

Notes on Epistemology

Rev. John J. Toohey, S.J.
Georgetown University
Washington, D.C.

The unique place of reason in natural-law philosophy has been affirmed by the modern Thomistic philosopher, the late Father John Toohey. Toohey defined sound philosophy as follows: "Philosophy, in the sense in which the word is used when scholasticism is contrasted with other philosophies, is an attempt on the part of man's unaided reason to give a fundamental explanation of the nature of things." – Murray Rothbard

Scanned from 1952 monograph
(italics replacing underlining)
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Theses

1. Certitude is a firm assent to a perceived truth.
2. The doctrine of universal scepticism cannot be professed without self-contradiction; the state of mind of universal scepticism is intrinsically impossible.
3. No reasonable man can demand a proof of every truth before assenting to it.
4. There is a world outside of us.
5. The theory of Kant offers no escape from the scepticism of subjective idealism and undermines its own foundation.
6. There is no proof that the human mind has ever been deceived *per se*.
7. The assent which the mind gives to a truth without scientifically weighing the grounds is in many cases a genuine certitude.
8. The pragmatist's account of truth is arbitrary and his philosophical position is without foundation.
9. There are direct universal ideas, i.e., universal ideas whose objects are independent of the mind. The world of reality affords a foundation for the universality of the direct universal ideas.
10. The systems of Ultra-realism, nominalism, and conceptualism are false.
11. The mind can acquire certitude of historical fact from human testimony.
12. Evidence is the universal criterion of truth and the ultimate motive of every act of certitude.

Introduction

The Definition of Epistemology

Epistemology is derived from the two Greek words “episteme” knowledge and “logos” science, and means the science of knowledge. As employed in philosophy the word means *the science of the certitude of human knowledge*.

The *material object* of Epistemology is human knowledge and its sources.

The *formal object* of Epistemology is the certitude of human knowledge.

Epistemology is also called Major Logic, Applied Logic, Material Logic, Critical Logic, Criteriology, and Fundamental Philosophy. Since the name Logic without qualification is now very generally applied to the science of valid argument, it can hardly be regarded as a good name for the science of certitude. Fundamental Philosophy is not suitable as a name, because it does not tell what the science is concerned with; and besides, it supposes that there is general agreement that the science of certitude is the foundation of all philosophy.

I. The Starting Point of Epistemology

The word “epistemology,” which by derivation means the science of knowledge, is very commonly employed to signify the science of the certitude of human knowledge. “Certitude” is here used to denote the conscious possession of truth, that is, the act or state of mind wherein the mind possesses truth and knows that it possesses it. Among the topics treated in the science are the nature of truth, the sources of human knowledge, the obstacles which impede the pursuit of truth, the means of avoiding error, and the criterion of certitude.

Some of the principal data with which the epistemologist starts with are contained in the following four truths:

1. that we have all made mistakes;
2. that we have corrected many mistakes;
3. that we have accumulated a vast store of truths;
4. that we look upon our mistakes as exceptions to the general course of our lives.

It is the first and second of these truths which gave rise to the science of epistemology. Unless men had discovered that they had fallen into error, there would have been no occasion to discriminate between certitude and error or to determine the tests by which we know that we are on the right course.

There is in this feature a close parallel between epistemology and logic. It was because experience had brought men in contact with invalid and misleading arguments that they directed their thoughts to the scientific study of argumentation. The logician examines the invalid arguments and compares them with those that are valid, and in this way is led on to establish the canons of argumentation which apply universally and by means of which it is possible to test the validity of the arguments which are set before us.

The epistemologist proceeds in a similar manner. He assembles various cases of error and certitude, studies the circumstances in which they have occurred, examines the precautions which men of

prudence have adopted for the avoidance of error, and gradually comes to a knowledge of the principal causes of error and to a determination of the criterion which should guide us in our search after truth.

The data which were mentioned above must never be obscured or put out of view. The student must continually recur to them, for they are the chief test of the correctness of any theory or explanation which is advanced in epistemology.

The question has been asked, What is the proper attitude to assume in approaching the study of epistemology, that is, in approaching the investigation of its data? The question is a strange one; at least it would be strange if we were unacquainted with the various experiments which have been made in this field. Why ask this question concerning the epistemologist in preference to any other scientist? The question is just as pertinent in the case of the chemist and astronomer as it is in that of the epistemologist. If an answer is to be given to the question, it is one that applies to every scientist, and it is this: The proper attitude is, first, a determination to adhere closely to the data and to let them control our speculations; secondly, a willingness to profit by the labors of others, to examine their theories fairly, and to assign our reasons for the judgment we pass upon them.

There is one account of epistemology which has attained a vogue in recent years and which it is the purpose of this chapter to examine. It is to this effect: That the main problem which the epistemologist has to solve is whether the human mind has the power to acquire truth; that he must not commence his investigation by assuming the existence of this power; that at the start he must doubt it in one or other of three or four ways; that at the same time he must not doubt, but affirm, that the mind knows these two truths:

1. every man is conscious of making spontaneous assents, and
2. the mind has the power of analyzing these assents; that the analysis is to be directed towards determining whether the spontaneous assents have put us in possession of truth; that the starting-point of epistemology which is here propounded is proved to be the correct one by the following three facts:
 - (a) that we cannot know that the mind has the *power* to acquire truth till we know that it

has acquired truth, and this knowledge can come only after an analysis of the spontaneous assents;

- (b) that the sceptics, as well as we, admit the two truths mentioned above and, therefore, the affirmation of these truths puts us upon common ground with the sceptics;
- (c) that the procedure recommended in this account is the same as that which is followed by all scientists, namely, to treat every hypothesis or theory as doubtful till it has been proved and, since the proposition that the mind has the power to acquire truth is an hypothesis, it must be considered doubtful till proof is furnished of its truth; that this procedure, moreover, has the sanction of St. Thomas, whose practice it is to throw the proposition he is defending in the form of a question.

Before proceeding to the discussion of the foregoing account, let us distinguish six attitudes which we may adopt in reference to a proposition:

1. we may reject it;
2. we may doubt it;
3. we may simply accept it;
4. we may accept it and also proceed to prove it to a person who does not accept it;
5. we may suppose it doubtful for the sake of the supposition, that is, for the sake of setting forth the consequences of the supposition itself;
6. we may leave it out of formal consideration.

Other attitudes might be indicated, but they have no bearing on the present discussion.

The attitude last mentioned is the one we take up in reference to matters which are irrelevant to the particular point we are investigating. Of course, if an irrelevant question is thrust upon us, we may consent to answer it, but we do so under protest,

because the answer is no aid to the investigation, except as getting rid of a perverse and senseless interruption.

The fourth attitude was the one adopted by St. Thomas towards the propositions which he defended in his *Summa*. It is exemplified everywhere in the sciences. When I adopt this attitude, I may sometimes throw the proposition into the form of a question. This may happen for two reasons: First, because the proposition comes to me in that form from the person with whom I am dealing; the proposition is a question to *him*, not to me; secondly, because my putting the proposition in that form is a pledge to him that I do not mean to beg the question of its truth.

If a proposition is self-evident, so as to be incapable of proof to anyone, it cannot, of course, be doubted, nor can we assume towards it the attitude indicated under number four. In this case we may, if we wish, adopt the fifth attitude. Since the proposition is self-evident, it can be supposed doubtful for only one purpose, viz., to show the consequences which follow from the supposition that it is doubtful. The procedure will take the following shape: "Supposing (or if) proposition A is doubtful, then such and such consequences follow"; for example: "If it is doubtful whether a circle is round, then it is doubtful whether its area is equal to πr^2 ."

A remark may be inserted here by way of parenthesis: It is sometimes said that to fasten upon instances of inconsistency in an author's statements is not a refutation of his doctrine. That is true enough when the inconsistencies are incidental and unconnected with his argument. But the exact opposite is the truth when the contradiction resides in the very heart of his doctrine; and all plausibility in the doctrine vanishes when a contradiction appears in the essential relation of the doctrine to its alleged foundation.

If the investigator in epistemology had set out on his course in a sensible fashion and had been allowed to proceed quietly with his studies, as happens in the case of investigators in other branches of science, he probably never would have heard of the question of the mind's power to acquire truth. Had the question by any chance come under his notice, he would have taken up the attitude which is mentioned under number six; that is, he would have put it aside as not belonging to the matter he was investigating. When, however, the question was forced upon him and he was besieged with a demand for an answer, the proper procedure for him in the circumstances was to adopt the fifth attitude and draw out the implications of the supposition as follows:

“If it is doubtful whether the mind *can* know any truth, then it is *a fortiori* doubtful whether it *does* know any truth. Hence, if you start by supposing it to be doubtful whether the mind can know any truth, you must, as part of your supposition, consider it doubtful whether the mind does know any truth. If you do not suppose it doubtful whether the mind knows any truth, you abandon your supposition. Your supposition disappears the moment you introduce the notion that the mind knows any truth whatever.”

Turning now to the account of epistemology which was described above, let us first glance at the position which it proposes as the starting-point of the investigator. Even if we examine this position in itself, apart from the arguments which were employed to recommend it, and part form its relation to the rest of epistemology, we shall find that it is open to two grave objections. First, it involves a contradiction; secondly, it assumes, under another name, the very point it professes to prove.

- I. First Objection: The position is set forth in these two statements:
- (a) We must doubt (or consider doubtful) that the mind can know any truth whatever;
 - (b) We must not doubt (or consider doubtful)—on the contrary, we must affirm—that the mind knows these two truths:
 - (1) We are conscious of making spontaneous assents; and
 - (2) The mind has the power of analyzing these assents.

This representation demands of us the performance of an impossible feat, viz., at one and the same time to regard the same thing as doubtful and also as not doubtful. We cannot in reason approach a man and say to him: “You claim that it is doubtful whether the mind can know any truth. I am willing to adopt that view myself provided that at the same time you agree with me in holding that the mind knows one or two truths; for example, these two: that the mind makes a number of spontaneous assents and that it has the power of analyzing them.” We cannot at one and the same time consistently assert

that their mind knows two truths and also that it is doubtful whether it can know any truth at all. Moreover, the position implies that the mind knows still another truth, viz., that the supposition is made that the mind's power to know truth is doubtful.

- II. Second Objection: The power of analyzing the assents is either a power of arriving at truth or it is not. If it is not, it will be of no avail to employ it in investigating the spontaneous assents; for by its use we shall learn nothing about them. If it is a power of arriving at truth, then you are setting out with the explicit assumption that the mind has the power to acquire truth.

Before we can reasonably accept a theory, we must examine the theory in itself; that is, we must determine its obvious implications and the demands it makes of us; next, we must examine the arguments or reasons which are put forward in recommendation of the theory. We must ask whether the necessity of accepting the theory follows from an acceptance of the arguments. It certainly does not follow if the acceptance of the theory renders impossible the acceptance of the arguments which are used to support it. This is a consideration which tells heavily against the arguments of the sceptics. There is not one of them that possesses the slightest force. The only behavior on the part of the sceptics which has even a semblance of consistency is one of silent wonder.

We are asked to adopt the position under discussion on the following grounds: First, we are only able to know that the mind *can* acquire truth after we know that it *has* acquired truth; secondly, the mind's knowledge of the two truths mentioned above (viz., the occurrence of spontaneous assents and the mind's possession of the power to analyze them) together with the doubtfulness of the mind's power of knowing truth is the very position of the sceptics, and we ought to place ourselves in their position in order to secure a common basis of argument with them; thirdly, the example of scientists in other fields of inquiry teaches us to regard with doubt any theory which has not yet been proved, and at the start of our investigation the existence of the mind's power to acquire truth is a theory, and is, in fact, the chief problem which epistemology has to solve.

The statement which is put forward as the first ground is perfectly true, but nothing to the purpose. We discovered years ago, as little children, that our minds have acquired truth, though we may not have used this mode of expression or even put the matter into words. Ask a little child whether it is true that two plus three is equal to five, and you will receive a prompt answer in

the affirmative. The ask him whether it is possible for us to know something if we do know it, and, if he does not laugh at the simplicity of the question, he will be equally ready with an affirmative answer. The inference from the fact of knowing to the power of knowing is immediate in the sense of self-evident. A man may never have thought of making this inference, but the matter has only to be presented to him to elicit from him an instantaneous assent. will it be said that he doubted his possession of the power to know truth down to the time that you asked him the question? By no means. A man does not doubt something which he has never even heard or thought about. It is impossible for the mind to assume any attitude whatever towards a proposition or a question which has never been brought before it. It may be objected that the sceptic does not admit that the mind has acquired any truth. A word shall be said on this point in the following paragraphs.

As to the second ground, its weakness may be seen from the following considerations. First, it assumes that our chief concern is to hold an argument with the sceptics, whereas such a proceeding need not form any part of our purpose. Our purpose may be simply to go on with a study of the data of epistemology and to throw our findings into the shape of a science, or it may be to put our hearers in possession of a system which shall render them immune to the sophistry of the sceptics.

Secondly, there may be those among the sceptics who will refuse to take up the position for which you are contending and who will defend their refusal by saying: "You are going to analyze your spontaneous assents because a number of them have been erroneous; but have there been no instances of error in analysis?" Thus, you are thrown back upon an analysis of the mind's power of analysis as a preliminary to its employment upon the spontaneous assents, and this drives you into a *processus in infinitum*.

Thirdly, the contention requires us to adopt the sceptic's position without examining it or scrutinizing the arguments which he uses to support it. The doubtfulness of the mind's power to acquire truth is not the starting-point of the sceptic's argument; it is the *conclusion* of his argument; and yet we are asked to *start* our argument against him by adopting his conclusion! I refuse to grant, even for the sake of argument, what it is the business of the sceptic to prove. I refuse to *start* my argument at the point where the sceptic's argument *ends*.

The so-called common ground is the prison-house of the sceptic and to enter it is to become his captive. Surely a common ground is one where the combatants are on an equal footing, where each of them has a fair chance to fight; it is not a place where one of them is caught in a trap which was set by his antagonist. Let us look at the *arguments* of the sceptic and judge from them the reasonableness of the position which he would have us adopt. We shall find that his arguments destroy themselves. There is not one of them that does not start with a demand that we accept some truth or something we are expected to look upon as a truth. There is no other possible way of getting an argument in motion. You cannot build an argument out of a bundle of questions. You cannot argue by proceeding in this fashion: "Is every man mortal? Is every king a man? Therefore, is every king moral?" (Of course, the situation is altered if the questions are rhetorical; that is, if they are in reality assertions in the form of questions.) The conclusion of an argument cannot be that argument is impossible; nor can the conclusion from our knowledge of certain truths be that it is doubtful whether we can know any truth. Even if a man begins his argument with a "perhaps" or a "maybe," he is asking us to accept the truth that what he proposes is conceivable. It is astounding to what lengths the sceptic will go in his effort to give an air of plausibility to his arguments. He actually appeals to our knowledge of certain facts in order to prove that we do not know those facts!

And now as to the third ground. In the first place, the scientist does not wait for a proof of everything; else he would have no data to work upon. Nor does he wait for a proof of every theory; many of them he rejects without a second thought; and rightly so, for their absurdity or falsity is evident at a glance. What would a scientist think of a theory which required him to question the existence of his data? Would he entertain a theory which obliterates the data that are supposed to have suggested the theory? What should we think of the chemist who consented to pay serious attention to a theory which raised a doubt as to whether there are any chemical reactions? Doubt as to the occurrence of chemical reactions destroys the possibility of a science of chemistry. In the same way doubt as to the data concerning knowledge or doubt as to the power or fact of knowing makes impossible the creation of a science of epistemology. The strange performances of the sceptics would suggest the thought that, instead of dealing with the science of knowledge, they were intent upon constructing a science of the non-existence of knowledge or a science of universal ignorance.

In the second place, the existence of the mind's power to acquire truth is not a theory or a proposition which we take upon ourselves to prove; it is a self-evident fact. To doubt it is to stifle thought at its birth. There may be speculation on the *manner* of knowing, but not on the fact or power of knowing. Speculations on the manner of knowing presuppose the fact of knowing, and their validity is tested by that fact. It is the *doubtfulness* of the mind's power to acquire truth that is a theory -- a theory for which the sceptics have never been able to produce a particle of proof. The sceptics did not derive their theory of the doubtfulness of the power of knowing from an inspection of the data of epistemology. They took a cursory glance at only one section of the data and then turned their eyes away from the data altogether and perplexed and confused their minds with sophisms; and ever since, their strategy has been to inveigle us into imitating their folly, that is, to concentrate our attention upon the sophisms and to leave the data of epistemology out of view. The consequence is that the career of epistemology in the hands of the sceptics has not been one of serious investigation, but of collision and conflict, a battle in which everyone is fighting everyone else. A stranger, watching the antics of the sceptics, would imagine that he had wandered into a madhouse or a place where men were on a holiday, amusing themselves with puzzles and each one striving to outdo the others in the extravagance of his sophisms. The sceptic, instead of confining himself to the field of science, has plunged headlong into topsyturvydom and brought discredit on the science of epistemology. And what increases the discredit which invests the science is that many writers on the subject disdain to use a language which the average educated man can understand. Whatever they have to say is enveloped in cloud and mystery. They vie with each other in the fabrication of dark sayings till they have reached the last depths of the unintelligible.

The second paragraph of this chapter mentioned four heads of data which belong to the subject matter of epistemology. There is not one of them which a man who was seriously entering upon a study of human knowledge would call in question for an instant. All four are perfectly patent to a man till he deliberately closes his eyes to them and works himself into a state of doubt. but what has the sceptic done? He has taken a hurried look at the first head of data, viz., the fact that men have made mistakes, and banished all other data into oblivion. But if he had paused a moment to reflect even upon the occurrence of mistakes, he would have noticed that every time he finds himself in a mistake he discovers at least two truths, namely, (1) the truth that he had

made a mistake, and (2) the truth which revealed to him that he had made a mistake.

In the account of epistemology which we have been discussing it is set down that the existence of the mind's power to acquire truth is the chief problem of epistemology. Surely this is a grave misconception of the object of epistemology. The existence of the mind's power to acquire truth is not a problem at all, any more than the Law of Contradiction. The aim of the student of logic is not to find out whether the mind can reason correctly or whether there are any valid arguments, but to determine what constitutes a valid argument and what are the means of securing its validity. In like manner the aim of the epistemologist is to investigate what constitutes certain knowledge and what are the means of guaranteeing its certitude. It was the sceptic who raised the question of the mind's power to acquire truth, not the man who kept his attention fixed upon the data of epistemology. If the sincere and earnest student is left undisturbed to pursue his investigation of the data, the question of the mind's power to acquire truth will never enter his head. By right the question should be omitted altogether from the formal consideration of the epistemologist. But it is difficult to see how such a natural course is possible at the present day. Encompassed as he is by the incessant wranglings of the various schools, and feeling his responsibility for those whom he has to instruct, he is obliged to take up and answer the sophisms of the sceptics. But it is an unfortunate and burdensome necessity.

In conclusion there is one remark to be made upon a point which is closely connected with the subject of this chapter. The claim has been made that we are unable to do justice to an opponent's argument unless we entertain a doubt of our own position. The claim cannot be sustained, and no one ever dreams of acting upon it in his own case. If a man doubts his own position, he ceases to hold it; that is, it ceases to be his position. And if a man gives up his position, why should he defend it? Is all argument a game having no more significance than a battle of wits? And how many times is a man to abandon his position? If the contention in question were well grounded, then no matter how often a man had proved a proposition to his own satisfaction and that of those who opposed him, he would have to doubt it all over again with every fresh dispute. Supposing someone challenged the truth of the Law of Contradiction, I should be obliged, according to this contention, to doubt that Law myself in order to show that the man was making a fool of himself. The contention is logically bound up with universal scepticism. Besides, what possible effect

can my state of mind have upon the *objective worth* of my argument? Surely controversies are to be settled by the objective worth of the arguments presented, not by the state of mind of the disputants. It is the business of my opponent to find fault with my *argument*, not with my state of mind. My argument is before him in black and white, and even though I changed my state of mind every minute, the force of the argument would not change; it would remain what it was when I wrote it down. All that my opponent can reasonably demand of me is that I deal fairly with his arguments; and the question whether or not I deal fairly with them cannot be judged by the position of my mind but by what I say in answer to them. My statements in reply to him are there on paper to be judged by him and by all who take an interest in the matter. If there is any unfairness on my side of the discussion, let it be pointed out where it can be observed by all, viz., in the statements which constitute my part of the discussion. To make the position of my mind the capital point to be insisted upon and, on this account, to refuse to weigh the force of my argument is to act an irrational part and to place one's self outside the arena of serious debate. My opponent has just one thing to do if he is to meet me squarely, and that is to indicate any unfairness in my method of handling his argument or to point out a flaw in my own.

II. Reality and Truth

I

The words “reality” and “truth” would not need to be defined if philosophers had not quarreled over their meaning. Every man understands what is meant by these words when he meets them in reading or in conversation. To say that a man understands the meaning of a word does not imply that he is able to give a definition of the word. He knows what is meant by the words “horse” and “dog,” though he would evince some hesitation if he were called upon to define them. There are words which do not admit of a definition, unless a synonym could be called a definition. “Reality” and “truth” would probably have been classed among the undefinable words if philosophers had not made them the subject of controversy.

The first point to be insisted on is that these words are not the exclusive possession of the philosopher, and therefore, the philosopher is not at liberty to give them any meaning he pleases. They are on the lips of all men, even of the most ignorant, and the ignorant man’s use of them does not differ from that of the educated man. Consequently, if the philosopher is to construct a definition of these words, he must be guided by the common man’s use of them.

The second point to be noticed is that the words “reality” and “truth” would hardly have been invented if men had not fallen into error. If men had never been deceived and had never attempted to deceive, there would hardly have been any occasion which would call for the use of these words. At any rate, it is certain that one of the primary functions of these words is to express approval. The words “real” and “truth” are primarily words of approval; “unreal,” “merely apparent” and “false” are words of disparagement. The words “real” and “truth” are primarily employed to indicate that there is no mistake or no possibility or likelihood of mistake. “Unreal,” “merely apparent” and “false” are used when there is a mistake or something calculated to deceive or a suggestion of something which is not or cannot be.

The crucial test of a definition is that it may be interchanged with the term defined, that is, it may replace the term without a change of sense in any literal context in which the term is employed. Philosophers have not always been careful to apply this test, and yet the test is essential if there is a dispute over a

definition and the dispute is to reach a final settlement. If a man is employing a technical term or attaching to a term a special meaning of his own, there can, of course, be no dispute and there is no occasion for the application of the test. All that we expect in such a case is that the man's use of the term shall be consistent with his definition. But the philosopher does not pretend that "reality" and "truth" are technical terms or that he assigning to them his own private meaning. He professes to express in other language the meaning which these words have in the speech of the common man or to give a fuller or deeper explanation of that meaning. His definition must, therefore, be tested by the speech of common man.

II

Let us first consider the words "reality" and "real." What do people mean when they apply either of these words to an object, as when they say "That is a reality" or "That is real"? It is plain that these expressions are used when an object is presented to the mind and the mind is called upon to decide whether the object is real or unreal. We shall be right, then, in saying that when a man calls an object "real" or "a reality," he means that the object is such as it is suggested to be; and when he calls it "unreal" or "merely apparent" or "an unreality," he means that it is *not* such as it is suggested to be. The suggestion may come from anyone of a variety of sources; it may come from a person or from the object itself. A straight rod plunged at an angle into a glass container filled with water suggests to us that it is bent. We may, therefore, define a real object or a reality as *an object which is such as it is suggested to be* or *an object which is what it purports to be*, and an unreal object or an unreality as *an object which is not such as it is suggested to be*.

We may not inquire what it is that determines a man to pronounce one object real and another object unreal. We will suppose that the man is justified in deciding in the one case that the object is real and in the other that it is unreal. He calls the object real when he sees that the elements or attributes which are suggested as being in the object *are* in the object. He calls it unreal when he sees that the elements are *not* in the object. He knows that an object cannot be composed of elements which exclude each other. When, upon examination, he notices that certain elements of the object exclude others which have been suggested as belonging to the object, he pronounces the suggested

combination of elements unreal or merely apparent. The presence or absence of a suggested element or collection of elements is his *test* whether the object is real or unreal. The consideration will enable us to define “reality” and “unreality” as follows:

A *reality* or a *real object* is one which is made upon of elements or attributes which coalesce into unity, that is, into one object. To put it more accurately and concretely, a reality is an object which is such and such and such

An *unreality* or an *unreal object* is a number of elements which are suggested as coalescing, but which do not coalesce, into unity; or it is an object which is suggested as being such and such, but which is not such and such. We may also put it in this way: An unreality is a suggested coalescence of elements which do not coalesce.

The elements of which we speak in the case of an unreality are not themselves unrealities, but their coalescence which is suggested is unreal. The very fact of throwing together the words “square” and “circle” into one term suggests the coalescence of the elements which are signified by these words. Each of the words “square” and “circle” stands for a reality, but these realities cannot coalesce into one object. There is, of course, no such thing as an unreality; but the union of the two words “square” and “circle” in one term *suggests* the union in one object of what they stand for, that is, it suggests a single object which is made up of these elements; and because there is a single term, the single word “unreality” has been invented to designate what is suggested by the term. To say that a square circle is an unreality is merely another way of saying that a square and a circle do not coalesce into unity, though their coalescence has been suggested.

Like the zero of the mathematician, the words “unreality,” “nothing” and “nonentity” have no separate meaning of their own. They have no signification outside of a context—a context expressed or understood. The purpose they serve is to enable us to set forth concisely what, without them, would require a long and clumsy expression. It is much more convenient for the mathematician to write “ $4 + 2 - 6 = 0$ ” than to write “ $4 + 2 - 6$ is not equal to any number.”

Dreams and hallucinations are realities; they are events which actually occur. It is only when they are suggested to us as external physical events or otherwise as being what they are not that they

deserve to be called unrealities, for in that case they are not such as they are suggested to be.

It should be noted that every mere appearance is an unreality, but not every unreality is a mere appearance. An oblong object viewed from a particular direction may appear to be square, but no object can appear to be a round square. A second point to be noted is that something may be a mere appearance without our knowing it to be a mere appearance. In order to *know* that it is a mere appearance, we must be able to compare it with the object with which we are tempted to identify it, and this necessitates a knowledge of that object. There may be a difference between two objects which is hidden from us, but if we are to detect the difference, *both* of the objects, not merely one of them, must be known to us. Consequently, the contention of Kant that the things in themselves differ from the phenomena and that our minds cannot be accommodated to the things in themselves has no justification, if indeed it has any sense, when viewed in connection with his doctrine that the things in themselves are absolutely unknown.

Sometimes an object is suggested to us and we have not the means of determining whether it is real or unreal. This may be called a *problematic object*, which may be defined as a suggested coalescence of elements which are not seen either to coalesce or not to coalesce into unity. Error is always due to the acceptance of a problematic object as real or to its rejection as unreal. Error mainly consists in confusing an object as it might be, so far as it is known to us, with the object as it is. When we mistake for a horse an animal (*viz.*, a cow) which is moving behind a bush, we are confusing the moving animal as it might be, so far as it is known to us, with the animal as it is. Men would not fall into error if they refused to accept or reject an object without sufficient scrutiny. The only kind of object which the mind will accept and rest in is one which it thinks to be real, this is [*sic*: <that is>?—AF], one which it judges to be such as it is suggested to be.

Some philosophers have held that reality is the ultimate subject of every judgment. It is far more important to remark that reality is the ultimate *predicate* of every judgment. It is because an object is judged to be a reality that the mind accepts the object; or rather, we should say that accepting the object and judging it to be a reality are one and the same thing. Reality is the ultimate predicate, whether we express ourselves by means of an affirmative or of a negative proposition. This may be illustrated by a reference to the fourfold scheme of the categorical proposition, as follows:

A All men are mortal = B There are men who are mortal
 There are no men who are not
 mortal

B = H Men who are mortal are realities
 Men who are not mortal are not reality

E No horses are rational = C There are horses that are not
 rational
 There are no horses that are
 rational

C = J Horses that are not rational are realities
 Horses that are rational are not realities

I Some critics are subtle = D There are critics who are subtle

D = K Critics who are subtle are realities

O Some men are not wise = F There are men who are not
 wise

F = L Men who are not wise are realities

B, C, D and F may be called *object propositions*, because, after the words “there are” or “there are no,” they present us with the objects which in H, J, K and L are pronounced to be or not to be realities, that is, to be or not to be such as they are suggested to be. The objects which the mind contemplates and acquiesces in do not take the shape of subject, copula and predicate. The objects in which the mind acquiesces are more closely represented by the propositions which begin with “there are”; and the objects which it

rejects are represented by the propositions which begin with “there are no.”

What had just been said about the categorical proposition applies also to the hypothetical, thus:

U If the Hudson River is frozen, then the weather has recently
 been cold

U = G There is no frozen Hudson River without recent cold weather

G = M The frozen Hudson River without recent cold weather is not
 a reality

If we let X stand for the antecedent, and Y for the consequent, of a hypothetical proposition, the proposition may be written as follows:

U If X, then Y = G There is no X without Y

G = M X without Y is not a reality: that is, it is not such as it is suggested to be.

The universe of reality is divided into two worlds, and in order to have convenient names to designate these two worlds, we shall employ the words “physical” and “metaphysical,” though in doing so we shall be departing somewhat from current philosophical usage. By the *physical world* or the *world of nature* we mean the sum total of things which exist; and by the *metaphysical world* we mean the sum total of things which do not exist, but which have existed or can exist. A thing which does not exist, but which can exist, is a reality; it is not merely nothing; it is made up of elements which coalesce into unity, though existence is not one of those elements. A post office which is to be built next year, though it does not exist is not merely nothing; otherwise we could not think about it and the architect could not draw plans for it; and it is the post office that is to be built, not our thought about it or the plans that have been drawn for it. so far as our knowledge goes, there has never existed a perfect circle or a line which is perfectly

straight, but the mathematician knows what these objects are and he does not hesitate to refer to them in his calculations. It is a common criticism of an historian's treatment of a passage of history, e.g., the battle of Waterloo, to say that it is unreal; but his treatment of the battle is not unreal unless the battle itself is real. Most of our thoughts during the day, our reflections upon the past, our plans and preparations for the future, are occupied with objects which do not exist, and yet no man would say that they are occupied with nothing.

It may be objected that propositions beginning with "there are" refer to existence, that when a man says "There are no perfect circles," he means that perfect circles are not real, and therefore, "real" and "existing" have the same meaning. Again, it may be said that we often employ the expression, "That object is not real; it is purely imaginary," and here "real" plainly refers to existence. The answer is, that in the second case the object is pronounced to be unreal because existence was suggested as one of its elements and that element was not present in the object. This holds also in the first case. Perfect circles are pronounced to be unreal because their existence was suggested. The proposition, as stated above, is short for "There are no perfect circles in the physical world"; and certainly it is correct to say that, so far as we know, "Perfect circles in the physical world are not realities."

III

We may now take up the word "truth." Before proceeding to a definition of this word, we should call attention to a confusion of long standing. The attempt has often been made to define "truth" without the use of examples which contain that word. The only defense of the definition that was offered was that the examples contained the word "true." There would be no objection to this if in the examples the word "true" were the adjective that is exactly equivalent to "truth." You cannot justify your definition of "truth" by means of examples which neither contain nor can contain that word. You cannot test your definition unless you can substitute it for the word "truth" in a context in which the word is employed. But the word was not only not employed, it was inadmissible, in the context which was produced to justify the definition. The claim was made that "truth" was predicated in a certain way, but no examples were forthcoming in which "truth" was predicated at all. There was not even an example in which the adjective "true" was the predicate. In all the examples that were offered the predicate

was a noun qualified by “true”; for instance: “This liquid is true wine” and “That metal is true gold.” It was contended that in these examples “true” or “truth” was predicated of “wine” and “gold,” whereas the correct account of the matter is, that “true wine” was predicated of “this liquid” and “true gold” was predicated of “that metal.”

In the foregoing examples “true” is not the adjectival equivalent of “truth.” No man would be tempted to say “This wine is true” or “that gold is a truth,” nor would he use the expression, “The truth of this wine,” though he might say “This wine is genuine” and “That gold is genuine.” If the examples which contain the word “true” are to be of any avail in establishing a definition of “truth,” the word “true” in the examples must be shown to have some connection with the word “truth.” Let us take two examples with the same grammatical structure, each containing the adjective “true,” but the first one using it in one sense, and the second in another sense, thus: “This is a true statement” and “this is a true diamond.” The noun corresponding to “true” in the first proposition is “truth,” but this is not the case in the second proposition; in the second proposition the noun is “genuineness.” This may be shown by placing the propositions in a longer context as follows:

- (1) “The man demonstrated that this is a true statement”;
- (2) “The man demonstrated the truth of this statement”;

but the second cannot be changed into “The man demonstrated the truth of this diamond”; for this would not make sense. The second will have to be written as follows: “The man demonstrated the genuineness of this diamond.” The examples in the preceding paragraph, therefore, might serve to justify a definition of “genuineness,” but not a definition of “truth.”

In common speech the word “truth” is used in two ways, as may be seen from the following examples:

- (1) “He stated a truth” or “He uttered a truth”;
- (2) “The truth of the statement is manifest.”

Truth is always an abstract term, but in (1) it is used like a general concrete term, that is, it is used in the plural or by itself with the indefinite article. This may, for convenience, be called the *concrete* use of the word. The word “intrepidity” is an abstract term, but it is never found in the plural or by itself with the indefinite article. Hence, it never has what we have called a concrete use. The word “truth” in (2) is used like the word “intrepidity” in the proposition,

“The intrepidity of the man is manifest.” The use of “truth” in (2) we shall call its *abstract* use. It is necessary to direct attention to these two uses of the word, because they will have to be taken into account when we are constructing a definition of “truth.” The definition will obviously have to be worded in two ways if it is to replace the word “truth” in contexts in which the two different uses of the word are found.

First as to the concrete use of the word. We are constantly meeting the expression, “That is a truth,” and also the expression, “That is true,” in the sense of “That is a truth.” What does the word “that” signify when “true” or “a truth” is applied to it? It signifies what is or can be expressed by a proposition, never what is expressed by a concrete term. We never say that a dog or a black horse is a truth or that either of these terms expresses a truth. The term “dog” or “black horse” may be the subject or the predicate of a proposition, but in neither case can it be said to express a truth.

If we put aside the tautological proposition, all propositions purport to convey information about a specified object or about something which the mode of expression suggests as an object. It is necessary to add the words “or about something which the mode of expressions suggests as an object,” in order to provide for propositions which are worded in the ordinary form, but which are elliptical or figurative or otherwise in need of explanation. To deal at all adequately with such propositions would require a separate chapter. The proposition, “A round square is an unreality,” is an instance of what we mean. The word “object” signifies that which is or can be contemplated or attended to. What is suggested by “round square” cannot be contemplated, and therefore, this combination of words does not stand for an object. It is true that in the preceding section the word “object” was used in the definition of “unreality,” but what it signifies was cancelled by the other words in the definition. However, it will be simpler in what follows to employ the expression “specified object” without qualification.

The categorical proposition purports to convey information about the object signified by the subject term; the hypothetical proposition purports to do this about the object expressed by the antecedent. To illustrate this in the case of the hypothetical proposition, let us shorten the example we have already used and throw it into different shapes, as follows:

If the river is frozen, then the weather has been cold

Either the river is not frozen or the weather has been cold

In order that the river should be frozen, the weather must have been cold

The river cannot be frozen without the weather having been cold

The river is (or can be) frozen, only if the weather has been cold

The second of the above formulas may be written in this way: "The river is not frozen or, if it is frozen, the weather has been cold." The proposition in any of these shapes may be called an *inferential proposition*, and it will be noticed that in each case it conveys information about the frozen river. The information which is conveyed about the frozen river is, that it cannot be without recent cold weather. This may be generalized as follows: In the proposition, "If X, then Y," the information which is conveyed about X is, that it cannot be without Y.

The inferential proposition conveys information about an object which need not be known to be real. We may, as a matter of fact, know in certain cases that the object is real, and in other cases we may know that it is unreal; but the proposition itself does not purport to tell us whether the object is real or unreal. When we wish to make it clear that we are conveying information about an object which is known to be real, we employ the categorical proposition. In the categorical proposition, the information about the subject is conveyed by the copula combined with the predicate; in the hypothetical, the information about the antecedent is conveyed by "if – then" combined with the consequent.

It will be convenient to confine the following paragraphs to the categorical proposition, for our remarks on this proposition will also apply, *mutates mutandis*, to the hypothetical. We have seen, then, that every proposition purports to convey information about a specified object, and that in the categorical proposition this object is signified by the subject term. It will be necessary at this point to get rid of an ambiguity which may easily cause a good deal of confusion in our discussions. Such words as "argument," "syllogism," "proposition" and "statement" are used in two senses. In our books on logic the argument and the syllogism are said to consist of premises and a conclusion, and the proposition and the statement are said to consist of subject, copula and predicate. Afterwards we are told that a proposition is proved by means of an argument or a syllogism. But a proposition is not proved by means of premises and a conclusion; it is proved by means of premises, and the proposition which is proved is the conclusion. Thus, the words, "argument" and "syllogism" are often used in the sense of premises. Again, the proposition and the statement are said to convey information about the subject. In this use of these words

the subject is not part of the proposition or the statement, and therefore, the proposition and the statement consist of copula and predicate. Of course, there cannot be a proposition without a subject, but that does not mean that the subject is part of the proposition. There cannot be a copula and a predicate without a subject, and yet the subject is not part of the copula and the predicate. When, therefore, we say that a proposition purports to convey information about a specified object, we are using “proposition” in the sense of copula and predicate. It is also in this sense that “proposition” is used when we say that a given proposition expresses a truth. A truth is always a truth *about* an object, just as a statement is always about an object.

A truth is not expressed by subject, copula and predicate. A truth is *about* the subject. We speak of the truth about Russia and the truth about Napoleon; but the truths about Russia and Napoleon are expressed by the copula and the predicate. When a man remarks to a friend that Jones is a brilliant mathematician, and his friend says in return “That is also true of Smith,” the friend does not mean that “Jones is a brilliant mathematician” is true of Smith; he means that what is stated *about* Jones is true of Smith; and what is stated about Jones is expressed by the copula and the predicate. Here we have the precise answer to the question which was stated above: What does the word “that” signify in the expression, “That is a truth” or “That is true”? It signifies what is expressed by all the words in a logical proposition except the subject term.

Let us confine ourselves to propositions which deserve to be called true. What do these propositions express? We may answer indifferently that they express something that can be known about a specified object—namely, the object signified by the subject term—or that they express a truth about that object. The word “truth” in its concrete use may, therefore, be defined as follows:

A truth is something that can be known about a specified object.

This definition applies even to the tautological proposition. Hence, to the general question, “What is truth?” the answer is: Truth is whatever can be known about a specified object.

If a proposition is not only true, but known to be true, it expresses something that *is* known about a specified object. Some philosophers use the expression “ontological truth” as a technical name for “truth,” and the expression “logical truth” as a technical name for “known truth.” Since every known truth is a truth, it is plain that every logical truth is an ontological truth.

It should be remarked that, when we say that a given proposition or statement is true, we are using elliptical language; the full expression is this: what is expressed by the proposition or the statement is true. To prove that a proposition is true is to prove that what it expresses is true. If we bear this in mind, we shall find that the definition given above may be substituted for the word “truth” in any literal context that contains the concrete use of the word; for example: “He told me two important truths about Argentina” = “He told me two important things that can be known about Argentina.” “I maintain that this statement is true” = “I maintain that what this statement expresses is something that can be known about its subject.”

The word “falsity,” so far as it has a concrete use, may be defined as something that conflicts with what can be known about a specified object. Instead of using the expression, “That is a falsity,” we commonly prefer to say “That is false” or “That is not true.”

If we leave out of account the tautological proposition, we may define a truth as (a piece of) information about a specified object, and a falsity as misinformation about a specified object.

And now as to the abstract use of “truth.” It is here that we encounter the controversy over the Correspondence Theory. The controversy owes its origin to a confusion of two meanings of the word “correspondence.” In one of these meanings the theory may be justified, but not in the other. In one application “correspondence” and “conformity” have the meaning of “similarity”; in the other they have the meaning of “identity.” In one application they imply two distinct objects; in the other, only one. When we say (1) “The copy corresponds to the original,” we have two objects before our minds—the copy and the original. But when we say (2) “The city corresponds to his description of it” (= “The city corresponds to what he describes it to be”) or “The man corresponds to what you say he is,” we have only one object before our minds, and we mean “The city *is* what he describes it to be” or “The man *is* what you say he is.” In the first case we have similarity; in the second, identity.

If in the Correspondence Theory the word “correspondence” is taken in the sense of “identity,” the theory is correct. When we wish to replace the verb “is” by a noun, we employ the word “identity,” not “similarity.” Let us take the following sentence:

I acknowledge that what you state about Jones is true (or a truth).

For this we may write:

I acknowledge that what you state is something that can be known about Jones.

If the concrete use of “truth” is replaced by the abstract us, the sentence will read:

I acknowledge the truth of what you state about Jones.

This will give us:

I acknowledge the *identity* of what you state with something that can be known about Jones.

The words “is” and “identity” are italicized [*sic*: <underlined> in the original—AF] to indicate that the former is replaced by the latter. If what is said or thought about an object *is* (identical with) something that can be known about that object, then we have truth. Hence, we may define “truth” in its abstract use as follows:

Truth is the identity of what is or can be said about an object with something that can be known about that object.”

In many cases the word “anything” will have to be substituted for “something,” as in the example:

I deny the truth of your statement about the matter	=	I deny the identity of what you state with anything that can be known about the matter
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If we substitute the words “diversity from anything” for “identity with something,” we have a definition of “falsity” in its abstract use.

The definition of “truth” in its abstract use is unwieldy. The abstract use of “truth” can always be converted into the concrete use, and if this conversion is made in the examples we employ, it will simplify the substitution of the definition for the word “truth.” Thus, the sentence,

Robert admitted the truth of your assertion about his employer
may be converted into

Robert admitted that what you asserted about his employer is true
(or a truth).

The substitution of a definition for the term defined cannot be effected in every context. The context, if it is to be suitable for this purpose, must first be literal, and then complete, that is, not elliptical. Many words, by reason of their constant use in

literature, have accumulated a host of associations which do not attach to a definition, and therefore, the definition would be inappropriate in many contexts that contain the word. If we define “man” as a rational animal, we may substitute “rational animal” for “man” in the propositions, “This is a man,” and “Every man is mortal”; but we cannot make this substitution in “Man is lord of creation” or in “What is man that Thou shouldst magnify him?”

Here we may conclude. The points we have endeavored to emphasize and to apply are the following:

First, the words “reality” and “truth” belong to the common man as well as to the philosopher.

Secondly, a definition of these words which is seen to be in conflict with the common man’s use of them is thereby proved to be wrong.

Thirdly, the presence or absence of conflict may be detected by substituting the definition for the term where the term is found in the speech of the common man.

The intimate bearing of these points upon the issue of the foregoing discussion is hardly open to question; the only question is, whether they have been employed to good purpose.

In the course of the foregoing discussion it was noted that the expressions “ontological truth” and “logical truth” are sometimes used as technical names for “truth” and “known truth” respectively. The expression “moral truth” also occurs in many works on epistemology. In its concrete use this expression is a technical name for “candid statement”; in its abstract use it is a technical name for “candor.” A candid statement be defined as *a statement deliberately conveying to the person addressed something which the speaker assents to*, and an uncandid statement as *a statement deliberately conveying to the person addressed something which the speaker does not assent to*. Candor may be defined as *the identity of what is deliberately said about an object with what the speaker thinks about the object*. “Identity,” not “conformity” is the appropriate word in the definition of “candor.” “Conformity” often has the meaning of “similarity,” and therefore might easily be misleading in the definition of “candor.” We say that a man speaks candidly when what he says *is* (identical with) what he thinks, not when what he says is *similar* to what he thinks.

Let us consider four circumstances in which a person may make a statement as to the roundness or flatness of the earth, and

in doing so let us employ the expressions (1) “ontologically true,” (2) “logically true” and (3) “morally true” to designate respectively (1) a statement which is true, (2) a statement which is known to be true, and (3) a candid statement. The result will be as follows:

- (1) Suppose that a man thinks the earth is round and says it is round. In that case his statement, “The earth is round,” is ontologically, logically and morally true. It is ontologically true, because it expresses a truth about the earth; it is logically true, because it expresses a truth which the man assents to; it is morally true, because it expresses something which the man assents to.
- (2) Suppose that a man thinks the earth is flat and says it is flat. In that case his statement, “The earth is flat,” is ontologically and logically false, but morally true. It is ontologically false, because it expresses a falsity about the earth; it is logically false, because it expresses a falsity which the man assents to; it is morally true, because it expresses something which the man assents to.
- (3) Suppose that a man thinks the earth is flat and says it is round. In that case his statement, “The earth is round,” is ontologically true and morally false, but neither logically true nor logically false. It is ontologically true, because it expresses a truth about the earth; it is morally false, because it expresses something which the man does not assent to; it is not logically true, because it does not express a truth which the man assents to; it is not logically false, because it does not express a falsity which the man assents to.
- (4) Suppose that a man thinks the earth is round and says it is flat. In that case his statement, “The earth is flat,” is ontologically and morally false, but neither logically true nor logically false. It is ontologically false, because it expresses a falsity about the earth; it is morally false, because it expresses something which the man does not assent to; it is not logically true, because it does not express a truth which the man assents to; it is not logically false, because it does not express a falsity which the man assents to.

Thus a statement which is morally false has an ontological, but not a logical, character.

III. Proposition, Judgment and Inference

The importance of accurate definition has often been emphasized by philosophers, and yet there is no field of investigation which has suffered more than philosophy from hasty and ill-constructed definitions. There are few things so calculated to set a philosopher upon a false scent as a wrong definition of a term or a misinterpretation of a common phrase. We may cite, in illustration, the phrase that language is the expression of thought. That is an innocent mode of speech, and the general run of men are not misled by it; but it has more than once been a trap for the philosopher, and that, on account of the ambiguity of the word "thought." "Thought" is used in the sense of an act of thinking and also in the sense of the object of the act. The phrase does not mean that language is the expression of our acts of thinking, but that it expresses what we are thinking about. Language expresses what it directs our attention to, and outside one or two departments of philosophy it rarely directs our attention to acts of thinking; and even when it does so, it is because these acts have become objects of thought.

The words "proposition," "judgment" and "inference" have been variously defined by philosophers, and the purpose of this chapter is to examine a few of these definitions. Each of these words has a number of meanings in everyday speech, and the philosopher has a perfect right to select any one of them he pleases, and in doing so he is not open to the charge of attaching an arbitrary meaning to the word. What he has to guard against is the danger of substituting another meaning for the one he has selected. He may also, if he likes, affix to any of these words a special meaning of his own; but then he must remember that he is no longer speaking the language of everyday speech and the people he is addressing must not get the impression that he is speaking about what the common man understands by the word.

Recently the custom has taken root in several quarters to make a distinction between a proposition and a sentence. This, of course, has always been done by philosophers. Our grammars call a command and a question a sentence, and few persons have confused either of these with a proposition. But the recent practice is to differentiate the proposition from what the grammars call the declarative sentence, whereas in the older custom the two

were treated as synonymous. The Logical Positivists, in particular, insist on making the distinction, but the practice is not confined to them. On this interpretation, a proposition is not made up of words like a sentence, but it is what is expressed by a declarative sentence; so that we should not say that a proposition expresses something, but that a declarative sentence expresses a proposition. Dr. A. C. Ewing, who is opposed to the Logical Positivists, puts the matter in this way:

Only sentences can be properly said to have meaning, not propositions. A proposition is what certain sorts of sentences means and cannot again itself have meaning except in a quite different sense of the word "Statement," on the other hand, is used both to stand for a proposition and for a sentence expressing a proposition. I shall use it in the latter sense. (*Mind*, July 1937, p. 347.)

There is some justification in daily usage for this interpretation of "proposition." Thus, we commonly say that a given proposition is true, and by this we do not mean that a given set of words is true, but that what is expressed by the words is true. Hence, it would seem that a proposition is something that is expressed by the words. The chief objection to this interpretation of "proposition" is that it is exceedingly difficult to carry out consistently. The writers who adopt it commonly begin at once to employ the word "sentence" as synonymous with "declarative sentence." Dr. Ewing said that he was going to use the word "statement," not for a proposition, but for a sentence expressing a proposition. In the next paragraph we find him speaking as follows:

I shall first take the extremer form of the theory, according to which a statement is said to be verifiable, and therefore to have meaning if and only if its truth could be conclusively established by sense experience.

If a statement is a sentence, and a sentence is a set of words, is it correct to speak of a statement as being verifiable? We do not say that a set of words is verifiable; we have them before our eyes. It is what the words mean that is verifiable.

But it is particularly the authors of works of Logic who are apt to fall into this confusion. Indeed, in their case the confusion would seem to be unavoidable. Throughout the greater part of their works they are dealing with the proposition, explaining its structure and the function it performs in an argument. They insist upon the correct interpretation of such words as "all," "some," "is," "is not," "if-then" and "either-or," and they speak of these words as

entering into a proposition and determining the class to which it belongs. But if a proposition is not made upon of words, then these words cannot enter into its structure. Certainly no one would be inclined to say that “all,” “some,” “is,” etc., are expressed by the words of a sentence. They *are* the words of a sentence. Again, the logician will warn the student against ambiguity in a proposition. But ambiguity resides only in words, not in the meaning of words. A word is ambiguous when it has two meanings, but a meaning has not two meanings.

The purpose of the writers who adopt this convention is reasonable enough; they are doubtless aiming at accuracy. And we have seen that they can present a fair case in behalf of their position. We speak of proving a proposition, but we do not speak of proving a set of words; therefore, a proposition must be what is meant or expressed by the words. Nevertheless this argument is not without its weakness. It is not uncommon to meet such an expression as “His words were impressive and we were convinced of their truth.” It would seem, then, that the argument in favor of the recent convention is not entirely persuasive. In ordinary speech even the word “word” is used not merely signify a certain sound or a mark of paper, but also that which is expressed by the sound or mark. What Dr. Ewing said of “statement” is true of “word” and “proposition,”—they stand for a mark or sound and also for what is meant by the mark or sound. It is also well known that the words “utterance,” “speech,” “language” and “phrase” have the same two meanings. Not even the word “sentence” is free from this ambiguity.

It would seem, therefore, that we shall have to resign ourselves to a certain amount of ambiguity in these words. But since the ambiguity is the same in all of them, and since we are alive to the ambiguity, there should be very few occasions for serious confusion. We can cling to the older custom which identifies “proposition” with a certain kind of sentence; and when a context occurs in which “proposition” will not bear this interpretation, we can say that the context is elliptical, that is, that in such a case “proposition” is short for “what is expressed by the proposition.”

The older definition of “proposition” is that it is the verbal expression of a judgment. This is also unsatisfactory. The word “judgment” is used in two senses, and in neither of them can the definition be justified. Let us consider these senses separately.

It is customary for the philosopher to say that a judgment is an act of the mind, an act of deciding. If the word “judgment” is taken in this sense, then to say that a proposition is the verbal

expression of a judgment is the same as to say that it is the verbal expression of an act of deciding. But when the philosopher presents us with an example of proposition, it does not fit his definition. "The earth rotates on its axis" is a proposition, but it does not express an act of deciding or an act of the mind. A proposition cannot be said to express something of which it makes no mention. How many propositions mention an act of the mind? The propositions that do so are mostly confined to Psychology and Epistemology.

But the word "judgment" is used not only in the sense of an act of deciding; it is also used in the sense of that which is decided, that is, in the sense of the object of the act. The difference between these two senses of "judgment" is parallel to the difference between "sight" in the sense of a faculty, and "sight" in the sense of that which is perceived by the faculty, as when we speak of a beautiful sight. If "judgment" is taken in this second sense, there are two objections to defining a proposition as the verbal expression of a judgment. First, if this definition were correct, it would be impossible for a man to tell a lie. Secondly, there are many propositions which do not express a judgment in the sense of what is decided; for example, "No men are lawyers," "Some squares are round." Both of these examples are propositions, for they are the contradictories respectively of "Some men are lawyers" and "No squares are round," and the contradictory of a proposition must itself be a proposition. Again, many a proposition is put up for consideration and people are asked to discuss it, though the proposition does not express what is decided by anyone in the party. Most of the propositions in novels and fairy tales are not the expression of judgments.

How, then, is a proposition to be defined? First of all, it is plain from what we have seen that "proposition" is not synonymous with "pronouncement." The proposition, "Some squares are round," is not the pronouncement of anybody. Let us use the word "statement" as a synonym for "pronouncement." The every statement is a proposition, but not every proposition is a statement. The following may be offered as definitions of these words:

A proposition is the verbal expression of something which is put forth for acceptance or non-acceptance.

"Non-acceptance" is here used as short for "rejection or doubt." What the "something" is will be suggested at the end of this paper.

A statement is a proposition purporting to convey what the speaker or writer has decided or what he regards as true.

A proposition which is not a statement we shall call a *mere* proposition.

A statement is a proposition to which a man commits himself. There are various synonyms for "statement," such as "assertion" and "declaration." Neither of these names may be substituted for a mere proposition such as "Some squares are round." A rhetorical question is not a mere proposition, but a statement in the form of a question. There are certain epithets which are not applied to a mere proposition, but which are continually applied to a statement; for example, "candid," "uncandid," "truthful," "untruthful," "deliberate," "dogmatic." These epithets show that there is a personal element in a statement which is absent from a mere proposition; they show that the speaker or writer makes himself responsible for what he says. A man engaged in controversy is disputing, not mere propositions, but the statements of an opponent. Works of a scientific character are mostly made up of statements; novels and fairy tales, most of mere propositions.

Before leaving the consideration of the proposition, one further point should be noted. In works on Logic it is common to classify the hypothetical and the disjunctive proposition with the compound proposition. By a compound proposition we understand two or more simple propositions combined into one. The justification for classifying the hypothetical and the disjunctive with the compound proposition would seem to be that a proposition is a form of expression which possesses the characteristic of being true or false. Now it is of course correct to say that every proposition is either true or false, but that is not a definition of a proposition, any more than it is the definition of a man that he is an animal. There are other forms of expression which possess the characteristic of being true or false; for example, clauses of a certain kind which go to make up a simple proposition. But since this might wear the appearance of a *petitio principii*, let us put the matter in another way. Apart from the tautological proposition, the function of a proposition, at least when it is a statement, is to convey information. Doubtless it does not always fulfil this function. Sometimes it conveys misinformation, and then it is false. But let us consider only such propositions as fulfil their proper function. If, then, we have a compound proposition, that is, two or more simple propositions combined into one, we have a form of expression which conveys two or more items of information. But a hypothetical or a disjunctive proposition does not convey two or more items of information; it conveys only one. Only one item of information is conveyed by the proposition, "If the house is well built, the

foundation is strong.” This is also true of the proposition, “The fish on the line is either a trout or a bass.” The nature of the information conveyed by the hypothetical and the disjunctive proposition will be touched upon later. Let us take an example of a proposition which is admittedly compound: “Peter is a lawyer and a senator.” If a man asserts this proposition, he makes two assertions, viz.: “Peter is a lawyer” and “Peter is a senator.” But the assertion of the hypothetical or the disjunctive proposition we have just mentioned does not involve two assertions.

It is more accurate, then, to speak of the hypothetical and the disjunctive proposition as being composed of *clauses*, and not of propositions. Hence, we may define a hypothetical proposition as a proposition in which one clause, simple or compound, is suggested as implying another. In the disjunctive proposition the implying clause is omitted and replaced by its contradictory. That is why “if-then” is changed to “either-or.” If we insert the implying clause in the disjunctive proposition of the preceding paragraph, the proposition will read: “The fish on the line is a trout or, if it is not a trout, it is a bass.” The implying clause is “the fish is not a trout.”

II

In dealing with the words “judgment” and “inference” (or “reasoning”), we shall take them in their primary meaning, that is, as signifying acts of the mind. We say that a man judges and infers, and by this we imply that he is performing acts. Philosophers commonly mention three cognitive acts: apprehension, judgment and inference. Judgment and inference have this in common: they are both acts of deciding. To say that a man infers B from A is the same as to say that he decides that B follows from A or that A implies B.

First as to judgment. When the philosopher is explaining the nature of judgment, he is accustomed to associate it with the categorical proposition, and from an inspection of this kind of proposition he derives his definition of judgment. His definition will run somewhat like this: “A judgment is an act of the mind by which it affirms or denies something of something.”

The serious objection to this definition is that the words “affirming” and “denying” properly signify an activity of speaking, not an activity of thinking. Speaking and thinking are manifestly two different kinds of activity, and if we are to avoid confusion, we

shall have to describe thinking in terms which do not apply more appropriately to speaking.

When we describe a man's cognitive activities in unambiguous terms, we employ such words as "decide," "apprehend," "accept," "assent," "acquiesce," "reject" and "doubt." None of these expressions is applied to his speech. If, then, we follow the philosopher's example of associating judgment with the categorical proposition, we may lay down the following definition:

A judgment is an act of the mind by which it decides what is normally expressed by a categorical proposition.

The word "normally" is used in the definition to indicate that what is decided need not be expressed, but that if it is expressed, it is expressed by a categorical proposition. In the time of Ptolemy it would not have been unnatural for an astronomer to say: "After making many observations and calculations, I decided that the earth is a sphere." He would not have said: "I affirmed the sphere of the earth" or "I applied sphere to the earth." It is true that in his *statement* he applied the *term* "sphere" to the earth; but this was done by his speech, not by an act of mind.

Another point. It is the practice of philosophers to call a judgment affirmative or negative, and this practice has arisen from the fact that a categorical proposition is affirmative or negative. But the words "affirmative" and "negative" cannot properly be applied to a judgment, no matter in which sense the word "judgment" is taken. This is plain when "judgment" is taken in the sense of an act of deciding, for a categorical proposition does not express an act of deciding. Nor is it correct to apply "affirmative" or "negative" to a judgment when it is taken in the sense of what is decided. When "judgment" is taken in this sense, it is not wrong to say that it is expressed by a proposition, or rather, by a statement; but in such a case, to call a judgment affirmative or negative is to confuse what is expressed with the mode of expressing it. A proposition is affirmative when the copula is "is"; it is negative when the copula is "is not"; but there is no "is" or "is not" in what is expressed by a proposition or in what is decided by a judgment. In a proposition, "is" indicates that what the subject and predicate terms stand for is one object, not two; "is not" indicates that they stand for two objects, not one. When we have one object, and not two, we have *identity*; when we have two objects, we have *distinction*. Hence, instead of speaking of an affirmative and a negative judgment, we should speak of a judgment of identity and a judgment of distinction. There are negative particles, prefixes and suffixes in *language*, but there are none of these things in that

which is expressed by language. You will look in vain for a negative article or prefix in the objects which the mind contemplates—unless indeed the mind is contemplating language. When you have a distinction, both of the objects are “positive.” There is no such thing as a negative object, unless “negative” is used in an entirely different sense, as in the expression, “a negative charge of electricity. When we apply what is called a negative term to an object, it is to indicate that the object is distinct from what is signified by the positive term.

III

As regards the word “inference” or “reasoning” there is no uniform teaching among philosophers, though they have generally accepted the division of cognitive acts into apprehension. We know that the philosopher has recourse to the categorical proposition when he wishes to explain judgment; but he is vague on the subject of inference. Some philosophers associate inference with the syllogism, and especially with the categorical syllogism. This species of syllogism is composed of three categorical propositions. But if a categorical proposition is connected with a judgment, then three such propositions are connected with three judgments. Thus, the explanation has not got beyond judgment. Where does inference come in?

If a categorical proposition is useful in explaining judgment, what kind of expression shall we employ to explain inference? As was noted above, it is common to say that a man infers B from A, and this is the same as saying that he decides that A implies B. Our mode of expressing what is thus decided is the hypothetical proposition: *If A, then B*. The definition of “inference” will, therefore, be as follows:

An inference is an act of the mind by which it decides what is normally expressed by a hypothetical or an equivalent proposition.

But we also say that a man infers the conclusion of a categorical syllogism from the premises. It would seem, therefore, that there is an inference involved in what is expressed by a categorical syllogism. This true, but something else is involved. When a man accepts the conclusion of a categorical syllogism, he makes a judgment, and that is because he considers that the conclusion is *proved* by the premises. But inference does not imply proof; it always accompanies proof, but may exist without it. When a man infers B from A, he does not necessarily consider that B is proved. We are right in inferring the consequent from the

antecedent of the following proposition: *If the defendant is innocent, the court should acquit him*; but in making this inference we are far from thinking that the consequence is proved. Where, then, in the categorical syllogism is the proposition which expresses what is decided by an act of inference? This proposition is omitted from the common mode of stating the categorical syllogism, and one reason for this is the unwieldy character of the proposition.

Let us symbolize a given categorical syllogism as follows:

All M is P

All S is M

Therefore, All S is P

The omitted proposition is this:

If all M is P, and all S is M, then all S is P.

If we prove the antecedent of this proposition, we thereby prove the consequent. In the categorical syllogism, as it is commonly written, the three clauses of this hypothetical proposition are separately asserted to be true, but the proposition itself is omitted. Nevertheless it is this proposition which states what is decided by the act of inference; and a man must know that this proposition is true before he can see that the conclusion is proved. In a syllogism, therefore, the inference precedes the perception of the proof.

IV

It may be inquired whether there is an intrinsic difference between an act of judging and an act of inferring. Both of these acts differ intrinsically from an act of apprehending, but they do not differ intrinsically from each other. they are both acts of deciding, and the difference consists, not in the acts themselves, but in what is decided by the acts. According as what is decided is expressed by a categorical or a hypothetical proposition, the act is a judgment or an inference. Viewed intrinsically, therefore, there are only two cognitive acts: the act of apprehending and the act of deciding. We shall call these two acts apprehension and decision.

There has been considerable controversy among philosophers on the on the question whether, after all, apprehension and decision are distinct acts. When we have apprehended something, have we not achieved a knowledge of it? where is the need of our performing a distinct act of decision? Nevertheless the acts are

distinct. When a man hesitates between what is expressed by two contradictory propositions, he apprehends what is expressed by both, but he does not decide either way. There cannot be a doubt without an apprehension of what is doubted. We have in this case an instance of apprehension without decision—unless we take into consideration the decision that the matter is doubtful. The man withholds his decision because, though he apprehends, his apprehension does not extend far enough. In error also the apprehension does not extend far enough, though in error there is decision—a wrong decision. again, in mere recollection there is apprehension, but no decision. in the cases in which a man's decisions are correct and fully justified, the apprehension is a *discovery*, that is, the apprehension of something new. I have maintained in another connection (cf. p. <53>) that a man does not repeat a decision or a judgment he has once made, unless he has forgotten or revoked his decision. what some philosopher have called “a repeated judgment” is in reality an act of recollection—a recollection of what has been decided. What has once been decided remains decided, unless a man loses the memory of it or unless he has occasion to revise his decision.

The decision consists of this: *it is a refusal to search because search is seen or appears to be unnecessary*. When a man refuses to search because he *sees* that search is unnecessary, he is in possession of certitude. When search is not seen, but *appears*, to be unnecessary, the man is in possession of opinion, and he may be right or wrong in his opinion. It is plain that the refusal to search follows upon an adequate or an inadequate apprehension, and therefore, it is distinct from apprehension. Unlike apprehension, decision is not a transient, but an enduring thing, and for this reason we could speak of it as a *state of mind* which follows upon apprehension.

V

One final point remains to be considered. We have endeavored to explain the difference between the object of a judgment and that of an inference by referring to the categorical and the hypothetical proposition. We were led to adopt this expedient in the case of judgment, because it is the expedient usually adopted by philosophers when they are engaged in explaining the act of judging. Hence, there is nothing arbitrary in our associating the categorical proposition with the act of judging. However, there is something lacking in our explanation. In common speech the universal categorical proposition is often made to perform two

functions, and one of these functions is to express what would be more appropriately expressed by a hypothetical proposition. Thus, the following propositions have the same meaning:

A moving body uninfluenced by an external force will move indefinitely in a straight line.

If a moving body is uninfluenced by an external force, it will move indefinitely in a straight line.

These propositions have these in common, that the subject of the first and the antecedent of the second stand for an object which need not be known to be real in order that the proposition itself should be known to be true. What in this case is a characteristic of the categorical proposition is a characteristic of the hypothetical proposition in every case: it purports to convey information about an object which need not be known to be real. But in the majority of cases the categorical proposition performs a different function: it purports to convey information about an object which is known to be real. It is only when the categorical proposition performs this second function that it can be said to express an object which is different from the object of an inference; and hence, it is only in this case that the categorical proposition should be associated with the act of judging. Both the act of judging and the act of inferring, when performed correctly, are acts by which we gain information about an object. Consequently, if we suppose that these acts are performed correctly, we may define them as follows:

A judgment is an act by which we gain information about an object which we know to be real.

An inference is an act by which we gain information about an object which we need not know to be real.

When we employ the hypothetical proposition, we often in fact know that the antecedent stands for something real, and we often know that it stands for something unreal; but we do not allow this knowledge to come into play when we make an act of inference or when we employ the hypothetical proposition. This kind of proposition is not intended to tell us whether the object is real or unreal. It may be asked how it is possible to gain information about such an object, and especially when we in act know it to be unreal. The proposition, *If the house on the hill is well built, the foundation is strong*, expresses information we have gained about the well-built house on the hill, and the proposition remains true, whether the well-built house is real or unreal. The information we have gained about the house is, that it cannot be without a strong

foundation. The proposition, *If X, then Y*, expresses information we have gained about X, namely, that it cannot be without Y. Let us take the proposition in which the antecedent stands for something which we know to be unreal:

If a circle is square (= if there is a square circle) it has four right angles.

Though the antecedent here stands for an object which is obviously unreal, nevertheless the proposition is true. What enables us to gain information about such an object is, that in the case of every unreality, there are two features which are known to be real:

- (1) the *elements* which are suggested as coalescing in the object, and
- (2) the *suggestion* that they coalesce.

It is the suggested *coalescence* that is unreal. We gain the information because of the suggestion and because of the elements; and all of these are known to be real. A square is real, and so is a circle, and we know that a square has four right angles. It is because of our knowledge of the reality which is a square that we gain the information about the square circle, namely, that it cannot be without four right angles.

It has already been remarked that when the cognitive act is divided into apprehension and decision, the difference between the acts is intrinsic, but when decision is divided into judgment and inference, the difference is not intrinsic, but resides in the objects of the acts. This point may perhaps be made somewhat clearer if we employ two philosophical terms which have largely passed out of use in modern philosophy: "material object" and "formal object."

The material object of a cognitive act is the object *which* is contemplated, and the formal object is the object *so far as* it is contemplated. If we let the propositions (1) *A is B* and (2) *C is not D* stand for the objects of judgments, then *A* and *C* are the material objects of (1) and (2) respectively. In (1) the formal object is *A* so far as it is viewed as a *thing which is identified with B*. In (2) the formal object is *A* so far as it is viewed as a *thing which is distinct from D*. In the proposition, *If X, then Y*, the material object of the inference is *X*, and the formal object is *X* so far as it is viewed as a *thing which cannot be without Y*. The acts of judging and inferring are, therefore, chiefly differentiated by their formal objects. Now if we recur to the definition of "proposition" which was given earlier in this paper, we may put the matter in this way: In the case of every proposition, it is one of these formal objects which is put

forth for acceptance or non-acceptance. Accepting it means deciding that it is real, and rejecting it means deciding that it is not real.

An object which is accepted is often indicated by a proposition beginning with “There is (or are),” and an object which is rejected is indicated by a proposition beginning with “There is (or are) No,” thus:

There are *men who are clever*

There are no *horses that are rational*

What has just been said about accepting and rejecting an object may be illustrated by the following concrete examples:

- (a) The earth rotates on its axis
- (b) Horses are not rational”
- (c) If the house is well built, the foundation is strong
- (d) There are no horses that are rational

These propositions will be resolved as follows:

- (a) The earth, viewed as identified with a thing that rotates on its axis, is real
- (b) Horses, viewed as distinct from rational beings, are real
- (c) The well-built house, viewed as a thing that cannot be without a strong foundation, is real
- (d) Horses, viewed as identified with rational beings, are not real.

We may bring this discussion to a close by indicating two main conclusions that follow from it:

- (1) So far as the exercise of judgment and inference is concerned, the whole effort of the human mind in its dispassionate moments is directed towards the attainment of the real, and it refuses to rest content with anything that appears to fall short of the real.
- (2) The real, so far as it is known to the mind, is the test to which

Thus, the expression “giving a reason” or “proving,” when correctly employed, has the same meaning as “appealing to something real.”

IV. The Definition of Certitude

THESIS 1

1. *Certitude is a firm assent to a perceived truth.*

This thesis is laid down in order to determine the definition of the word “certitude.” Unless we have a clear idea what is meant by the word “certitude,” our discussions in Epistemology will be fruitless.

The word “firm” in the definition signifies that the assent is unwavering.

By “perceived truth” we mean a truth which has been brought home to the mind by adequate evidence or proof.

N.B. All proof is evidence, but not all evidence is proof. *Proving* means making evident something that is not evident.

2. When we say that certitude is a firm assent to a perceived truth, we mean that the firm assent is based upon and is determined by a perception of the truth. Men at times adhere stubbornly to what is false, and claim that they are certain.

There are three kinds of firm assents.

The first is that which is given to a perceived truth, and in which the perception of the truth is the reason why the assent is given; this is certitude properly so-called.

The second is that which is given to what is false, but appears to be true.

The third is that which is given to a truth, when the truth is not perceived.

Gailileo’s assent to the motion of the earth round the sun was an assent to a truth, but was not a certitude, because it was not an assent to a *perceived* truth; for he did not have an adequate proof of the phenomenon. He was right *per accidens*,—he *happened* to be right,—but in order to be certain, he should have been right *per se*, that is, in virtue of evidence or proof.

NOTE: We shall begin the proof of each thesis with a syllogism. We do not wish to be understood by this to imply that a bare syllogism is in every case sufficient to establish the thesis. Frequently we shall have to append a proof of the major premise or

of the minor or of both. We have adopted this method solely for the sake of clearness and brevity. Again, when it suits our convenience, we shall state the *logical* minor premise before the *major* premise; but in the proof of the premises we shall call that premise the *major* premises which comes first; the second premise we shall call the *minor* premise.

3. PROOF OF THESIS: Certitude is the most perfect attainment of truth.

But the most perfect attainment of truth is a firm assent to a perceived truth.

Therefore certitude is a firm assent to a perceived truth.

The *Major*: The words "certitude" and "certain" are the words which people use when they wish to designate that act or state of mind in which truth is perfectly attained. When a man says "I am certain of the matter," and afterwards discovers that he was wrong, he commonly uses some such expression as "after all, I was not certain, though I thought I was." This shows that when a man uses the word "certain" deliberately, he means that he has perfectly attained the truth.

Minor: That the most perfect attainment of truth is an assent to a truth, is obvious. It must also be an assent to a *perceived* truth, that is, to a truth which has been brought home to the mind by adequate evidence or proof; otherwise it would only be an accident that the assent was given to a truth, and the mind would not *know* that it was assenting to a truth. The assent must also be *firm*, that is, unwavering; for if the assent were hesitating, it could not be called the *perfect* attainment of the truth.

4. It is only in judgment and in inference that we have assent. Since there is no assent in apprehension, and since it is only by assenting to what is not true that we make a mistake, we cannot make a mistake by apprehension. Hence it is only by judgment or inference that we fall into error.

We have seen that certitude is a firm assent to a perceived truth. According as one or other of the elements of this definition is lacking, we have *error*, *prejudice*, *doubt* or *opinion*.

Error is an assent to a falsity; that is, it is an assent to a proposition which is not true.

Prejudice is a firm assent to a falsity or to a truth which has not been perceived. The characteristic of prejudice is that the assent is *firm* though there is no objective ground for the firmness. As is

plain from the definition, there may be true prejudices as well as false.

Doubt is a suspension of assent. It is a hesitation of the mind to pronounce a proposition true or false. A question is the method we ordinarily employ to convey our doubt to others.

N. B. A man is said to doubt only when a proposition is actually present to his mind and he withholds his assent from it.

Opinion is an assent to something with a recognition that it may not be true.

V. Universal Scepticism

1. *Sceptics* are persons who say that certitude is impossible to the human mind or that it is possible only for a few subjects.

Universal scepticism denies that certitude can be obtained about anything whatever.

Partial scepticism denies that certitude can be obtained outside a certain class of subjects.

Protagoras of Abdera (480 B.C.) claimed that all knowledge is *relative*, and that there is no objective truth. From this it follows that a proposition and its opposite are equally true, if they appear to different persons to be true. His famous dictum was, "Man is the measure of all things."

Pyrrho of Elis (365 B.C.) held that real things cannot be known and that we should abstain from judging in order to reach a state of imperturbability, which is man's supreme happiness.

Arcesilaus (316 B.C.) and Carneades (210 B.C.) maintained that probability was all that was possible to the human intellect.

Among the Romans the chief exponent of scepticism was Sextus Empiricus (150 A.D.). The leaders of the modern skeptics were Montaigne (1533-1592), Bayle (1647-1706), and Hume (1711-1776). Hume denied any connection between cause and effect, and declared that both mind and matter were mere phenomena, that is, mere appearances.

THESIS 2

2. The doctrine of universal scepticism cannot be professed without self-contradiction; the state of mind of universal scepticism is intrinsically impossible.

The *doctrine* of universal scepticism is that the human intellect cannot acquire certitude about anything, that everything is doubtful and that therefore we should doubt about everything.

Universal scepticism, *as a state of mind*, is a continual suspension of all assent to anything.

In our thesis we do not say that it is impossible for a man to be a partial sceptic, but that he cannot be a universal sceptic. Nor,

again, do we maintain that it is impossible for a man to *say* that he is a universal sceptic or honestly to *think* that he is; but we say that it is impossible for him to *be* a universal sceptic in reality. The mere physical inability to exercise assent does not constitute a man a sceptic; otherwise a man who is unconscious or asleep would *ipso facto* be a sceptic. He alone would be a universal sceptic who in the full possession of his faculties should deliberately withhold his assent from everything whatever.

It is important to notice carefully the wording of the thesis. The first part deals with the *profession* of the *doctrine*, and it says that the *doctrine* cannot *professed* without self-contradiction. The second part deals with the *state of mind*, and it says that the *state of mind* which withholds all assents whatever is *impossible*. In the thesis we do not say that the doctrine of universal scepticism is impossible, nor do we say that the doctrine involves a self-contradiction. The doctrine is stated in the proposition: "Everything is doubtful," or "Nothing is to be accepted as true"; and this proposition is not self-contradictory. The following is an instance of self-contradictory proposition: "Epimenides, the Cretan, says that Cretans never speak the truth." What we say in the thesis is, that the doctrine of universal scepticism cannot be *professed* without self-contradiction; that is, that the man who should attempt to profess the doctrine would contradict himself. To profess a doctrine means to profess to *accept it as true*.

3. PROOF OF PART 1: *The doctrine of universal scepticism cannot be professed without self-contradiction.*

The doctrine of universal scepticism cannot be professed without self-contradiction if the very act of professing it would involve professing a pair of contradictory propositions.

But the very act of professing the doctrine of universal scepticism would involve professing a pair of contradictory propositions.

Therefore the doctrine of universal scepticism cannot be professed without self-contradiction.

The *Major* is evident.

The *Minor*. The minor is true, because the very act of professing the doctrine of universal scepticism would involve professing the two following propositions:

1. Nothing is to be accepted as true;
2. Something (*viz.*, the proposition, "Nothing is to be accepted as true") is to be accepted as true.

1 is the doctrine of universal scepticism; and in order to profess 1, a person would have to profess 2; for professing a doctrine means professing to accept it as true; and 1 and 2 are a pair of contradictory propositions.

Moreover, the universal sceptic is prevented by his doctrine from arguing in favor of the proposition that nothing is to be accepted as true; for his premises should not, on his theory, be accepted as true, and hence they cannot be used to prove the proposition that nothing is to be accepted as true. But the professed sceptic does use these premises and thus is continually contradicting himself and showing that he is not a universal sceptic at all.

Again, by the very fact of arguing he acknowledges that he knows with certitude the difference between the true and the false, between what is certain and what is uncertain, between knowing and not knowing.

A man involves himself in a contradiction when he uses the reasoning of the intellect to prove that that reasoning cannot be relied upon; and this is what the sceptic attempts to do.

It is absurd to call in question or to deny what the whole human race is convinced of and adheres to with relentless persistency in spite of the advance of science in all its departments. The whole human race is inflexibly convinced that it can acquire truth with certitude, for it does hold many things as true and certain. The sceptics themselves do it; otherwise they could not attempt to argue.

4. PROOF OF PART 2: *The state of mind of universal scepticism is intrinsically impossible.*

A state of mind which requires the presence of elements which utterly exclude each other is intrinsically impossible.

But the state of mind of universal scepticism requires the presence of elements which utterly exclude each other is intrinsically impossible.

Therefore the state of mind of universal scepticism is intrinsically impossible.

The *Major* is evident.

The *Minor*: The state of mind of universal scepticism requires the presence of elements which utterly exclude each other, because it requires the presence of the two following elements:

1. That I doubt the proposition: (a) The earth is round;

2. That I doubt the proposition: (b) The proposition, "The earth is round," is present to my mind.

The state mind of universal scepticism requires that, in doubting (a), I also doubt (b); for this state of mind requires that I doubt everything whatsoever. But it is impossible to doubt both (a) and (b); for, in order to doubt a proposition, I must have that proposition before my mind; that is, I must *know* what I am doubting about. Doubting is not the same as being unconscious.

5. NOTE ON THE SOLUTION OF OBJECTIONS. As in the proof of each thesis we endeavor to combine clearness with brevity, the same object will be kept in view in the method we shall adopt for the solution of objections to the thesis. When a proposition in an objection admits of more than one interpretation, it will be *distinguished*, that is, the sense in which it is true will be discriminated from the sense in which it is false; the former will be granted, and the latter denied.

When the major premise is distinguished owing to the fact that the *middle term* may be taken in two sense, the minor premise will have to be distinguished too, because in this premise also the middle term will admit of two sense. When the minor premise is distinguished on account of ambiguity in the middle term, we are said to *contradistinguish* the minor premise; because, while the middle term gives us a true proposition when combined with the major term in one sense, it gives us a false proposition when combined in the same sense with the minor term.

Sometimes, after distinguishing the major or the minor premise, it is necessary to make a further distinction in the same premise. We are then said to *subdistinguish* the premise.

When the *major term* is ambiguous, the major premise and the conclusion are to be distinguished. When the *minor term* is ambiguous, the minor premise and the conclusion are to be distinguished. In both cases we are said to *distinguish the conclusion in like manner*.

In the solution of objections we shall employ the following abbreviations:

Dist. maj. (distinguo majorem) = I distinguish the major (premise).

Dist. min. (distinguo minorem) = I distinguish the minor (premise).

Contrad. min. (contradistinguo minorem) = I contradistinguish the minor (premise).

Subd. (subdistinguo) = I subdistinguish.

Par. Dist. Cons. (pariter distinguo consequens) = I distinguish the consequent (conclusion) in like minor).

Conc. (concedo) = I grant.

Nego = I deny

Nego suppositum = I deny what is assumed by the proposition.

Trans. (transeat) = Let it pass.

Dist. ant. (distinguo antecedens) = I distinguish the antecedent.

6. OBJECTIONS:

(1) That system which is immune from error should be adopted. But universal scepticism is immune from error. Therefore universal scepticism should be adopted.

Dist. maj.: which is immune from error and contains some truth, *Conc.*; which is merely immune from error, *Nego. Contrad. min.:* universal scepticism is immune from error and contains some truth, *Nego*; merely immune from error *Trans.* As a matter of fact it does contain error in its doctrine.

(2) That which cannot be refuted is true. But universal scepticism cannot be refuted. Therefore universal scepticism is true.

Dist. maj.: A doctrine which cannot be refuted is true, *Trans.*; a state of mind which cannot be refuted is true, *Nego. Contrad. min.:* The doctrine of universal scepticism cannot be refuted, *Nego:* the state of mind of universal scepticism cannot be refuted, *Conc.* A state of mind is not the kind of thing that is refuted, any more than a mountain is; but we can refute the proposition that a given state of mind exists or is possible.

(3) Either we know that we are in error or we do not. If we know that we are in error, error is impossible, which is absurd. If we do not know that we are in error, we ought always to be in fear of falling into error and hence there can be no certitude..

We deny the *major*, and add a third alternative, viz. "or we know that we are not in error." To put forth such an objection is like arguing in the following manner: "Either you know what an ass you are or you do not know what an ass you are." This proposition assumes that the man is an ass and leaves out the important third alternative that the man knows he is not an ass.

(4) The preceding objection may be stated more plausibly as follows: *When we are in error*, we either know it or we do not. If we

know it, error is impossible (since we cannot knowingly assent to what is false) and this is absurd. If we do not know that we are in error, we ought *always* to be in fear of falling into error, and hence there can be no certitude.

This objection commits the fallacy of arguing from a special case to a universal rule. The premises refer merely to the cases *when we are in error*, and have no reference to the numberless cases *when we are not in error*. Consequently, the conclusion should not be: "We ought *always* be in fear of falling into error and hence there can be no certitude"; the conclusion should be: "When we are in error we ought to be in fear of falling into error, and hence there can be no certitude when we are in error."

(5) There is a great diversity of opinion among different nations and even among philosophers. Therefore it is impossible to arrive at the truth.

Dist. ant.: on matters that are evident, *Nego*; on matters that are obscure, *Conc.*

(6) Frequently in the past we thought that we had perceived a truth and were deceived. Therefore we can never attain to truth.

I deny the *sequence*: - How did we find out that we had been deceived? It was only by learning the truth. He who says that we cannot learn the truth because we have once been deceived, contradicts himself, because we could not know that we had been deceived unless we had learned the truth.

7. Before the mind can be certain of anything, it ought to know perfectly the nature and all the attributes of the thing; otherwise there can always be a legitimate doubt or fear lest one of the hidden attributes should contradict the ones we thought we knew.

We deny the assertion and distinguish the proposition adduced in proof: there can always be a legitimate doubt lest one of the hidden attributes should contradict one of the attributes of whose existence we have no absolute evidence or proof, *Conc.*; should contradict an attribute whose existence is perfectly evident to us, *Nego*. No hidden attribute of common table salt can contradict the fact that the salt is white and not purple. Though we may not know all the attributes of a circle, we know enough to be sure that it is not a square. We may not know every thing about an apple tree, but we know that it is not a barrel of water, or a shoe lace, or the tail of a fish; moreover we know that it produces apples and not turnips or cucumbers.

VI. The Cartesian Doubt

Nowadays the words “problem” and “doubt” possess a talismanic power. It is interesting to observe the fascination they exert over a certain class of minds. In many circles it has become a fashion to introduce them into every topic of discussion. Even Abbot Dimnet seems to have yielded somewhat to their spell, as witness the following sentence from his *Art of Thinking*: “The student must acquire the habit—which both Descartes and Schopenhauer regard as the fundamental philosophical attitude—not to receive anything as true or beautiful, but to consider everything as a problem” (p. 146. Emphasis his.) In this passage the Abbot does but echo a sentiment which has high sanction in many of our academic centres. The use of the word “problem” is esteemed a mark of intellectual distinction. View everything as a problem, and you will receive your first papers of admission to citizenship in the Republic of Higher Thinking.

The man who, if not the founder of the Problem School of Philosophy, certainly gave it life and momentum, was Rene Descartes, and down to this day he remains the prime oracle of the school. His influence is visible nearly everywhere in philosophy outside the tradition of Plato and Aristotle. The catalogue of prominent names who bow to him is an impressive one.

The trouble with the fundamental dictum of this school—that everything should be considered as a problem—is that it cannot be reduced to practice. What is worse, it defies even the attempt to reduce it to practice. Of course, a man may delude himself into thinking he is doing so. So singularly futile is the dictum, that one wonders at times whether its champions really expect to be taken seriously and whether they are not indulging in exaggeration for rhetorical effect. Can it be that we are doing them an injustice in attaching a literal meaning to their words when, after all, they are but employing cryptic phrases whose sense is revealed only to the initiate? However that may be, the remarks which follow are offered on the understanding that the words of these philosophers are to be interpreted literally.

In the eyes of his worshippers, Descartes’ chief title to fame in philosophy is his proposal of a universal doubt as a method of reaching certitude. He claimed in his own case that he was able to push this method to the point of doubting everything except his

own existence. This doubt of Descartes', being entertained, not for its own sake, but for a definite purpose, viz., the acquisition of certitude, was called the Methodic Doubt. Descartes attempted to justify this doubt on two grounds: first, the fact that we have made mistakes; secondly, the possibility that we are the victims of a malignant spirit who is perpetually deceiving us. Let us consider these reasons in order.

Descartes appeals to the various occasions on which we have been led into error by our senses, by our reason, by our memory, and by human testimony. Therefore, he says, we must withdraw our assent from everything that has come to us from these sources and we must doubt everything except our own existence. This conclusion of Descartes is open to criticism from two directions. In the first place, a sensible man, when he finds himself in error in any matter, learns a lesson from that error and takes precautions against its repetition. He does not simply forget it or doubt its occurrence. But Descartes would have him doubt whether the error ever took place, for he is commanded to doubt everything except his own existence.

In the second place, since the Methodic Doubt means that we should doubt everything except our own existence, it means that we should doubt the arguments or reasons which are advanced in favor of the Methodic Doubt. If, therefore, in obedience to the rule of the Methodic Doubt, we doubt the reasons for it, why, then, we have no reason for adopting it. How can a man reasonably accept the rule of the Methodic Doubt when, in order to do so, he must doubt the reasons for it?

Descartes' reasons for urging the adoption of the Methodic Doubt may be stated in the following propositions:

- (1) we have been deceived by our senses;
- (2) we have been deceived by our reason;
- (3) we have been deceived by our memory;
- (4) we have been deceived by human testimony;
- (5) we have been deceived by dreams.

Each of these propositions expresses a truth which is evident to us and which we accept. But these truths would not be evident to us unless each of them was certified to us by an additional evident truth. It is impossible for us to find ourselves in error unless the discovery of some truth reveals to us that we have been in error. The *discovery* of personal error has no tendency whatever to cast doubt upon the mind's power to acquire truth. On the contrary, it

is a strong vindication of that power, for it always means an increase in our knowledge. It always involves the acquisition of at least two truths, and frequently of many more. The two truths are, first, the truth that we had made a mistake, and secondly, the truth which brought home to us that we had made a mistake. Moreover, the discovery of such error commonly carries with it this signal benefit, that it warns us away from the path-on which our feet have stumbled, and thus diminishes the chance of similar error in the future.

Observe that Descartes is appealing to our memory to attest the truth of the foregoing propositions, for in each instance he is appealing to the past. Hence, by his own argument, there are cases in which we know that our memory may be trusted. Now, what is Descartes' procedure? He adduces the evidence of all these truths as a proof that they are not evident and, therefore, that they should be doubted! If nothing is evident except our own existence, then none of the foregoing propositions is evident. When the premises or reasons are stated as evident, surely the conclusion cannot be that the premises are not evident.

This procedure of Descartes' is typical of the whole sceptical school: everyone of its arguments commits suicide. In the nature of things, it could not be otherwise. To set out to obtain evidence or proof of the proposition that nothing is evident is essentially a hopeless enterprise.

Let us now consider Descartes' second plea for the Methodic Doubt, viz., that it is possible we are at the mercy of a malignant spirit who is deceiving us in everything.

The first remark to be made upon this supposition is that it cannot possibly be supported by argument. Any attempt to argue in favor of it destroys the supposition or, if we like, the supposition destroys the argument, just as the Methodic Doubt nullifies every attempt at argument in its behalf. As a matter of fact, the supposition may be regarded as merely another way of stating the doctrine of the Methodic Doubt.

The introduction of the malignant spirit is irrelevant to the issue. What constitutes the point of the supposition is not the cause of the deception, but the deception itself. The point, then, is expressed in this proposition: "It is possible we are deceived in everything."

The proposition, "It is possible that we are deceived in everything," cannot possibly be accepted as true. In order to understand the proposition at all, we must know what it is to be

deceived, and we gain this knowledge only through experience of deception. Certainly the knowledge must come to us from some direction. A prerequisite, then, to an understanding of the proposition is that we should *not* have been deceived in everything. Our knowledge or experience of deception cannot itself be a deception; else we should put a wrong interpretation on the word “deceived” in the proposition, and we should be unable even to understand or contemplate the supposition which Descartes sets, before us.

There is nothing in the foregoing criticism of Descartes’ position that does not apply with equal force to Abbot Dimnet’s advice to the student which was quoted above: “The student must acquire the habit . . . not to receive anything as true or beautiful, but to consider everything *as a problem*.” The student cannot accept this advice of the Abbé. If he is to consider everything as a problem, he must consider this advice as a problem; and as long as he considers it as a problem, he cannot accept it. In fact, the very words of the Abbé are an appeal to the student not to receive the advice as true.

The minimum requirement of any philosophy is consistency in essentials. Doubtless even the greatest minds are betrayed from time to time into inconsistency. The weariness which follows upon prolonged concentration is in many cases the explanation of this phenomenon. But one of the distinctive marks of the true philosopher is a readiness, nay, an eagerness, to relinquish a position once he has found it to be inconsistent.

Descartes furnishes a striking instance of a man of undoubted genius and scientific attainments going astray in the field of philosophy. But his case is by no means a solitary one. Indeed, one of the most frequent phenomena to be observed in the history of philosophy is how the philosopher will fall asleep in the midst of his speculations, how he will remain in a semi-conscious state throughout his life, and how he will fail to notice certain essential points in his subject matter which are staring him in the face. Horace’s celebrated saying *quandoque bonus dormitat Homerus*, has an application far beyond the realm of poetry.

When in his *Discourse on Method* Descartes is engaged in laying down precepts for the guidance of scientific investigation, he is admirable and he well deserves the applause which has come to him from men of science. Separate sharply the certain from the uncertain; reduce involved and obscure propositions to those that are simpler; subject what claims to be a proof to a severe scrutiny before acquiescing in it; such are some of Descartes’ rules of

procedure, and it is obvious that their observance will have an important influence on the progress of science. Descartes' vision was clear and steady when his subject was mathematics, but it faltered and grew dim when he entered the field of philosophy. The reason was that he lost sight of his own rules. And by a strange freak of fate, most modern philosophers have exhibited the same weakness that showed itself in Descartes. Instead of guiding themselves by the rules which Descartes had formulated, they put them aside, and fastened upon the crudest and most indefensible part of Descartes philosophy and extolled *that* as his great achievement.

The modern philosopher has an itch for the bizarre, for what is paradoxical, sophistical and startling. Let the choice be between what commends itself to the common sense of mankind and what flies in the face of it, and we may be fairly sure beforehand that the philosopher will give his sanction to the latter. The result is the bewildering mass of confusion which is spread before us at the present day and dignified by the name of philosophy. Whatever weakness may justly be laid to Descartes' account, there is one fault which can rarely be charged against him even when he is occupied with questions of philosophy, and that is obscurity. He may be wrong in his conclusions, but there is scarcely ever any doubt as to his meaning. In this he is a sharp and vivid contrast to the philosophers who have succeeded him, especially since the time of Kant. Kant is the father of the modern confusion. Some chronic dislocation in the mental equipment of the modern philosopher drives him towards the vague and the mysterious, and impels him to frown upon what is clear and simple and straightforward. Clearness seems to be identified in his mind with shallowness. It is plain from the principles of Descartes that this delusion must be conquered before there can be any hope of a prosperous career for philosophy.

A suggestion might be offered as a possible explanation of the weird fancy of Descartes which we have been discussing. First, it may be that he was inadvertently contemplating, not his own mind, but mind in the abstract, or the mind of another person, say, Mr. Nemo. Now, the supposition that Mr. Nemo may be deceived in everything possesses *prima facie* a semblance of consistency, though even in this case the supposition will not bear examination. But even if we could consistently make this supposition in regard to Mr. Nemo's mind, we could not do it in regard to our own.

Secondly, Descartes may have confused doubt with inattention or oblivion or ignorance; and there is ground for suspecting that he did so. Certainly, if anything is clear from his writings, it is that he never came anywhere near exemplifying the rule of the Methodic Doubt in his own person. It is one thing to doubt a proposition; it is a very different thing to turn one's attention away from it or to forget it or to be ignorant of it. We may divert our attention from the invention of the telephone, but this does not mean that we doubt that invention. When a man is in a state of dreamless slumber or has fallen into a fainting fit, everything has passed out of the focus of his attention, but he does not doubt everything; otherwise you could turn a man into a universal sceptic by the simple expedient of drugging him or knocking him senseless with a club, and the bulk of humanity would become universal sceptics every night in the year. Doubting is a positive act, and can be performed only by a person in the possession of his senses. In order to doubt a proposition it is essential to have the proposition before the mind, to know what it is that one is going to doubt. A man cannot doubt the presence of the proposition the truth of which he is doubting. Where there is no knowledge, there can be no doubt. For this reason a universal doubt is an intrinsic impossibility.

The word "prescind" is of familiar occurrence in philosophy. It means to fasten one's attention upon one or two things or attributes and to leave everything else out of view. If we substitute "prescind" for "doubt" wherever it occurs in Descartes' essay, we shall find that, up to a point, we are able to frame a fairly plausible case for his contention. If we set about determining, not how far we can carry our doubt, but how far we can go in excluding objects from our attention, we shall discover that we are able to extend the process of exclusion to the point which Descartes fancied he had reached by the exercise of doubt. What are we able to exclude from attention consistently with the exercise of attention? This is almost equivalent to the question, How far can we carry the process of analysis? It is a profitable exercise to push our analysis to the furthest limit. It is in this way that we arrive at first principles and gain that fundamental insight into reality which is the goal of philosophical speculation. But analyzing or prescinding does not mean doubting everything that is left out of thought.

By all means, then, let us analyze; let us not cease from analysis till we have penetrated reality to the core; let us insist upon evidence for that which we accept with a full acquiescence; but in the name of all that is reasonable, let us not pretend to

doubt when we are not doubting; above all, let us not allow our conclusion to give the lie to our premises.

THESIS 3

No reasonable man can demand a proof of every truth before assenting to it.

PROOF: No reasonable man can be a universal sceptic.

But he who demanded a proof of every truth before assenting to it would be a universal sceptic.

Therefore no reasonable man can demand a proof of every truth before assenting to it.

The *Major* is evident from thesis 2.

Minor. He who demanded a proof of every truth before assenting to it would be prevented from assenting to any truth whatever; for he would have to demand a proof of the premises by which the truth is proved, and then again he would have to demand a proof of the premises by which the truth of these premises is proved, and so on forever. Thus he would be prevented from assenting to any truth whatever, and hence he would be a universal sceptic. Every proof must start with some certain principle which is accepted as certain, that is, assented to; and the truth to be proved is only so far certain as the principle is certain by which it is proved. *Proving* means *making evident* something which is not evident. If a truth or a proposition is self-evident, it is useless to attempt to prove it; to attempt to prove it would be to attempt to make evident something which is already evident; it would be like trying to illuminate the sun with a candle.

VII. Idealism

1. *Idealism* is the doctrine which asserts that the objects of knowledge, whether sensuous or intellectual, are ideas possessed by the thinking subject, and that nothing outside the ideas corresponds to them or, at least, is known to correspond to them.

Absolute idealism is the doctrine which denies that there is any evidence for the existence of any being, any “non-ego” outside the Universal Consciousness. This is the doctrine of Fichte, Schelling, Hegel, and Schopenhauer. “The world,” says Schopenhauer, “is my representation.”

Empirical idealism is the doctrine which denies that there is any evidence for the existence of any substance whether within or outside the consciousness of the individual. This doctrine is upheld by Locke, Hume, John Stuart Mill, Bain, Comte, Taine, and Littré. For these philosophers there is nothing substantial, and nothing existing outside actual sensations.

The advocates of empirical idealism are called *Subjective Idealists*. Their contention is that it is impossible for us to go beyond the idea or sensation which is actually present in consciousness so as to make sure that there is an object distinct from the idea or the sensation. For this reason subjective idealism has been appropriately called *Solipsism*, that is, belief in one’s self alone. The subjective idealists do, however, admit that the object of memory is really distinct from memory where memory has to do with past ideas or sensations. This concession, as regards memory, was forced from Mill by William George Ward. Mill says, “The psychological theory cannot explain memory”; and again, “Our belief in the veracity of memory is evidently ultimate; no reason can be given for it which does not presuppose the belief and assume it to be well grounded.”

Locke said, “Since the mind in all its thoughts and reasonings hath no other object but its own ideas, which it alone does and can contemplate, it is evident that our knowledge is only conversant about them.” (Essay, B. IV., 1.)

Hume speaks as follows: “All the perceptions of the human mind resolve themselves into two distinct kinds, which I call impressions and ideas. The difference betwixt them consists in the degree of force and liveliness with which they strike upon the

mind, and make their way into our thought or consciousness. Those perceptions which enter with most force and violence we may name impressions, and under this name I comprehend all our sensations, passions and emotions, as they make their first appearance in the soul. By ideas I mean the faint images of these in thinking and reasoning.” “I never catch myself at any time without a perception, and I never can observe anything but a perception.”

Berkeleian idealism is the doctrine which denies that there is any evidence for the existence of corporeal substance. Berkeley, the chief advocate of this species of idealism, maintained that bodies are nothing outside of our ideas. According to him their being consists in being perceived. The only substances he admitted were immaterial, unextended substances. He maintained that all the sense-impressions which we call material were to be ascribed, not to the action of any independent matter, but to the immediate agency of God.

2. *Sense* is either perceptive or appetitive. In Epistemology we are concerned only with those senses which are faculties of perception. Sense, then, as a perceptive faculty, is a faculty by which we become aware of corporeal things or activities in a corporeal way.

A *corporeal* thing is a thing which is naturally extended.

Corporeal activity is the activity of a corporeal thing.

Sensation is the perceptive act of a sense; that is, it is the act by which a perceives a corporeal thing or a corporeal activity.

The *internal senses* are faculties by which we become directly aware of our own bodies and of corporeal activities within ourselves.

The *external senses* are faculties by which we become directly aware of corporeal things or activities outside ourselves; they are faculties for perceiving external bodies by an impression produced in an organ.

3. There are three things to be considered in the act of sense perception, viz., the faculty, the object, and the condition of perception, that is, the stimulation of the faculty by the object.

The *material object* of a *sense* is the thing *which* can be perceived by the sense.

The *formal object* of a *sense* is the material object so far as it can explicitly be perceived by the sense.

The *proper object* of a *sense* is the material object so far as it can be explicitly perceived by that sense *alone*.

A *common object* of several senses is the material object so far as it can be explicitly perceived by more than one sense.

The *external organs* of sensation are the eyes, the ears, the nostrils, the tongue and palate, and the skin.

The *external senses* are sight, hearing, smell, taste, and touch.

The *proper objects* of these senses are respectively color, sound, odor, flavor or savor, and resistance or temperature.

The *common objects* of sight and touch are magnitude, distance, figure, motion, and rest. Though these objects can be perceived in a general way by the sense of sight, they can usually be perceived accurately only by the sense of touch.

The *condition* of sensation is the impression produced on the sense by the object.

4. Three things are required to insure the veracity of sense perception:

(1) The organ of sensation must be healthy and rightly disposed for the perception of the object. Since the organ is a part of the body, it is more or less affected by the state of health of the body. Thus, to a person who is sick certain articles of food seem to be bitter, whereas in themselves they are sweet. When the eye has been fixed for some time upon a brilliant light, it cannot immediately perceive other objects.

(2) The object must be accommodated and proportioned to the sense as regards magnitude, distance, and motion. If a thing is exceedingly minute, it cannot appeal to the senses, except perhaps to the sense of smell. If it is too far away, it is indistinct and seems smaller than it really is and of a different shape. Thus, a square tower at a distance appears round, and the moon seems to be as large as the sun. If a thing moves rapidly, the eye cannot respond quickly enough to detect its various positions. For instance, a lighted torch moved quickly in a circle has to the eye the appearance of a ring of fire.

(3) There must be no impediment or disturbing element between the faculty and the object. The medium through which the activity of the object is conveyed to the faculty must be

homogeneous and it must be the medium through which the faculty normally perceives its object. A straight rod which is partly immersed in water appears bent or broken.

The absence of one or all of the foregoing requisites can be known without much difficulty. This may be determined by the application of the following tests. We know that one or other of the requisites is lacking:

1. when the report of one sense is opposed to the report at another;
2. when the report of our senses is opposed to the testimony of men who are sound in mind and body and who have observed the object as well as we;
3. when the report of our senses is opposed to a truth which is certain or when it leads to a conclusion which we know to be false.

THESIS 4

There is a world outside of us.

5. This thesis is evident even to those who profess to doubt it. That it is evident to them is clear from the fact that their actions show they do not doubt it. If their actions revealed that they sincerely doubted the existence of an external world, they would have to be placed under guard; if left to themselves, they would soon be in the grave.

What is here set down under the heading "Proof of Thesis" is not intended to anything prove to a person who really doubts the existence of an external world. He would doubt whether he heard or saw you. Your speech and actions he would look upon as part of a dream or vision which was taking place inside him. Our conviction of the existence of an external world is the result of a personal experience which each one of us must acquire for himself, and which, therefore, cannot be communicated to another person. What we are directing attention to in "Proof of Thesis" is but an exceedingly minute fraction of the evidence which is pouring in upon us at every moment of our conscious existence. It is not put forth in the hope of convincing anyone who really believes that he is the only being in existence.

Proof of thesis: We know that we have been deceived by our external senses. But if we know that we have been deceived by our external senses, then there is a world outside of us.

Therefore there is a world outside of us.

The *Major*: It is common for a man to mistake the shape or the position or the size or the color of an object, and he repeatedly corrects such a mistake. It is because he has *corrected* such a mistake that he *knows* that he has been deceived by his external senses.

The *Minor*: If we know that we have been deceived by our external senses, this is because we have applied our external senses more carefully to the object. But we cannot apply our external senses to an object which is not outside of us. Consequently, if we apply our external senses to an object which is outside of us, it is plain that there *is* world outside of us.

6. N.B. (1) The judgments which are directly founded on the testimony of the external senses have never been shown to be wrong in presence of the requisite conditions. In section 4 we noted what the requisite conditions are. By judgments which are *directly* founded on the testimony of the external senses we mean judgments by which we accept merely what the senses report, and not what is inferred from the testimony of the senses. If a man accepts something that is inferred from the testimony of the senses, there may be a mistake when the man is not careful in his inference. At one time people believed that the sun moved round the earth; but that belief was an inference from the different positions of the sun with reference to the earth at different periods of the day. The senses certainly did not report that the sun moved round the earth; all that they reported was that the sun was in different positions during the day; and these positions could just as well be accounted for by the earth revolving on its axis.

(2) We know from experience that all men place their highest confidence in the testimony of the external senses; for all men consider that they are producing the strongest possible evidence for their case when they say "I have seen it," "I have heard it," or "I have touched it." So emphatically is this the case that it has passed into a proverb that "facts are stubborn things," and men say "There is no arguing against facts." If the senses reported falsely in presence of the requisite conditions, we should make so many mistakes that we should not rely upon the senses, just as we do not trust a man whom we know to be a liar.

(3) According to the idealists thought cannot transcend itself and our knowledge is limited to the ideas which are now present in consciousness. But everyone of the idealists trusts memory and expectation; now in memory and expectation our thought does transcend itself, for it is not then limited to the present facts of consciousness; it is not thinking about ideas which are now present to the mind; it is thinking about things which are past, or things which are future, and consequently the objects of thought are not the ideas which are now present in the mind. Again, the idealists admit the existence of "other men." But how can we know the existence of other men, unless thought can go beyond itself, and unless their existence is brought home to us by the testimony of the external senses?

(4) There is a vast difference between imaginary representations and sense perceptions. The workings of the imagination are largely dependent on the will, but not so the perceptions of sense. In imagination I can transport myself whithersoever I please without troubling to pass over the intervening distance, and I can change at will the objects before my imagination. But when I am travelling, the perceptions of sense are not dependent on my wishes; they are determined by something outside, and the things which are impressed upon my external senses and the places through which I have to pass to reach my destination are often quite contrary to what I should wish.

(5) Idealists are accustomed to refer to the phenomena of dreams and hallucinations as an argument against the trustworthiness of the senses. The obvious answer is that the very urging of this objection is an argument *in favor* of the trustworthiness of the senses. The phenomena referred to could not be called dreams or hallucinations unless we were able by our external senses to distinguish them from true perceptions. What right have the idealists to call dreams and hallucinations deceptive, unless they have *discovered* that they are deceptive? And now can they discover that these phenomena are deceptive, unless they rely upon the perceptions of the external senses to tell them that dreams and hallucinations are not the representations of realities? However, another word should be said in answer to this objection. In the case of hallucinations the organ is disordered at least temporarily, and hence one of the conditions of a true perception is lacking. If we compare together a large number of dreams which have occurred with hours of waking between them, we shall find that they have no connection with each other and present no regular series of actions or events and that it is not in our power to reduce them to order. But in our waking hours we

recognize a series of connected actions which it is largely in our power to regulate as we wish.

(6) OBJECTIONS: (1) The mind knows only its own ideas. But its ideas are something subjective, not something outside of us. Therefore the mind does not know anything outside of us.

Dist. Maj.: The mind knows only its own ideas, if by "idea" is meant that which is contemplated, *Conc.*; if by "idea" is meant an activity of the mind, *Nego.* *Contrad. Min.:* Its ideas are something subjective, as regards that which they contemplate, *Nego*; in so far as they are an activity of the mind, *Conc.*

(2) In order to be certain of the existence of a body external to us, we ought to be able to compare the body with our perception. But we cannot compare the body with our perception. Therefore we cannot be certain of the existence of a body external to us.

Dist. Maj.: We ought to be able to compare the body with that which is perceived, *Conc.*; with the act of perception itself, *Nego.*

Contrad. Min.: We are not able to compare the body with that which is perceived, *Nego*; with the act of perception itself, *Conc.*

Explanation: In urging the foregoing objection the idealist cannot assume his theory to be true and then insist that we answer the objection in the light of his theory. The objection is an argument which he puts forward to prove his theory, and hence the objection cannot take for granted that the theory is true. According to the idealistic theory, the objects of all our thoughts are ideas, and of course the idealist is forced by his theory to compare his ideas or subjective acts of perception with the objects of them in order to assure himself of the accuracy of his perceptions; and hence he can never by acting on his theory get beyond his own subjective states. The purpose of the comparison which the idealist demands in the objection is to find out whether we have made a mistake. But the only way to find this out is to compare *that which is perceived* by the act with things as they actually exist. If that which is perceived is an existing reality, we know that we have not made a mistake; if it is not an existing reality, we know that we have been deceived. It is in this way that we discover whether we have been the victims of illusion, and it is precisely in this way that the idealists themselves have discovered that there are such things as dreams and hallucinations. They did not compare the act of dreaming with something; they compared *that which they dreamt* with reality and they found out that the two did not agree.

(3) In order to know that the cause of our sensations is not within us, we ought to have a complete knowledge of the powers of the thinking subject. But we have not this knowledge. Therefore we do not know that the cause of our sensations is not within us.

Dist. Maj.: We ought to know everything that the thinking subject *can* do, *Nego*; we ought to know something that it cannot do, *Subd.*: we ought to know this with an exhaustive knowledge, *Nego*; with a distinct knowledge, *Conc.*

Contrad. Min.: We do not know everything that the thinking subject *can* do, *Conc.*; we do not know what it cannot do, *Subd.*: we do not know this with an exhaustive knowledge, *Conc.*; with a distinct knowledge, *Nego*. For example, we know that the thinking subject which rouses in itself imaginary representations can vary them at will; but we know that the thinking subject cannot at will vary the perceptions of the external senses; hence we know that those perceptions are not produced by the thinking subject within itself.

(4) If God can permit error in the mind, He can be the cause of our sense perceptions. But God can permit error in the mind. Therefore

Dist. Maj.: If God can permit error, that is, if He can by a positive act produce invincible error in the mind, He can be the cause of our sense-perceptions, *Conc.*; if He can simply permit error, that is, if He does not prevent it, *Nego*.

Contrad. Min.: God can simply permit error, *Conc.*; can by a positive act produce invincible error in the mind, *Nego*.

(5) God can by a positive act produce physical evil. But error is a physical evil. Therefore God can by a positive act produce error.

Dist. Maj.: God can by a positive act produce a physical evil which often reflects upon the moral character of its cause, *Nego.*; a physical evil which never reflects upon the moral character of its cause, *Transeat. Contrad. Min.:* error is a physical evil which often reflects upon the moral character of its cause, *Conc.*; error is a physical evil which never reflects upon the moral character of its cause, *Nego*.

If this argument of the objector were sound, it would make lying and deceiving consistent with God's infinite Truthfulness or it would do away altogether with Truthfulness as a Divine Virtue.

VIII. The Secondary Sensible Qualities

The term “primary quality” corresponds to what the Scholastics meant by “common object,” and the term “secondary quality” corresponds to what they meant by “proper object.” Accordingly, a primary quality, such as shape, size or motion, may be defined as a quality which can be perceived by more than one external sense, and a secondary quality, such as color, sound or resistance, may be defined as a quality which can be perceived by only one external sense.

There are two objections to critical presentative (or critical intuitive) realism. First, it is hard to see how one could consistently accept its conclusion and remain a realist. This doctrine seems to do away with the external senses altogether. By an external sense is meant a faculty by which we perceive an object that exists or belongs in the external world. By an internal sense is meant a faculty by which we perceive only what exists or happens inside us. According to this doctrine the secondary qualities, i.e., the proper objects of the so-called external senses, exist only inside us. Therefore, they can be perceived only by an internal sense. Hence, either there is no such thing as an external sense or there is no such thing as a proper object of an external sense.

The proper object of the sense of sight is said to be color; the proper object of the sense of touch is said to be resistance and temperature. Under the head of resistance are included such qualities as hardness, softness and smoothness. The sense of sight cannot perceive a colorless object, and the sense of touch cannot perceive a non-resisting object. Thus, two men in the same room cannot by the sense of sight perceive the atmosphere which exists between them, nor can they by the sense of touch perceive the real image which is formed by a concave mirror. Consequently, if all the objects in the external world are colorless and non-resisting, they cannot be perceived by the sense of sight or the sense of touch. The only thing we are *conscious* of perceiving by sight and touch is an object which is formally colored and formally resisting. Now if all formally colored and resisting objects are inside us, then sight and touch are internal senses.

It is said that we can perceive bodies external to us by direct contact with them. Doubtless there may be direct contact, but we cannot know it in any given case unless the bodies resist us; and

on this theory resistance, since it is a secondary quality, is merely an internal sensation.

The statement has been made that "secondary qualities are perceived only indirectly through an intervening medium of air or ether movement, or chemical or electrical agency." This is not true of the secondary quality of resistance which is perceived by the sense of touch.

Again, it is claimed that the primary qualities are more fundamental than the secondary, since "secondary qualities exist only dependently on primary qualities." This is true ontologically, but it is not true epistemologically, since the primary qualities can be *perceived* only dependently on the secondary. Not that we first perceive the secondary qualities and then the primary, but we cannot perceive the primary qualities unless we perceive the secondary. By the sense of sight we are not conscious of perceiving an extended object unless the object is formally colored. Two men who are conducting a conversation cannot by the sense of sight perceive the atmosphere which exists between them, though the atmosphere is an extended object.

That is the first objection to critical presentative realism. It makes subjective everything we are conscious of perceiving by our so-called external senses.

The second objection is that this theory does not put enough data into its premises, and consequently it draws a wrong conclusion. We admit most of the premises employed by the advocates of the theory, but we do not admit their conclusion. In fact one reason why we are not idealists is because we know that these premises are true.

We know that the premises are true because they have been obtained by the application of the external senses to objects which these senses have perceived to be outside us. In other words, the premises have been derived from objects which are admittedly external to our senses,

For the sake of brevity, let us deal chiefly with the sense of sight and consider only such perceptions as take place in the presence of the requisite conditions and are accordingly called veridical or accurate. It is chiefly by means of accurate perceptions that we can discover the inaccuracies of other perceptions. One of the requisite conditions is that the eye shall not be suffering from strain or fatigue. Sometimes sight and hearing act as internal senses, as when a man sees stars from a blow in the eye and when he hears a ringing sound from a slap on the ear.

A colored object is a luminous object. The object may be self-luminous or it may be illuminated by another object. For the purpose of the present discussion a colored body or object may be defined as a body or object which is capable of stimulating the organ of sight in normal perception. This requires that there be light and that the body diffuse light. Color is not a permanent quality in a body. It exists in the body only when the body diffuses light.

The physicist, in his capacity *as* a physicist, is not competent to decide the epistemological question on which we are engaged. The physicist discovers in the object what he is looking for. He is concerned with measurement, and only quantity can be measured. He does not discover quality, because he is not looking for it, and his methods and instruments are not adapted to put him in possession of it. A chemist who is concentrating on detecting the presence of carbon will observe no difference between a lump of charcoal and a diamond. If a person who is interested in charcoal looks at a picture of Washington which the artist has drawn in charcoal, he will notice the particles of charcoal, but he will not notice the picture of Washington. Nevertheless the picture of Washington is there where the charcoal is. Similarly, the color is there where the light waves are.

It is a simple matter of fact that the eye does not see what the physicist says is outside the eye, e.g., light waves and wave lengths or frequencies; that is, the eye does not see them as light waves and wave lengths; and yet the eye sees something, and the only thing the eye is conscious of seeing is a formally colored object.

There is a red object and a blue object somewhere, for we see them and our attention is directed to them. According to the critical presentative realists the red and blue objects are in the eye or somewhere else inside the skull. Therefore, there is inside the skull something that can be formally red and something that can be formally blue. But if there can be something formally red and something formally blue inside the skull, what evidence is there to prove that there is no such thing outside the skull? Has anyone ever attempted to prove that only nerve-ends can be formally red or blue? Is it not possible for an object to *be* what it appears to be? Or at least for a second Object to be what the first object appears to be? Since there are no incompatible elements in the appearance, there will be no incompatible elements in the object which really *is* what it appears to be.

A sense perception is an act by which we direct our attention to an object by means of a bodily organ. If we leave out of account

what precedes and accompanies act, there are two things involved in the formal act of perceiving: (1) the act of directing attention, and (2) the object to which attention is directed.

The words “impression” and “sensation” can be very misleading, and so at times can the word “perception.” They are often associated with feeling. We are not conscious of a red or a violet feeling; we are conscious of directing our attention to a red or a violet, object. We shall provide against ambiguity and confusion if we avoid the words “impression” and “sensation” and speak of the act of perceiving or the act of directing attention. No one would speak of a red or a violet act of directing attention, any more than one would speak of a triangular or semicircular act of directing attention.

There are two things in the external world which are formally colored: (1) any material or body that diffuses light, and (2) the pattern that the material or body sends forth. Now the main question is this: When the act of perceiving is normal and accurate, what is it that is really colored in the way in which it appears to the person who performs the act of perceiving? In nearly every case it is a body external to us, and in every case it is the pattern which travels from the body to the eye. The pattern is just as emphatically an object external to the eye as the body which sends the pattern.

The word “pattern” is used because it is less open to objection than “image” or “picture.” In order that a thing should properly be called an image or a picture, it must resemble the object of which it is an image or a picture. But a pattern need not resemble anything, though very frequently it does. We often see on a wallpaper a pattern which does not resemble anything we have seen before. A beam or bundle of light waves will necessarily have a certain contour or outline or configuration, and this contour or outline is what is meant by a pattern. It is this pattern which impinges on the retina of the eye or on a photographic plate.

The color of the pattern which reaches the eye is not always the color of the body which sends the pattern as that body is seen in white light. The color of the pattern depends upon four things:

- (1) the character of the body which sends the pattern;
- (2) the kind of light which strikes the body;
- (3) the angle at which the body sends the pattern;
- (4) the medium through which the pattern travels.

Thus, the pattern which travels in an easterly direction from the neck of a pigeon will often be colored differently from the pattern which travels in a westerly direction.

Again, if a white pattern travels through blue glass and then through yellow glass, it will come forth as a green pattern. This is because blue and yellow glass, when spaced apart, absorb all the colors of the spectrum except green.

The example of a rainbow has been used as a proof that color is not formally in the external object. Each drop of rain or particle of mist is colorless in itself, but when sunlight strikes the mist, a man who views the mist from one direction will see all the colors of the spectrum, whereas a man who views it from another direction will see none of these colors. The argument, then, is this: The mist itself cannot at the same time be and also not be colored in this way. Therefore, the colors are subjective to the person who is looking at the mist.

In the first place, if this were a valid argument, it would be an argument against the presence of *primary* qualities in the objects outside of us. Shape is not a secondary, but a primary, quality, and the shape of the rainbow is visible only to people who view the mist from a particular direction. In the second place, if a camera containing a photographic plate, such as is used in color photography, is placed at a certain angle, it will reproduce all the colors of the rainbow as well as its shape. If the camera is placed at a different angle, it will reproduce neither the shape nor the colors of the rainbow.

Now certainly there is nothing subjective in a camera or a photographic plate. It is admitted that the photographic plate does not record what both parties to the dispute agree is subjective, e.g., the complementary color of green which appears before the organ of sight after the eye has been gazing upon a brilliant red object. It is also admitted that the plate does record what both parties agree is formally outside us, namely, the shape of the rainbow. What reason, then, can be assigned for the contention that the plate does not record what the rigid presentationists hold to be formally outside us, namely, the colors of the rainbow?

In the third place, the critical presentationists are chargeable with the very contradiction which they impute to the rigid presentationists. They say that the sensation of blue is caused by certain light waves which proceed from the object to the eye, and the sensation of red is caused by different light waves. Suppose, then, that one part of a given object, say the neck of a pigeon, causes a sensation of blue in one person and a sensation of red in

another person. The argument will run as follows: One identical part of the object cannot at the same time give forth and also not give forth the light waves which cause the sensation of blue. Therefore, by the method of arguing employed by the critical presentationists, we ought to say that the light waves are subjective.

In matter of fact, there is no contradiction on either side. In order to have contradiction, it is not enough to say "at the same time and in the same part"; we should say "at the same time and in the same respect." One identical part of an object may at the same time send forth one beam of light waves in one direction and a different beam in another direction. Similarly, it may send forth one color in one direction and a different color in another direction. Even a highly polished object will have upon it a vast number of minute excrescences, so that one and the same part of the object will present different surfaces to people who view it from different angles. It is not surprising, therefore, that different people see different colors in the object; for the colors they see are really in the object.

Excerpts from Encyclopedia Britannica, 14th edition

For the discussion of color, white light, such as daylight, can be considered as consisting of a mixture of all wave-lengths of the visible spectrum. A body, such as a piece of cloth, illuminated by such light, appears colored because it absorbs light of certain wave-lengths *partially or completely*, and throws back the remainder. Thus an ordinary *blue object absorbs red, orange and yellow rays*, and scatters *blue together with some green, indigo and violet*; the purer the color the smaller is the spectral region of the unabsorbed light. *A yellow object absorbs the blue, indigo and violet*, and generally throws back *with the yellow a certain amount of green, orange and red*. The color is thus produced by absorption. When white light, say, falls on a pigment *a small part is reflected unchanged at the surface as white light*, but the greater part penetrates a short distance into the body and then, as a result of internal reflections and refractions due to irregularities, emerges again, modified by the 19S5 of the rays which are most strongly absorbed.—p. 53, right column, Vol. 6.

Neglect of the fact that the colors of glasses and pigments are due to absorption often leads to great confusion as to the result of mixing colors. If we mix a blue and yellow pigment the green sensation produced is not the result of mixing blue and yellow light. The *blue pigment absorbs, roughly speaking, the red, orange*

and yellow: the yellow pigment absorbs the blue, indigo and violet. It follows that *the only color which escapes the double absorption is green*, which accordingly is thrown back from the mixture. If we mix blue and yellow light, by letting a beam which has passed through a piece of ordinary yellow glass fall on a white screen which is also illuminated by the appropriate amount of light which has passed through an ordinary blue glass, the result is a white light, for yellow and blue are complementary colors. Of course if we let the light pass first through one glass and then through the other, the result will be green light as with the pigments, for the light transmitted is the spectral region which escapes the double absorption. In the same way a red and blue glass, put together may stop all light and appear black, but red and blue light mixed produce a purple.

The average blue pigment appears black in red, orange or yellow light, greenish in green light, for most blues do not completely absorb the green, and, of course, blue in blue light. The modifications in appearance which colored bodies undergo with change of illumination is familiar to most people from the change in appearance of fabrics in natural and artificial light. This is particularly marked with blue, in consequence of the fact that *artificial light differs from daylight chiefly by relative deficiency of blue*. Thus a cloth that appears blue by day will appear nearly black by artificial light, for it absorbs all colors but blue, and there is little blue present in the illuminating light. —p. 54, left col.

[White light] can be roughly defined as sunlight at noon on a clear day.—p. 54, right col.

Artificial lights which are usually called white differ still more among themselves and are all much yellower than sunlight, that is the blue end of the spectrum is relatively faint in the artificial light. —Id.

A body which absorbs a large fraction of the incident light, without absorbing anyone color markedly better than another, throws back a *feeble white light*, and appears grey. —p. 54, right col.

IX. The Theory of Kant

1. One of the main objects of Kant's philosophy was to oppose the scepticism of Hume. In 1781 he published his chief philosophical work, the *Critique of Pure Reason*. In this work he does not question whether we can know anything. He admits that we can, and he accepted as certain the conclusions of mathematics and physical science. He rejected all previous attempts at a science of metaphysics, because no system of metaphysics had met with universal reception. Universal reception was thus for him the test of a true science. In his view science consists in judgments which force themselves upon everyone.

By the *critique of reason* Kant means the examination of the origin, extent, and limits of human knowledge.

Pure reason is reason independent of all experience.

The *Critique of Pure Reason* is the examination of the reason so far as it can acquire knowledge independently of experience.

Since judgments which record an experience are singular and contingent, and since the judgments of science are universal and necessary, the problem is to determine how the mind can make these universal and necessary judgments.

Transcendent knowledge is knowledge of what lies beyond the range of experience.

Criticism or *transcendental philosophy* or *transcendental idealism* is an inquiry into the possibility of transcendent knowledge.

2. All our knowledge, says Kant, begins *with* experience, but not all knowledge springs from experience. "Experience tells us, indeed, what is, but not that it must necessarily be so and not otherwise; hence it gives us no true universality."

A priori knowledge is knowledge which does not originate in experience.

A posteriori knowledge is knowledge which originates in experience. "We shall understand by cognitions *a priori* those which take place independently, not of this or that, but of all experience whatever; opposed to them are empirical cognitions, or such as are possible only *a posteriori*, i.e., through experience; of *a*

priori cognitions those are called *pure* with which no empirical elements whatever are mixed.”

For Kant necessity and universality are sure signs of a cognition which is independent of experience.

The following are Kant’s definitions:

An *analytical judgment* is a judgment in which the predicate is found by analysis to be contained in the subject-concept, though it was not previously observed, e.g., “All bodies are extended.” Kant called analytical judgments *elucidating* judgments, because they impart clearness to our cognitions; but he maintained that they do not increase our knowledge of the subject or instruct us in any way. All analytical judgments *a priori*.

A *synthetic judgment* is a judgment in which the predicate is outside the subject-concept and cannot be discovered by an analysis of the subject-concept; e.g., “All bodies are heavy.” Kant calls synthetic judgments *ampliative* judgments, because they increase our knowledge of the subject.

A *synthetic a posteriori judgment* is a judgment in which the synthesis of the predicate with the subject is effected by the aid of experience; e.g., “This rose is red”; “My tooth is aching.”

A *synthetic a priori judgment* is a judgment in which the synthesis of the predicate with the subject is effected independently of all experience.

Kant holds that all the judgments of physics and most mathematical judgments are synthetic *a priori* judgments. He says that they are *a priori*, because they are universal and necessary, that they are synthetic, because they increase our knowledge. As instances of such judgments he gives the following: “ $7 + 5 = 12$ ”; “The straight line is the shortest distance between two points”; “In all the changes of the material world the quantity of matter remains unchanged”; “In all communication of motion action and reaction must always be equal to each other.”

3. Since, then, there are synthetic *a priori* judgments, the fundamental question of Kant’s *Critique* is: How are synthetic *a priori* judgments possible?

Kant’s answer is as follows: Synthetic *a priori* judgments are possible, because man first acquires the materials of knowledge by experience in virtue of his receptivity, and then brings to this material certain pure forms of knowledge, which he creates in

virtue of his spontaneity and independently of all experience, and into which he fits all given material.

These forms are the conditions of the possibility of all experience; they are at the same time the conditions which make possible the objects of experience, because whatever is to be an object for me must take on the forms through which the Ego, my original consciousness, shapes all that is presented to it.

4. *Sensibility* is the receptivity of the mind, in virtue of which it has representations whenever it is affected in any manner.

Understanding is the mind's spontaneity of cognition, in virtue of which the mind creates pure forms of knowledge.

The purely subjective forms of Sensibility Kant calls the *Intuitions* of sense.

There are two of these intuitions, viz., Space and Time.

The purely subjective forms of the Understanding he calls the *Categories*, which are twelve in number. The Categories are the original conceptions on which all the varieties of judgment are conditioned.

The purely subjective forms of the Reason he calls *Ideas*. There are three such ideas.

Kant divides the *Critique of Pure Reason* into three parts, viz., *Transcendental Aesthetic*, *Transcendental Analytic*, and *Transcendental Dialectic*.

Transcendental Aesthetic is an inquiry into the *a priori* conditions of sensation. These conditions are the two pure intuitions of sense.

Transcendental Analytic is an inquiry into the *a priori* conditions of understanding. These conditions are the twelve categories.

Transcendental Dialectic is an inquiry into the *a priori* conditions of reason.

These conditions are the three ideas.

5. Kant says that the forms have objective validity in a synthetic *a priori* judgment. But the objects with reference to which they have this validity are not the things-in-themselves or transcendental objects (*Das Ding an sich*), that is, they are not objects as they are in themselves, apart from our mode of

conceiving them; they are merely phenomena, that is, appearances, which exist in our consciousness as mental representations.

The things-in-themselves cannot be known by man. The things-in-themselves do not conform themselves to the forms of human knowledge; nor do the forms of human knowledge conform themselves to the things-in-themselves. But all phenomena conform themselves to human knowledge, because they are only representations in our minds. Hence we can know phenomena, but only these. *Noumena* is the name which Kant gives to the things-in-themselves.

“Sensation is the actual affection of our sensibility The perception which refers itself to an object through sensation is *empirical perception*. The undetermined object of such a perception is a *phenomenon (Erscheinung)*.”

“That element in the phenomenon which corresponds to sensation I call the *matter*, while the element which makes it possible that the various determinations of the phenomenon should be arranged in certain ways relatively to one another is its form.

“Not only are the rain-drops mere phenomena, but even their circular form, nay, the space itself through which they fall, is nothing in itself, but both are mere modifications or fundamental dispositions of our sensuous intuition, while the transcendental object remains for us utterly unknown.”

6. Our external senses represent their objects as, extended in *space*; our internal senses represent our conscious states as succeeding each other in *time*. Space is, therefore, the pure subjective form of external sensibility, and time the pure subjective form of internal sensibility.

Space and time are not properties of things-in-themselves; all coexistence and succession are in *phenomenal* objects, and hence in the perceiving subject. The things-in-themselves affect our senses; through this affection arises the sensation of color, or smell, etc. These sensations are not to be supposed similar to that unknown element in the things-in-themselves which excites them in us. The function of the forms of space and time is to reduce the manifold, disconnected impressions or affections of the senses to unity and thus generate the phenomena which are the objects of sense-perception.

On the *a priori* character of space depends the possibility of geometrical judgments; the possibility of arithmetical judgments depends on the *a priori* character of time.

7. THE CATEGORIES. By means of the categories the phenomena become objects of scientific knowledge.

“Understanding has already been defined negatively as a non-sensuous faculty of knowledge. Now, as without sensibility we can have no perception, understanding cannot be a faculty of perception. But, apart from perception, the other mode of obtaining knowledge is by means of conceptions. . . . All perceptions, as sensuous, rest upon affections, whereas conceptions rest upon functions. By function I mean the unity of act, in which various ideas are brought under a common idea. Conceptions are based on the spontaneity of thought, sensuous perceptions on the receptivity of impressions. Now the only use that understanding can make of these conceptions is to judge by means of them. And, as without perception there is no direct consciousness of an object, conception is never related directly to an object, but always indirectly, through apperception or through another conception. Judgment is therefore the indirect knowledge of an object, or the knowledge of knowledge. . . . All judgments are functions of unity, because they do not consist in the direct knowledge of an object, but bring that and other knowledge under the unity of a higher and more comprehensive conception.”

The matter or material element of judgment is presented by the sense perceptions. The form or formal element is supplied by the understanding. By the imposition of this form (or category) the phenomena become the objects of judgment. Hence there are as many categories as there are ways of judging. The judgment may be viewed from the standpoint of quantity, quality, relation, and modality; under each of these heads three judgments are possible. Consequently, there are twelve categories corresponding to these kinds of judgment.

Kinds of Judgment

Categories

I. Quantity:

Universal

Unity

Particular

Plurality

Singular	Totality
II. Quality:	
Affirmative	Reality
Negative	Negation
Infinite	Limitation
III. Relation:	
Categorical	Subsistence and Inherence
Hypothetical	Causality and Dependence
Disjunctive	Reciprocity or Interaction
IV: Modality:	
Problematic	Possibility and Impossibility
Assertoric	Existence and Non-existence
Apodeictic	Necessity and Contingency

Of the foregoing categories Kant says: "This, then, is a list of all the primary pure conceptions of" synthesis that understanding contains within itself *a priori* Only by them can it understand anything in the complex content of perception, that is, think an object."

8. "The categories without internal or external perceptions are empty and meaningless; but perceptions without conceptions (categories) are blind. The understanding can perceive nothing, and the senses can think nothing."

Without the categories the materials of scientific knowledge would be given in experience, but they would not be objects of knowledge, and hence would not be known. Though the categories are *a priori*, that is, independent of experience, *they do not extend our knowledge beyond phenomena.*

9. THE SCHEMATA.

"It is clear that pure concepts of the understanding, as compared with empirical or sensuous impressions in general, are entirely heterogeneous, and can never be met within any intuition How then can the categories be applied to phenomena? There must be some third thing

homogeneous on the one side with the category, and on the other with the phenomenon, to render the application of the former to the latter possible. This intermediate representation must be pure (free from all that is empirical) and yet intelligible on the one side, and sensuous on the other. Such a representation is the transcendental schema.”

Kant’s definition, therefore, of a transcendental schema is as follows: An intermediate representation, homogeneous on the one side with the category, and on the other with the phenomenon, and rendering the application of the former to the latter possible.

10. THE REASON. The *reason*, according to Kant, is the faculty which by its principles establishes unity among the judgments of the understanding; just as the understanding is the faculty which by its categories introduces unity into phenomena. The conditions or subjective forms according to which the reason proceeds he calls *Ideas*.

There are three kinds of reasoning:

(1) The *categorical*: This is based on the category of subsistence and inherence (substance and accident), and its form is the idea of the soul or the Ego, that is, of an absolute subject which cannot be predicated of any other subject. This idea of the Ego is called the *Psychological Idea*.

(2) The *hypothetical*: This is based on the category of causality and dependence (cause and effect), and its form is the idea of the world as the absolute unity of the series of the conditions of phenomena. This is called the *Cosmological Idea*.

(3) The *disjunctive*: This is based on the category of reciprocity and interaction (reciprocity between the active and passive), and its form is the idea of God as the absolute unity of all objects of thought, or as the Being who includes in Himself all reality. This is called the *Theological Idea*.

Rational psychology speculates about the Ego in itself, but the Ego does not appear as it is in itself, but under internal phenomena and hence with the subjective form of *time*. What it is in itself or in its properties cannot be known.

Rational cosmology speculates about the world and falls into contradictions.

Rational theology speculates about God and is unable to prove His existence.

Hence nothing can be known about the noumenal reality of one's own Ego, or of the world, or God.

THESIS 5

11. *The theory of Kant offers no escape from the scepticism of subjective idealism and undermines its own foundation.*

PROOF OF PART 1: *The theory of Kant offers no escape from the scepticism of subjective idealism.*

That theory which limits all our knowledge to phenomena (appearances) in the thinking subject offers no escape from the scepticism of subjective idealism. But the theory of Kant limits all our knowledge to phenomena in the thinking subject.

Therefore the theory of Kant offers no escape from the scepticism of subjective idealism.

Major. It is a matter of no consequence whether we call the objects of our knowledge ideas or phenomena, so long as we confine our knowledge within the thinking subject; in either case we are driven into scepticism as regards the world outside of us. Kant sought to overthrow the scepticism of Hume, but his own system is as profoundly sceptical as that of Hume.

The *Minor* is evident from the constantly reiterated assertion of Kant that we cannot go beyond the phenomena of sense to the thing-in-itself; the thing-in-itself, is in the theory of Kant utterly unknown to us.

12. PROOF OF PART 2: *The theory of Kant undermines its own foundation.*

That theory which pronounces as unknowable the principle on which it is based undermines its own foundation.

But the theory of Kant pronounces as unknowable the principle on which it is based.

Therefore the theory of Kant undermines its own foundation.

The *Major* is evident.

Minor. The principle on which the theory of Kant is based is the universal reception by mankind of the conclusions of mathematics and physics. He rejected all previous systems of metaphysics because none of them had met with universal reception. Because of the universal reception of the truths of mathematics, and physics he declared that the judgments of these sciences were the types to which all scientific judgments should conform. But by his theory he is compelled to doubt the existence of mankind of all men except himself; for the only things he can know are the phenomena within himself; everything else is unknowable. Hence the existence of mankind is unknowable to Kant, and therefore the principle which his theory is based is unknowable, namely, the universal reception by mankind of the conclusions of mathematics and physics.

13. *Note.* Kant says that the judgments of mathematics and physics are certain, and that they are synthetic *a priori*. But there are no judgments which are certain and also synthetic *a priori* in the Kantian sense, and we prove it as follows:

A judgment in which the mind has not adequate evidence of what it assents to is not a certain judgment.

But the Kantian synthetic *a priori* judgments are judgments in which the mind has not adequate evidence of what it assents to.

Therefore the Kantian synthetic *a priori* judgments not certain judgments.

Minor. The synthetic *a priori* judgment, in the Kantian sense, is a judgment in which the synthesis or union of the predicate with the subject is effected independently of all experience, that is, by means of a subjective form or category; and it is only after this subjective form is applied that there is an object which the judgment can assent to. The application of the category of Reality constitutes an object of affirmative judgment; the application of the category of Negation constitutes an object of negative judgment (cf.7). Since there is no object for the mind to assent to till the category is applied, and since the category is applied independently of the mind's perception, and since Kant gives no reason why in any given case the category of Reality should be applied rather than the category of Negation, it follows that in the Kantian synthetic *a priori* judgment the mind has not adequate evidence of what it is going to assent to. One man would make the judgment, "Two plus three are equal to five," because the category of Reality had been applied; another man could just as easily and with just as much warrant make the judgment, "Two plus three are not equal to five," because the category of Negation had been applied.

It is Kant's contention that we can know nothing about the things-in-themselves, that the only objects we can know are phenomena, and that all synthetic *a priori* judgments are concerned with phenomena. But we have just shown that, on Kant's theory, even the synthetic *a priori* judgments about phenomena are uncertain judgments. This practically reduces the theory of Kant to the status of universal scepticism.

X. Kant on the Propositions of Pure Mathematics

Kant has the reputation of having introduced a new method into philosophy the method of criticism. But the fundamental mistake of Kant, the mistake which gave a wrong turn to his whole system, was that he did not carry his criticism far enough, or rather, that he did not point it in the right direction. He accepted uncritically not a little of the teaching of his predecessors, though there was much in what he accepted which should have been subjected to criticism. For example, his general doctrine of “concepts” is an inherited doctrine which he did not attempt to criticize or to justify. These “concepts” which Kant inherited played an important part in shaping the doctrine which is the subject of the present chapter.

It is the thesis of Kant’s *Critique of Pure Reason* that the propositions of pure mathematics are not analytical, but synthetical as well as *a priori*, and that the propositions of physical science are not *a posteriori*, but *a priori* as well as synthetical. The *Critique* is directed towards the solution of the question. How are synthetical judgments or propositions *a priori* possible? It is, therefore, a matter of life and death to Kant to prove that the propositions of pure mathematics and physical science *are* synthetical *a priori*. The purpose of the present chapter is to show that he has not succeeded in this attempt. In order to keep the chapter within due bounds, the discussion shall be limited to the propositions of mathematics; but we shall have to prepare the way for the discussion by removing one or two ambiguities which have heretofore seriously confused the subject.

In this discussion it will be convenient to adopt the procedure of Kant as it is indicated in the following sentence: “I speak of affirmative judgments [or propositions] only, the application to negative ones being easy.” Again, for the sake of avoiding the frequent repetition of qualifying phrases, we shall commonly understand by the word “proposition” a categorical proposition which is known to be true, and by “judging” we shall understand judging correctly.

When we judge, we learn, that is, we come to know. The object about which we learn something is called the subject of the judgment, and it is this object which is denoted by the subject term of a categorical proposition. The subject term, considered apart from the rest of the proposition, stands for the object as it was known to us before we made the judgment; the subject term, the copula and the predicate term combined stand for the object as

it is known to us after the judgment has been made; the copula and the predicate term combined stand for what we have learned about the object which is signified by the subject term.

To obviate misconstruction, a note should perhaps be added in explanation of the preceding paragraph. When we use a term which denotes an object, all that we commonly expect other people to understand by it is what has been fixed by convention, and this may be called its *conventional* connotation. But our own understanding of the term is not always limited to the conventional connotation; it includes this, but goes beyond it, and often very far beyond it. Everything that we know about the object over and above the conventional connotation may be called the *personal* or *private* connotation of the term. When, therefore, we say that the subject term stands for the object as it was known to us before we made the judgment, we are referring to the personal connotation along with the conventional. By this we do not mean that all the items of information which we possess about the object are actually before us when we use the term, but that none of them is excluded as though it did not form part of our knowledge of the object. What we learn about the object by an act of judging is something in addition to the items of information which were already in our possession. Again, when we speak of examining or analyzing the subject of a proposition or a judgment, we are not referring merely to the conventional connotation of the term; we mean that all the relevant items of information which we already possess about the object and which we recall at the moment are being submitted to examination.

It is one thing to judge; it is a very different thing to utter a proposition. To judge is to learn; to utter a proposition is to express what one has learned by the act of judging.¹ [¹ There does not seem to be any need to take into consideration here such propositions as *A is A* and *A is not not-A*.] We do not repeat a judgment we have once made, for by that judgment we have learned something, and we do not learn again what we have already learned, unless, indeed, we have forgotten it. We may by means of a proposition exhibit to others what we have learned, and we may do this a thousand times, but in so doing we are not learning the same thing over again, and therefore, we are not making a judgment. Again, by an analytical judgment we learn something in a particular way, which way shall be considered later; and by an analytical proposition we express, not an analytical judgment—for the proposition does not express an act of learning—but what we have learned by an analytical judgment.

It was a failure to note the two points we have just mentioned which was responsible for the controversy on the question whether a synthetical judgment is not an analytical judgment “in the making.” The controversy involved a twofold confusion. First, the word “judgment” was used in the sense of judging or making a judgment, and again in the sense of the information which is gained by the judgment. It is the information gained by a judgment that is expressed by a proposition, not the act of judging itself; and yet the proposition was said to express a judgment. The second confusion was a consequence of the first. Because a proposition expresses the information gained by a judgment, it was supposed that a repetition of the proposition involved a repetition of the judgment in the sense of an act of judging. The disputants were continually speaking of “making the judgment again,” and debating whether, upon being repeated, the judgment did not change from a synthetical judgment into an analytical. But a given judgment, in the sense of an act of judging, is never repeated, unless the information we have gained by it is utterly lost from memory. We do not acquire again information which is already in our possession, though we may see a fresh reason for clinging to it. We may recall what we have learned, and we may compare it with our previous: knowledge, and we may communicate it to others, but we do not repeat the act of learning it.

If there be dissent from this position, let the two following points be considered:

First, it will be generally agreed that, when we judge, we come to a decision. The decision is that something is so and so. Do we come to the same decision more than once upon the same matter unless we have forgotten or revoked our decision? Doubtless we may happen upon additional evidence to confirm us in our decision. But being confirmed in a decision is: not the same thing as coming to a decision.

Secondly, when we put forth a proposition which we know to be true, we state something which we have learned by an act of judging. What test are we to apply in order to determine whether that proposition is analytical or synthetical? There is no test except to consider how we learned what is expressed by the proposition. Suppose, then, that we make the judgment a second time. There is general agreement, again, that every correct judgment is either analytical or synthetical. Now if the test, and the only test, by which we can decide whether a judgment is analytical or synthetical is the manner in which we gained information by it, then any act to which that test cannot be applied

is neither an analytical nor a synthetical judgment. Well, that test cannot be applied to a so-called repeated act of judging, for by the repeated act we should not gain any information. How are we going to differentiate a repeated act of judging from an act of recollection? Certainly a recollection is never called analytical or synthetical.

Recollection enables us to apply the test to a proposition; for by recollecting the original act of judging, we observe how we gained information by it. No matter how often the proposition is repeated, we must go back to the *original* act of judging, and not to any repeated act, in order to decide whether the proposition is analytical or synthetical.

Kant's account of the analytical judgment or proposition may be abbreviated as follows:

“The judgment [or proposition] is called analytical when the predicate B belongs to the subject A as something contained (though covertly) in the concept A. Such a judgment might be called an illustrating, as opposed to an expanding judgment, because in it nothing is added by the predicate to the concept of the subject, but the concept is only divided into its constituent concepts which were always conceived as existing within it, though confusedly. If I say, for instance, ‘All bodies are extended,’ this is an analytical judgment [or proposition]. I need not go beyond the concept connected with the name of body, in order to find that extension is connected with it. I have only to analyze that concept and become conscious of the manifold elements always contained in it, in order to find that predicate. . . . Our knowledge is in no way extended by analytical judgments. . . . Analytical [judgments] are no doubt very important and necessary, yet only in order to arrive at that clearness of concepts which is requisite for a Safe and wide synthesis.”

Since in judging we learn something which we did not know before, there is inconsistency or, at least, confusion in the foregoing, account of the analytical judgment. By the act which Kant calls an analytical judgment we either learn something or we do not. If we do not learn anything, we do not make a judgment at all. If we learn something, we expand our knowledge. Kant says that by the analytical judgment something that was confused has become clear to us. But the only way in which a thing can become clear to us is by our observing something about, it which we did not observe before, and observing something which we did not observe before is exactly what is meant by expanding our

knowledge. Our knowledge cannot be expanded in any other way. Hence, if what Kant calls an analytical judgment is a judgment at all, it expands our knowledge. Kant himself acknowledges this, almost in so many words: "I need not go beyond the concept connected with the name of body, in order *to find* that extension is connected with it." To find is to discover, and to discover is to come to know what one did not know before, that is, to expand one's knowledge.

It will be noticed that we have confined our remarks to Kant's comment upon his example, and we have said nothing about the example itself. The example is not a happy one. It comes close to being what the logician would call a: nominal definition or a synonymous proposition, and synonyms are learned from experience. It is also from experience that we learn the conventional connotation of a term. Hence, a proposition in which the predicate is intended to express in whole or in part the conventional connotation of the subject term is an *a posteriori* proposition.

The difference between an analytical and a synthetical proposition consists in the difference of ground by which we have come to know the one or the other to be true. If a proposition is true, and it has been discovered to be true without recourse to experience, it is analytical. If it is true, and it has been discovered to be true by recourse to experience, it is synthetical. Kant quarrels with these definitions, and contends that many propositions which correspond to our definition of analytical should properly be called synthetical, and he bases his contention mainly upon his alleged proof that the propositions of pure mathematics are not analytical and upon the fact that these propositions are discovered to be true without recourse to experience. We shall see presently that this alleged proof of Kant's is not a proof at all; but first let us call attention to the unsatisfactory character of his account of an analytical proposition or judgment.

Kant remarks as follows: "In [the analytical judgment] nothing is added by the predicate to the concept of the subject, but the concept is only divided into its constituent concepts which were always conceived as existing within it, though confusedly." Now an analytical judgment does not mean one in which we have picked the predicate out of the subject, as is suggested by Kant's description. It certainly never means that we have picked out something which was already known to qualify the subject. That would not be a judgment. There is no judgment where there is no

addition to our knowledge. An analytical judgment does not mean one in which an examination of the subject has revealed to us what the predicate is. This often happens, but it need not happen. The suggestion of the predicate may have come from a source entirely distinct from an examination of the subject, as it does in the case of a student of geometry. The suggestion of the predicate does not come to him from an examination of the subject of the proposition, but from his teacher or his textbook. But once the predicate has been suggested to us and we know what it means, then our proposition is analytical if an analysis or examination of the subject shows us that the suggested predicate belongs to it. A proposition is constituted analytical or synthetical, not by where we had to look to find the *predicate*, but by where we had to look to find the *justification* for attaching the predicate to the subject. If the justification was furnished by the subject, and not by experience, the proposition is analytical or *a priori*; if the justification was experience, the proposition is synthetical or *a posteriori*.

In the case of an analytical judgment, we examine the object signified by the subject term, and in so doing we do not look beyond the object as it was already known to us before we made the judgment; and it is the object as it was known to us which informs us that the predicate belongs to it; so that we now see that the object could not in itself be such as we knew it to be without also being qualified by the predicate. It generally happens that, in examining the object, we have to recall some information about it which is not conventionally expressed by the subject term. If, in such a case, we wish to prove or make clear to another person the truth of the proposition, we shall be obliged to employ an additional term, technically called the middle term. But so far as we ourselves are concerned, the middle term does but express information which was not only already in our possession, but which was actually before us when we were examining the object signified by the subject term.

The conclusion of every deductive process is the result of an analysis of what was already known about the subject of the conclusion. Proving is essentially an appeal to something which does not itself require proof on the part of the person we are addressing. Our appeal is either to something which he already knows to be true or it is to something which he sees to be true as soon as it is stated. What we are doing for him is to direct his attention to various items of information, nearly all of which are already in his possession, but which it has never occurred to him to piece together in this particular way. Once these items are

brought home to him in combination, he sees immediately that the conclusion is true; in other words, he sees that the subject of the conclusion is qualified by an attribute which he did not notice in it before.

In discussing the argument by which Kant attempts to prove that the propositions of pure mathematics are not analytical, we shall deal first with that part of it which is occupied with geometrical propositions, because this is more easily disposed of than the part which has to do with the propositions of arithmetic.

Kant has this to say on the propositions of geometry:

“Nor is any proposition of pure geometry analytical. That the straight line between two points is the shortest, is a synthetical proposition. For my concept of *straight* contains nothing of magnitude (quantity), but a quality only. The concept of *shortest* is, therefore, purely adventitious, and cannot be deduced from the concept- of the straight line by any analysis whatsoever.”

This argument of Kant’s calls for three remarks:

First, the only thing which his argument proves—and it did not need his proof—is that we cannot get short out of straight or straight out of short, and hence, that neither of the following propositions is analytical: “What is straight is short”; “What is short is straight.”

Secondly, Kant overlooked the presence of the word “line” in the proposition. Even were it true that the “concept of *straight* contains nothing of magnitude”—and it is not true, for there is magnitude in everything that is straight—nevertheless a straight *line* essentially contains magnitude. There cannot be a line without magnitude. If we are thinking about a line at all, we are thinking about something that has length, and length is magnitude.

Thirdly, we do not profess to “deduce the concept of *shortest* from the concept of the straight line.” The word “shortest” shows that there was more than one line present to the mind when it made the judgment. The superlative degree of an adjective is never employed unless the mind has more objects than one before it and is comparing these objects together. No one would dream of saying, except as a joke, that the Hudson River is the widest river between New York and Jersey City, since the Hudson River is the only river between those cities. Moreover, the subject of a proposition is not determined by its position in the proposition. Sometimes it is first, and sometimes it is last. It is last in the

proposition, “Uneasy lies the head that wears a crown.” The subject of a proposition is that about which the proposition directly purports to convey information, and it can often be determined by considering the question to which the proposition is an answer. Every proposition may be regarded as an answer to a question or, at least, as forestalling a question. To which of the following questions is the proposition we are discussing an answer? (1) “What is a straight line?” or (2) “What is the shortest line that can be between two points?” Obviously it is an answer to the second question. If it were an answer to the first, the man who put the question would have to take the word of his informant for the truth of the proposition; for he would be learning for the first time the meaning of the term “straight line”; whereas, if the proposition is an answer to the second question, the truth of the proposition is self-evident: and it is to be noted that when this proposition is referred to in works on mathematics it is called an axiom, i.e., a self-evident truth. Consequently, if we place the subject first, the proposition will read: “The shortest line that can be between two points is a straight line.” Now a man cannot recognize that proposition as true unless he has several lines before his mind when he is considering the subject, (as is evident from the word “shortest”), and unless the straight line is one of those lines. Therefore, the proposition, “The shortest line that can be between two points is a straight line,” is an analytical proposition.

If it be insisted that “straight line” belongs in the subject position, then “straight line” is not the full expression of the subject, and it still remains true that the proposition is not an answer to the question, “What is a straight line?” The proposition does not purport to give information about the straight line considered in itself, but about the straight line considered in relation to other lines. If “straight line” belongs in the subject position, the proposition is an answer to the question, “How long is a straight line as compared with other lines?” The logical order of the proposition will then be: “The straight line, as compared with other lines, is the shortest that can be between two points.” No matter how the proposition is worded, if the subject is given in full, it will be seen that an analysis or examination of the subject: is essential in order to obtain a justification for attaching the predicate to the subject, and it is futile to look elsewhere for any justification. We are dealing, therefore, with an analytical proposition.

And now as to the propositions of arithmetic. Before taking up this part of Kant’s argument, one or two general remarks should be made on the meaning and use of symbols, since this will enable us

to simplify the discussion considerably. We proceed, then, as follows:

Terms and symbols are conventional signs, and they get their signification from agreement among those who employ them. The purpose of using them is to direct attention to something to direct it so far and no farther. When we see the word “seven” or the symbol 7, our attention is directed to certain units and no farther. The expression, “what the term or symbol stands for,” or “what the term or symbol means,” is the same as the expression, “what the term or symbol is intended to direct our attention to”; and what the term or symbol is intended to direct our attention to is learned from convention and from that alone.

$7 + 5$ may be called a symbol or a combination of symbols, according to the context. Strictly speaking, 5 does not stand for or signify, but *replaces*, $1 + 1 + 1 + 1 + 1$. One numerical symbol does not signify another. The symbol 5 and the symbol $1 + 1 + 1 + 1 + 1$ are alternative expressions which stand for the same objects or units.

Numbers are symbols which stand for objects merely so far as they are distinct from each other, that is, without reference to the kind of objects they are. The individual objects, so far as they are symbolized by numbers, are called units: at least, this is the sense in which the word “unit” is employed in this chapter. If the only numerical symbol in our possession were the symbol 1, we should have to symbolize five units thus: $1 + 1 + 1 + 1 + 1$. But this cumbersome symbol is now unnecessary, because we have the symbol 5. The same thing is true, *mutatis mutandis*, of the other numerical symbols, such as 12 and 7.

After we have learned what the various numerical symbols signify, we can deal with the symbols alone. The study of arithmetic consists largely in determining the equivalence of various symbols, and especially the equivalence of simpler and less cumbersome to more cumbersome symbols. In the propositions, $7 + 5 = 12$, $7 - 5 = 2$, $7 \times 5 = 35$, $35/5 = 7$, the symbol to the right of the sign of equality is simpler and less cumbersome than the one to the left. The proposition, $7 + 5 = 12$, might be interpreted in this way: “The use of the symbol 12 is equivalent to the use of the symbol $7 + 5$.”

We may do as we please with symbols, provided our operation with them is consistent with what they signify; but the objects which are symbolized are not in our power to manipulate. We may

arrange and group symbols in a variety of ways, but in doing so we do not arrange or group the objects or units for which the symbols stand.

In Kant's argument it is not always clear whether he is referring to the operation of symbols or to the units which the symbols signify. We shall be obliged, therefore, to consider his statements in the light of both interpretations. His argument on the propositions of arithmetic sets out as follows:

“At first sight one might suppose indeed that the proposition $7 + 5 = 12$ is merely analytical But, if we look more closely, we shall find that the concept of the sum of 7 and 5 contains nothing beyond the union of both sums into one, whereby nothing is told us as to what this single number may be which combines both. We by no means arrive at a concept of Twelve, by thinking that union of Seven and Five.”

Notice that Kant employs the words “look” and “find,” which are the same as “observe” and “discover” respectively. Notice, again, that he calls $7 + 5 = 12$ a proposition. Now a proposition is made up of terms or expressions, not of “concepts.” If Kant has in mind here the operation of symbols, the second sentence of the quotation should run thus: “If we look more closely, we shall find that the expression $7 + 5$ contains nothing beyond the union of both sums into one, whereby nothing is told us as to what this single number or symbol may be which combines both [i.e., which is equivalent to both].” In the proposition $7 + 5 = 12$, the expression $7 + 5$ is not intended to tell us “what this single symbol may be which combines both.” We only know the proper symbol from our previous acquaintance with numerical symbols. If we were unacquainted with the symbol 12, we should not know what symbol to put down in the proposition. The reason why we are able to apply the symbol 12 correctly in the present instance is because we recollect what men intended to direct attention to by the use of this symbol.

If Kant has in mind, not the operation of symbols, but that which the symbols stand for, the second sentence of the above quotation should read: “If we look more closely, we shall find that, when we observe what is symbolized by $7 + 5$, we observe nothing beyond the union of both sums into one, and, in observing the union of both sums into one, we do not observe what this single symbol may be which stands for both sums combined into one.” Of course we don't. We do not even observe the symbol $7 + 5$ in that which is symbolized by $7 + 5$. We do not look at an object in

order to discover in it the symbol or term which men have agreed shall stand for the object.

In the third sentence of the above quotation Kant says: "We by no means arrive at a concept of Twelve, by thinking that union of Seven and Five." We are not supposed to arrive at a "concept" of Twelve. What we are supposed to arrive at is the correct simple symbol to replace the complex symbol $7 + 5$; and we cannot do this unless we are already acquainted with the symbol 12 and with the signification which has been attached to it.

If in the foregoing sentence Kant is referring, not to the operation of symbols, but to what they signify, the sentence should be changed as follows: "We by no means come to observe the objects or units which the word 'twelve' stands for by observing the units which are signified by the word 'seven' together with the units which are signified by the word 'five.'" On this interpretation the statement is palpably false.

Kant continues his argument as follows: "I first take the number 7, and taking the intuition of the fingers of my hand, in order to form with it the concept of the 5, I gradually add the units, which I before took together, to make up the number 5, by means of the image of my hand, to the number 7, and I thus see the number 12 arising before me." In the proposition $7 + 5 = 12$, the subject is $7 + 5$. Observe that Kant throughout is examining or analyzing the subject. He is guided solely by the subject in all that he does and says. The words, "I take the number 7," mean "I observe the symbol 7" (or "what the symbol 7 signifies"). The words, "taking the intuition of the fingers of my hand," mean "observing the fingers of my hand." Now why did Kant take only five fingers, unless he was guided by the symbol 5 in the subject of the proposition? And why did he confine himself to the symbol 5? If it was necessary to look at his fingers in the case of the symbol 5, it was just as necessary to look at more of them in the case of the symbol 7. "I gradually add the units....to the number 7." The only units he has mentioned are the fingers of his hand. Hence, his sentence ought to read: "I gradually add the fingers of my hand to the number or symbol 7." "And I thus see the number 12 arising before me." No: he does not see the number or symbol 12 arising before him. What he sees arising before him is the symbol 7 and the fingers of his hand. On his account of it, the proposition should not read " $7 + 5 = 12$ "; it should read " $7+5 = 7 +$ the fingers of Kant's hand," or " $7 + 5 = 7 +$ these five units." Kant may examine and manipulate the subject $7 + 5$ as long as he pleases, and he may call to his aid every intuition imaginable; he will never

learn by this means that 12 is the correct symbol to put in the predicate of the proposition. He can only know this from his previous acquaintance with the symbol 12 and from his previous knowledge that men have decreed that this symbol, shall stand for so many units and no more.

It is true that men often use fingers or pebbles when doing a sum in arithmetic. This is merely an aid to concentration. But what they are concentrating on is units in general, not the particular units which are the fingers or the pebbles. Otherwise the result would not be a proposition of universal application; it would not be " $7 + 5 = 12$," but "This 7 + this 5 = this 12" or "These 7 units + these 5 units = these 12 units." Most of us are doubtless familiar with the story of the little boy who was undergoing an examination in arithmetic. The examiner asked him: "Robert, supposing you had one watermelon, and your uncle gave you two more, how many watermelons would you have?" The little boy replied: "Oh, we haven't got as far as watermelons; we've only got as far as potatoes." Obviously Robert had not been learning arithmetic.

What we have to determine in arithmetic practically amounts to this: Given our acquaintance with the various numerical symbols and with such signs of operation as +, -, x, ÷, what is the correct symbol to replace the several symbols which are connected by any of these signs? For example, $19 + 42 + 67 + 93 =$ what? In order to determine the correct symbol, the only expedient at our disposal is to examine the signification of the several symbols in their relation to the sign or signs by which they are connected. But in doing this we are analyzing the subject.

We ought to allude here to a passage in *Kant's Theory of Knowledge* by Professor H. A. Prichard. This work is a criticism of the whole theory of Kant, and the criticism is in general so excellent that one is surprised to find the author putting forth such statements as the following:

"Kant is obviously right in vindicating the synthetical character of mathematical judgments. In the arithmetical judgment $7 + 5 = 12$ the thought of certain units as a group of twelve is no mere repetition of the thought of them as a group of five added to a group of seven. Though the same units are referred to, they are regarded differently. Thus the thought of them as twelve means either that we think of them as formed by adding one unit to a group of eleven, or that we think of them as formed by adding two units to a group of ten, and so on. And the assertion is that the same

units, which can be grouped in one way, can also be grouped in another” (pp. 6-7).

Unless we suppose that Professor Prichard entertains the view that an analytical judgment does not increase our knowledge, it is difficult to understand why he set down the foregoing lines. What interpretation can be put upon the words, “no mere repetition,” except that the predicate of an analytical proposition is here considered to express something which was known to belong to the subject before the judgment was made? We have touched upon this point in a previous paragraph. It is not correct to say that “though the same units are referred to, they are regarded differently.” They are not regarded differently; they are merely symbolized differently. Again, the following comment is inaccurate: “The assertion is that the same units which can be grouped in one way, can also be grouped in another.” It would be closer to the mark to say: “The assertion is that the same units which can be symbolized in one way, can also be symbolized in another.” We do not group units when we are engaged upon a sum in arithmetic, nor are the units grouped for us. We group the symbols, or some of them, but not the units for which the symbols stand. The symbol 12 does not signify a group of units. It signifies certain units, whether they be gathered into a group or scattered over all creation.

But the essential point of the whole discussion is this: What is it that decides for us that 12 is the symbol we ought to put in the predicate of the proposition? Certainly Kant has not proved that the deciding factor is anything besides the subject. However, that the passage we have quoted from Professor Prichard is the result of the particular interpretation he has put upon the term “analytical judgment,” and that he is, after all, in substantial agreement with the contention of this chapter, would seem to be brought out by the following statement:

“The essential distinction [between ‘Three-sided figures, as such, are three-angled’ and ‘This man is tall’] is that in the universal judgment the predicate term is apprehended to belong to the subject through our insight that it is necessitated by the nature of the subject term” (pp. 157-8).

So far as we can see, this is only another way of saying that an analysis of the subject is our justification for attaching the predicate to it.

One further remark is suggested by Kant’s example, and it is one which has a bearing on the so-called Logic of Relatives. In the proposition $7 + 5 = 12$, 12 is only part of the predicate; the other

part is bound up with the sign of equality. If we call $7 + 5$ a complex symbol, there is an immense class of complex symbols which are equal to 12; for example, $15 - 3 = 12$, $48 \div 4 = 12$, $6(3 - 1) = 12$, and so on. Without the sign of equality, the proposition could be written in this way: “ $7 + 5$ is a member of the class of complex symbols which are equal to 12.”

* * *

We may perhaps be permitted to add a paragraph which has no direct connection with the foregoing chapter. We should like to propound a problem which is suggested by the theory of Kant. It has probably occurred to other readers of the *Critique*, but we have never seen the solution to it. It may be that the problem arises from a misunderstanding on our part as to Kant's meaning. If this is shown to be the case, we shall be very glad to acknowledge it.

Anyhow, so far as we understand Kant's meaning, this is what he teaches: (1) That we do not know anything about the things in themselves; (2) That our knowledge is limited to phenomena; (3) That there cannot be a phenomenon unless the mind has had a hand in fashioning it; (4) That the mind fashions the phenomenon by means of a subjective form which has its birth-place and residence in the mind.

Well, then, how about the mind? Is it a thing in itself or is it a phenomenon? On the theory of Kant, it cannot be a thing in itself, because Kant professes to know a great deal about it. Therefore, it is a phenomenon. Our problem is this: Where did the subjective form reside which fashioned the mind itself into a phenomenon?

XI. Error

1. The purpose of the present chapter is to enforce the conclusions we have reached thus far, and to indicate in a general way how it happens that the mind falls into error.

It is not necessary for our present purpose to give a full account of the mind and its operations; it will be sufficient to say that by the mind we mean the faculty which by its assent attains to objective truth. The mind is also the faculty by which we fall into error; but we are going to maintain that the presence of error in the mind is purely accidental, that it is not due to the constitution of the mind, and hence that, so far as the mind itself is concerned, error can always be avoided.

The human mind would be *deceived per se* if by its very nature without any extrinsic influence it assented to what is false. In order that the mind should be deceived *per se*, it must not only be impossible for it to perceive the truth at the moment of assent, but it must be forced by its very nature to give its assent to what is false.

The *nature* of the human mind is revealed by what it shows itself to be in all men, not by what it shows itself to be in a few men. Some men have abilities or prejudices or defects which are absent from other men; hence, those abilities or prejudices or defects do not belong to the *nature* of the human mind; if they did, every man would possess them.

The human mind is *deceived per accidens* when on account of some influence extrinsic to its nature it assents to what is false.

Such extrinsic influences are, for example, prejudice, excitability, impatience, slothfulness, carelessness, inattention, haste, illness, a morbid imagination, and the like. What we maintain is that, when the mind makes a mistake, the mistake is traceable to some such influence, not to the nature of the mind itself.

THESIS 6

2. *There is no proof that the human mind has ever been deceived per se.*

Proof of thesis: There is no proof that the human mind has ever been deceived *per se* if there is no proof that it has ever been necessitated by its own nature to assent to what is false.

But there is no proof that the human mind has ever been necessitated by its own nature to assent to what is false.

Therefore there is no proof that the human mind has ever been deceived *per se*.

The *Major* is evident; for, in order to be deceived *per se*, a faculty must not be under the influence of anything extrinsic to its nature, and hence its own nature must necessitate it to assent to what is false.

The *Minor* is also evident, for no instance has ever been recorded in which the human mind was necessitated by its own nature to assent to what is false. If in the case of a given individual it seems that he could not have helped making a certain mistake, this would not prove that he was necessitated by the nature of the human mind to make that mistake. In order to prove that the man was necessitated by the nature of the human mind to make the mistake, it would have to be proved that he made the mistake, not because of his particular constitution; but because he was a member of the human race; and not only this, it would have to be proved that any member of the human race would have been necessitated to make that mistake.

Moreover, the following consideration may be offered to show the difficulty that would confront anyone who should attempt to prove that the human mind is ever necessitated by its own nature to assent to what is false. If the human mind were ever thus necessitated, *it would be necessitated by its nature to assent to what is not evident*, for anything that is evident is true. When what is presented to the mind is not evident the mind is not forced to give its assent; for we know from experience that we frequently suspend our assent when we are confronted with matters which require investigation. This shows that the mind is not necessitated by its own nature to give its assent to what is not evident. Consequently, if the mind does at times give its assent to what is not evident, this must be due to something else than the nature of the mind itself.

Again, the mind frequently corrects its own errors, and withdraws the assents which it has previously given. But the mind could not do this, if its own nature impelled it to assent to those errors; for the mind cannot change its own nature.

In matters of a simple nature, which are either self-evident or capable of easy demonstration the mind never makes a mistake. It is in matters that are obscure or recondite that the mind goes astray.

“We have to form our opinion,” says Newman, “make our profession, take our side on a hundred matters on which we have but little right to speak at all. But we do speak, and must speak, upon them though neither we nor those who hear us are well able to determine what is the real position of our intellect relatively to those many questions, one by one, on which we commit ourselves; and then, since many of these questions change their complexion with the passing hour, and many require elaborate consideration, and many are simply beyond us, it is not wonderful, if, at the end of a few years, we have to revise or to repudiate our conclusions . . . Such are the mistakes about certitude among educated men; and after referring to them, it is scarcely worth while to dwell upon the absurdities and excesses of the rude intellect, as seen in the world at large; as if anyone could dream of treating as deliberate assents . . . the prejudices, credulities, infatuations, superstitions, fanaticisms, the whims and fancies, the sudden irrevocable plunges into the unknown, the obstinate determinations—the offspring, as they are, of ignorance, willfulness, cupidity, and pride—which go so far to make up the history of mankind.” *Grammar of Assent*, pp. 235-6.

3. *Note 1.* The *condition* which makes error possible is the limitation of the human mind, by reason of which the search after truth is a slow and laborious process. The mind is altogether ignorant of many things, and what knowledge it does possess of any subject is for the most part very far from being exhaustive.

The *cause* of error is the *will*, by which the mind is frequently ruled in the exercise of assent. When the reasons alleged in proof of a given proposition are only probable or apparent, the mind is indifferent to that proposition or its contradictory, because it is not now determined by an evident truth. In such case the will can move the mind to one side rather than the other, and it may be that that side is false.

When a proposition is evident, the mind cannot be deceived at all, even *per accidens*; and that is why we say the mind is *sometimes* deceived *per accidens*. In that case the mind is not under the influence of the will; for, when the proposition is evident,

the indifference of the mind ceases, and it is by its nature determined to assent.

McCosh writes: "I cannot keep from giving it as my decided conviction, that . . . positive error does, in every case, proceed directly or indirectly from a corrupted will, leading us to pronounce a hasty judgment without evidence, or to seek partial evidence, on the side to which our inclinations lean. A thoroughly pure and consistent will would, in my opinion, preserve us from all mistake." *Intuitions of Mind*

4. *Note 2.* It is usual to state the doctrine of the present thesis thus: The human mind is infallible *per se*, but in some things it is fallible *per accidens*.

5. *Note 3.* Logical falsity is the diversity of what is assented to from reality. This diversity or difformity, in order to be logical falsity, must be *positive*, and not merely *negative*. We have *negative* diversity or difformity, when the mind does not contemplate everything, there is in the object, and at the same time does not deny anything that is there. We have *positive* diversity or difformity, when what the mind assents to is different from reality, either because the mind attributes to the object what it does not possess or denies of it what it does possess.

6. *Note 4.* For the most part, an assent to what is false is due to a failure to take the precautions which experience or common sense prescribes. This lack of precaution manifests itself in three principal ways:

- a. The mind may affirm more than it sees. Thus, it sees two objects of the same color, for example, flour and powdered sugar, and affirms that they are of the same nature.
- b. The mind may refer the properties of an object as it appears to be to the object as it is in itself. Since the *existing* object is not always what it appears to be, it may happen that the idea of the object as it appears *does not contemplate* the object as it actually is. Thus, a person may judge that a rod partly immersed in water is broken, because it appears to be broken. Direction, distance, and shape are not the proper object of the sense of sight, and hence we should not rely upon sight alone to determine them; we should have recourse to the sense of touch.
- c. We may deny something of an object, because we do not see it in the object. For example, a man may deny that there is chlorine in common table salt, because he does

not see it there. [An apparent a slip on the author's part, this last way of manifesting a lack of precaution is not listed as *c.* in the text, but this seems to be where it naturally separates itself from the *b.*—A.F.]

THESIS 7

7. The assent which the mind gives to a truth without scientifically weighing the grounds is in many cases a genuine certitude.

This thesis is directed against certain rationalistic philosophers, notably Th. Lipps, who maintain that scientific investigation is the only warrant for certitude.

We have seen that certitude is a firm assent to a perceived truth. In this definition "perceived" means brought home to the mind by adequate evidence or proof, that is, by such evidence or proof that the mind knows it is assenting to a truth.

Natural certitude is an assent which the mind gives to a truth without scientifically weighing the grounds.

Philosophic or scientific certitude is the assent which the mind gives to a truth after scientifically weighing the grounds.

Natural certitude is common to all men and concerns matters which are easily known and are necessary to human life. Philosophic certitude is peculiar to those who are accustomed to accurate reflection and has to do with matters which are abstruse and also with many of the subjects with which natural certitude is concerned.

We do not say that the assent which the mind gives to a truth without having scientifically weighed the grounds is *always* a genuine certitude, but that it is so *in many cases*. Much less do we say that every assent even though it is given on apparent grounds, is an assent to a truth.

Proof of thesis: That assent which is founded on adequate evidence of a truth is a genuine certitude.

But the assent which the mind gives to a truth without scientifically weighing the grounds is in many cases founded on adequate evidence of a truth.

Therefore the assent which the mind gives to a truth without scientifically weighing the grounds is in many cases a genuine certitude.

The *Major* is evident; even our opponents will admit this. What they deny is that in natural certitude there is adequate evidence of a truth.

The *Minor* is proved by experience and by reason:

(1) *Experience*: All men who have come to the use of reason, even though not scientifically trained, assent firmly to a multitude of truths, for example, the first principles of knowledge, the existence of the world, their own existence, the distinction between right and wrong, and so on. Many of these truths are self-evident and no amount of scientific investigation can make them more evident than they are.

(2) *By reason*: Men are not born philosophers or scientists; they *become* philosophers or scientists by careful study and training. But they must begin their philosophic reflection or study with some truths which are certain; for a conclusion is not certain unless it is proved by premises which are certain. But these certitudes with which a man begins his studies must be *natural* certitudes, not philosophic, for philosophic certitude comes only after one is a philosopher.

XII. Pragmatism

1. *Pragmatism* is a system which teaches that all axioms are postulates, that meaning consists in practical consequences, and that truth is the same as satisfaction or verification. Things are what “they are known as.” Professor Dewey writes:

“The entire significance of the evolutionary method in biological and social history is that every distinct organ, structure or formation, every grouping of cells or elements, has to be treated as an instrument of adjustment or adaptation to a particular environing situation. Its meaning, its character and its value is known when, and only when, it is considered as an arrangement for meeting the condition involved in some specific situation.” (*Studies in Logical Theory*, pp. 14-15.)

Hence the pragmatist maintains that the meaning, character, and value of an idea or judgment is determined by the function it exercises in harmonizing and adjusting old beliefs and opinions. He tells us that the purpose of thought is the useful reaction of the organism upon the environment. “Ideas” are instruments for molding our experience; and their “truth” consists in their usefulness and success in performing this function.

N.B. It is important to remark that by “idea” the pragmatist commonly means a judgment.

In the pragmatic view every idea or judgment is an hypothesis or working formula and its truth is determined by whether it “works” in reducing previous beliefs to harmony. “Do ideas present themselves except in situations which are doubtful and inquired into?.. Are the ideas anything except the suggestions, conjectures, hypotheses, theories, tentatively entertained during a suspended conclusion?” (Dewey, in *Journal of Philosophy*, Vol. V, p. 378.) Professor Dewey calls an idea or Judgment a “plan of action.”

2. In accordance with the assumptions of their system the pragmatists have a peculiar doctrine on “meaning.” For them meaning is the same as practical consequences.

This is set forth in the following passages:

“There is no distinction of meaning so fine as to consist in anything but a possible difference of practice” (Peirce, in *Popular Science Monthly*, Vol. XII, p. 293).

“The effective meaning of any philosophic proposition can always be brought down to some particular consequence in our future practical experience” (James, in *Journal of Philosophy*, Vol. I, p. 674).

Pragmatism is “the doctrine that the whole ‘meaning’ of a conception, expresses itself in practical consequences, consequences either in the shape of conduct to be recommended or in that of experience to be expected, if the conception be true; which consequence would be different if it were untrue, and must be different from the consequences by which the meaning of other conceptions is in turn expressed. If a second conception should not appear to have other consequences, then it must really be only the first conception under a different name.” (James, in Baldwin’s *Dictionary of Philosophy*.)

“If you wish to find out what any philosophic term means, go to experience and see what it is experienced as” (Dewey, in *Journal of Philosophy*, Vol. II, p. 399).

“To say that a truth has consequences and that what has none is meaningless, means that it has a bearing upon some human interest. Its ‘consequences’ must be consequences to some one for some purpose” (Schiller, in *Studies in Humanism*, p. 5).

“Imagine the entire contents of the world to be once for all irrevocably given. Imagine it to end this very moment, and to have no future; and then let a theist and a materialist apply their rival explanations to its history. . . . By the hypothesis there is to be no more experience, and no possible differences can be looked for. Both theories have shown their consequences, and by the hypothesis we are adopting these are identical. The pragmatist must consequently say that the two theories, in spite of their different sounding names, mean exactly the same thing, and that the dispute is purely verbal” (James, in *Pragmatism*, p. 96).

3. REMARKS. The pragmatists have appropriated the word “meaning” to their own use. Having found one particular application of the word in which it bears the interpretation they put upon it, they most unscientifically decree that the word shall have this interpretation wherever it is applied. As a matter of fact, the verb “mean” is applied in at least three different ways; and in many cases it may be replaced by the substantive “meaning,” but not always. The three applications are as follows:

- (1) A person asks the questions, "What does the word 'biology' mean?" "What is meant by the words, 'Veni, vidi, vici'?" In these questions we may substitute the substantive for the verb, thus, "What is the meaning of the word 'biology'?" "What is the meaning of the words 'Veni, vidi, vici'?" It is plain that in these questions, the person is asking what the people who use these words understand by them; he is asking for the definition or *interpretation* of the *words*. For the sake of clearness this application of "meaning" shall be called the conventional meaning or connotation of a word.
- (2) A mother, referring to her son's success in life, speaks as follows: "I cannot tell you what his success means to me"; or "I cannot tell you the meaning his success will have for me." As is obvious, the word "meaning" in this context is the same as "practical consequences" and the sentence is equivalent to the following: "I cannot tell you the practical consequences his success will have for me." We may call this the *pragmatic meaning*.
- (3) A friend says, "When I go to the city, I mean to call on your brother." Here the word "mean" is the same as "intend." In this sense the word is applied exclusively to *persons*, never to words, thoughts or things. Thus, we never say, "When the machine is started, it means to make a pen." This may be called the *purpose-meaning*.

In their account of the word "meaning" the pragmatists fix upon the second application, that is, the pragmatic meaning and use it as though it covered the conventional meaning. When they fancy they have proved that a *thing* has no practical consequences, that is, no pragmatic meaning, they pronounce that the words used to denote the thing are meaningless, that is, that they have no conventional meaning. Thus, Mr. James says that at the end of the world the systems of theism and materialism "in spite of their different sounding names, mean exactly the same thing, and that the dispute is purely verbal." Even on his own interpretation, Mr. James' statement is untrue. When he says that theism and materialism "mean exactly the same thing" at the end of the world, he wishes us to understand that they will have the same consequences. But on Mr. James' supposition they will have no consequences at all, since the world is at an end; and hence, instead of saying that theism and materialism will mean exactly the same thing, he ought to say that they will have no meaning at all. Again, on Mr. James' theory, the propositions "Napoleon was

defeated at Waterloo” and “Napoleon” was not defeated at Waterloo” will mean exactly the same thing at the end of the world.

Professor Dewey says, “If you want to find out what any philosophic term means go to experience and see what it is experienced *as*.” Most people, if they were asked what they experienced a given philosophic term *as*, would doubtless reply that they experienced it as a particular kind of *word*. Would Professor Dewey then say that a given philosophic term means a particular kind of word? Very likely, however, Professor Dewey wishes to say that if you want to find out what practical consequences the *thing denoted* by a philosophic term has, go to experience and see what the *thing* is experienced *as*. But how can we tell what *thing* he is speaking about, that is, what *thing* is denoted by the philosophic term, unless he first tells us what the philosophic term *means*; that is, unless he first gives us at least a nominal definition of the term? We cannot converse intelligibly about the pragmatic meaning of the *thing* denoted by a term, unless we first know the conventional meaning of the term, that is; unless we know *what thing* we are talking about.

If the pragmatists were held rigorously to their explanation of “meaning,” many of their statements would make absolute nonsense, that is, they would be utterly without meaning. Take, for example, the following sentence from Dr. Schiller: “To say that a truth has consequences and that what has none is meaningless, means that it has a bearing upon some human interest.” On the pragmatic explanation of “meaning” this sentence would run, “To say that truth has consequences and that what has none is meaningless, has for practical consequences that it has a bearing upon some human interests.” Take again, the following passage from Dr. Schiller: “*Truth* therefore will become ambiguous. It will mean primarily a claim which may or may not turn out to be valid. It will mean secondarily such a claim *after* it has been tested and ratified” (*Studies in Humanism*, p. 144). By “truth” does Dr. Schiller wish us to understand the *word* “truth” or the *thing* denoted by the word? It cannot be the *thing* denoted by the word; for things are not ambiguous; it is only words that are ambiguous. His statement, then, should be worded as follows: “The word truth will have for practical consequences primarily a claim which may or may not turn out to be valid. It will have for practical consequences secondarily such a claim after it has been tested and ratified.”

4. It will be found that in their explanation of “truth” the pragmatists are continually speaking of the pragmatic meaning,

and yet they seem to wish to leave the impression that they are referring to the conventional meaning of the word "truth." Moreover, when they speak of ideas (i.e., judgments) as true, they are referring to judgments which no one but a pragmatist calls true, namely, judgments which embody scientific and other hypotheses. The following are some of their utterances on the subject:

"An idea (i.e., a judgment) is true so long as to believe it is profitable to our lives" (James, in *What Pragmatism Means*, p. 75).

"Theoretical truth is no relation between our mind and the archetypal reality. It falls *within* the mind, being the accord of some of its processes and Objects with other processes and objects" (James, in *Mind*, Vol. XIV, p. 198).

"Truth happens to an idea (i.e., a judgment). It becomes true, is made true by events. Its verity is in fact an event, a process; the process, namely, of its verifying itself, its *verif-ication*. Its validity is the process of its *valid-ation*" (James, in *Pragmatism*, p. 201).

"The truth of our beliefs consists in general in their giving satisfaction" (James, in *Philosophical Review*, Vol. XVII, p. 5).

Truth is "a function of our intellectual activity or a manifestation of our objects which turns out to be useful" (Schiller, in *Humanism*, p. 61).

"All truths must be verified to be properly true" (Schiller, in *Studies in Humanism*, p. 8).

"If truth could win no recognition, it would so far not work, and so fail to be true" (*Ibid.* p. 70).

"Truth is an experienced relation of characteristic quality of things, and it has no meaning outside of such relation" (Dewey, in *Mind*, Vol. XV, p. 305).

"From this (the pragmatic) point of view verification and truth are two names for the same thing. . . . What the experimentalist means is that the effective working of the idea (i.e., the judgment) and its truth are one and the same thing—this working being neither the cause nor the evidence of truth but its nature" (*Ibid.* p. 335-7).

"The true, to put it very briefly, is only the expedient in the way of our thinking, just as the right is only the expedient in the way of our behaving, expedient in almost any fashion and expedient in the long run, and on the whole" (James, in *The Meaning of Truth*, Preface p. VII).

“Truth is what is useful in building up a science; a falsehood, what is useless or noxious for the same purpose. . . . To determine therefore whether any answer to any question is true or false we have merely to note its effects upon the inquiry in which we are interested and in relation to which it, has arisen. And if these effects are favorable, the answer is ‘true’ and ‘good.’” (Schiller, in *Studies in Humanism*, p. 144.)

“New truth is always a go-between, a smoother-over of transition. It marries old opinion to new fact, so as ever to show a minimum of jolt, a maximum of continuity. We hold a theory true just in proportion to its success in solving this problem of maxima and minima. But success in solving this problem is eminently a matter of approximation. We say this theory solves it on the whole more satisfactorily than that theory; but that means more satisfactorily to ourselves, and individuals will emphasize their points of satisfaction differently” (James in *Pragmatism*, p. 61).

THESIS 8

5. *The pragmatist’s account of truth is arbitrary, and his philosophical position is without rational foundation.*

PROOF OF PART 1: *The pragmatist’s account of truth is arbitrary.*

That account of truth is arbitrary which ascribes truth to propositions that ordinary men refuse to call true and which limits the application of the word “truth” to such propositions.

But the pragmatist’s account of truth ascribes truth to propositions that ordinary men refuse to call true and limits the application of the word “truth” to such propositions.

Therefore the pragmatist’s account of truth is arbitrary.

The *Major* is evident; for a person who will not consult mankind as to what propositions deserve to be called true, who out of his own head conceives a particular application of the word “truth,” and then by his *ipse dixit* decrees, that such application shall be the only correct one is certainly giving an arbitrary account of truth.

Minor: The only propositions that the pragmatists call true are the hypotheses of science and propositions which have the same function as these hypotheses, namely, such propositions as are provisionally laid down for the purpose of harmonizing and explaining the multifarious facts and data in our experience and in

the world outside of us. But no one, not even the scientist, calls these propositions or hypotheses “true.” What men do call true are the facts and data which the hypotheses are devised to explain. It is *true* that whenever water is subjected to chemical decomposition, it gives forth oxygen and hydrogen; it is *true* that table salt gives forth sodium and chlorine. This the scientist calls true whether or not he has any hypothesis or theory to explain it. When he does venture upon an hypothesis, he does not call it true. He does not call it true, because he knows that it may turn out to be false. It is only after he has collected a vast amount of evidence in favor of it, evidence of such a nature as to exclude the possibility of mistake, that he calls it true. But when a proposition, which at the start was called an hypothesis, has been proved true, it is no longer called an hypothesis, but an established truth.

Note: James says that the truth of an idea or judgment is “the process of its *verifying* itself, its *verif-ication*.” And Professor Dewey: “Verification and truth are two names for the same thing.” As a matter of fact, to verify is to prove to be true; verification is proving or establishing a truth. A judgment or proposition is verified when it is proved to be true. But the judgment or proposition has to be true *before* it is proved true. Observe that it must *be* true, though it may not be *known* to be true, before it is proved true. Verifying is not *making* truth; it is making truth *known*. Now, since the pragmatists identify truth with verification, it is plain that on their theory no proposition can be proved to be true; for to prove the truth of a proposition would be to verify the verification of the proposition, it would be the verification of its verification—which is nonsense.

6. PROOF OF PART 2: *The pragmatist’s philosophical position is without rational foundation.*

A philosophical position which is neither self-evident nor capable of being proved to one who does not hold it is without rational foundation.

But the pragmatist’s philosophical position is neither self-evident nor capable of being proved to one who does not hold it.

Therefore the pragmatist’s philosophical position is without rational foundation.

The *Major* is evident.

Minor: That the philosophical position of the pragmatist is not self-evident is plain from the fact that most men of common sense

reject it, and from the fact that the pragmatists make such energetic attempts to recommend it to others. That it cannot be proved to one who does not hold it is also plain. The pragmatists themselves admit that their position cannot be proved. Dr. Schiller says that “the pragmatic theory has to be adopted before it can be verified” and that therefore it would be absurd in pragmatism to attempt to prove itself true to one who has not first adopted it. (Jour.

of Phil., Vol. IV.) Speaking of the pragmatic universe, James says: “Whether what they themselves say about that universe is objectively true, i.e., whether the pragmatic theory of truth is true really, they cannot warrant, - they can only believe it.” He compares pragmatism to universal scepticism, and says “You can no more kill off (scepticism) by logic than you can kill off obstinacy or practical joking. This is why it is so irritating. . . . No more can logic kill the pragmatist’s behavior” (*Philosophical Review*, Vol. XVII, p. 16).

7. *Note.* According to the pragmatists, a judgment is true which “works,” which gives satisfaction. If the same judgment does not give satisfaction to a second person, it is false for him. If the judgment gave satisfaction yesterday, it was true yesterday. If it fails to give satisfaction today, it is false today. Should it give satisfaction again tomorrow, why, then, it will be true again tomorrow. Thus truth is changeable. This doctrine is quite in line with the pragmatist’s contention that hypotheses are the only things that are true. But a man of common sense would not say that truth is changeable; he would not say that what was true yesterday may be false today. If yesterday he held a given proposition to be true which today he found out to be false, he would not say that the proposition was true yesterday and false today. He would say that he made a mistake yesterday in thinking a false proposition was true. Pragmatism is thus utterly at variance with common sense.

Suppose that at two o’clock this proposition is true, “John has a toothache,” and that at three o’clock the following proposition is true, “John has not a toothache”—has truth changed between two and three o’clock? By no means. The element of time enters into both those propositions, though it was not formally expressed. If it is expressed, it will be seen that both propositions are true now, and that they are eternally true. What is conveyed by the foregoing propositions, if fully expressed, would run as follows: “At two o’clock on February 18, 1950, John had a toothache”; “At three

o'clock on February 18, 1950, John did not have a toothache."
These propositions can never become false.

XIII. The New Realism

1. The authors of the book entitled *The New Realism* say in their Introduction: "The new realism is primarily a doctrine concerning the relation between the knowing process and the thing known" (p. 2). There is much in this introductory chapter to which we can give a ready and cordial assent. Let the following quotations serve as specimens of our points of agreement: "The escape from subjectivism and the formulation of an alternative that shall be both remedial and positively fruitful, constitutes the central pre-eminent issue for any realistic protagonist" (p. 10). "To understand [the meaning of the new realist's relational theory] it is necessary to go back. . . . to that primordial common sense which believes in a world that exists independently of the knowing of it" (p. 10). "The realist believes that he thus discovers that the interrelation [between the thing known and the knower] is not responsible for the characters of the thing known. . . . Being known is something that happens to a preexisting thing. The characters of that pre-existing thing determine 'what happens when it is known'" (p. 34). "In the end all things are known through being themselves brought directly into that relation in which they are said to be witnessed or apprehended" (p. 35). "The [new realist] regards analysis and conception as means of access to reality, and not as transformations or falsifications of it." (p. 35).

The above quotations give some idea of the fundamental doctrine which the new realists propose to expound and defend. In outlining their mode of procedure they lay down some admirable rules, which, indeed, are essential to clarity of thought and to the achievement of any substantial results in science or philosophy. They insist, for instance, upon a scrupulous use of words, exact definition, logical form, and the necessity of dealing with one question at a time if we are to avoid confusion.

The new realists began their campaign at a time when the subjectivists and the idealists were having it all their own way and were firmly entrenched in most of the educational centres of Europe and America. The inauguration of this campaign seemed a good omen. It opened up a hope that the principles for which the scholastics have been contending for centuries would now gain a hearing in institutions from which hitherto they had been

excluded. So intense and successful was the attack of the new realists upon the idealistic position that the idealists were forced to reconstruct their defenses.

But something went wrong. The new realist conducted his attack with a clearness of statement, a directness of aim, and a keenness of logic which were exhilarating. He had the bearing of a man who was dominated by a strong conviction and an inspiring vision. But suddenly he flung away the weapons which had served him so well in the battle with the idealist. He abandoned common sense and that scrupulousness in the use of words upon which he had set such store. As one studies the manoeuvres of the new realists, one gets the feeling that their efforts have been wasted, that their battle with the idealists was not a battle at all, but a mere beating of the air. That this feeling is justified is attested by three facts—their alliance with the sceptics, their rejection of the notion of substance, and their too heavy reliance upon abstract terms.

2. As to scepticism, it would be unfair to generalize and to accuse the whole body of new realists of formally adopting that attitude. But that is the impression which is conveyed again and again by their writings. Among the passages which might be cited to this effect is a notable one by Professor Spaulding. He is drawing up the list of propositions which constitute his platform and he lays down the following:

While on the one hand no proposition is so certain that it can be regarded as exempt from examination, criticism, and the demand for proof, on the other hand, any proposition, if free from self-contradiction, may be true (in some system). In this sense every proposition is tentative, even those of this platform. (*The New Realism*, p. 479)

That this statement represents the view of the six authors of *The New Realism*, would seem to be implied in the following passage: “Each list has a different author, but has been discussed at length, revised, and agreed to by the other conferees. The six lists, therefore, though differently formulated, are held to represent the same doctrines” (Ibid. p. 472).

On reading this statement of Professor Spaulding’s one begins to wonder what has become of the original plan of operations and what is the objective at which the new realists are aiming. If “every proposition is tentative,” do not the propositions of the idealist deserve this description as well as those of the new realist? If “any proposition may be true,” why attack any proposition? If “no proposition is so certain that it can be regarded as exempt from the

demand for proof," how are you going to start your polemic against the idealist? Is not the idealist entitled, on your principle, to demand a proof of everyone of your own propositions before you can employ any of them against him? And when are you going to stop proving? Where will you find a place for the "logical form" which was to be one of the rules of the game? Take the following proposition: "A proposition, to be true, must be free from self-contradiction." Must, this proposition, too, be regarded as subject to the demand for proof? The new realist has bound himself hand and foot; he has but succeeded in making argument impossible.

Now, why could not the new realist be real? Why distort the immemorial sense of the term "realist" by applying it to the advocates of such a doctrine as the above? Until the fashion arose of wresting words from their normal meaning, "realist" signified a man who held that the human mind gets at reality as it is and knows that it gets at it. It is largely true to say that the new and the critical realists would be more appropriately described by the name of hypothetical realists, for their position could be interpreted thus: "We know nothing, but if we did know anything, it would be something independent of mind." And the same remark applies, *mutatis mutandis*, to the idealists. They should more properly be called hypothetical idealists. If their statements and arguments are analyzed, they will be found to express something like this: "We know nothing, but if we did know anything, it would be something dependent upon mind." The realisms of recent birth are realistic, not in doctrine, but in desire. Mr. Bertrand Russell is ranked among the new realists, and Mr. Santayana calls himself a critical realist. This passes muster within the circle of philosophers who tolerate the misuse of words and names. But it would hardly be allowed outside that circle.

The sceptical attitude is a fashion and nothing more. There is absolutely nothing to be said in its favor. It is unworthy of a philosopher to take up a position merely because it is fashionable. The true philosopher will not adopt a position without some ground in reason; and from the nature of the case there can be no argument for scepticism.

3. And now as to substance. The new realists misinterpret the name and reject the thing. This may be seen from the following quotations: "The principle of substance betrays realism into the hands of its enemy" (Perry in *The New Realism*, p. 103).

"Matter analyzes out completely into mathematical entities, and leaves no residue by way of little material brickbats. A block of wood is ponderable, *et cetera*, but the shape, volume, physical

masses, and electrical charges of which it is composed are not ponderable; ponderability being a property of, and deducible from, just these things in their organized completeness” (Holt, *ibid.* pp. 368-9). “The picture I wish to leave is of a general universe in which all things . . . subsist. The entities of this universe have no substance” (Holt, *ibid.*, p. 372). “Would it not then have seemed to the uncritical mind even as it does today, that a *thing* is *not the mere aggregate* of its qualities, but that it includes a *substratum* in which these attributes inhere? . . . Would it not also seem to the uncritical and naive mind that *things would affect one another*, yet . . . without prejudice to the self-identity of the substance-like substratum that is the ‘core’ of each?” (Spaulding in *The New Rationalism*, pp. 32-3.) “[The Aristotelian] logic, we have found, is a logic of *things*, of attributes that inhere in an underlying substratum. . . . It is a logic that is *metaphysical* in (the) derogatory meaning of the term. . . . Modern logic and scientific method are characterized by a strong reaction against this entire ‘substance point of view’” (*Ibid.*, pp. 270-1). “The view which I am advocating is . . . monism in the sense that it regards the world as composed of only one kind of stuff, namely, events” (Russell in *Philosophy*, p. 282). “It must be understood that the same reasons that lead to the rejection of substance lead also to the rejection of ‘things’ and ‘persons’ as ultimately valid concepts” (*Ibid.*, P. 243). “Everything in the world is composed of ‘events’” (*Ibid.* p. 276).

The notion of substance which is conveyed by the foregoing citations is a wrong one. It is certainly not the scholastic notion. Had the new realists taken the trouble to consult the standard scholastic writers, they would have discovered that they were fighting a man of straw and, moreover, that they were themselves, in their own strange way, upholding the doctrine of substance. In scholastic philosophy a substance is an object which of its very nature exists without a subject. That is what it means, and all that it means. If, therefore, “shape,” “volume,” “electrical charges,” “events,” and the like are objects which of their very nature exist without a subject, then each of them is a substance; and the new realists are in fact maintaining that the world is composed exclusively of substances. Again, it is inaccurate to say that a substance is a “substratum in which attributes inhere.” Why, substance is itself an attribute, if anything is an attribute. “Attribute” is the abstract name we give to anything that can be predicated or affirmed of an Object. To say of an Object that it is a substance is as emphatically to affirm an attribute of it as to say that it is red or that it is round. Substance occupies the place of honor in Aristotle’s list of categories or *praedicamenta*. People

ascribe attributes to a person or to a thing taken in its entirety, not to a substance considered as a substance. For example, they say "John Brown is tall and intelligent." They do not say "The substance of John Brown is tall and intelligent." This remains true even when "tall" and "intelligent" are changed into abstract words. Thus, people speak of the tallness and intelligence of John Brown, not of the tallness and intelligence of his substance.

4. The error of the new realists concerning substance is intimately connected with their too facile use of the abstract term. By the abstract term I do not mean the general term, but a term such as "ponderability" and "generosity," though there are some terms which, besides being abstract, are also general. The test of a general term, which can be applied in the large majority of cases, is this, that the speech of the ordinary man sanctions its use in the plural. Thus, "action" and "virtue" are examples of abstract general terms. If there is one counsel more than another which needs to be drilled into the student of philosophy at the present day, it is to beware of the abstract term. The abstract term is the worst mischief-maker in philosophy. It is chiefly responsible for the vast confusion which pervades the philosophical world and for the endless quarrels and misunderstandings which have arisen there. You can play about with an abstract word and make it perform a thousand tricks. Now everything in the physical world is concrete. And if you cannot get a concrete word to designate anything you are referring to in that world, you may take it as a danger signal. Ninety-nine times out of a hundred it means that what you are referring to is not there at all. Of course, the new realist is not the only offender in this matter. We, too, have had our lapses from the straight path. But the abandoned and unrepentant sinner is the idealist. He wallows in abstract terms. That is why, in reading him, one has the feeling of being in a nightmare.

The professional sceptic is not a sceptic in his private life or in his social relations. Scepticism is a pose. But it is scepticism and the excessive indulgence in abstract terms which have caused the Babel that now-a-days goes by the name of philosophy. Of course, it would be foolish and stupid to put an absolute veto upon the abstract word. Language would be impoverished without it; it is a necessity of normal civilized discourse. Nor is there any harm in employing it to describe concrete things any more than there is in the use of metaphor. In ordinary conversation and in literature people take in your meaning without difficulty and there is no risk of misunderstanding. But the mistake, the fatal mistake, is to imagine that, when you use an abstract word to denote an external

object, you are speaking literally. Everyone understands you when you talk of the redness of the rose or of the straightness of the stick. It is you who are misled when you fancy that these are accurate and literal expressions. There is neither redness in the rose nor straightness in the stick. The eye does not perceive the redness of the rose; it perceives the red rose or the rose so far as it is red.

There is a very simple test to be applied in this matter. Take any abstract word you please and set it down as the predicate of an affirmative proposition in which the subject stands for what everyone acknowledges to be an external object: you will find that your proposition makes nonsense. Thus, there is no sense in the proposition, "The rose is redness" or "The stick is straightness." Since it is impossible, by means of an affirmative proposition, to identify such a thing as redness or straightness with an object in the external world, this is a proof that there is no such thing in that world. It is no answer to this to bring forward the proposition, "A quality of the stick is straightness." You are not here identifying straightness with an external object; you are identifying it with what is expressed by an abstract term, for the word "quality" is abstract term. Quality cannot be affirmed of anything which we all recognize as an object in the external world. Nor do you strengthen your contention by declaring that a quality exists externally when it is individualized and that you individualize it by saying, "This quality of the stick is straightness." You cannot bring a thing into physical existence merely by prefixing the word "this" to the term which stands for the thing; otherwise you could bring a centaur into existence by saying, "This centaur has long fetlocks." Supposing two persons who acknowledge the existence of an external world are having a dispute as to whether what is denoted by a given term is present in that world; there is only one way of settling the dispute, and that is, to determine whether the term can be employed as the predicate of an affirmative proposition and affirmed of something which the disputants agree is an external object. Doubtless in some cases the proposition will require proof; but the first thing to determine is whether it makes sense.

We are perpetually confronted with such words as "instant," "relation," "motion," "energy," "shape," "collision," "event," "dimension," "direction." These words are tossed to and fro in controversy as though they stood literally for objects in the external world, and this is what makes the controversy so hopeless. Everyone of these words is abstract. They are useful in pure mathematics. When Professor Holt said that "matter analyzes out completely into mathematical entities," he might as well have

said that matter is composed of mathematical tests and rules of measurement. Literally speaking, there is no motion in a body or a collision between two locomotives or a relation between father and son. When we speak literally, we say that a body moves or that it is a moving thing, that two locomotives collide, and that father and son are related.

A few years ago some philosophers were discussing the question, Where is consciousness? One of them answered the question by asking another, "Where is it not?" Professor Holt has this to say: "Consciousness, whenever localized at all (as it by no means always is) in space, is *not* in the skull, but it is 'out there' precisely wherever it appears to be" (*The New Realism*, p. 353). "Consciousness is, then, out there wherever the things specifically responded to are" (*Ibid.* p. 354). The impression conveyed by these sentences is that "consciousness" has been turned into a technical term and used by the writer in a sense of his own. But if this liberty be conceded to him, why may not another writer avail himself of the same liberty? And when this happens, how are the disputants to come to grips over one and the same issue? I am not altogether sure that I understand the meaning of Professor Holt's words, but it does seem as if the question would be clarified if the abstract term were omitted and the question put in concrete language, thus: "Where is the conscious being?" and "Where is that of which he is conscious?" or rather "Where is that which he is conscious of contemplating?"

In a large number of cases the origin of the abstract word is to be ascribed to a desire for brevity, a desire to let a single word stand for a good part of a sentence. We are continually converting the concrete predicate of a proposition into an abstract word and allowing this to do service for everything in the proposition except the subject. We say, for instance: "Astronomers have demonstrated that the earth is round" and "Jones is convinced that the rose is red"; and afterwards we say: "Astronomers have demonstrated the roundness of the earth" and "Jones is convinced of the redness of the rose." "The roundness of the earth and "the redness of the rose" are handy forms of expression, much handier in continuous discourse than the propositions for which they stand. But we fall into a fallacy when we forget that "roundness" and "redness merely replace the words "is round" and "is red" and that they do not stand" for something that is in the earth or the rose.

At one moment a person will say: "George admits that wood is ponderable, that grass is green, and that gold is a substance"; at

another moment he will put it in this way: "George admits the ponderability of wood, the greenness of grass, and the substantiality of gold." "The ponderability of wood," "the greenness of grass," and "the substantiality of gold" have here exactly the same meaning respectively as "Wood is ponderable," "Grass is green," and "Gold is a substance." When the philosopher has obtained a phrase in place of a proposition, some imp of perversity prompts him to declare that wood is not a ponderable thing but that it possesses ponderability, and that grass is not a green thing but that it possesses greenness. The new realist is forbidden to say that gold is a substance; but now that he has found an abstract word to replace "substance," he may perhaps be permitted to say that gold possesses substantiality. He is permitted to say that it possesses solidity. Before he realizes what has happened, he will find himself executing the gyrations of the idealist.

Let the philosopher, then, have done with the folly of scepticism; let him resume a normal human existence after his long orgy in the land of abstract terms; and will find that he has rid himself of three quarters of his problems, and—what is by no means an unimportant point—he will begin to speak a language which a man of intelligence can understand.

One word in conclusion. Our philosophy is the only one that has a rightful claim to the name of realism. It is the only philosophy that does not do violence common sense. If it is to have a designation that shall discriminate it from the present-day systems which have usurped its name, it should be called common-sense realism. Common sense is not everything in philosophy, but it is the foundation. No system can endure which is not built upon that foundation. System after system arises with an initial appeal to common sense and then proceeds to undermine its foundation. The intellect of the average man resents the desecration and impatiently brushes aside the framework of unrealities which have been pieced together by the innovator and re-instates common sense in its traditional position. That is the story of the rise and fall of philosophical systems. In recent works on philosophy common sense realism has been nicknamed "naïve" and treated with contempt. But let it be remembered that common sense is backed by the wisdom of the ages, and philosophy has little or no meaning if it is not a love of wisdom.

XIV. The Misinterpretation of the Abstract Term

From ancient times the philosopher has been seeking a solution of a number of problems, but with little success. This naturally leads one to ask, What is it that is forever interfering with the efforts of the philosopher? There can be little doubt that the most formidable obstacle in his path is language. The present chapter will advance two or three illustrations in confirmation of this contention:

In the very threshold of his investigation the philosopher is confronted with the ambiguous word, with the figure of speech, with the elliptical phrase, with the convenient expression, with the expression employed for the sake of variety, with the vast apparatus of technical words and phrases. He must possess the key to this labyrinth or he is lost.

A harmless instance of the elliptical expression occurs when we say that we assent to a proposition, whereas we assent to what is expressed by the proposition. We speak of bringing an object before us, when we mean that we are attending to the object or directing our attention to it. We say that we combine objects, when our meaning is that we attend to the objects so far as they are combined in a particular way. Sometimes a philosopher seems to be making a comment on an object, when in reality he is commenting on a comment which he or another person had previously made upon the object.

Not many years ago a philosopher launched a paradox to the following effect:

1. A is B
2. B is predicate with reference to A
3. Predicate with reference to A is predicate with reference to B.
But, by proposition 2, B is predicate with reference to A
Therefore B is predicate with reference to B.

The conclusion of the philosopher from this was that all predication is tautology. Without realizing it, he was making a comment on a previous comment. In his argument, proposition 1

states a fact or a supposed fact; 2 is a comment on proposition 1; 3 is a comment on proposition 2. The full expression of 2 and 3 would be as follows:

2. In proposition 1 the term B is predicate with reference to A.

3. In proposition 2 the expression, "predicate with reference to A," is predicate with reference to B.

2 and 3 are not a comment on what is expressed by 1; they are a comment on the logical structure of propositions 1 and 2 respectively and a comment, moreover, by means of the technical language of Logic. Technical language is devised to serve a particular purpose. When it is pushed beyond that purpose and employed to the oblivion of that purpose, it leads to paradox or to an unreal problem. It is amazing that the fabricator of such paradoxes does not realize that he is manufacturing boomerangs, that the paradoxes, if taken seriously, would nullify all his own arguments and render every one of his doctrines meaningless.

The Greek philosopher, Zeno, constructed several paradoxes on the subject of motion. One of them may be mentioned here as an example of concealed ambiguity. It has been employed at various times by philosophers in support of the doctrine that bodies do not move in reality, but only in appearance. It professes to make the supposition that an arrow moves, and then endeavors to show that the supposition cannot be fulfilled in fact. The argument is as follows:

If an arrow moves, it must move either in the place where it is or in a place where it is not;

But it cannot move in the place where it is; otherwise it would not be there; and it cannot move in a place where it is not, for it is not there to move;

Therefore, an arrow cannot move.

Three comments may be made on this argument:

First, if this is an argument against the reality of motion, a slight change in the wording will show that it is also an argument against the appearance of motion, thus:

If an arrow appears to move, it must appear to move either in the place where it appears to be or in a place where it does not appear to be;

But it cannot appear to move in the place where it appears to be; otherwise it would not appear to be there, etc.;

Therefore, an arrow cannot appear to move.

Secondly, Zeno's first premise assumes that the following proposition is self-evident: "If an arrow moves, it must move in a place." If this proposition is not accepted as self-evident, Zeno's premise will not be allowed to pass unchallenged. In order to provide for this Objection, the premise will have to be worded as follows: "If an arrow moves in a place, it must move either in the place where it is or in a place where it is not." And in that case, the conclusion of Zeno's argument will not be "An arrow cannot move," but "An arrow cannot move in a place."

Thirdly, there is an ambiguity in the word "place" as it is used in Zeno's argument, and it is this ambiguity which is responsible for the paradox. If "place" signifies an area such as that which is over the city of London—which area is undoubtedly a place—certainly an arrow can be in such a place and it can move while continuing to be in that place. If "place" signifies an area exactly conterminous with the extent of the arrow, then Zeno has not made the supposition that the arrow moves, or, at least, he has cancelled or withdrawn it in the very act of making it. You cannot suppose an arrow to move without supposing that it has room to move; and it has not room to move in a place which is conterminous with its own extent. If a man were to say, "Let us suppose that at one and the same time an arrow moves and does not move," he would not be making the supposition that the arrow moves; nor would he be making it if he were to put it in this way: "If an arrow moves, it must move in a place where it cannot move." Well, that is precisely what Zeno has done. His argument purported to show that an absurdity *follows from* the supposition that the arrow moves, whereas the absurdity was introduced at the start into the supposition itself; or, if we prefer to put it so, it was introduced immediately after the supposition was made. Moreover, the justice of this criticism is implicitly conceded by Zeno in the very wording of his argument.

The second premise runs thus: "It cannot move in the place where it is. . . ." In order that this premise should possess any plausibility, the words "in the place where it is" must have the meaning "in the place which is conterminous with its own extent." Why cannot the arrow move in such a place? The reason—and it is to this that Zeno is covertly appealing—is that the very supposition of motion implies that, when an object moves, it necessarily moves *out of*, and not *in*, the place which is conterminous with its own extent. Not only is this true of real motion; it is also true of apparent motion. An arrow cannot even appear to move without appearing to move *out of* the place which is apparently conterminous with its own extent. Hence, if "place" is

to have the second of the two interpretations given above, then Zeno's first premise will have to be worded as follows: "If an arrow moves, it must either move out of the place where it is or out of a place where it is not."

The two instances of confusion which have just been noticed were the result of artifice; but the numerous pitfalls which beset the path of the philosopher are not all of them deliberately designed—not by any means. The ordinary structure of language is dotted with them.

Sometimes we encounter an expression which is perfectly clear and incapable of misinterpretation; sometimes an expression will have exactly the same structure as the first and yet be such as may lead one astray. Let us call the first a literal, and the second a non-literal, expression. The question arises, What is it that secures the first against misinterpretation, while the second may mislead? It is obviously not the structure of the expressions, for that is the same in both, and it is because the structure is the same in both that one of them is misleading. The answer is to be found in the difference of matter which is employed in the two expressions. Let us illustrate this in the case of two kinds of expression: "The B of A" and "There is (a) C in (the) A." The *form* or *structure* of the expression is "The . . . of . . ." in one case, and in the other it is "There is . . . in . . ." The *matter* of these expressions is symbolized by the letters A, B and C. Let us substitute words for A, B and C in two or three examples:

1. The house of John Brown; there is a bullet in John Brown.
2. The body of John Brown; there is a heart in John Brown.
3. The acuteness of John Brown; there is intelligence in John Brown.

In 1, A, B and C (John Brown, house and bullet) are all of them fully constituted physical objects which are totally distinct from each other. In 2, A, B and C (John Brown, body and heart) are not all of them fully constituted physical objects which are totally distinct from each other. What has just been said of A, B and C in 2 is still more emphatically true of A, B and C (John Brown, acuteness and intelligence) in number three. The fact that in 1, A, B and C are each of them a physical object, fully constituted and distinct, may be called an implication of 1; 2 and 3 lack this implication.

"Fishes in water" is a literal expression. "Bodies in space" cannot be accounted a literal expression, till we have determined what is denoted by the word "space," or whether anything is

denoted by it. And yet a good part of Kant's philosophy is based upon the assumption that "bodies in space" is literal, and this, without having first decided what the word "space" refers to. The philosopher is led astray because his attention has been fixed upon the form of the expression, whereas it is the matter that should have engaged his attention.

If it did not sound like an appeal to an ideal that is never achieved, one might put it down as a characteristic of literal language, that it is language which defies misconstruction even at the hands of the philosopher.

There are certain questions to be asked about words and their use; for example:

- (1) What is denoted by the word?
- (2) What does the word refer to?
- (3) Does it bring an object before us?
- (4) Does it bring an object before us when used by itself or only when used in a context?
- (5) If the word, when used in a context, seems of itself to bring an object before us, is this because the context has been shortened, and is the presence of the object due to another word which the context has suggested?
- (6) Does the use of the word in a context add anything to the meaning of the context?

The sixth question might be applied to the sentence, "We see bodies extended in space" or "We observe events succeeding each other in time." Does "in space" or "in time" add anything to the meaning of "We see bodies extended" Or "We observe events succeeding each other"? Certainly "in water" would add to the meaning of "We see bodies extended," "in New York" would add to the meaning of "We observe events succeeding each other."

The fact that a word, when used by itself, does not bring an object before us should at once put us on our guard. Some logicians say that an abstract word has connotation, but not denotation. If this is so, then an abstract word does not by itself stand for an object; instead, it has something of the character of a preposition, like "between," and its function is to round out the meaning of a context, and thus add to the connotation of some word in the context which does stand for an object.

Much of the effort of philosophers has been spent in a vain attempt to answer unreal questions. By an unreal question is

meant a question which has an implication that is not true. If the implication may be true, but is not yet ascertained to be true, the question should wait till the truth of the implication has been ascertained. The question, "Where did Robinson buy the twelve elephants that are in his back yard?" implies that there are twelve elephants in Robinson's back yard and that Robinson bought them.

In Plato, wisdom and justice are called Ideas or exemplars; in Aristotle, they are called universals. The philosopher asks "Where are the universals?" This implies that there *is* a universal, that it is an *object*, and that it is of such a nature that it can be somewhere. Would anyone ask "Where is between?" or "Where is that which is expressed by the word 'between'?" This would imply that there was an object denoted by the word "between." "Between" has connotation, but not denotation. What is expressed by a word having both denotation and connotation may exist and may exist somewhere, but what is expressed by a word having connotation alone cannot exist anywhere. If the philosopher can manage to change "between" into a noun, so that he now has the word "betweenness" before him, he is forthwith tempted to put the question "Where is betweenness?" and "Is betweenness in a physical object?" and "Is it physically distinct from that object?" The whole procedure of the philosopher rests upon the assumption that a noun, *because* it is a noun, must stand for an object.

When we judge, we increase our knowledge of an object, that is, of the object which is expressed by the subject of the proposition. This is another way of saying that, when we judge, we add to the connotation which the subject term possessed for us before we made the judgment. Adding to the connotation of a term means making the object denoted by the term better known. In the case of a term which has denotation, we may say, in general, that its connotation *for us* is what is known by us about the object which is denoted by the term.

The knowledge or information about the object denoted by the subject term is not expressed by the predicate alone, but by the predicate combined with the copula, that is, by all the words in the proposition except the subject. The information we receive about William in "William is a lawyer" is not expressed by "lawyer," but by "is a lawyer." Similarly, the information we gain about George from "George is not a scientist" is not expressed by "scientist," but by "is not a scientist." Take the following examples in illustration: (1) "Gold is a malleable thing and this is clearly established"; "The horse is not a rational being and this is evident." The first

becomes “That gold is a malleable thing is clearly established”; and the second, “That the horse is not a rational being is evident.” The first is then turned into “The malleability of gold is clearly established”; and the second into “The irrationality of the horse is evident.” Thus, the words, “is a malleable thing,” are replaced by “malleability” and the words, “is not a rational being,” are replaced by “irrationality.” Consequently, the question, Where is “malleability”? is exactly the same as the question, Where is “is a malleable thing”? and this question has no sense.

We do not prove or demonstrate what is simply designated by a concrete term; thus, we do not prove Peter Smith or the head of Peter Smith. The only thing that is proved is a proposition, that is, what is expressed by a proposition; for example, we prove the proposition, “Peter Smith is an upright being”; and yet we say we prove the uprightness of Peter Smith. This shows clearly that “the uprightness of Peter Smith” is an alternative expression for a proposition. The two following sentences have exactly the same meaning: “The attorney demonstrated that Peter Smith is an upright being”; “The attorney demonstrated the uprightness of Peter Smith.” In these two sentence there is no difference whatever between the meaning of “Peter Smith is an upright being” and the meaning of “The uprightness of Peter Smith.” Hence, the word “uprightness” is the same as “is an upright being.”

As our knowledge of an object increases, the connotation of the term denoting the object increases for us. But the connotation of an abstract term does not ordinarily increase. For the most part, the abstract term stands primarily for such information about an object as is gained by one judgment. When a preposition is used, it helps to convey such information.

We have not in every case an abstract term to express the information we obtain about an object when we judge. “That the stone is a diamond has recently been demonstrated”—if we had an abstract word, we could turn this into “The diamondness of the stone has recently been demonstrated.”

Once the words, “is a malleable thing,” have been converted into the noun “malleability,” the noun will submit to a good deal of the grammatical manipulation which is applied to a concrete noun. It will take the article “the” in front of it, and prepositions, like “of,” “in,” and “between,” before and after it. It will be said to be possessed by an object and to be in an object. That is why the abstract word is such a linguistic convenience. In fact, one might almost say that the only reason for its existence is that it is a linguistic convenience. When an abstract word is not forthcoming

for our purpose, we are obliged to resort to the use of such words as "the fact that," and we place them in front of the words which would otherwise be packed into a single abstract word. It would be convenient to be able to say: "I insist upon the diamondness of the stone"; but, in default of the abstract word, we are forced to employ some such expression as this: "I insist upon the fact that the stone is a diamond."

The considerations which were set forth in the preceding paragraphs suggest this reflection: The physical sciences have not suffered the constant recurrence of failure which has marked the career of philosophy. A chief cause of the good fortune of the physical scientist is that he is accustomed, before dealing with a problem, to place it in front of him in language which is at least literal enough not to set him off on a false scent. There can be no prospect of success for the philosopher till he condescends to adopt the same precaution. Whatever be the subject of investigation, the first step must be to set it out fully, exactly and literally, so as to obviate all chance of confusion and misinterpretation. In this effort, the abstract term must be made a special object of suspicion; for this, more than anything else, has obscured the vision of the philosopher and brought disaster to his most ambitious schemes. How often has he not persuaded himself that he was immersed in profound and subtle questions of philosophy, when, in matter of fact, he was simply bemused with words! His only safe course, therefore, is to transfer his allegiance to the concrete term. When he is once in possession of a literal statement of his problem, he may indulge his propensity for figurative language to his heart's content, for the literal statement is always there to steady him in his speculations. One inestimable advantage of this cautious procedure will be that he will see many of his problems vanish in the process of stating them literally.

XV. The Misinterpretation of the General Concrete Term

The common possession of all schools of philosophy is language. This is their great point of contact. In view of the interminable squabbles which have existed among them upon every question under the sun, one might be tempted to pronounce it their only point of contact; but that would be an exaggeration. Anyhow, since it is their common meeting ground, one would think that they would have come to some agreement as to its interpretation, and that the interpretation would be the right one. The tragedy is that they *have* come to an agreement, but they have agreed to misinterpret it. The misinterpretation began with the ancient philosophers, and the identical misinterpretation has persisted down to this day. The man in the street does not fall victim to this misinterpretation, and it is a curious fact that the philosopher himself is free from it except when he dons his robes of office and speaks *ex cathedra*. It is the misinterpretation of language which has set the philosopher the bulk of his problems, and in his efforts to solve them he has allowed himself to espouse the wildest extravagances. How are we to extricate ourselves from this tangle? There is only one expedient that is open to us, and that is, to submit ourselves to the humble drudgery of studying the structure of language. The thing to which we have to accustom ourselves most of all is to dissociate what is literal from what is not literal in the language that is constantly on our lips.

In chapter XIV we devoted considerable space to the interpretation of the abstract term, and in the course of the chapter we maintained that, of the following six expressions the first and the second are literal and the remaining four are not literal:

1. The house of John Brown;
2. Brown possesses a house;
3. The body of John Brown;
4. Brown possesses a body;
5. The acuteness of John Brown;
6. Brown possesses acuteness.

We did not pause to justify the use of “literal” and “non-literal” in their application to these expressions. A few lines may be set

down here in defense of their use. A word is used non-literally when it is used as a significant word, but that is not present which it is the proper function of the word to signify. When a preposition or a verb like "to possess" occurs between two nouns, it is its function to signify a relation. Now, there cannot be a relation unless the nouns stand for objects which are distinct from each other. If there is a doubt as to whether the nouns stand for distinct objects, there is a doubt as to the existence of the relation. You cannot have a relation or a distinction if one and the same object is at both ends of what purports to be a relation or a distinction. It is common to speak of the relation of whole to part and of part to whole. But there cannot be such a relation. There is a relation of part to the rest of the *rest* of the whole, but not of part to whole. You cannot have the whole without the part, and the part cannot be at both ends of the relation.¹ In like manner, before you can maintain that the fifth and the sixth of the above examples are literal, you will have, to prove "acuteness" stands for a physical object and that this object is distinct from John Brown. There is no difference in the meaning of the two following sentences: "Jones admitted that John Brown is an acute being"; "Jones admitted the acuteness of John Brown." The expressions, "John Brown is an acute being" and "The acuteness of John Brown," have here the same meaning, and therefore, "acuteness" and "is an acute being" have the same meaning.

We might allude here in passing to the confusion in which the words "time" and "space" have been enveloped by the philosopher, and this, from the mistaken notion that he was dealing with literal language when, in matter of fact, the language was not literal. He has accepted as literal such expressions as "bodies in space," "bodies moving through space" and "events happening in time; and this has led him to speak of "the concept of time" and "the concept of space" and even to imagine a cross-breed of time and space which he has called "space-time." He is not entitled to interpret the foregoing expressions as literal till he has proved that each of the words "time" and "space" stands by itself for an object. It is not an inalienable right of a noun to stand for an object. "Absence" does not stand for an object, and yet it is a noun.

The abstract term has been the chief source of the philosopher's troubles. Next to the abstract term as a trouble-maker we might place the use of the general concrete term in the singular when literal accuracy requires its use in the plural. It is proposed in the present chapter to deal with this second point, though the approach to it will doubtless seem to be somewhat circuitous. The nature of the subject we are going to discuss seemed to dictate this

mode of presentation, and it has been adopted in the interests of brevity and clearness. Unless we made clear the sense in which we are going to use certain terms, we shall expose ourselves to misapprehension.

The subject of definition is of such essential importance in philosophy that we may be permitted one or two remarks upon it. If there is one canon of definition which should be put down as sacred, it is this: The terms which are to be employed in the exposition and proof of a system must not be defined in such a way as to assume the truth of that system. If this canon is violated, the persons who are not already adherents of your system—even the most open-minded among them—will not listen to you. Supposing a textbook defines “term” as the verbal expression of an idea, after having defined “idea” as a mental representation; that textbook is begging the question in favor of the representational theory of knowledge. If it defines “simple apprehension” as an act of the mind by which it represents an object, the textbook is again begging the question in favor of that theory. It is not unusual for an author to say that a judgment is an act of the mind, and then to define “proposition” as the verbal expression of a judgment. When he presents us with an example of a proposition, we find that it does not stand for an act of the mind at all, but for an object which is as solid and independent of us as the Rocky Mountains. If “general term” were defined as the verbal expression of a universal idea, we should have to inquire what was meant by “universal idea,” and whether the representational theory was not again being assumed to be true. In the present paper it is claimed that a certain kind of term does not stand for an object. This might provoke the question: “Do you not mean a merely external object?” In order to assure the questioner that this is not our meaning, we have to define the word “object.” And then we come upon the well-known technical terms, “material object,” “formal object” and “simple apprehension,” which play such an important part in philosophy, and which must be defined in such a way as to forestall all chance of legitimate objection. Finally, if a definition is couched, for convenience sake, in language which is not literal, it must be subjected to the test of reformulation in literal language. If it will not pass this test, we know that something is wrong, and we must make it our business to discover what is wrong.

What is it, then, which is presupposed by all systems of philosophy, which all philosophers are justified in taking for granted, and to which, therefore, we have a right to appeal in the construction of our definitions? Three things in particular may

justly be placed among the presuppositions of philosophy, viz.: (1) language, (2) objects, and (3) man's power of attending to the objects. Anything over and above these three which the philosopher may put forward in the development of his system must clearly belong to the other presuppositions of philosophy or he must prove his right to put it forward. It is plain that we are setting up an ideal for philosophical definition. Whether this ideal has been achieved in the definitions which follow may be left to the judgment of the reader.

An *object* is that which is or can be contemplated. "Contemplate" is here used as synonymous with "attend to," "advert to" and "notice." When we contemplate many objects by means of one act of contemplation, the many objects are commonly called the object or our contemplation; that is, though many objects are contemplated, the word "object" is used in the singular, because the many objects are contemplated by one act.

The *material* object of a cognitive act is the object *which* is contemplated.

The *formal* object of a cognitive act is the material object *so far as* it is contemplated. For example, if the mind concentrates on the table so far as it is brown, then the formal object of the cognitive act is the table so far as it is a brown thing. It is sometimes said that in this case the formal object is the brownness of the table. This is a handy way of wording it which has its uses, but it is not literal. The trouble with this wording is that it has repeatedly misled the philosopher into interpreting it as literal. Literally speaking, the formal object is not the brownness of the table, but the table so far as it is a brown thing. Sometimes we contemplate the object merely so far as it is a table, without thinking of it as brown or as wooden, and then the formal object is the object so far as it is a table.

An *apprehension* is an act of the mind by which it contemplates an object.

A *simple apprehension* may be defined as an act of the mind by which it contemplates what is normally expressed by a concrete term.

If we use the word "idea" as synonymous with simple apprehension, there can be no controversy over ideas; for all philosophers agree that there is such a thing as contemplation, and there can be no contemplation without an object that is contemplated. In this sense, when we say that we have an idea of an elephant, we mean that we have an apprehension of an

elephant, that is, that we are contemplating an elephant. A universal idea will then mean a universal contemplation, that is, an act by which we contemplate all the objects of a class or all objects whatever. It is only when "idea" is used in the sense of a mental image or of a Platonic Idea that we have a controversy on our hands, and the controversy presupposes throughout that we have a universal idea in the sense of a universal contemplation.

A *noun* is a word which may be used alone in its own right as a significant word in the subject position of a proposition.

A *term* is a categorematic word or a combination of categorematic words which may stand as a significant combination in the subject or predicate position of a proposition. According as we have a single categorematic word or a combination, the term is called simple or complex. "White men" and "men who have sailed the ocean" are examples of complex terms.

A *concrete term* is a term which by itself stands for an object and nearly always describes and limits it; for example, "horse" stands for an object and describes it sufficiently to enable us to distinguish it from other objects. If we insist upon literal exactness in the definition, it may be worded thus: A concrete term is a term which by itself stands for an object and nearly always stands for it so far as it is *such* an object. We say in the definition that a concrete term nearly always describes an object because there are some concrete terms which do not describe the object or objects for which they stand; for example, "thing," "being," "object," "entity." These four terms have, therefore, no connotation, though they have denotation.

An *abstract term* is a term which for the most part stands for a description without an object that is described; for example, "honesty" and "patriotism." Hence, an abstract term has connotation, but no denotation. This definition is sufficiently wide for present purposes. If it were meant to apply to such general abstract terms as "attribute," "quality" and "characteristic," it would require alteration. These are general designations for what is signified by the ordinary abstract term. "Act," "action" and "event" are general abstract terms of narrower application. The universal mark of an abstract term is that it does not by itself stand for an object and, therefore, it cannot be used alone in the predicate position of an affirmative proposition in which the subject stands for an object. The function of an abstract term, like that of a preposition, is to fill out a context; and it is some other word in the context, or it is the context taken in its entirety, that

stands for an object. We are assuming all along that the language is neither figurative nor elliptical nor merely suggestive.

When a term has both denotation and connotation, the two combined constitute the *meaning* of the term. In case a term has no connotation, its meaning is constituted by the denotation alone; and the connotation alone constitutes the meaning of a term that has no denotation. If we make a distinction between “meaning” and “implication,” the meaning of a term or a proposition is that which is necessarily before the mind when the term or the proposition is understood. This may, for convenience, be called the *conventional* meaning of the term or the proposition. When a term which stands for a given object is introduced into a discussion, a man who has made a special study of the object will frequently have much more before his mind than the ordinary man, but he must have before him at least what is present to the other participants in the discussion; otherwise there will be no common understanding of the subject. In the pragmatist’s use of the word “meaning,” it comes close to being the same as “importance,” as when we say that a son’s success in life *means* much to his parents. This may be designated the *pragmatic* meaning. If “meaning” has this interpretation, then the meaning of a proposition is the importance of what is before the mind when the proposition is understood. The importance or pragmatic meaning may at times vary with the individual, but the conventional meaning cannot thus vary if there is to be intelligent discussion.

In what follows we shall be dealing with concrete terms and we shall assume that they are used univocally.

A *general term* or *name* is a term which is used both in the singular and in the plural or which is equivalently used in both ways. The word “gold” is used only in the singular, but it is equivalently used in the plural when we say “Some gold is found in California and some gold is found in Alaska.” The word “scissors” is used only in the plural, but it has what is equivalent to a singular use when we say “These scissors were made in the United States and those scissors were made in Canada.” It is of the nature of a general term that, when it is used in the plural or is equivalently so used, it stands for objects which are distinct from each other, and emphasizes the fact of their distinction. A good test of a general concrete term is that it may take the signs “some” and most immediately in front of it.

A *class* is many objects possessing a common characteristic which is not possessed by other objects. Or we may put it in this

way: A class is many objects which are similar to each other in a characteristic which is not possessed by other objects. If we exclude all but literal language from the definition, it will run as follows: A class is many objects which are similar to each other and which, so far as they are similar, are each of them such as other objects are not; for example, the class of men. Each object possessing the common characteristic is called a *member* of the class.

A *class name* is a term which, when used in the subject position in the plural and without qualification, stands for a class and, when used in the singular, stands for a member of that class. "Man," "rose," "elephant," and most general concrete terms are class names. When we say "without qualification," we mean not merely that no qualification is expressed, but that there is no qualification suggested by the context or by the circumstances in which the class name is used. It should be remarked that, when the class name stands for a class in the subject position of an affirmative proposition, the predicate, if fully expressed, is also commonly in the plural when it is a class name; for example, "Roses are flowers."

There are some expressions which may seem to conflict with this definition of a class name. Thus, we say "Man is mortal" and "The horse is a quadruped." Here "man" and "horse" are used in the singular, and yet each of them stands for a class and not for a member of that class. But these are modes of expression which are employed in place of the more exact literal expressions, "Men are mortal beings" and "Horses are quadrupeds." That this is the true account of the matter is evident when we attempt to use the propositions in a syllogism. We do not express ourselves in this fashion: "Man is mortal, John is man, Therefore John is mortal"; "The horse is a quadruped, This animal is the horse, Therefore this animal is a quadruped." We do not say "John is man" or "This animal is the horse." We say "John is *a* man" and "This animal is *a* horse"; and this is equivalent to saying "John is a member of the class of men" and "This animal is a member of the class of horses." Consequently, the correct literal wording of the major premise is "Men (or all men) are mortal beings" and "Horses (or all horses) are quadrupeds." This would be still more manifest if the minor premise were "John and Peter are men" and "These animals are horses." It is true that in Latin there is no indefinite article and that we say "Joannes est homo," and this might seem to support the literal accuracy of "Homo est mortalis." But the inadequacy of this suggestion is apparent when we refer to more than one person. We may say "Joannes est homo" and "Petrus est homo,"

but we do not say “Joannes et Petrus sunt homo”; we say “Joannes et Petrus sunt homines.” If we had the syllogism, “Homo est mortalis, Joannes et Petrus sunt homines, Ergo Joannes et Petrus sunt mortales,” it would be evident that the major premise should read “Homines sunt mortales” or “Homines sunt entia mortalia.”

On the definition given above, the following general terms are not class names: “thing,” “entity,” “class,” “sort.”

Two points are to be noticed about a class name when it is used in the plural: first, it stands for objects precisely so far as they are *similar* to each other: secondly, it stands for them so far as they have a *characteristic which is not possessed by other objects*.

The word “thing” or “entity” does not come under the definition of a class name. When “thing” is used in the plural, it does indeed stand for objects so far as they are similar to each other, but it does not stand for them so far as they have a characteristic which is not possessed by other objects. This is also true of “being” and “object.” “Reality” might be added to the list, but this word calls for special consideration. Some of these words have an abstract use as well as a concrete; thus, we say: “The reality of the sun’s expansion and contraction has been disputed.” But the use of words as abstract terms does not belong to the present discussion.

The word “class” fails to satisfy the definition of a class name as is obvious. When used in the plural, it does not stand for a class, but for classes. When used in the singular, it stands for a class, and not for a member of that class. Again, when “class” is used in the plural, it stands for objects so far as they are different each other; for the characteristic mark of each class is different from that of every other class. When we speak of two classes, we mean that the objects in the one class are different from those in the other. But when we speak of two men, we do not mean that they differ from each other. Doubtless they do differ from each other, but the fact that they differ is not brought out by calling them two men, and we could still speak of them as two men even if they resembled each other in every particular. On the other hand, the fact that the objects in the one class differ from those in the other is brought out by speaking of them as two classes. If they did not differ from each other in the characteristic which marks them as members of their respective classes, they would not constitute two classes, but one. The only reason why we can use the word “class” in the plural at all is that, though the classes differ from each other, the characteristic marks of the classes are not mentioned. When the characteristic mark of a class is mentioned, the word “class” has to be used in the singular. Thus, we speak of the class

of men and the class of ruminants. We do not speak of the *classes* of men, unless indeed we have in mind certain sub-classes, and then the reason which warrants our using "class" in the plural is that we have failed to designate the characteristic marks of the various sub-classes.

Every class is constituted such by its characteristic mark. Hence, there can be no such thing as a class of classes, that is, a class which should have all other classes for its members. There are two reasons for this, or rather, two ways of stating the one reason: first, because the class of classes could not have a class name; secondly, because it could not have a characteristic mark which is not possessed by objects outside of it; in other words, there would be no objects outside of it, and this means that it would not be a class. This point was overlooked by the man who invented the paradox of the class of classes. Another point he failed to notice was this: If there were such a thing as a class of classes, it would be constituted by all *other* classes, not by all other classes plus the class of classes. To say that it was constituted by all other classes plus the class of classes would be the same as saying that it was constituted by all other classes plus all other classes; and then, to be consistent, you would have to say that the class of men was constituted by all men plus all men. A class is constituted by its *members*, not by the class itself in addition to its members. It must not be forgotten that, in literal accuracy, the word "class" should be used in the plural when reference is made to more than one class.

It will be noticed that there is a wide difference between a class and a collection. One collection may be similar to another in the characteristic which constitutes it such a collection; for example, an army. But one class cannot be similar to another in the characteristic which constitutes it such a class. It is true that the individuals in an army are not only a collection; they are in a sense a class as well. Let us give a name to the army and call it Army A. When the individuals in the army are considered as a class, the class name is not "army," nor is it "Army A"; the class name is "soldier of Army A"; and "soldier of Army A" must be used in the plural if it is to stand for the class. You have a literal designation of a class by means of a class name only when the name is used in the plural or is equivalently so used.

The moral of the present discussion might be developed at some length, but we shall content ourselves with two remarks. First, consider the artificial atmosphere of mystery and solemnity with which the philosopher has surrounded such words as "substance"

and “being” and “reality” by printing them in the singular and adorning them with a capital letter. Let the capital letter be banished, and let the words be printed in the plural or, if they must be used in the singular, let them be preceded by the indefinite article; and then, if any mystery still clings to them, at least it will not be mystery of our own creation. The second remark may take the form of a question: If we make it a point to employ the class name in the plural when we are referring to a class, and if we are careful to substitute for the abstract term its literal equivalent, how are we going to propound the problem of universals? That there is a universal idea in the sense of a universal contemplation is obvious. If the philosopher claims that “universal” means more than this, it is his duty to justify his claim. If he maintains that “universal” means a universal representation or a platonic exemplar, he may be challenged to produce instances of his universals, to construct his definition of “universal” in accordance with these instances, and then to prove in literal language that he is entitled to the definition which he has constructed. The besetting sin of philosophy from its first beginnings has been an irritating vagueness and looseness of expression, accompanied by a tendency to let assumption serve in the place of proof. This is the very antithesis of the scientific habit, and philosophy must free itself from this reproach if it is to vindicate its claim to lay down the law for the other sciences.²

¹ Sometimes it is that the part is “inadequately” distinct from the whole, and the reason assigned is that, since the part is not the whole, the part must be distinct from the whole. But to say that the part is not the whole is merely another way of saying that the part is not the part plus the rest of the whole, just as one apple is not that apple plus another apple. To say that the part is not the part plus the rest of the whole is a roundabout way of saying that the part is not the rest of the whole, and, of course, the part is distinct from the rest of the whole.

² The common saying, that science is not concerned with the individual but with the universal, is ambiguous and misleading in the mouth of the philosopher. A clearer and more accurate statement would be, that science is not concerned with the individual but with the class. Or still better: Science is concerned with the class, and with the individual only so far as it is a member of the class. *Existing* members of a class may change, but the class itself does not change. The essential requirement for membership in a class is that an object shall be similar in the class characteristic to the other members of the class. Except in the case of a class which is composed exclusively of existing individuals, the class is unaffected by the existence or non-existence of its members. That is why

the class is unchangeable, for only existing things change; and, in general, that is why there is such a thing as a science.

XVI. Universal Ideas

1. The subject of universal ideas is perhaps the most important in all philosophy. Upon its correct explanation depends the solution of some of the most momentous questions which have perplexed the minds of the greatest philosophers.

In his *Isagoge*, which is an introduction to the logic of Aristotle, Porphyry (A.D. 233-304) treats of genus, specific difference, species, property, and accident, and he proposes three questions:

- (1) whether genera and species (that is, universals) subsist in themselves, i.e., outside the mind, or whether they exist solely in the mind;
- (2) whether, supposing them to exist outside the mind, they are corporeal or incorporeal;
- (3) whether they exist apart from sensible objects or only in them.

Porphyry declined to discuss these questions, because they were too difficult to be treated in an introductory work. These questions were among the chief topics of discussion in the philosophical schools of the Middle Ages.

It is not unusual to speak of the subject on which we are at present engaged as the Problem of Universals. But it is very confusing in this connection to use the word "universal" as a substantive. When using it in this way some authors apply it indifferently to the term, to the idea, and to the object of the idea; and in not a few cases it is difficult to determine which of the three they are speaking about. The consequence is that the subject becomes desperately tangled and is made to seem much more abstruse and difficult than it really is. In what follows we shall use the word as an adjective and apply it only to the idea. The subject before us, then, is not Universals, but Universal Ideas.

The reason why there is a problem of the Universal Idea is because philosophers have made it a problem. They have used paradoxical language in speaking about it, and it is this paradoxical language rather than the universal idea that

constitutes the problem. The efforts of the philosophers have been mainly directed towards getting sense out of their paradoxes. The paradoxes arise from a misinterpretation of the phrases of everyday speech. We shall set down here one or two specimens of the philosopher's mode of stating the problem. Professor C. E. M. Joad writes as follows:

A universal is something which is able to characterize a number of different particulars. The redness which I see in this patch is the same as the redness which I see in that one, although the two patches are different. When we use a word to describe something which, like redness can belong to a number of different objects or facts, the something may be defined as a universal. Thus whiteness, humanity, justice, triangularity, are all universals, since many different things and facts can be respectively white, human, just and triangular. But this particular piece of snow, this particular man, this particular legal decision, this particular triangle, are all, as the language we use to speak of them denotes, particular, although their total description may involve the presence of Universals. (*Guide to Philosophy*, pp. 259-60.)

Again, philosophers will say that "man" or "horse" is a universal because it can be predicated of many objects, and they will define a universal as "one common to many" or as "one capable of being predicated of many." They will say that "man" is predicated in the same sense of John, Peter, George and so on, and, therefore, that one and the same thing is predicated of many distinct individuals.

Again, philosophers maintain that, though "man" is a universal, we predicate "man" of a definite individual, thus, "James is a man," and then they ask, What is our warrant for predicating a universal, idea or something, universal of a definite individual object, since this object (James) is not universal?

Before commenting on these various modes of presenting the problem, we shall explain the system we propose to advocate and which goes by the name of *Realism* or *Moderate Realism*.

2. The word "idea" is a synonym for "simple apprehension," and it signifies the act by which we contemplate what is normally expressed by a concrete term (cf. p. 85. **What is the reference for this edition?**)

The mind has a twofold power of perception—direct and reflex, By the direct it attains to what is independent of it; by the reflex, to what is dependent upon it.

The idea by which we contemplate something independent of the mind is called the *Direct Idea*; the other is called the *Reflex Idea*.

Moreover, the mind has the power of concentrating its attention upon one aspect of a thing and withholding its attention from the other aspects. This is called the power of *prescinding*; the mind is then said to prescind *from* the other aspects.

3. *Prescission* is an act of the mind by which it attends to an object so far as it is such an object or merely so far as it is an object without attending to it so far as it is other such and such. It may be put more loosely in this way: Prescission is an act of the mind by which it attends to an object under one of its aspects without attending to it under its other aspects. Thus, the mind, looking at Peter Jones, contemplates him so far as he is a man and withholds its attention from him so far as he is tall or strong or a citizen or an editor. If we contemplate him so far as he is a being or as an entity, we are attending to him merely so far as he is an object.

N.B. In prescinding, the mind does not positively exclude the other aspects; it merely does not attend to them. Since the mind does not attend to them, it neither decides that they are present nor that they are absent.

By the universal idea obtained by prescission we contemplate the whole individual object, not a mere part of it, though we do not contemplate it exhaustively. Thus, when we say "Peter Jones is a man," we affirm an objective *identity* between Peter Jones and a man. By our idea of man we contemplate the whole Peter Jones; otherwise we could not affirm this identity. We do not say that Peter Jones is an arm, because Peter Jones and an arm are not objectively one and the same thing. But though by our idea of man we contemplate the whole Peter Jones, we do not contemplate him exhaustively, i.e., under every aspect, for we do not contemplate him so far as he is healthy or an American or a mechanic.

4. The abstract term has its dangers. We speak of the animality of a dog, as we speak of the ear of a dog. From this it is easy to fall into the mistake of thinking that animality is a part of the dog, just as the ear is a part of him. In literal truth animality is *not* a part of the dog, nor is it *in* the dog, for "animality" is an abstract term and therefore does not stand for an object. The dog is an animal (f. pp. 79, 85), and by the idea of animal we contemplate the *whole* dog, not a part of him.

5. The *material object* of an idea is the object *which* we contemplate by the idea. Thus, if we are contemplating John Smith, then John Smith is the material object of this idea.

The *formal object* of an idea is the object so far as we are contemplating it.

For example, if we are contemplating John Smith *so far as* he is a man, then John Smith so far as he is a man is the formal object of this idea.

6. A *singular* or *individual idea* is an idea by which we contemplate one specific individual object to the exclusion of other objects; for example, the idea by which we contemplate “Potomac River” or “this stone” is a singular idea.

A *universal idea* is an idea by which we contemplate all the objects of a class or all objects whatever; for example, the idea by which we contemplate all men or all animals is a universal idea. We may also define a universal idea as an idea by which we contemplate what is expressed by a general concrete term in the plural. For all practical purposes, this definition will also answer as a definition of *direct universal idea*.

When by the idea we contemplate all objects whatever, the idea is also called a *transcendental idea*.

It is to be observed that by most of our universal ideas we contemplate not only existing objects, but also objects which have existed or which can exist. When we say, “All horses are quadrupeds” we are contemplating not only existing horses, but horses that have existed or that can exist.

We have seen that *prescission* is an act of the mind by which it attends to an object under one of its aspects or attributes without attending to the others. The other aspects or attributes are called *Individuating Notes*, which may accordingly be defined as follows:

Individuating or *identifying notes* are those notes or attributes by which the individuals severally contemplated by the direct universal idea can be distinguished from each other. The individuating notes do not make an object individual. It is impossible for a thing in the physical world to be other than individual or to be conceived as anything else than individual. A thing in the physical world is not partly individual and partly universal. If I am employing the universal idea of man or men and contemplating Peter Jones by means of that idea, then all the endless multiplicity of notes in Peter Jones are individuating notes except the few notes which go to constitute him a man. Obviously

it is not by means of the notes which constitute him a man that I am able to distinguish Peter Jones from George Smith. Peter Jones does not differ from George Smith in the notes which constitute him a man. If I am contemplating Peter Jones not under the attribute of man, but under the attribute of white, then the notes which go to constitute him a man are individuating notes; for the notes which make him a man enable me to distinguish him from other white things; for example, from snow and cotton.

8. As regards the act of prescission the following points are to be noticed:

1. The separation of the form or aspect from the individuating notes is not physical, that is, it is not a separation which is effected *in* any of the individuals themselves which are contemplated; it is a *mental* separation or distinction. Prescission requires that the attribute which is prescinded shall not be *physically* distinct from the individual which is characterized by that attribute. Two objects of thought are said to be *physically* distinct from each other when they are physically separated or can be physically separated. Thus, the hilt of a sword is physically distinct from the blade. Hence, if a man attended to the hilt without attending to the blade, he would not be prescinding from the blade.
2. The mind does not positively exclude the individuating notes from any of the individuals which are contemplated by the universal idea. The mind merely refrains from fixing its attention upon the individuating notes. It does not assert that any given individual contemplated, for instance, by the universal idea of "man" is not tall, or healthy, or white; it simply *attends* to one attribute without attending to the others (cf. 3, N.B.). Hence, there is no falsity involved in the act of prescission.
3. The mind, in obtaining the universal idea does not positively communicate anything to the formal object; it merely withholds its attention from the individuating notes.

9. By its power of reflection the mind *knows* that it *has* the universal idea, that is, it recognizes the *universality of the direct idea*.

The *reflex universal idea* is an idea by which we contemplate the direct universal idea so far as it is universal.

10. THE FOUNDATION OF THE UNIVERSAL IDEA. By the *foundation* of the universal idea we mean the objective ground in

the world of reality which warrants us in contemplating an entire class of objects by one idea. Scholastic authors are agreed that ultimately the foundation is the fact that the objects are *similar*.

Some Scholastic writers hold that we have a universal idea of an individual object before we have a singular idea of it. With Suarez and his followers we maintain that the singular idea of some individual object precedes the universal. Our reason is that the foundation of a universal idea is, as all Scholastics teach, the similarity between individuals, and hence that we cannot have a universal idea till after we have perceived the similarity. Our opponents themselves maintain that, if there were no similarity between individuals, the universal idea would have no foundation and would be a pure fiction of the mind. Speaking literally, the foundation of a universal idea is *the individuals so far as they are similar*. If there are similar individuals in the world of reality, the world of reality affords a foundation for a universal idea; but the *mind* has not a foundation for a universal idea till it has perceived these similar individuals. The mind *has* a foundation for a universal idea by *perceiving* the foundation. Similarity is a relation, and the mind cannot perceive a relation without first perceiving the things which are related. The mind perceives several similar individuals and by adverting to that aspect in each of them in which they are similar and withdrawing its attention from the aspects in which they disagree, it has the universal idea.

Comparison of similar individuals, actual or possible, with *each other* is a necessary preliminary to the formation of the direct universal idea.

N.B. When we say that the direct universal idea is acquired by prescission it must be understood that the prescission is accompanied or followed by a comparison.

Some authors say that the mind perceives the universal in the individual. But this is not true; for the universal is not in the individual. There is no such thing in the world of nature as a universal. The mind does not obtain a universal idea merely by attending to one attribute in an individual object and neglecting the other attributes or individuating notes; for the attribute to which the mind attends in the individual is just as emphatically an individual attribute as any other attribute or note in the object. The mind perceives Peter Jones and adverts, let us say, to the attribute "man," in him. This attribute "man" in Peter Jones is an individual attribute; it is "this man." If all that the mind attends to is the attribute "man" in Peter Jones, the mind has an idea of "this man." It is only after the mind has adverted to the actual or

possible existence of individuals having an attribute similar to that of Peter Jones, that the mind can drop the “this” and have a universal idea of man or men.

Of course, we do not mean that you or I had a singular idea of *Peter Jones* as this man, before we had a universal idea of men. We had acquired the universal idea of men long before we met Peter Jones. What we mean is that we must have had a singular idea of some one determinate individual man before we had a universal idea of men. This determinate individual man may have been your father or mine.

Some authors use the word “thisness” or “haecceity” as synonymous with “individuality.” But this is not correct. By speaking of an object as “this object” or by referring to the “thisness” of the object, we do not mean to refer to the individuality of the object nor even to its determinateness in itself. The word “this” or “thisness” refers to the determinateness of a given object *for the mind or idea* which contemplates it. *In itself*, the object of a singular idea, e.g., “this man,” is no more individual and determinate than is the object of a universal idea, e.g., “men”; but it is more determinate *for the mind which is contemplating it*. “This” signifies that one individual object is *determinate for the mind*, that it is singled out, that the mind has fastened its attention upon it to the exclusion of other objects.

It is sometimes said that the connotation of a singular term is wider than that of a general term. This again, is incorrect. The connotation of the term “this man” is exactly the same as the connotation of the term “men.” The connotation of a term is not the aggregate of all the notes or attributes which are in the object, but the sum total of notes or attributes *which convention has decided shall be expressed by the term*. If the two notes “rational” and “animal” constitute the connotation of the term “man,” the same two notes; and no others, constitute the connotation of the term “this man.” “This” does not add to the notes in the connotation of the idea, but indicates that one given individual is contemplated by the mind and that others are not. If the connotation of a singular idea were the aggregate of all the notes or attributes in an object, then every singular idea would be a comprehensive or exhaustive idea.

It is vitally important to remember that the mind prescind not only when it acquires a universal idea, but also when it acquires a singular idea. The mind cannot possibly attend to all the attributes in any object whatever, whether it is contemplating the object by means of a universal idea or by means of a singular idea;

and for this simple reason, that it cannot have a comprehensive idea of anything; that is, it cannot know all there is to be known about anything whatever.

We do not obtain a universal idea of an object by prescission alone. The prescission must be accompanied or followed by a comparison. But even this is not enough. When the mind is comparing several individual objects together, it is keeping each of these objects before it by means of a singular idea, so that it is simultaneously employing several singular ideas, for example, the idea of this man, the idea of that man, and the idea of that other man. What is called “generalizing” or “universalizing” consists essentially in this, that *the mind releases its attention which was concentrated solely upon this object and that object and fixes its attention upon a class or an indefinite number of individual objects by means of one idea*, and this idea is a universal idea.

It is impossible for the mind to prescind from the *individuality* of the objects which it contemplates in the world of nature, just as it is impossible for it to prescind from the being or “thingness” of those objects. What is outside the mind is one and individual by the very fact that it is a physical being or thing. Were the mind to prescind from the individuality of an object, it would no longer be contemplating an object which is in the world of nature; it would be contemplating a universal object, which can have no existence outside the mind. We could not assert that the object of such an idea was identical with anything in the world of nature, for nothing in the world of nature is universal.

11. HAS THE DIRECT UNIVERSAL IDEA A UNIVERSAL OBJECT? By the direct universal idea we contemplate only individual objects. We do not contemplate a universal object; for by the direct universal idea we contemplate what is independent of the mind, and only individual objects are independent of the mind. By the *reflex* universal idea we contemplate a universal object; for the object contemplated by the reflex universal idea is the *direct universal idea*, and that, so far as it is universal. By the direct universal idea we contemplate an individual, but we do not contemplate a specific individual; that is, we do not specify for the mind one individual in its extension rather than another. When the subject of a judgment is a singular idea and the predicate a universal idea, it is the subject-idea which specifies one individual for the mind. The direct universal idea is called universal, not because it has a universal object, but because by it *we contemplate an entire class of objects, that is, an indefinite number of individual objects*.

12. In obtaining its first universal ideas the mind compares actually existing individuals with each other. Afterwards, from the contemplation of a *single* individual object the mind may conceive of many possible individuals which are similar to the one it has observed. For example, a man perceives an elephant for the first time—he has the singular idea of “this elephant.” If he now thinks of many possible animals having a form similar to this elephant, he has a universal idea of elephants and his idea of elephants would be universal, even though there were only one elephant in existence, nay, even though that one ceased to exist.

THESIS 9

13. *There are direct universal ideas, i.e., universal ideas whose objects are independent of the mind. The world of reality affords a foundation for the universality of the direct universal idea..*

Proof of part 1: There are direct universal ideas, i.e., universal ideas whose objects are independent of the mind.

Objects which are identified with individual things that are admittedly independent of the mind are themselves independent of the mind.

But there are universal ideas whose objects are identified with individual things that are admittedly independent of the mind.

Therefore there are direct universal ideas, i.e., universal ideas whose objects are independent of the mind.

The *Major* is evident.

The *Minor* may be established by an appeal to examples. Take any universal idea at random, for example, the idea of men, i.e., the idea by which we contemplate each member of the class of men. The objects of this idea are identified with individual things that are admittedly independent of the mind, for everyone acknowledges that they are identified with such individual things by the very fact of asserting that identity in statements like the following: “George is a man,” Peter is a man,” “George and Peter are men.” Since George and Peter are admittedly independent of the mind, it is plain that the *men* (i.e., the objects of the universal idea), that George and Peter *are*, must also be independent of the mind.

N.B. The material object of the idea of men is John Brown, Peter Jones, George Smith, etc., who are men; the formal object is John

Brown, Peter Jones, George Smith, etc., *so far as they are men*. John Brown and Peter Jones *who are men* are tall and handsome, but they are not tall and handsome *so far as they are men*. The idea of men prescind from tall and handsome; otherwise by it we could not contemplate men who are not tall and handsome.

14. *Part 2: The world of reality affords a foundation for the universality of the direct universal idea.*

When we say that the world of reality affords a foundation for the *universality* of the direct universal idea, we mean that the world of reality warrants us in having one idea by which we contemplate all the members of a class, so that it is not necessary for us to have a separate idea for each member of the class. By the *world of reality* we mean the sum total of things which are what they are independently of our thought about them.

Proof of part 2: The world of reality affords a foundation for the universality of direct universal idea, if objects in the world of reality are perfectly similar to each other so far as they are members of a class.

But they are perfectly similar to each other so far as they are members of a class.

Therefore the world of reality affords a foundation for the universality of the direct universal idea.

Major: A universal idea is an act by which the mind contemplates each of the members of a class. One such idea is separate from another only when what it contemplates is different from what is contemplated by the other idea. For example, the idea by which we contemplate horses is a separate idea from the idea by which we contemplate trees. But if there is no difference between the objects contemplated, one idea is sufficient to contemplate them all, and this is what is meant by a universal idea.

The *Minor* is evident from this, that objects are members of a class because they are similar. If the members of a class were not perfectly similar to each other so far as they are members of the class, then the mention of the word "tree" would suggest to us some difference of one tree from another, but it does not. One tree does not differ from another because it is a tree, but because something else can be known about it besides the fact that it is a tree. If a man tells us that he was looking at a tree in a garden, we are unable to judge from his words what kind of tree it was, and that is because all trees are perfectly similar to each other so far as they are trees.

15. *Note 1.* Adversaries of our doctrine point out that no two individual things in the world of nature are perfectly similar and hence we have no foundation for a universal idea. They say that one man is different from another man and one tree is different from another tree. We answer that one man differs from another man so far as he is *such* a man, but not so far as he is a *man*; that one tree differs from another tree so far as one is hickory, and the other pine, but not so far as it is a *tree*. And we must bear in mind that an individual man is contemplated by the universal idea, not so far as he is such a man, that is, not so far as he is *learned*, but only so far as he is a *man*. If one man is utterly different from another man, why do we call them both *men*? It is plain that, if two men are utterly different from each other and we call them both men, we are using the word “man” in an equivocal sense, and we are leading people to believe that we are expressing the same meaning in both cases. Why not call one of them a man, and the other an island or a half-moon or a drawbridge?

16. *Note 2.* Nominalists hold that we have no universal ideas, because there is no such thing as a universal man or a universal tree. We answer that the universal man or tree does not exist in the world of nature, but that the world of nature affords a *foundation* for conceiving a universal idea of men or trees; and what is contemplated by these universal ideas is not a universal man or a universal tree, but *many individuals* each of which is a man or a tree.

17. *Note 3.* Again, Nominalists say that we have not a universal idea of men or trees, because we predicate “man” and “tree” of existing individuals, and we cannot predicate of existing individuals anything which is prescinded. We answer that we predicate that *which* is prescinded, but we do *not* predicate it *to the exclusion of the other attributes or forms*. When we *employ* a universal idea in predicating something of an individual outside the mind, it is the *direct* universal idea which is employed, not, the *reflex* universal idea. That which is prescinded means nothing more or less than that which is, attended to, the other attributes of the individual object being left out of thought. Now, that *which* is attended to or prescinded is what is contemplated by the direct universal idea, and this is what is predicated of an individual outside the mind. Since, then, we employ the direct universal idea in predicating something of an individual, we predicate what we *contemplate* by the direct universal idea; and since by the direct universal idea we do not *contemplate* what is prescinded to the exclusion of the other attributes, it is obvious that we do not

predicate what is *prescinded* to the exclusion of the other attributes.

18. *Note 4.* The preceding paragraph contains in substance the scholastic solution of one of the chief problems of the universal idea. It will be recollected that in the beginning of the present chapter the problem was stated in the form of a question, as follows: What is my warrant for predicating a universal idea of a definite individual? Now, in answer we say that it cannot be too emphatically insisted on that, when we speak of predicating a universal idea of an individual, we are not speaking with strict accuracy. "Idea" and "simple apprehension" are synonymous, and yet everyone would recognize that we were not speaking accurately or literally if we were to say that we predicate a simple apprehension of an individual object. What is predicated is not the idea, but *that which is contemplated* by the idea. We saw in section 11 that the direct universal idea does not contemplate a universal object; it contemplates *individual* objects. Hence, when a direct universal idea is used to predicate something of a definite individual, it is not something universal which is predicated, but an individual object. *The statement pronounces an objective identity between the definite individual and one of the individual objects contemplated by the direct universal idea.*

19. *Note 5.* The word "same" has caused a good deal of confusion in philosophy, because it has two very different applications. In one application it signifies one person or thing and *excludes* plurality: in another application it means "similar" and *implies* plurality. When many people are discussing the political ambition of Mr. Jones, we say that the person they are speaking about is the *same*, and we use "same" in the first sense. When we say that all men are the *same* as regards their responsibility to God, we use "same" in the second sense.

20. OBJECTIONS

- (1) The object of science is in the external world. But the universal is the object of science. Therefore the universal is in the external world.

Dist. maj.: The object of a science which treats of thought is in the external world, *Nego,* of a science which treats of the external world, *Conc. Contrad. Min.:* The universal, that is, that which is contemplated by the direct universal idea, is the object of science, *Conc.;* the universal, that is, the universality of the direct idea, is the object of science, *Subd.:* it is the object of a science which treats of thought,

Conc.; of a science which treats of the external world, *Nego. Par. dist. cons.*: The universal, that is, that which is contemplated by the direct universal idea, is in the external world, *Conc.*; the universal, that is, the universality of the direct idea, is in the external world, *Nego.*

- (2) The object of a cognitive act exists prior to the cognitive act. But the universal is the object of the cognitive act of the mind. Therefore the universal exists prior to the cognitive act of the mind.

Transeat major. Dist. min.: the universal is the object of the cognitive act of the mind, that is, *that which is contemplated* by the direct universal idea, is the object, *Conc.*; the universal, that is, the universality of the idea, *Subd.*: is the object of the reflex cognitive act, *Conc.*; is the object of the *direct* cognitive act, *Nego. Par. Dist. cons.*: the universal exists prior to the cognitive act, that is, that which is contemplated by the direct universal idea, exists prior to the cognitive act, *Conc.*; the universality of the idea exists prior to the cognitive act, *Subd.*: Prior to the reflex cognitive act, *Conc.*; prior to the direct cognitive act, *Nego.*

- (3) That which is the same in many individuals before the act of the mind is universal in the external world. But “man,” for instance, is the same in many individuals before the act of the mind. Therefore “man” is universal in the external world.

Dist. maj.: That which is the *same*, in the sense of one person or thing (excluding plurality), is universal in the world of nature, *Conc.*: that which is the *same* in the sense of “similar” (implying plurality), *Nego. Contrad. min.*: “Man” is the same, in the sense of similar, in many individuals, *Conc.*; in the sense of one person (excluding plurality), *Nego.* (19.)

- (4) A definition expresses a nature which is in the external world. But there is only one definition of individuals of the same species in the external world. Therefore there is only one nature in those individuals.

Dist. maj.: A definition expresses a nature which is multiplied in many individuals, *Conc.*; which is not multiplied in many individuals, *Nego. Transeat minor. Par. dist. cons.*: There is only one nature which is multiplied in

those individuals, *Transeat*; which is not multiplied, *Nego*. The consequent might also be distinguished as follows: There is only one nature in those individuals, that is, the nature in one does not *differ* from the nature in the others, *Conc.*; the nature in one *is* the nature in the others, *Nego*.

N.B. It is important to discriminate the meanings of the two words “distinct” and “different.” *Distinct* means “not identical,” that is, “not one and the same thing.” *Different* means “not similar.” Hence, the man in Robert Brown is *distinct* from the man in Peter Jones, but *not different* from it. It is *distinct*, because the man in one *is not* the man in the other; it is *not different*, because the man in one *is similar* to the man in the other.

THESIS 10

21. *The systems of Ultra-realism, Nominalism, and Conceptualism are false.*

Ultra-realism or exaggerated realism is the doctrine that there are universal ideas in the mind and universal natures or Ideas or exemplars in the external world. These universal natures exist in themselves apart from individual things and apart from God. Individual things are constituted by participation of these universal natures. Thus, justice and beauty are examples of these universal natures or exemplars. According to this doctrine, justice and beauty have their own separate existence, and a man is just and a flower is beautiful because one participates in the universal justice and the other in the universal beauty. This is the theory of Plato and his followers.

Nominalism is the doctrine that only the term, and not the idea, is universal. Nominalists say the idea is only a representation of the object; and since there can be no universal object, there can be no universal idea. Words are mere labels for a collection of things or a series of particular events. The advocates of nominalism were Roscalin in the Middle Ages, and Hobbes, Hume, Berkeley, John Stuart Mill, and Wundt, among the moderns.

Conceptualism is the doctrine that the idea is universal, but that there is no object corresponding to it. Our universal ideas have *ideal* validity, but we do not know whether they have any validity in reality. The conceptualists maintain that our universal ideas do

not contemplate objects which are independent of the mind. This system was upheld in ancient times by Protagoras, Epicurus, and the Stoics, in the Middle Ages by Abelard and Occam, in modern times by Kant and Lotze.

22. PROOF OF PART 1: *Ultra-realism is false.*

Ultra-realism is false if there is no such single object in the external world as Justice or Beauty or Man-as-such.

But there is no such single object in the external world as Justice or Beauty or Man-as-such.

Therefore ultra-realism is false.

The *Major* is evident from the doctrine of the ultra-realists.

The *Minor* is true, because such words as "Justice," "Beauty" and "Man-as-such" are shorthand or non-literal expressions respectively, for "is a just being," "is a beautiful thing" and "Every man by the fact that (or so far as) he is a man." Thus, the sentence, "The justice of John Brown has been established," is the same as "That John Brown is a just being has been established." "The beauty of this rose is evident" is the same as "That this rose is a beautiful thing is evident." "Man, as such, is a social being" is the same as "Every man, by the fact that he is a man, is a social being."

23. PROOF OF PART 2: *Nominalism is false.*

Nominalism is false if a general concrete term in the plural stands for a class.

But a general concrete term in the plural stands for a class.

Therefore nominalism is false.

The *Major* is evident from the teaching of the nominalists. If a general concrete term in the plural stands for a class, it stands for something which we contemplate by a universal idea, for that is what is meant by a universal idea, namely, an idea which contemplates all the objects of a class. The nominalists deny that there is such an idea.

Minor: A general concrete term in the plural either stands for one single object or one single collection of objects or for a class of objects. But a general concrete term in the plural (e.g., "men" or "animals") does not, like the term "Napoleon" or "this horse," stand for one single object, nor, like the term "Army A," does it stand for one single collection of objects. Therefore it stands for a class; and since it stands for a class, it is obvious that we contemplate a

class, and the act by which we contemplate a class is called a universal idea.

24. PROOF OF PART 3: Conceptualism is false.

Conceptualism is false if by our universal ideas we contemplate objects which are independent of the mind.

But by our universal ideas we contemplate objects which are independent of the mind.

Therefore conceptualism is false.

The *Major* is evident from the teaching of the conceptualists.

The *Minor* is evident from an example. Take the universal idea by which we contemplate men. By this idea we contemplate objects which are independent of the mind, for everyone acknowledges that we speak truly when we say: "John is a man," "Peter is a man," John and Peter *are* men." Hence, the objects, namely, men, which we contemplate by the universal idea of men are present where John and Peter are present; and since John and Peter are admittedly independent of the mind, it is plain that men are independent of the mind.

25. *The misinterpretation of certain words and phrases.* In the beginning of this chapter we noted several ways in which philosophers have stated the so-called Problem of Universals. We shall now show how the problem has arisen from the philosopher's misinterpretation of certain words and phrases. Professor Joad says: "The redness which I see in this patch is the same as the redness which I see in that one." This language is not literal, and yet it is interpreted here as literal. We do not see redness in a patch; we see a red patch. Whether "redness" be interpreted as a Platonic exemplar which exists apart from individual things or as an idea in the sense of a mental image, it is not literal language to say that it is in the patch. If redness exists apart from the patch or if it is a mental image, it is not *in* the patch.

Again, Professor Joad says: "Whiteness, humanity, justice, triangularity, are all universals, since many different things and facts can be respectively white, human, just and triangular." The words "whiteness," "humanity," "justice," and "triangularity" are here used as though they stood for objects which we contemplate, whereas they stand respectively for "is a white thing (or being)," "is a human being," "is a just being" and "is a triangular thing." Thus, the sentence, "George admits the whiteness of snow, the humanity of the Hottentot, the justice of Peter Brown and the triangularity of the frame," has the same meaning as the sentence, "George admits

that snow is a white thing, that the Hottentot is a human being, that Peter Brown is a just being, and that the frame is a triangular thing.”

The philosopher says that a universal is “one common to many” or that it is “one capable of being predicated of many.” There are many men, but where is the one which is common to them or which is capable of being predicated of them? It is said that “man” is predicated in the same sense of John, Peter, George, and so on, and therefore, that one and the same thing is predicated severally of many distinct individuals. As we have already seen, the word “same” is ambiguous. If we are to speak unambiguously, we should not say that “man” is predicated of John, Peter, and George in the same sense, but that it is predicated of them in an exactly similar sense. The sense or meaning of a term is that to which the term is intended to direct our attention. When “man” is predicated of John and then predicated of Peter, it is intended to direct our attention to two distinct objects, and therefore, it has two distinct meanings, though the meanings are exactly similar to each other. Again, we do not say “John is man” or “Peter is man”; we say, “John is *a* man” and “Peter is *a* man.” We do not say, “John and Peter are man”; we say, “John and Peter *are* men.” The very fact that we use “men” in the plural shows that when it is predicated of John and Peter, it has two distinct but perfectly similar meanings.

XVII. Human Testimony

1. Locke, Bonnet, Laplace and Craig deny that it is possible to attain to certitude by means of human testimony. J. J. Rousseau, Diderot, Hume, D. Strauss, Renan, Harnack, and Loisy maintain that it is impossible to obtain certitude concerning miracles. The special bearing of human testimony upon belief in miracles will be treated in Cosmology. In the present chapter we are concerned merely with the general question of the value of testimony as a basis for certitude.

2. There are certain moral principles or laws, that is, certain *constant and uniform moral inclinations and modes of action*, which men follow freely in certain circumstances. These moral principles or laws are the foundation of our reliance upon human testimony. They are such as the following:

- (1) *Love of truth*, that is, an inborn tendency within us to learn the truth. For this reason, we inquire into a truth when the inquiry is not difficult.
- (2) *Hatred of falsehood*. Falsehood is of its very nature a disgrace, and no one tells a lie except for some advantage.

It is to be observed that the moral principles or laws, of which we have been speaking, are constant and uniform *inclinations and modes of action*. They are not to be confused with ethical principles. Ethical principles are precepts, not modes of action. Examples of ethical principles are the following: that one should do good and avoid evil; that one should not steal.

3. An *historical fact* is a past event which has been recorded, that is, handed down in writing or by word of mouth.

A *witness* is a person who makes known to others an external event or fact which is known to himself.

An *immediate witness* is a witness who has perceived the event or fact with his own faculties.

A *mediate witness* is a witness who has not perceived the event or fact with his own faculties, but has learned it from others.

Testimony, in its primary sense, is the act by which a witness makes known to others an external fact which is known to himself. In its secondary sense, it is that which the witness makes known.

The *authority* of a witness is his fitness to secure belief in what he says.

Belief or faith is a firm assent to something on the authority of one or several witnesses.

4. The authority of a witness consists in two things, viz., his *knowledge* of the fact, and his *truthfulness* in recounting it. When the knowledge and truthfulness of a witness are evident to us, then we have adequate evidence of what he relates; and hence, we are warranted in giving a firm assent to the fact, that is, in being certain of it.

THESIS 11

5. *The mind can acquire certitude of historical fact from human testimony.*

PROOF: The mind can acquire certitude of historical fact from human testimony, if it can be certain of the knowledge and truthfulness of the witnesses to an historical fact.

But the mind can be certain of this.

Therefore the mind can acquire certitude of historical fact from human testimony.

The *Major* is evident.

Minor:

(1) *The mind can be certain of the knowledge of the witnesses on the following conditions:*

- a. if the fact or event which they relate was a public one and attracted general attention at the time of its occurrence;
- b. if the report of it has been handed down *independently* by a large number of persons who were present at it;
- c. if these persons differed widely from each other in age, character, disposition, occupation, mental gifts, education, and the like;
- d. if the report was made at a time when those whose interests were at stake would have been sure to denounce it in case it contained anything erroneous.

- (2) *The mind can be certain of the truthfulness of the witnesses on the following conditions:*
- a. if the witnesses were known to be men of integrity;
 - b. if their testimony could have brought them no advantage, but rather the reverse;
 - c.) if their testimony was given in the presence of those who could easily have detected a falsehood and to whom such detection would have been of supreme advantage.

6. *Note 1.* The opponents of our thesis commit the fallacy of Composition. We saw in the *Handbook of Logic*, section 116, that Composition is the fallacy of concluding that what is true of certain elements when taken separately is also true of them when taken together. In the *Handbook of Logic*, we remarked as follows in connection with the subject before us:

This fallacy would be committed by a man who should pronounce that the *cumulative* force of various independent testimonies in favor of a fact failed to constitute a proof of the fact, because a single witness was liable to be mistaken. As the stones of an arch support each other and are thus able to sustain the building, so the independent testimony of each witness strengthens that of the others and is itself strengthened in return, so that the combined force of all is able to do what none of them could do if taken in isolation. Each testimony is to be viewed in relation to the others, for they all form a *connected* and *converging* body of proof.

It is to be remarked that the *connection* and *cumulative* force of the various independent testimonies is an entirely distinct element which is not found in anyone of the witnesses taken by himself, but only in all the witnesses taken as a *collection*.

It is true that large number of blind men taken together lack the power of seeing just as emphatically as does anyone in the collection. But that is because no blind man is able to help another blind man to see; whereas the independent testimonies of two witnesses do help each other to prove a fact. Each witness helps to support every other witness. A single strand of rope cannot accomplish much by itself. But twist a large number of strands together, and they will be able to pull a very heavy load.

7. *Note 2.* Two objections have been brought against our thesis, as follows: (1) "One witness could have made a mistake about the

fact; therefore, all could have made a mistake.” (2) “One witness could have told a lie; therefore, all could have told a lie.” Our answer is, that these are not objections to our thesis; they are entirely irrelevant to it. Our certitude of an historical event is not based on the supposition that the witnesses could not have made a mistake and that they could now have told a lie; our certitude is based on the fact that they did not make a mistake and that they did not tell a lie; and this fact is determined by the conditions which were set forth in the proof of the thesis.

XVIII. The Ultimate Motive of Certitude

1. When the mind makes an act of certitude, it assents firmly to a perceived truth. The question now arises, What is it that enables the mind to discriminate truth from falsity, and what is it that moves the mind to assent firmly, whenever it makes an act of certitude? We have already touched briefly upon this question in chapter III. We now propose to examine the matter more in detail.

2. A *criterion of truth* is a standard by which the mind recognizes truth and distinguishes it from falsity.

The *universal criterion of truth* is the standard by which the mind always recognizes truth and distinguishes it from falsity.

A *motive of an act of certitude* is that which determines the mind to assent firmly when it makes an act of certitude. It is the cause or reason why the mind assents firmly to the truth when it is in possession of certitude.

The *ultimate motive* of an act of certitude is the motive or reason beyond which no motive can be assigned for an act of certitude. When we ask a man why he is certain, we are asking for the motive of his certitude. When he has given us an answer to the last question we can put to him as to why he is certain, he has given us the ultimate motive of his certitude.

3. In the present chapter we are inquiring *what* the ultimate motive is. That there *is* a *motive*, is evident from the fact that we are in possession of certitude, for there can be no certitude without a reason for being certain. That there is an *ultimate* motive is also evident. Otherwise certitude would be impossible, for we should have to go on forever answering the question why we are certain and never reach the final answer.

4. We are going to maintain that *evidence* is the ultimate motive of *every* act of certitude. The testimony of the senses furnishes us with the motive of what is called *physical* certitude; the testimony of rational beings is the motive of *moral* certitude; chemical analysis is the motive of our certitude as regards the chemical properties of the elements of bodies. But evidence is the common attribute of every legitimate motive whatever. Particular motives *are* motives only because they are *evidence*; just as a man, a horse,

a bird, and a fish are animals only because they are sentient things.

5. *Evidence* is the actual manifestation of the object to the mind. In other words, it is the object *as manifested to the mind*. The word “object” here means the formal object of a judgment or of an inference. Every act of certitude is a judgment or an inference, though there are many judgments and inferences which are not acts of certitude. Certitude is a firm assent to a perceived truth, and the firm assent is given to the formal object of a judgment or of an inference.

6. Scholastic authors frequently divide evidence into objective and subjective, as follows:

Objective evidence is the actual manifestation of the object to the mind.

Subjective evidence is the actual perception of the object by the mind.

Some scholastic writers hold that the ultimate motive of certitude is objective evidence; others, that it is subjective evidence; others again, that it is both combined. There is no need to adopt any of these contentions to the exclusion of the others; for what the three parties say really comes to the same thing. We cannot have objective evidence without subjective, and we cannot have subjective evidence without objective; for the object cannot be manifested to the mind without the mind perceiving it, and the mind cannot perceive the object without the object being manifested to it. To say that the object is manifested to the mind means in fact nothing else than that the mind perceives the object.

7. The object is actually manifested to the mind when the mind *apprehends the object as it is* and not otherwise than it is.

8. The object is *immediately* evident when it is evident of itself; that is, when it is self-evident.

The object is *mediately* evident when it has been proved.

The object is *intrinsically* evident when self-evident or when it has been proved directly or indirectly independently of the testimony of rational beings.

The object is *extrinsically* evident when it has been made evident by the testimony of rational beings.

N.B. In order that the testimony of rational beings should avail to make the object evident, the *authority* of these rational beings

must be *intrinsically* evident. Otherwise, there would be a *processus in infinitum* involved in making the object evident.

9. As regards the source from which evidence comes to the mind, evidence is divided into metaphysical, physical, and moral.

Metaphysical evidence is evidence which is obtained by the mind itself without the medium of a sense faculty.

The only evidence which is obtained by the mind without the medium of a sense faculty is that which is derived from the contemplation of the operations of the mind and will and from the analysis and comparison of the formal objects of ideas.

The evidence which is derived from the operations of the mind and will is obtained by *psychological reflection* or *introspection*.

The evidence which is derived from the analysis and comparison of the formal objects of ideas is obtained by *ontological reflection*. Thus, by analyzing the formal object of the idea of "straight line, as compared with other lines" and comparing this formal object with the formal object of the idea of "shortest line that can be between two points," we find that the former involves the latter. Hence we have metaphysical evidence for the proposition, "The straight line, as compared with other lines, is the shortest line that can be between two points."

N.B. When we say that the evidence derived from the analysis and comparison of the formal objects of ideas is obtained by the mind without the medium of a sense faculty, we do not mean that the mind originally obtains the formal objects of the *ideas themselves* without the medium of a sense faculty. On the contrary, we maintain that the mind originally obtains all the formal objects of its ideas, except of the ideas of its own acts, through the medium of the senses. In other words, the senses supply the mind originally with the *material objects* of its ideas. But once the mind has the ideas, it may prescind from the *actual existence* of the material objects and also from the means or medium by which the material objects were presented to the mind, and it is only after this is done that the formal objects of the ideas become the subject matter of analysis and are capable of furnishing metaphysical evidence.

10. *Physical evidence* is evidence which is obtained from the report of the senses. Thus, we have physical evidence of the existence of the house in which we live and of the clothes which we wear.

The singular or individual, judgments which we make in presence of the direct testimony of the senses and all the inferences which we draw from these judgments are warranted by the general principle that the *laws of nature are constant*.

When we say that the laws of nature are constant, we do not mean that they are absolutely necessary and immutable. Physical science cannot prove that they are absolutely necessary and immutable. In Cosmology and Natural Theology it will be shown that God has the power to suspend the operation of a physical law, and that He does so in particular instances. But since the human mind is so constituted that it places absolute confidence in the order of nature, unless it has reason to suspect that the operation of a law has been suspended, and since God is infinitely good and truthful, it follows that, if He works a miracle, He will give some sign or indication which will at least cause us to suspect that a miracle has taken place.

11. *Moral evidence* is evidence which is obtained from the testimony of rational beings. Thus, we have moral evidence of the existence of Alaska.

When the evidence is derived from the testimony of rational *creatures*, it is called natural moral evidence. By *natural* moral evidence we usually mean the evidence which is derived from the testimony of human beings. When the evidence is derived from the testimony of God, it is called *supernatural* moral evidence.

Our warrant for relying upon the testimony of mankind, as we have seen, are certain moral principles or laws, that is, certain constant and uniform moral inclinations and modes of action which mankind follows freely.

THESIS 12

12. *Evidence is the universal criterion of truth and the ultimate motive of every act of certitude.*

ADVERSARIES: According to the Idealists, the criterion of truth and the motive of certitude, so far as they admit certitude, consists in the agreement of our thoughts with the thoughts of other men. According to the Traditionalists, e.g., de Bonald and Lamennais, it is divine revelation or the consent of mankind. According to Lipps, it is scientific demonstration. According to Descartes, it is a

clear and distinct idea. According to the Pragmatists, e.g., James, Dewey, and Schiller, it is utility, that is, satisfaction of some kind. According to Reid, it is a blind instinct without any perception of reasons. The opinion of Reid is substantially the same as that of Kant, whose schemata work like a machine.

13. PROOF OF PART 1: *Evidence is the universal criterion of truth.*

The standard by which the mind always recognizes truth and distinguishes it from falsity is the universal criterion of truth.

But evidence is the standard by which the mind always recognizes truth and distinguishes it from falsity.

Therefore evidence is the universal criterion of truth.

The *Major* is evident. It is a definition which all will admit.

Minor. Evidence is the standard by which the mind always recognizes truth and distinguishes it from falsity, that is, it is the *only* standard, because it is only when the object is evident that the mind sees the object as it is and not otherwise; but the mind would not be able to pronounce such a proposition false, unless it saw the object as it is.

14. PROOF OF PART 2: *Evidence is the ultimate motive of every act of certitude.*

The motive or reason beyond which no motive can be assigned for any act of certitude is the ultimate motive of every act of certitude.

But evidence is the motive or reason beyond which no motive can be assigned for any act of certitude.

Therefore evidence is the ultimate motive of every act of certitude.

The *Major* is evident.

Minor. Evidence is the motive or reason beyond which no motive can be assigned for any act of certitude; for the last answer we can give to a person who asks us why we are certain of a given object is that the object is evident, that we perceive it. If we are asked why we are certain that a straight line is the shortest distance between two points, we answer "because it is evident." If we are asked why we are certain that the square of the hypotenuse of a right-angled triangle is equal to the sum of the squares of the other two sides, we answer, "because we have proved it." And if we are asked why we accept the proof, we answer, "because it is evident." If a person

were to ask us why we assent to an evident object, we should consider him either crazy or impertinent.

15. *Note 1.* As regards the doctrine of the idealists, even were we to concede that the agreement of our thoughts with the thoughts of other men was a criterion of truth, we could not use it as a criterion unless the agreement was evident to us.

16. *Note 2.* The ultimate motive of every act of certitude cannot be divine revelation, as the Traditionalists assert; first, because not all the things of which we are certain have been revealed; secondly, because our certitude of revelation itself arises from the fact that revelation is evident. The same remarks apply to the consent of mankind.

The doctrine of Lipps was refuted in the chapter on Error.

17. *Note 3.* If by “a clear and distinct idea” Descartes had meant the clear *perception* of the object, there would be no objection to his doctrine; for it would be substantially the same as ours. But if, as is most probable, he meant a clear and distinct idea no matter how it was acquired, his doctrine is manifestly false. I may have a clear and distinct idea of a green elephant, but that would not be a motive for a certitude that a green elephant exists.

18. *Note 4.* The universal criterion of truth cannot be its utility or satisfaction, as the pragmatists maintain; for, even allowing that utility or satisfaction is a kind of criterion, it can be a criterion only on condition that the utility or satisfaction is evident to us.

19. *Note 5.* Reid’s doctrine that a blind instinct without any perception of reasons is the ultimate motive of certitude is false; for a man cannot be certain of a thing unless he knows the thing, and he cannot know a thing unless he perceives the reasons for it, that is, unless the thing is *evident* to him.

20. OBJECTIONS: 1. The mind of the individual is not an infallible judge of truth. But to say that evidence is the universal criterion of truth is to say that the mind of the individual is an infallible judge of truth. Therefore evidence is not the universal criterion of truth.

Answer: We have nowhere said that the mind of the individual is an infallible judge of truth, nor does our thesis imply it. In order to be an infallible judge of truth, the mind would have to be incapable of making a mistake in any case whatever. What we have maintained is, that *in those cases in which the object is evident*

the mind cannot make a mistake; and the reason is, that in such cases the mind sees the object as it is and not otherwise than it is.

2. To make evidence the criterion of truth is equivalent to saying that the thing is so because it seems so to me.

I distinguish: To make evidence the criterion of truth is equivalent to saying that the thing is so because it seems so to me, that is, because the thing is so *manifested* to me and I see the thing as it is, *Concedo*; because it seems so to me, that is, because I have some reason for it, whether good or bad, *Nego*.

NOTE ON THE THREE KINDS OF CERTITUDE

21. Certitude is called metaphysical, physical, or moral, according as it is immediately determined by metaphysical, physical, or moral evidence. Hence, it is usual to speak of three kinds of certitude, as follows:

Metaphysical certitude is certitude which is *immediately* determined by metaphysical evidence (cf. 9). Thus, we have metaphysical certitude of the proposition, "The straight line is the shortest distance between two points." All the axioms and conclusions of pure mathematics are metaphysically certain. We also have metaphysical certitude of the operations of the mind and will.

Physical certitude is certitude which is *immediately* determined by physical evidence (cf. 10). For example, we have physical certitude of the existence of the room in which we study and of the wagons on the street.

Moral certitude is certitude which is *immediately* determined by moral evidence (cf. 11). Thus, we have moral certitude of the existence of Australia and Napoleon.

N.B. Metaphysical certitude, physical certitude, and moral certitude are all of them certitudes strictly so called; that is, they are all absolute certitudes. We must, therefore, distinguish moral certitude in the strict sense from what is sometimes loosely called moral or practical certitude. Moral certitude in the loose sense is an opinion, an assent to a probability, such as is sufficient for a prudent decision in many of our daily acts. For instance, we are morally certain, in this loose sense, that there is no poison in our food, and that the floor on which we walk will not give way.

22. We have said certitude is called metaphysical, physical, or moral, according as it is *immediately* determined by metaphysical, physical, or moral evidence. My certitude, for instance, that the straight line is the shortest distance between two points, is immediately determined by metaphysical evidence. My certitude that the house in front of me exists is immediately determined by physical evidence. But I could not assent to the truth that the house exists, unless I also had metaphysical evidence that a thing cannot both exist and not exist at the same time. But it is not this metaphysical evidence which *immediately* determines my certitude that the house exists. Long before I knew of the existence of the house, I had metaphysical evidence that a thing cannot both exist and not exist at the same time. What immediately determines my certitude that the house exists is the evidence supplied by sight and touch.

In like manner, my certitude that Napoleon existed is immediately determined by moral evidence. But I could not assent to the truth that Napoleon existed, unless I had metaphysical evidence that a thing cannot both exist and not exist at the same time, and also physical evidence that men had spoken or written about Napoleon. But it is not the metaphysical or the physical evidence nor both combined which *immediately* determines my certitude that Napoleon existed. It is not the mere sound of men's voices nor the merely written words on paper which *immediately* determines my certitude. My certitude is immediately determined by the *meaning* which those sounds and written words convey and by the *authority* of the men from whom they proceed, and this is moral evidence.

If any of the premises in a process of reasoning is physically certain, and no premise morally certain, then the conclusion is physically certain. If any of the premises is morally certain, the conclusion is morally certain.

23. As we call our assents certain, so we are accustomed to speak of things or propositions as certain. Certitude is primarily applied to assent or knowledge. It is applied in a secondary sense to the things or propositions of which we are certain. In English the word "certitude" is frequently used for the assent, and the word "certainty" for the thing or proposition of which we are certain.

A proposition which is certain is sometimes called an *objective certitude*; an assent which is certain is sometimes called a *subjective certitude*. A person who has a firm assent, but not to a perceived truth, is sometimes spoken of in a loose way as having subjective certitude.

24. A *true* proposition is a proposition which expresses something that can be known about its subject.

An *evident* proposition is a true proposition which is perceived to be true by the mind.

A *certain* proposition is an evident proposition to which the mind has given a firm assent.

XIX. Philosophy and Common Sense

From time to time we meet the statement that philosophy is bankrupt. It is a statement which comes from the philosophers themselves. To an outsider it must sound rather strange. He does not hear the astronomer or the physicist complain that astronomy or physics is bankrupt, unless, indeed, the astronomer or the physicist turns philosopher, and when that happens, of course one may expect to hear anything. The statement is a confession of failure on the part of philosophy to solve the problems it set out to solve and of failure to solve the pressing problems of the present. It is common to hear the philosopher declare that the conclusions of philosophy are in continual need of revision, that what he puts forth today he may have to withdraw or modify tomorrow. Naturally, if he has no confidence in his own conclusions, it is not surprising that other people should refuse to pin their faith to those conclusions. Sometimes the philosopher will make the claim that he has discovered the key to the problems of philosophy, but he cannot get any other philosopher to use the key or even to admit that it is a key.

But we do not need the confession of the philosopher in order to know that philosophy is bankrupt. The evidence is on all sides of us. Philosophy speaks with a hundred discordant voices; it has not a single straightforward answer to any of the great questions that have been put to it. If nothing of importance depended upon the solution of these questions, if philosophy were a game which a man might take up as a relaxation from the serious business of life, no harm would result from the futile efforts of the philosophers. But the questions on which philosophy is engaged intimately affect the happiness of mankind, and no issue can be more serious than that.

The name of philosopher is a very noble name—lover of wisdom. If the word “philosophy” were erased from the title-page and contents of all works of philosophy, would not the average intelligent man be surprised to hear the authors of these works called lovers of wisdom? And if he were told that these works embody the wisdom of the world, might he not reasonably ask: “If this be wisdom, what is folly?” Wisdom may roughly be said to consist, in knowing and keeping the proportions of things, certainly in not going to extremes. But has there ever been anyone

who could compete with the philosopher in going to extremes? Wisdom, like health, resides in a balance, and the philosopher does not observe the balance. One philosopher will say that everything is mind; another that everything is matter; a third that everything is number; a fourth that everything is illusion; a fifth that everything is space-time. One of them goes so far as to assert that there is no such thing as a person or a thing, but only a state of affairs, and when he condescends to use the word "thing," he encloses it in quotation marks. The philosopher is supposed to be engaged upon the great problems of life; but to the layman the philosopher himself must seem to be something of a problem.

The impression is often forced upon one that the philosopher is out for a sensation, that he feels he has not fulfilled his function as a philosopher till he has propounded something startling. But surely a desire of startling people ought not to be reckoned an essential ingredient of the love of wisdom. You can get startling things from a lunatic; you can get them from a nightmare. Witness the paradoxes with which the philosopher has stocked his study, and witness the uses to which he has put these paradoxes. Doubtless a paradox may at times serve a good purpose by jolting a solemn prig out of his self-complacency; it may serve a good purpose by bringing to light 'the inaccuracy of a traditional definition; it may be useful in bringing out a writer's own inaccuracy in applying a definition. But paradox is emphatically not the food on which the philosopher should feed. Instead of laughing at a paradox and bemoaning his stupidity in not being able to see the catch in it, the philosopher solemnly proceeds to make it the basis of a system and to prove by it that mankind has hitherto been the victim of illusion.

In consequence of these paradoxes various schools have arisen which spend their time battling over the significance of the paradoxes. A favorite method of dealing with them is to divide the universe into two worlds, one consisting of realities, and the other of appearances, and then to consign the paradoxes to the world of appearances. But a paradoxical appearance suffers from the same mortal weakness as a paradoxical reality. There can be no more of a contradiction in an appearance than in a reality. You cannot have an intrinsically impossible appearance. An appearance may be in conflict with reality, but it cannot be in conflict with itself. A plane figure cannot even appear to be at once a circle and a square. Everything that the philosopher advances to prove that a reality of a given kind is intrinsically impossible may be employed to prove that an appearance of the same kind is also intrinsically impossible. Alice in Wonderland wondered what the flame of a

candle would look like if it were blown out. If an object cannot in reality *be* a flame and be blown out, neither can it *appear* to be a flame and appear to be blown out. The division of the universe into reality and appearance is an utterly ineffective and misleading expedient for explaining the paradoxes that have been invented by the philosopher.

In dealing with a problem which has proved intractable, it is wise to begin by asking, What is wrong with the statement of the problem? Are we sure that it is accurately and literally worded? Are we sure that no important factor has been omitted? Many a problem ceases to be a problem when it is fully and accurately stated. It is the common phrases and turns of language which have presented the philosopher with most of his problems, and without a careful scrutiny of the wording of the problems he runs the risk of building a philosophy on a figure of speech.

The philosopher is searching for the ultimate cause of things; he is seeking an answer to the last "Why." But his search will be fruitless unless he knows when the last "Why" has been answered. The last "Why" has been answered when there is no conceivable positive answer to the question "Why not." Why is a circle round? Well, why shouldn't it be round? Can anyone say anything positive in answer to that question? And yet the philosopher imagines that he is laying down something profound and illuminating when he pronounces that a circle is round because of its roundness, which is equivalent to saying that it is round because of the fact that it is round. The question "Why" is nonsense unless there is something to be said in answer to the question "Why not." In like manner, "Why not" is nonsense unless the question "Why" admits of some kind of positive answer; for example, Why are there not four sides to a triangle?

The philosopher sets out to explain and ends by explaining away. He should first ask himself, Does the thing need explaining? You can only explain by means of something which is plainer than the thing to be explained. And if, as the philosopher not uncommonly concludes, nothing is plain, then it is not plain that there is a problem to be explained. In a parallel way, the philosopher will say of a certain principle, which everyone accepts and acts upon that it is not proved; and his attitude is copied by the flippant popular writer who says that no one has thus far succeeded in proving that two and two makes four. The implied conclusion is that there is some doubt about the truth of the principle. The philosopher has failed to put to himself the question, Does the principle require proof? The only proposition

that requires proof is the proposition that is not evident; for proving means making evident something that is not evident, and that can only be done by appeal to something that is already evident. The philosopher retorts that nothing is self-evident, and gravely sets about proving his assertion by referring to two or three generally accepted propositions which some philosopher has called in question. Even if there were some justification for questioning these propositions—and we need not pause to dispute the point—it could only be by reason of something that is evident. But quite apart from this, the philosopher has fallen into the common fallacy of arguing from a special case to a universal rule. This is his argument: “Two or three generally accepted propositions have been shown not to be self-evident; therefore, no proposition is self-evident.” With such a conclusion as a principle how does he ever expect to prove anything? You can only prove a proposition by means of premises which do not themselves require proof. Add to this, the principle nullifies the philosopher’s own claim to have proved certain propositions to be questionable. You must ultimately come to the self-evident or you can never prove anything, not even that a proposition is questionable.

Now and then a philosopher will be accused of kicking down the ladder by which he climbed to his position; and sometimes the philosopher will reply with a smile that the accusation is true, but will ask, Where is the harm of it? The accuser and the accused are both wrong. The philosopher did not kick down the ladder: it is still standing. He did not climb to his position by the ladder: it was pointed in the opposite direction. He *abandoned* the ladder and reached his position by a leap. It was not the power of reason, it was willpower, that landed him in his position. If a philosopher starts by laying down a set of premises, then a conclusion which condemns the premises condemns the philosopher. What happened was that he failed to examine his premises. There are no premises to be found anywhere which could justify the extravagant contentions of many of our philosophers. Muddled thinking and confused statement which in a scientist would be visited with the severest criticism are suffered to pass almost without comment in the case of the philosopher. The premises with which he starts are packed with implications which await his investigation; the pity of it is that he shows no signs of investigating them.

If you are going to solve the mysteries’ of life, you must start with the facts of life, not with a theory, and emphatically not with a theory which questions or denies those facts. It is remarkable that not a few philosophers seem to confuse mere supposition with

hypothesis. An hypothesis or theory is devised as a means of explaining or coordinating certain data, and it is the data which suggest the hypothesis. A supposition may be made for the purpose of speculating on what our condition would be if the facts and data of experience were unknown or were of a different nature from what they are. This may at times be a perfectly legitimate proceeding and it may have a useful application. But sometimes the philosopher will forget that he has made a mere supposition, and imagine that he has constructed an hypothesis, and challenge us to disprove his supposition. He is resorting to the fallacy of *argumentum ad ignorantiam*. The only way of disproving a supposition which is not self-contradictory is by comparing it with facts, but the philosopher in his very supposition has excluded all appeal to facts. His supposition may be consistent with things as they might be; the only objection to it is that it is not consistent with things as they are. Supposing the earth were completely covered with water, how could you prove that it contained any dry land? Supposing there were no evidence for an external world, how could you know of the existence of an external world?

One of the puzzling and annoying characteristics of the philosopher is his reckless habit of bestowing eulogistic titles upon himself. He will describe himself as especially bold and tough-minded because he declares his intention of abandoning all his convictions and certitudes in an attempt to solve the problems of philosophy. The boast is an idle one. In the first place, he never carries out his intention, for it cannot be done. A man may *say* anything he pleases, but he cannot *think* or *do* anything he pleases. He may say he saw a round square, but he cannot *think* he saw a round square. He may say, if he likes, that he saw a horse riding astride its own back, but we shall know what to think of him if he says it. In the second place, it is a queer exhibition of boldness and tough-mindedness to refuse to grapple with a problem by doubting the existence of the problem; and you would doubt the existence of the problem if you abandoned all your convictions.

Thus far we have been jotting down a few of the philosopher's oddities, because these will help to explain the bankruptcy of philosophy. However, when you meet the philosopher in the street, you will not recognize him. You will find him quite normal. The philosopher in the lecture room and the philosopher in the street are two different persons. Neither of them copies the other and neither of them suffers himself to be influenced by the other. And this would seem to be the root cause of the bankruptcy of philosophy.

The truth is, the philosopher is living in an artificial atmosphere which keeps him from being honest with himself. I do not mean that he is consciously dishonest, but he is restrained by his environment from giving expression to his deepest convictions—convictions which he has never relinquished. He is forbidden to investigate these convictions and to draw out their implications. “There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy.” He is allowed to dream, but he is not allowed to face his convictions. These are the convictions which he shares with the rest of mankind. In other words, they are common sense.

If we want to learn the fundamental convictions of a man, we look to his everyday actions and his spontaneous speech, not to his formulated doctrines, unless, indeed, these happen to be reflected in his actions. According to the time-honored phrase, actions speak louder than words. Commonly his philosophical system sits very lightly on the philosopher. In his unofficial dealings with other people there is nothing to mark him off from the common run of men. He does not stare at you with wild unseeing eyes. Moreover, he takes the ordinary precautions of the common man to preserve his health and sanity. In short, he gives evidence of having common sense.

It was not philosophy, but common sense, that furnished the philosopher with the initial data which started him on his career in philosophy. These data suggested certain questions to him, some of them very deep questions, and his philosophy was an attempt to answer these questions. What has become of his original data? They have disappeared from the vision of the philosopher and he lives in an unreal world which is the creation of his own fancy.

There is a test for a sound philosophy, just as there is a test for sanity; and the test is the same in both cases: common sense. It is not a complete test which guarantees the correctness of all the philosopher’s conclusions; but as far as it goes, it is a sure test. Observe that we are not asking the philosopher to solve his problems by common sense. We are asking him to employ common sense to check his conclusions wherever it is applicable. We are asking him to keep his eye on common sense and not to imagine a problem where common sense tells him there is no problem. We are asking him to study the pronouncements of common sense and to explore their implications.

The objection may be raised that “common sense” is a very vague term, that different people apply it differently, and therefore, that it is useless as a test in philosophy. But the term need not be

vague. We can limit it to the signification which it has on the lips of all mankind. We can limit its application to that to which all men agree it should be applied. In this application, common sense may be defined as that quality of men in general in virtue of which they accept and act upon principles and doctrines which are essential to their physical health and sanity. It is common sense which keeps a man out of the grave and the lunatic asylum, and it is only in this meaning that we are here using the term. If there be a request for instances of the kind of propositions which all sane men accept and act upon, here are one or two: That there is a world outside of us; That the men we meet in the intercourse of life are not "such stuff as dreams are made on"; That men are endowed with the power of choice; That the human mind is not responsible for the difference between an elephant and an onion. It is only the man who acts upon these propositions who is allowed to walk the streets of the city without a guard.

When you have tabulated the propositions which men in general must exemplify in the action of life if they are to survive and remain sane, you have set down the pronouncements of common sense; and these pronouncements should constitute the irreducible minimum in the creed of the philosopher. On matters which are level to the comprehension of the common man it is far better to have the judgment of all humanity behind you than the judgment of a single philosopher. And if the philosopher wants a really fruitful subject for reflection, let him put to himself this question: Why is it that, in spite of all the difficulties of the philosopher, common sense is always right; and why is it that in his heart of hearts the philosopher himself acknowledges that it is right?

Common sense satisfies the pragmatic test: it works. It satisfies the test of the man who invented the name of "pragmatism": it makes a difference. Our institutions for the insane are an eloquent testimony to the enormous difference it makes.

If the philosopher is to effect a reconciliation between his philosophy and his normal manner of life, he must shake off the artificial restrictions and conventions which the schools have imposed upon him and come to grips with reality—the reality which his common sense stubbornly refuses to deny or to question. He is accustomed to boast of his philosophical detachment, but there is no merit in being detached from reality. He has the reputation of being hard to satisfy with an argument; the real trouble with him is that he is too easily satisfied when the argument is against common sense. His studies and occupations

have created in him an unnatural state of mind, so that he will say one thing as a philosopher and another thing as a companion or a friend. If there is to be a philosophy which shall be really worthy of the name, it must be one that can be carried into action in the land of living men; it must be one that will demonstrate, and not belie, the sanity of its champion. And such a philosophy will of necessity be rooted in common sense.

XX. Philosophy and Its Pitfalls

1. Philosophy, in the sense in which the word is used when scholasticism is contrasted with other philosophies, is an attempt on the part of man's unaided reason to give a fundamental explanation of the nature of things. If the attempt succeeds, it is a true philosophy.

But the question arises, How are we to judge whether the attempt is a success or a failure? What is the test of a true philosophy? There must be some test applicable to all systems of philosophy, or we shall have no reason for adopting one rather than another. It is easy for a philosopher to fall into the error of fancying that his system is true because it is consistent. And when he does so, he will interpret facts in the light of his theory and deny those facts which cannot be reconciled with it. Internal consistency is very far from being a criterion of a true philosophy~ It is possible to start with a few false principles and deduce from them a mass of doctrine which will be consistent with itself and with the initial principles.

But in spite of its consistency the system will be false. Suppose there were two such systems, each containing a coherent body of teaching, but one contradicting the other: we could not choose between them and we should have to pronounce them both true, if we adopted internal consistency as our criterion.

The real test of a true philosophy will become clear, if we consider what it is to which every philosophical system has consciously or unconsciously appealed when it sought to secure a following. There have, indeed, been cases where disciples were already at hand who were prepared to accept the *ipse dixit* of their master upon any subject whatever. But apart from such cases, the thing to which the founders of philosophical systems have invariably appealed, at least at the outset, is *common sense*. Very few philosophers have refused to call their system the philosophy of common sense. And even those who have admitted that their philosophy was counter to common sense have nevertheless appealed to it when they were marshalling the data which they claimed were the justification of their fundamental principles. This universal practice of philosophers is an indication that the verdict of common sense is final in this matter. Any system of philosophy which should refuse to submit to its decision could not expect to

gain disciples from all walks of life. It would win its devotees, not on its intrinsic merits, but by its appeal to prejudice or to the spirit of loyalty or of reverence for a great name. Such a system would not be an explanation of the nature of things, but the development of a theory which begged the question from the start.

If we examine any system of philosophy which is not addressed to a select and prejudiced circle, we shall notice that its initial statements bear out the pronouncements of common sense, that it depends on these pronouncements in gathering the materials out of which it is to construct its theory, and that during the elaboration of its theory it pays unconscious homage to the accuracy of these pronouncements, though its own deductions are in conflict with them.

We say that man is possessed of common sense, when his words are ordinarily conformed to these pronouncements or, at least, not in opposition to them. When a man's utterances are habitually at variance with these pronouncements, we call him insane. These pronouncements we regard as a sure test of a man's mental balance. We may judge from this what name we should put upon those systems of philosophy which come in conflict with common sense.

When it is said that common sense is the test of a true philosophy it is not meant that it is a *universal* test which tells us in every case whether a conclusion is true or false. The deductions of every philosophy pass beyond the positive pronouncements of common sense. But these pronouncements constitute a *negative* test, such that, any conclusion which is opposed to them is thereby proved to be false.

2. If there is a system of philosophy which is based upon common sense, and which in all the details of its superstructure meets the demands of common sense, such a system deserves to be called the philosophy of common sense and, thus far, to be pronounced the true philosophy. There is only one system which approaches this ideal, and that is the scholastic.

But what is scholastic philosophy? There have been various attempts at a definition, and in the works of many philosophical writers who professed to give an account of it, scholasticism, instead of being defined, has been caricatured and loaded with abuse. We shall succeed in defining scholastic philosophy, if we bear in mind the purpose of definition. This purpose is to mark off from everything else the thing denoted by the term to be defined. This result is achieved by fixing upon a group of characteristics which is permanent in it and is not found elsewhere. In searching

for such a group of characteristics it is not unusual to start with what is called a nominal definition.

A *nominal* definition of scholastic philosophy is the philosophy developed from the teachings of Aristotle by the great theologians of the Middle Ages and elaborated in the Catholic universities and seminaries of the succeeding centuries. The following may be set down as a real definition: *Scholastic philosophy is the philosophy which teaches the certitude of human knowledge acquired by means of sense experience, testimony, reflection, and reasoning, and vindicates the independent reality of the classes which are the objects of our universal ideas.* By “reflection” is meant both psychological reflection and ontological.

The foregoing definition marks off scholastic philosophy from all other *systems* of philosophy so far as they are systems. It indicates where scholastic philosophy differs from them in fundamentals. It picks out those characteristics which, in the comparison of philosophy with philosophy, are of the most far-reaching importance and have the widest application. There is scarcely a system of philosophy which does not somewhere coincide with the teaching of scholasticism; but often this will be in some tenet which, though of momentous consequence in itself, has not such a universal influence on philosophic thought as the doctrines indicated in the foregoing definition.

There is no need to introduce any other scholastic doctrines into the definition. It is not the office of definition to tell us everything about the thing denoted by the term to be defined, but to discriminate it from everything else by means of attributes which are permanent in it. Man is defined as a rational animal. We could describe man accurately as a rational, vertebrate, warm-blooded animal, and this description gives us more information about him than does the definition. But we do not insert “vertebrate” and “warm-blooded” in our definition, because man is completely marked off from everything else by the two characteristics of “rational” and “animal.” However, it would be necessary to introduce some such attribute as “vertebrate” or “warm-blooded” into our definition, if the oyster and the herring had the power of reasoning.

3. If common sense is the final test of a true philosophy, and if all men of right mind—nay, even the false philosophers in their unguarded moments—instinctively accommodate their ordinary speech to the dictates of common sense, what is the cause of the perpetual multiplication of false systems of philosophy? Putting out of account such factors as malice, prejudice, and the desire of

bolstering up a cherished doctrine or project, and supposing in the inquirer an honest and earnest wish to arrive at the truth, we shall not be far wrong in assigning the following as the chief influences which have operated in the direction of false philosophy:

(1) Probably the most prolific source of philosophic error is the ambiguous word. The ambiguous word is a characteristic of every language in the world. It is an instinct of human nature to indulge in metaphor, personification, and the other figures of speech. This, together with the impossibility of putting a separate label upon every idea is responsible for the multitudinous ambiguities of language. These ambiguities cause little or no trouble in ordinary conversation or in literature; but they constitute a formidable obstacle to philosophic analysis. A conspicuous instance of this is found in the word "same." As was noted in chapter XVI, this word in one application signifies one person or thing and *excludes* plurality; in another it means similar and *implies* plurality. When several men are discussing the military genius of Napoleon we say that the person they are speaking about is the same, and we use "same" in the first sense. When we say that all men are the same in their desire for happiness, we use "same" in the second sense. In all probability it is mainly to a confusion of these two meanings of the word "same" that we are to ascribe the systems of Ultra-realism, Nominalism, and Conceptualism.

(2) A second source of error is the misinterpretation of the Abstract Term and of the General Concrete Term, as was explained in Chapters XIV and XV.

(3) A third and singularly pernicious root of error is the confusion of the fact of a thing with its nature, cause, and mode of operation, to say that we do not know that a thing is, because we cannot explain *what* it is, or *why* it is, or *how* it acts and behaves.

(4) A fourth source of error is the demanding an explanation of the obvious, the concluding that a thing is questionable because some one has questioned it. Some persons ask the question "Why," when they should first have asked themselves, "Why not?" For example, "Why do we assent to self-evident principles?" Common sense tells us that the question "Why" is nonsense unless there is some conceivable positive answer to the question "Why not?" Any attempt to explain the obvious, even when it is not false, will be either a disguised tautology or a *petitio principii*. Of course, we frequently resort in philosophy to the *reductio ad absurdum* when the obvious is called in question; but the *reductio ad absurdum* issues in the conclusion *that* a thing is so; it does not give us a reason *why* it is so.

(5) A fifth source of error is the inadvertent limiting of the application of universal principles. This is the mistake committed by those who impugn the cogency of the argument from design for the existence of God. If all men, including the opponents of this argument, in the daily routine of life unhesitatingly pronounce certain combinations of phenomena to be evidence of design, it is against reason to doubt that evidence in the case of phenomena which point to the existence of a Supreme Intelligence. The agnostic does not allow the abstract possibility of an accidental coalescence of parts to interfere with his absolute certitude that a complicated printing press is the work of intelligence. All we ask of him is that in his reasonings about the existence of God he apply the rules and principles upon which he relies for the attainment of certitude in his everyday life.

(6) A sixth source of error is undue eagerness for finality in the solution of problems. This is a very common failing of the human mind. The mind is impatient of delay, and rushes to conclusions without sufficient data or without a sufficient examination of the data at hand.

The foregoing are not, of course, isolated sources of philosophic error. A given error may be traceable to two or more of them; and it would be difficult to find any one of the first five unaccompanied by the sixth.

XXI. Schiller's Attack on Formal Logic

“Logic is a stern master; they feel it, they protest against it; they profess to hate it, and would fain dispense with it; but it is the law of their intellectual nature.” (Newman, *Difficulties of Anglicans*, Vol. I, p. 31.)

The 1938 Winter issue of *The Personalist* contains an assault upon Formal Logic by the late Professor F.C.S. Schiller. It is an amazing document to proceed from a man of his position. One would expect a careful scholar to exhibit a clear understanding of the subject he was discussing, especially when it was his purpose to attack it. But Professor Schiller has misinterpreted his subject. A man who had received a thorough grounding in Formal Logic and who was cautious in applying his knowledge would never have argued as Schiller has done. Certainly a clear-headed writer would not have recourse to arguments which could be turned against him, and yet this is the kind of arguments which we find in the article under review.

Before examining Schiller's arguments let us set down in brief what Logic professes to do and what it does not profess to do. First, it does not profess to prove that there are such things as arguments, propositions and terms. These things constitute the data of Logic and we have them in our possession before we take up the study of that science. Secondly, Logic does not profess to teach us how to think. If we did not know how to think before we began the study of Logic, we should never be able to master it. You cannot teach Logic to a cow. Thirdly, Logic does not profess to tell us what premises are true and what are false; if it did, it would put us in possession of the whole encyclopedia of knowledge, and all truth whatever would be packed between the covers of a logical treatise. Fourthly, Logic does not profess to furnish us with a guarantee against error. Not even Logic can confer the gift of infallibility upon fallible men.

What, then, does Logic profess to do? It professes to create in the man who masters it a habit of clear and connected thinking, an impatience with what is vague and confused, a confidence in

the construction of his own arguments and a facility in appraising the arguments of others. Of course, there are men of genius who do not need a formal training in Logic; they are gifted by nature with what the average man can only acquire by an effort. Doubtless there have been writers on Logic who have made extravagant claims in its behalf; but when a man undertakes a serious criticism of a science, he does not confine himself to what a few writers have said in praise of it; he makes an honest effort to understand the science itself.

The logician does not evolve the science of Logic out of his own head. He appeals to facts and data which are the common possession of mankind. He appeals especially to examples of arguments which everybody recognizes to be valid and to others which everybody recognizes to be invalid. He studies these arguments till he has discovered the principles which govern the validity of an argument, and these principles he calls the Rules of Logic. Again, he lays down a statement which is self-evident to everybody, namely, that if you wish to prove a proposition, you must make sure of two things: (1) that your premises are true; and (2) that the proposition follows from your premises. Thus, we have this general principle: *If the premises are true and the premises cannot be true without the conclusion being true, then the conclusion is true.* Beyond cautioning the student to see to it that his premises are true, the logician is not concerned with the truth of the premises. His main purpose is to determine when the premises *cannot* be true without the conclusion being true, and when they may be true without the conclusion being true. When the premises cannot be true without the conclusion being true, the conclusion is said to be *valid*; otherwise it is said to be *invalid*.

The logician does not entertain the design with which Schiller credits him, viz., "that the syllogism should tacitly supersede the notion of truth by that of 'validity'" (p. 18). The logician lays upon the student the emphatic injunction: "Make sure that your premises are true." In default of true premises, the argument, considered as a proof, is worthless. Schiller seems to imply (pp. 19, 24) that we can never be sure that the premises are true. Well, that is the dogmatic assertion of the sceptic, and we do not propose to follow him in his sceptical wanderings. Besides, it is not a slur on Logic alone; it is a slur on mathematics and every other science, and it renders abortive any attempt on the part of the sceptic to conduct an argument. Not even the sceptic can argue without premises, and in offering us a premise, he is asking us to accept it as true.

Everybody recognizes the truth of the following proposition: *If M is P, and S is M, then S is P*. That is a proposition, not a syllogism. In order to turn it into a syllogism, the three clauses of the proposition must be separately pronounced to be true. In laying down this proposition, we assert that the proposition itself is true, but we do not assert that any of its clauses is true. When we say that a given hypothetical proposition is true, we equivalently say that its consequent is valid. As a matter of fact, the truth of a hypothetical proposition and the validity of its consequent are one and the same thing. Hence, there can be no validity without truth. Not that any of the propositions of a given syllogism is true; but when the premises are made the antecedent, and the conclusion the consequent, of a hypothetical proposition, the proposition *must* be true if the consequent is valid.

Our everyday arguments are not commonly expressed in the full form of a syllogism. One of the premises is generally omitted. But if a man is to know that the conclusion is true and valid, he must know what the omitted premise is and also that it is true. Indeed, one of the distinct advantages of the study of Logic is that it accustoms a man to fix his attention upon the omitted premise.

Schiller's attack is mainly directed against that part of Logic which is occupied with the categorical syllogism, and he offers us what he claims are five objections to the syllogism. We shall consider these objections in the order in which he states them.

Schiller's first objection: "The truth of the premises always could be disputed, at least dialectically. A disputant *could* always say to his opponent, 'Please prove your premises,' and the demand was fatal Clearly the syllogism was a form of proof in which an infinite regress lay artfully concealed" (p. 19). "(The astute and resolute antagonist) could always question its premises *ad infinitum*." (p. 24).

If there were any force in this objection, it would be an objection to every argument whatever, and it would be fatal to the whole argument which Schiller pursues in *The Personalist*. There cannot be an argument without premises, and Schiller is employing premises to prove that Formal Logic is nothing but a game. By the very statement of Schiller, his own premises could be questioned *ad infinitum*, and therefore, his argument proves nothing, because it can never be brought to a conclusion. Can Schiller *prove* that an astute and resolute antagonist could always question the premises of an argument? And if he attempted to prove it, could not another astute and resolute antagonist always question the premises of Schiller's argument? Again, does Schiller imagine that when a

man is conducting an argument, he is always arguing with a flippant person? And does he imagine that a serious-minded man would consent to argue with such a person? A flippant person will utter the most irrelevant and nonsensical remarks on any occasion whatever, and what Schiller is pleased to call an “astute and resolute antagonist” is a flippant person. We have the Scriptural admonition to answer a fool according to his folly. Flippancy, if it is to be met at all, should be met with flippancy. The flippancy of Schiller’s astute and resolute antagonist should be reciprocated somewhat as follows: “I deny that you have demanded of me that I prove my premises, and I challenge you to prove that you have made the demand.” The sceptic is playing a losing game when he attempts to argue. From the nature of the case, his arguments will always rebound against his own position.

Schiller’s second objection: “Let us take the traditional proof that every man must die. It argues thus: *all men mortal, Socrates is a man, therefore Socrates is mortal* Common sense soon detects that unless the conclusion is true the major premise is false. That *Socrates is mortal* must be true, if *all men are mortal* is to be true. Hence it seems absurd to say that the mortality of all proves that of Socrates: the truth is that that of Socrates *goes to prove* that of all men. Plainly then the conclusion said to be proved is presupposed in the truth of the premises. So the argument is fallacious, and the technical name for its fallacy is *petitio principii* or begging the question” (pp. 20-21).

There are five comments to be made on this passage. First, the example cited by Schiller is not put forth as a “proof that every man must die.” If anyone ever put this forth as a proof of anything, he used it as a proof that Socrates must die. Secondly, the logician, if he knows his business, will not, in his capacity as logician, undertake to prove that Socrates is mortal. The mortality of Socrates is not part of Logic, any more than the existence of the sea serpent. Logic is secure in its position, whether Socrates is mortal or immortal. The logician could omit the example altogether and confine himself to symbols, and his doctrine would remain unaffected. The logician does not undertake to prove anything that is foreign to his subject. You are not attacking the logician’s doctrine when you merely find fault with one of his examples, and especially when you mistake the purpose of his example. If a logician employed the example we are considering, he was equivalently saying to the student: “Let these premises be regarded as true, and let them contain no ambiguity: then the conclusion must be regarded as true.”

Thirdly, when Schiller says, "Common sense soon detects that unless the conclusion is true the major premise is false," he is unfair to common sense; he is imputing to it a lack of discernment. What he should have said is, that unless the conclusion is true *either* the major or the minor premise is false. But his words are an implicit admission of what in the same paragraph he denies, namely, that his example is a valid syllogism, that is, that the conclusion follows from the premises. If the conclusion of an argument does not follow from the premises, it is not correct to say that unless the conclusion is true either the major or the minor premise is false. The conclusion of the following argument does not follow from the premises: *All horses are quadrupeds. All horses are animals. Therefore all animals are quadrupeds;* and hence it would be wrong to say in this case that unless the conclusion is true either the major or the minor premise is false.

Fourthly, supposing that a man knows that all men are mortal; that knowledge is not sufficient by itself to inform him that Socrates is mortal. His knowledge that all men are mortal must first be supplemented by the knowledge that Socrates is a man. Supposing that Socrates, instead of being a man, were an island in the Pacific Ocean; the knowledge that all men are mortal would not then be convincing evidence that Socrates is mortal. A knowledge of the truth of both premises is required before the premises can be said to be a proof of the conclusion.

Fifthly, Schiller says that "the conclusion said to be proved is presupposed in the truth of the premises." If these words were taken to mean that the conclusion is *implied* in the truth of the premises, they would be stating what is true of every proof. But Schiller does not mean this; he means that the conclusion of every syllogism must be known to be true before we can know the truth of the premises, and that this applies especially to the truth of the universal major premise. He means that even if we know the truth of a universal proposition, that proposition cannot be employed to prove the truth of any proposition that refers to a definite person or object. Thus, according to his statement, the following is not a valid argument: *All plane triangles are figures in which the sum of the angles is equal to two right angles; The figure referred to in the text-book is a plane triangle; Therefore, the figure referred to in the textbook is a figure in which the sum of the angles is equal to two right angles.* Schiller claims that the first premise of this argument cannot be known to be true till after we have learned that the conclusion is true. Now the question, how we justify our knowledge of the truth of universal propositions and how we justify the application of such propositions to the proof of other

propositions, is a question which belongs to Epistemology, not to Logic; and there is no space to enter into it here. For the present purpose, it is sufficient to observe that throughout his article Schiller himself employs universal propositions in his effort to prove his contention. He repeatedly uses the words “always,” “never,” “all,” “every” and “no”. These words are signs of universal propositions, and therefore, by his theory Schiller is not entitled to employ propositions which contain these signs. Sometimes he omits the universal proposition, but it is understood in his argument. Thus, in the paragraph on which we are commenting he says that his example of the syllogism is fallacious because it contains a *petitio principii*. But that would not be a reason for pronouncing it fallacious unless *all arguments containing petitio principii are fallacious*. The universal proposition we have just italicized, though it is omitted by Schiller, is nevertheless essential to the validity of his argument; and yet by his theory he is precluded from using it and even from leaving it to be understood, because he claims that we could not know it to be true till after we know the truth of his conclusion. On his own showing, therefore, his argument contains a *petitio principii* and is fallacious.

Schiller’s third objection: “When we put together two premises which we believe to be true, we can never be sure in advance that they will not put us to shame by leading to a false conclusion . . . (Ambiguity) may *always* happen. For it depends on the contexts in which the middle term is used, and it always must be used in two contexts, the difference between which may always disrupt the argument. . . . A formal logician, when he comes to grief in this way, will of course declare, ‘Well, that middle always was ambiguous, and there never was a syllogism at all.’ This is true, but irrelevant; it does not meet the difficulty that we can only find out the defect when we try to use our premise, and *after* our argument has gone wrong. . . . Logic can only discover the mistake after it has been committed, and is altogether wisdom after the event. Formal Logic thereby confesses that it is incapable of guiding thought and of averting blunders It will let us ‘prove’ conclusions which are falsified by the event. In short, it is ridiculous” (pp. 22-23).

This is an astounding statement. It means that a man can never be sure that he is using a term twice in the same sense! Was ever such a low estimate placed upon human intelligence? Is it impossible for a man to know what he means by a term when he uses it in more than one context? Schiller says that a man can only know it after he has completed his argument. But if he can know it then, what stands in the way of his knowing it in the

process of the argument? Are men in general so ignorant and stupid that they cannot know the meaning of the words they use at the time they use them? And if they cannot know it then, by what magic can they know it after the argument is completed? Schiller says "Logic can only discover the mistake after it has been committed." Well, has anyone ever discovered a mistake *before* it was committed? But supposing a man discovers that he has made the mistake of using a term in two senses in the same argument, is he not allowed to profit by his mistake? Must he lose the memory of it and never be sure that he is not repeating that mistake in subsequent argument? In the course of his article in *The Personalist* Schiller is continually using the same term in different contexts, and the very intelligibility of his argument, to say nothing of its validity, depends upon the term being taken in the same sense. Are we to understand, then, that Schiller cannot be sure of the intelligibility of his argument? In the foregoing quotation Schiller draws the conclusion that Formal Logic is ridiculous, and the premise he employs to prove this conclusion is that Formal Logic "will let us 'prove' conclusions which are falsified by the event." The major premise, which he has omitted, is this: "Anything that will let us 'prove' conclusions which are falsified by the event is ridiculous." The middle term of his argument is "thing that will let us 'prove' conclusions which are falsified by the event." According to his own statement, Schiller cannot be sure that this term is used in the same sense in the two premises, and therefore, he cannot be sure that he is justified in drawing his conclusion.

Schiller's fourth objection: "(Formal Logic) has always sustained the pretension that a syllogistic proof could justify prediction. Indeed, successful prediction was the covert, though unavowed, aim of the syllogistic form, and a large part of its charm" (P. 23).

This must come with a shock of surprise to the logician and set him wondering how he happened to miss a large part of the charm of his science. If the aim of predicting the future ever existed in the mind of the logician, Schiller is undoubtedly right in declaring that it was unavowed. But where is the proof that it was the *covert* aim of the logician? You can only predict the future by means of premises that have some reference to the future. And where is a man to get these premises? He certainly will not get them out of a treatise on Logic. Logic does not pretend to provide a man with premises for everything he wishes to prove. Logic tells him how to use his premises when he has them. The logician can, if you like, make a safe prediction that a certain event will never happen in the future. He can predict that no one will ever make a successful attack on the principles of Logic.

Schiller's fifth objection: "How is syllogistic (or, indeed, any sort of deductive) prediction to be rendered compatible with the growth of knowledge and the changes in the meaning of terms which this must entail?" (P. 23).

Here Schiller is again imputing to the logician the pretension of predicting the future. We have just seen that if a man is to predict the future, he must know something besides Formal Logic. As to "the growth of knowledge and the changes in the meaning of terms," well, knowledge has grown and terms have changed their meaning for over two thousand years, but during all that time the principles of Logic have remained unchanged. If terms change their meaning, the logician can employ new terms, terms which express and preserve the original meaning of his principles. If he should be frightened by Schiller's prediction of what is going to happen in the future, the logician could invent a set of technical terms to serve his purpose, or he could translate his treatise into Latin where terms do not change their meaning.

We may now bring our comments to a close, though we have set down only part of what might be said in answer to the article in *The Personalist*. Schiller misconceived the function and scope of Formal Logic, and that is one reason why he is so angry with it. It was the purpose of his article to prove that Logic is only a game, and not an "agent of value"; and in his attempt to accomplish his purpose, he resorted to arguments which on his own theory are fallacious. It is a high tribute to Formal Logic, and a powerful proof of its enduring value, that this is the only kind of case that can be constructed against it.