CRITERIOLOGY

A Class Manual in Major Logic

By

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This book is dedicated
with esteem and deep regard

To

THE REVEREND GERARD BRIDGE, O.S.B.,
of Saint Vincent College, Latrobe, Pennsylvania,

a Preceptor of my Youth, my Director in the Ways of Providence, my Guide to the enchanting Realm of the Written Word, and always my Cherished Friend.

PREFACE

This manual, the fourth of a series of textbooks in philosophy, was written, not merely because the series had been started and should be carried on. It was written because there is a great need for texts in English on Criteriology, the most fundamental of all philosophical sciences. It is offered with a word of explanation.

In a more than kind notice of one of the earlier manuals of this series, a reviewer remarked, "Of course, the book contains nothing new." The work in question being a treatise on the philosophy of the Catholic religion, the remark excites some wonder. Did the reviewer expect to find in the book an item or two that had been accidentally overlooked by apologists for twenty centuries? Certainly, there was nothing new in the book—in point of doctrine. There was, however, something new in point of attack, of treatment, of statement of rationale, which, indeed, the same reviewer recognized in the most generous and affable manner. Of this present work it can be stated firmly at the outset, "It contains nothing new." But it does contain (with whatever merit or lack of it) a new presentation of doctrine

that is just as old as truth. The mode of this presentation has been the occasion of many hours of labor, the fruits of which the reader and student are now to judge.

It was felt that this science, which deals with the truth and certitude of human knowledge, should be developed upon a general plan suggested by its definition, and should treat, in as distinct a fashion as possible, of I. Knowledge, II. Truth, III. Certitude. And if the reader thinks that it is an easy task to give anything like distinct treatment to subjects so essentially intertwined, he has not considered the matter with a careful and penetrating attention. What is truth if it be not known, and what is knowledge if it be not true, and how can knowledge be true and not at the same time certain? How distinguish clearly, in a manner suited to young minds, the warp and woof, the pattern and the dyes, of this weaving, and still keep the fabric intact and its design unspoiled? Has this wondrous thing been accomplished in the present work? Well, it has been attempted.

The attempt has accomplished one thing, at least, for which (one feels) the young student will be grateful. It has made plain to his eyes and to his understanding the plan upon which the whole science is developed. It has prepared for him no series of chapters on Realism and Pragmatism and Certitude and Skepticism—all set out in an order that is ap-

parently as arbitrary as that of the chapter headings of a novel. It has prepared for the student a clearly intelligible map of his journey (to shift our metaphor from tapestries to trails), a map he can easily understand at the outset, however rocky and desolate he may find the subsequent travelling. And, indeed, he will find that the journey through Criteriology is not the easiest of pleasure jaunts. He will find the going difficult. But he will take consolation, it is hoped, from the fact that it is a journey that should be made; one that will give him, when completed, a high, clear point of outlook that will show him the sad futility of doctrines which befog the view of many notable minds.

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CERTITUDE

INTRODUCTION

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1. NAME

The name *Criteriology* is derived from two Greek words—*kriterion,* "a standard or means of judging," and *logos,* "word; thought; science." Thus Criteriology is "the science of the means of judging." The thing to be judged is, in this instance, the truth and certitude of human knowledge.

Criteriology studies the *criteria* (that is, the norms and tests) by which one may judge what is true and certain in human thinking, in reasoning, in knowledge.

Sometimes Criteriology is called *Epistemology,* a name which is derived from the Greek words *episteme,* "knowledge," and *logos,* "science." By virtue of its name, Epistemology, "the science of knowledge," is broader in scope than Criteriology, "the science of true and certain knowledge." But a common usage makes the names Criteriology and Epistemology practically synonymous.

Other names by which this science is known are the following: Major Logic, Material Logic, Critical

Logic, Applied Logic, Critics, Critical Philosophy, Noëtics, First Principles of Knowledge.

2. DEFINITION

Criteriology is *the science of true and certain knowledge.*

a) Criteriology is *a science.* A science is a body of related doctrines, systematically arranged and reasonably complete, together with the reasons which evidence and justify each essential point of doctrine. Criteriology meets the requirements of this definition, and is, therefore, a science. For Criteriology is a reasonably complete and systematically arranged body of doctrines relating to the truth and certitude of human knowledge, and it presents reasons at each step of its development to justify and evidence its conclusions.—A science is called *speculative* (or *doctrinal,* or *theoretical*) when it aims chiefly at the enlightenment of mind and the enrichment of culture. A science is called *practical* (or *normative,* or *directive*) when it aims chiefly at the instruction of the mind in something to be done, when it aims at action. Criteriology is a speculative science. No science, however, can be purely speculative; the most speculative of sciences has inevitably some effect upon the practical view of him who learns it, and upon his decisions, actions, conduct. Criteriology has a practical aspect inasmuch as it furnishes norms and tests by which truth and certitude may be actually

recognized and evaluated. Since, however, its chief function is speculative, it is numbered with the speculative sciences.

b) Criteriology is a science of *knowledge,* and, more specifically, of *human* knowledge. The highest and noblest human knowledge is that of the mind or intellect. But Criteriology must also study that fundamental knowledge which is acquired by means of the senses. If there were no sense-knowledge, there could be no human intellectual knowledge. The intellect (mind, or understanding) has the power of piercing through sense-representation to grasp *essential* reality and thus to form *the idea* which is elemental in intellectual knowledge. But the sense-representation must be there, or the mind cannot pierce through its material and individual character to grasp the essence which it clothes. Even when the mind forms ideas of things that lie beyond the grasp of the senses—things such as *being, goodness, truth, spirit*—the service of sense is nevertheless prerequisite; for the mind works out ideas of these things from *other ideas* that were formed directly from sense-findings. Hence the ancient saying, "There is *nothing* in the mind that is not, in some manner, based upon sense-knowledge." Criteriology must, therefore, deal with the knowledge of the senses as something fundamentally involved in intellectual knowledge.

c) Criteriology is the science of *true and certain*

knowledge. Criteriology is not the only science of knowledge. Psychology deals with the nature of the knowing faculties, and, indirectly, with knowledge itself. Dialectics (or Formal Logic) deals with the correctness and consistency of knowledge. But Criteriology deals with the *truth and certitude* of knowledge. Of course, Criteriology must investigate the nature of the knowing faculties after the manner of psychology, but in a rather summary way, and only in so far as this is requisite for the proper grasp of criteriological doctrine. Criteriology does not concern itself directly with the correctness and consistency of the knowing-process; it presupposes correctness, and applies itself to the question of truth and certainty in human knowledge. It defines truth and certitude; it asks whether truth be knowable as such and with certainty; it seeks the ultimate criterion of truth and certitude; it traces out and studies the fonts or sources of certitude.

3. OBJECT

Every science does two things. First, it treats of a certain subject-matter. Secondly, it treats of its subject-matter in a certain way and with a special and definite aim. Now the subject-matter of a science, the field in which the science works, is called the *Material Object* of the science. And the special thing for which the science seeks in that field, that is to say, the special aim, end-in-view, point-of-focus

that the science has in dealing with its subject-matter, is called the *Formal Object* of the science. To illustrate: geology and geography have the same subject-matter or Material Object, *viz.*, the earth. But geology and geography do not study the earth in the same way. The two sciences are in the same field, but not for the same purpose. Geology studies the earth to know its rock structure. Geography studies the earth to know its surface divisions and contours. For this reason we say that geology and geography, while dealing with the same Material Object, have different Formal Objects. Thus two or more sciences may have the same Material Object; for there may be many ways of studying the same subject-matter, many different special interests in the same general field. But no two sciences can have the same Formal Object in every way; if sciences could have the same precise Formal Objects, they would be identical; they would be one, and not several. Hence the saying, "Sciences are ultimately distinguished one from another by their respective Formal Objects."

The Material Object of Criteriology is the same as that of Dialectics or Formal Logic, *viz., the acts of the mind,* that is, the acts of the knowing-process. But while Dialectics studies these acts with the view of maintaining correctness and consistency in them, Criteriology studies them with the view of knowing how truth and certitude may be obtained by them. Thus Dialectics and Criteriology have the same

Material Object; but each has its own proper Formal Object.

Our definition of Criteriology expresses both the Material and the Formal Object of the science. We indicate the Material Object of Criteriology by the words "science of *knowledge,*" for knowledge is achieved by *acts of the mind,* and these are, as we have seen, the Material Object with which Criteriology deals. We indicate the Formal Object of our science by calling Criteriology "the science of *true and certain* knowledge."

4. IMPORTANCE

Criteriology is the scientific study of the validity of thought; it is an investigation of the worth of knowledge. The importance of such a study needs no stressing. It is surely important to know whether the mind can know truth with certitude and accurately distinguish truth from falsity. If the mind could not do this, then all study would be useless, all science fantastic fiction, all learned discussion much ado about nothing, all desire to know truth futile and illusory, amounting to a heartless prank perpetrated upon helpless humanity by Nature itself. Therefore, the study which investigates the power and capacity of the mind for truth is a most important study. Its importance is fundamental. So important, indeed is Criteriology that it merits the noble title of "First Principles of Knowledge."

The science of Criteriology has an importance peculiar to the present moment. The modern materialistic view of life and mind, combined as it is with an all-embracing theory of evolutionary progress, takes away the solid bases of certitude, makes knowledge illusory, and reasoning futile. There is current in our day the doctrine that truth is relative, changing, evolving, moving on like a flowing stream, no point of which is the same for two moments together. There is current the agnostic theory of unknowable truth; the Cartesian theory of universal doubt as the best man can achieve in his quest for the basis of knowledge; the skeptical theory of nescience and intellectual void. Criteriology evidences the principles which show the absurdity of such theories. It enables the student to silence foolish theorists by indicating the self-contradictory character of their doctrines. Criteriology thus renders a notable service, and its study is consequently of great importance.

The importance of Criteriology is practical as well as speculative or theoretical. Its service to the student, just noted, is an evidence of this fact. Further: if truth and certitude be not shown as attainable (and Criteriology shows them to be attainable), then there are no certainly known duties, no certain obligations, no certain and definite laws. In a word, if there be no certain knowledge, there is no certain morality. And without morality, all human institu-

tions must perish. Thus, in establishing the existence, nature, and criteria of truth and certitude, Criteriology shows itself a science of supremely practical importance, even though in itself it is properly a speculative science.

5. DIVISION

The definition of Criteriology indicates the topics to be discussed in this treatise. In studying "the science of true and certain knowledge" we discuss the subjects of *Knowledge, Truth,* and *Certitude.* We therefore develop our treatise according to the following plan:

BOOK FIRST

Knowledge

Chap. I. Knowledge in General
Chap. II. Sense-Knowledge
Chap. III. Intellectual Knowledge

BOOK SECOND

Truth

Chap. I. The Nature of Truth
Chap. II. States of Mind with Reference to Truth
Chap. III. The Criterion of Truth

BOOK THIRD

Certitude

Chap. I. The Nature of Certitude
Chap. II. The Existence of Certitude

Chap. III. The Certitude of Sense-Knowledge
Chap. IV. The Certitude of Intellectual Knowledge
Chap. V. The Certitude of Faith

To these divisions we add an Appendix, in which we make a brief study of the proper procedure (method) to be followed in acquiring reasoned certitude (science). In a word, we study *Science* and *Method*.

BOOK FIRST

KNOWLEDGE

Intellectual knowledge has its beginnings in knowledge gained by the use of the senses. We must, therefore, study sense-knowledge before we take up the subject of intellectual knowledge. To these studies we preface a summary account of knowledge in general. This Book is accordingly divided into three Chapters as follows:

CHAPTER I

KNOWLEDGE IN GENERAL

This chapter is a direct and simple study of the meaning of *knowledge* and the verb *to know*. It is divided into the following articles:

Article 1. Knowledge and its Elements
Article 2. The Process of Knowing
Article 3. The Trans-subjectivity of the Object of Knowledge

Article 1. Knowledge and Its Elements

a) Description of Knowledge b) The Elements of Knowledge

a) Description of Knowledge

What is meant by *knowledge* and the verb *to know?* This is a simple question, but it is not to be answered simply. Everyone has a direct understanding of this matter, for it is a point of daily experience. In early youth we all learn the practical meaning of *knowledge, knowing,* and *to know*. But when we try to analyze this meaning, to reflect upon it and define it, we encounter difficulties. We are much in the position of the great St. Augustine when he was asked whether he knew the meaning of *time*.

"If you mean to ask me," said the Saint, "whether I know what time is, I answer that I know very well. But if you ask me to define it for you, I find I cannot."

Still, in spite of difficulties, we may discover a great deal about knowledge. To begin with, it is a very clear and definite fact. And if this fact will not admit of perfect and exhaustive explanation, it will admit of much and satisfactory explanation. By philosophic investigation we may learn much about the nature of knowledge, its value and trustworthiness, and we may learn to distinguish true knowledge from that which wears its mask, namely, error.

Pritchard says (*Kant's Theory of Knowledge,* p. 245): "Knowledge is simply knowledge, and any attempt to state it in terms of something else must end in describing something which is not knowledge." This is hardly a fair statement. True, there is nothing quite like knowledge, and any attempt to state it in terms of something else must end in an imperfect achievement; but not necessarily in a fruitless achievement. Indeed, if no attempt can be made to state knowledge in terms of something else, then no attempt to state it can be made at all, and there is an end of the matter and of all discussion upon the subject. To dismiss the fundamental question of knowledge in this offhand manner is to dismiss all philosophy and to discredit all scientific exposition.

We are not prepared to make such a sweeping surrender to skepticism and silence. We proceed to find out what we can about knowledge, very willing, and anxious, to state it in terms of something else.

If one asks a clear-headed man what is meant by *knowledge,* one may be told that it is something which men and brutes have—men in a much higher and finer way than brutes—but which plants and lifeless things appear to lack. Pressed for a further word, the clear-headed man may say that to know a thing is to get the thing somehow into one's head. The clear-headed man is right. To know a thing is to get the thing into one's *self,* to grasp it, to possess it, and yet to leave the thing in its own proper state (its "objective otherness") unaffected by the fact that it is possessed, grasped, *known.* To grasp a thing and leave it unaffected by the grasp; to possess a thing and leave it unaltered by the act of possession; to get a thing "into one's head" and leave it where it is—this it is *to know* the thing. We shall develop this matter presently. Here we pause to consider the meaning of some valuable terms which indicate the principal elements of knowledge.

b) ELEMENTS OF KNOWLEDGE

Knowledge involves three chief elements, *viz.,* the *one who* knows; the *thing* he knows; the *act by which* he knows.

The one who knows is called *the subject of knowl-*

edge, the knowing-subject, or simply *the subject.* It is important that the term *subject* be carefully noted. This is a common term, capable of varied, and even opposed, uses. We speak of the subject of a sentence, the subject of a king, the subject of a discourse, the subject of an action, the subject of a state of being. The etymology of the term gives us an understanding of the point which the different uses of it have in common. For *subject* is derived from the Latin *subjicere,* "to throw under," and is really the passive past participle of the Latin verb. Thus it means something "thrown under," something "underlying." The subject of a sentence is "thrown under" the application of the predicate. The subject of a king is "thrown under" the rule of the monarch. The subject of a discourse is "thrown under" the attention, consideration, and remarks of the speaker. The subject of an action is "thrown under" the action as its origin or source. The subject of a state of being is "thrown under" its influence as the one affected. In our present study we employ the term *subject of knowledge* as the one who has the knowledge, is the originator of the knowing-act, is affected by knowledge. The *subject* is the *one who knows.*

The thing which the subject knows is called *the object of knowledge,* or simply *the object.* The object may be considered in two ways, *viz., before* it is known, and then it is *a knowable object* or *a knowable; during* or *after* the act by which it is known,

and then it is *an object known.* The object is something outside the subject, which the knowing act brings into the subject as the latter's possession. When we say that the object is "outside" the subject, we do not mean that it is outside the subject's body. Many things are knowable objects although they are within the body of the knower (the subject). Such things, for example, are muscular contractions, pains, movements of joints, hunger. These things as knowables (that is, before they are taken into the subject by the act of knowing) are not outside the subject's body, but they are outside the subject as subject, that is, as *knowing;* they are outside the knowing-power of the subject. Indeed, all the objects of the external senses must be impressed upon their respective organs, must be intra-organic and thus intra-bodily, before they are sensed. Thus they are within the body of the subject, but outside the subject's knowledge, until they are sensed. We shall speak of this matter again.

The act by which the subject knows the object is called *cognition.* This word is a direct Latin derivative, and comes to us from *cognitio,* "knowledge," which, in turn, comes from *cognoscere,* "to begin to know, to learn, to become acquainted with."

To sum up: The chief elements of knowledge are *subject, object,* and *cognition.* We have defined these terms accurately according to the technical usage of Criteriology. The student is now warned to be on

the alert for the use of the terms in a transferred sense. Scientific writers are likely to employ them loosely. Thus the term *cognition,* which is the act of knowing, is sometimes used for the fruit of the act, that is, for *knowledge* itself, as in the Shakespearean line, "I will not be myself, nor have cognition of what I feel: I am all patience." Again, the term *knowledge,* which is the product of cognition, is sometimes used for the *object* of knowledge, as in the expression, "Mathematics is a branch of knowledge." Sometimes the term *object,* which is the thing knowable or known, is used in the sense of *worth* or *purpose,* as in the remark, "What is the object of this research? What object does your study serve?"

When subject, object, and cognition come together, the result is a piece of knowledge in the subject. We say "a piece of knowledge," and not simply "knowledge," because the latter term is usually employed to designate all or some of the fruits of the subject's cognitions, and not the single product of a single act of cognition.

SUMMARY OF THE ARTICLE

In this very brief article we have given, in a broad and general way, a description of the thing called *knowledge,* and of the meaning of the verb to *know.* We have indicated the chief elements involved in knowledge, *viz.,* the subject, the object, and cognition,

and we have defined these terms with technical exactness. We have made the prudent resolution not to be misled when our reading shows us the terms in transferred or inexact application.

Article 2. The Process of Knowing

a) Description of the Knowing-Process b) The Principle of Cognition

a) Description of the Knowing-Process

Knowledge is the inner grasp and possession of reality. *Reality* means not only individual things or classes of things, actual or possible. It also means the relations of these things as identical or different, like or unlike, connected or unconnected, essential or circumstantial, substantial or accidental. *Reality* (from the Latin *res,* "thing") means anything that can be grasped by senses or intellect. It means anything sensible, anything thinkable, anything imaginable. Such reality or entity is the *object* of knowledge in the widest sense of the term. To keep the term *object of knowledge* in this broad meaning would be to make our present investigation unwieldy in handling and vague in result. We, therefore, limit the sense of the term and make it more specific. We shall here consider such knowledge as has for its object the actually existing bodily things in the world around us.

Knowledge, we repeat, is the subject's inner grasp

and possession of reality, of an object. It is the representation, the re-presentation, the re-presence of the object within the subject's knowing grasp. Hence the object has a twofold existence: its own proper and natural existence among things, and its existence in the subject as a thing known. Obviously, these two modes of existence—or, more precisely, these two phases of the one existing thing—are not identical. The existence of the object among things in the world around us, without reference to the subject and his knowledge, is the natural, proper, real existence of the subject. The existence of the object as a thing known—its existence in the knowledge of the subject—is the knowledge-existence or cognitional existence of the object. Between these two phases of existence there is the same difference as between "being" and "being known."

In knowing a thing, the subject actually possesses the thing, he has it, it is in him. Granted that the man whom I see walking down the street is really in the street and not in my eye, he is none the less *in my knowledge*. What I see is the man, not a picture of the man; what I *know,* by the knowing-power called *vision,* is the actual, real, objective man, even though I *come to that knowledge* by means of a complex process, which includes the forming of an image on the retina of my eye. Thus, although we have said that knowledge is a "representation" of reality, we must clearly understand that the representation is not

a picture; it is a "re-presence" of the object within the subject. In other words, knowledge is not a set of photographic views which reflect reality into the subject in a kind of picture-existence. Knowledge is the grasp of reality itself, notwithstanding the fact that image and representation must play a part in the *formation* of knowledge, or rather in the *effecting* of knowledge within the subject. For the image that is impressed upon the sense-organ (to keep our assigned limits and deal with the world of things bodily, things sensible) is not the thing that is sensed; the object which impresses the image on the sense-organ is sensed by means of the image, yet the image plays no *consciously recognized* part in the knowing-act. It is not the image that is known; it is the object which impresses the image, the object *itself,* that is known. To use a somewhat awkward and inadequate illustration: One may learn what a person looks like by studying his photograph. One knows that the photograph is an image; it is recognized as such. The photograph is *not* the person which it pictures. It serves as a medium, and is consciously recognized as a medium, which enables one to know the appearance of the person represented. Now if, instead of studying his photograph, I study the reflection of a man's face in a mirror, the situation is somewhat different. Here I am not normally aware of the reflection as an image at all; it *is* an image, of course, but what I notice (by and through the image) is the

person himself. Although I see the image, I do not advert to it as a consciously recognized medium whereby I learn what the man looks like. What I look at (by and through the mirrored image) is the man himself. Of course, this illustration is meant to offer the merest suggestion of the difference between a mere material representation or picture and the "re-presence" of the object of knowledge within the subject. The illustration is far from accurate, but it is hoped that it will be suggestive, that it will give a direction to the student's thinking and help him in the grasp of what follows.

Let us institute a comparison between a camera and the knowing-power called *vision* or *sense of sight*. Suppose I hold a camera in my hands and prepare to make a snapshot of a graceful tree. As I press the spring of the camera, I look up and see the tree. At precisely the same instant, the image of the tree is impressed upon the camera-film and upon the retina of my eye, and I *see* the tree. The tree is where it is among bodily things, solidly rooted in the ground, unaffected by the fact that I am making a picture of it or looking at it. The image of the tree is impressed upon the film and upon the retina of my eye. Inasmuch as the impression is, in both cases, the effect of a photochemical process, the film-image and the retinal image are alike. But here the resemblance ends. When, by the action of light upon the chemical coating of the film, the image is impressed,

the photographic process is completed. When, by a like action, the retinal image is effected, the act of *seeing* is not completed, but is ready to take place. The retinal image considered photochemically (that is, as effected by light and the chemical activity of the eye) is like the film-image. But the retinal image considered physically (that is, as a completed thing, as an image that is *there*) is not like the film-image. The retinal image, considered physically, is impressed upon a living organ, not upon a lifeless film; it is received into the organ, it is *intra-organic,* and becomes the immediate object of the knowing-power which operates by that organ; it is the immediate object of vision. We see here that there is a twofold object of vision (as there is of every external sense). The one is the extra-organic object, the visible thing as it exists in nature. The other is the intra-organic object, and this is the retinal image, physically (not photochemically) considered. It is the intra-organic object which is perceived *immeditaely,* that is to say, without any medium whatever intervening between the seeing-power (the *faculty of sight*) and this object. By the instrumentality of the intra-organic object, vision apprehends the extra-organic object. The knowledge of the intra-organic object is *immediate;* that of the extra-organic object is *mediate.* But notice carefully that the *medium* (that is, the intra-organic object) by which the outer object is known, is not recognized as such. The subject has no

awareness of it as a medium. Hence its mediation is entirely *objective*. By one and the same act vision grasps its immediate object (intra-organic) and its mediate object (extra-organic). We do not form representations of things by vision as we make snapshots, and then contemplate the pictures; this is not the knowing-process. We lay hold of things objective (extra-organic) by the instrumentality (the objective mediation) of the intra-organic object. We lay hold of things, not of images. Of course, each sensation does not bring us complete and perfect knowledge of the extra-organic object as it is in itself, absolutely considered. Each sensation gives us knowledge of the extra-organic object *as it is presented* intra-organically—imperfectly presented, indeed, but capable of being perfected by repeated experience of the same sense under varied conditions and by the "check up" afforded by the findings of the other senses. Thus our knowledge of the world about us is rendered perfect by what is called "mediate experience."

Let us illustrate the knowing-process in a rather different way, borrowing now from Dom Gredt's excellent manual, *De Cognitione Sensuum Externorum*. I look at a seal or signet, noticing the design carved upon it. I impress the signet upon soft wax. In each case the configuration or design of the signet is *impressed*—upon the wax and upon vision. Notice now how different the two impressions are.

The impression of the signet upon wax results in a new thing, which is neither simple wax nor simple signet, but a *third* thing, *viz.*, figured-wax. The wax is now shaped to the design graven upon the signet; the wax holds the design as its own, as a *wax*-design. The wax-design is *like* the signet-design, but it really is not the signet-design, for it is a design in wax. In a word, the design of the signet is now compounded or "compositely joined" with the wax. Now let us consider the impression of the signet made upon vision. Here there is no new thing, no third thing, as the result of the impression. Vision receives the impression of the signet (by and through the retinal image, physically considered) but is not "shaped" to it, as wax is shaped in the material or bodily impression of signet on wax. Hence there is no "figured vision," no composite joining of signet and vision. Vision receives an impression which is not merely *like* the signet-design; it *is* the signet-design; vision sees the signet *as the signet*. Vision sees the signet *objectively* and leaves the signet in its "objective otherness" as it knows it, cognizes it, receives it into itself as a thing known, a thing *seen*. Now, in the impression of one bodily thing upon another (such as the impression of signet on wax) there is always a resultant third thing or *tertium quid* (as is *figured-wax* in the impression of signet on wax). This composite joining of bodily things in the production of a *tertium quid* is due to

the limitations of things material; it is due to their "materiality," their bodiliness. But cognition and knowledge are not marked and restricted by the limitations of bodies, for these things are not bodily. Even though the external senses operate through or by means of outer bodily parts or organs; even though the impression of the object on the organ is a physical impression, there is nevertheless no bodiliness in the knowing-act itself nor in the resulting knowledge. The object impressed upon the organ and existing in the organ as the intra-organic object of cognition, is *physical;* cognition and knowledge are *psychical.* The intra-organic object is the means or instrument of external sense-cognition, but this object is not cognition itself, nor is it knowledge.

Cognition and knowledge, therefore, are not bodily, they are not material, and hence they are not marked by the limitations of bodily things. They are free from the limitations of "materiality." To put the matter positively, cognition and knowledge are marked by "immateriality." The penalty, so to speak, of materiality, is the production of a *tertium quid* (like *figured-wax* in our example) when things material meet in mutual impression. Cognition, however, not being material, is not liable to this penalty. In the knowing-process, the impression of object upon subject results in no composite joining, in no resultant *tertium quid.* Here we have not composite joining, but objective know-

ing. All this suggests the meaning of the ancient saying of philosophers, "Immateriality is the root of cognition and of knowledge." Since "immateriality" means freedom from limitations imposed upon bodily things by their material character, and since the same immateriality renders its possessor capable of receiving impressions without composite joining and by objective grasp, it follows that "immateriality is the root of cognition and of knowledge."

b) THE PRINCIPLE OF COGNITION

Knowledge involves subject, object, and cognition. The object must be *impressed* upon the subject so as to induce the reaction called cognition. Now, it is asked, how is the object impressed upon the subject? The answer is that the subject is equipped with certain powers or capacities for taking cognizance of the objects that, under proper conditions, fall within their range; the subject has powers or capacities of receiving impressions from suitable objects. These powers or capacities for cognition are called *faculties,* or, more precisely, *cognitive faculties,* or *knowing-faculties.* A cognitive faculty is defined as "the proximate and immediate principle of cognition." This definition calls for some explanation.

A *principle* is that from which anything proceeds. It may be a mere starting-point or beginning, as dawn is the "principle" of day. It may be an origin, source, or cause, as the mountain spring is the "principle" of

the river; as the ocean is the "principle" of the inlet; as the right convictions of an upright man are the "principles" of his noble conduct; as creation is the "principle" of the creature; as the sun or a torch is the "principle" of illumination. Knowledge is the subject's grasp, by cognition, of the object impressed upon faculty or faculties. Hence, subject, object, and cognition are *principles* of knowledge, for knowledge requires them all, it "proceeds from" them all. But the point of the present inquiry is not the *principle of knowledge,* but the *principle of cognition* or of the *knowing-act.* And, in special, we seek to know the *proximate and immediate* principle of cognition.

For a principle is either *proximate and immediate,* or *remote and mediate.* Usually we refer to these distinctions as simply *proximate* and *remote.* A proximate principle is the immediate source of the proceeding; no medium intervenes between the influence of the proximate principle and that which proceeds from it. A remote principle lies farther back, and its influence on the proceeding is exercised through the mediation of the proximate principle. The boy throws the ball; so do the boy's arm and hand: the boy is the remote principle of the effect (the *throwing,* the *thrown ball*), and his arm and hand are the proximate principle.

Now, in cognition, there are three things that must be considered when the present question is raised, *viz.,* What is the proximate principle of cognition?

These things are: (a) the subject itself taken in its entirety; (b) the subject's nature; (c) the cognitive powers (that is, *faculties*) of the subject's nature. These are all principles of cognition, for cognition proceeds from all. But which of the three is the proximate principle of cognition?

(a) The subject itself is a *knowing*-subject. It *knows*. It *cognizes*. Cognition proceeds from it. Therefore, it is a true principle of cognition. Thus one says rightly, "John sees"; "The man understands." But John would be John if he were blind; the man would be the man if he were an imbecile and could not understand. Hence the cognition of seeing does not proceed immediately from John as John, nor does the cognition of understanding proceed immediately from the man as man. The subject, then, while a true principle of recognition, is not the immediate and proximate principle.

(b) The subject's nature is what enables the subject to know. It is, therefore, a true principle of cognition; cognition proceeds from it. Thus one says rightly, "It is natural for John to see"; "It is the nature of the man to understand." But human nature would be present in John and in the man even if John were blind, and the man an imbecile. Human nature would lack certain operative powers that it ought to have, and would be so far *imperfect*. But imperfect human nature is still human nature. Therefore, the cognitions of seeing and understanding do

not proceed immediately and proximately from human nature as such, since it can be "such" without these functions. It follows that the nature of the subject is not the proximate principle of cognition.

(c) The cognitive powers of the subject's nature constitute a true principle of cognition. Cognition proceeds from these powers. More: these powers would not be what they are if they could not cognize. Cognition proceeds from them as such. Hence these powers (called *faculties*) constitute the immediate and proximate principle of cognition. To speak distributively, the faculties are the proximate principles of cognition. The subject itself, and its nature, are remote principles of cognition; only the faculties of the subject's nature are the proximate principles of cognition.

A cognitive faculty is a power and capacity for cognition. It is an *operative* power, for cognition is an operation. It is not an *active* power in the sense that it produces or makes its object; it does not make its object, but receives it. Hence it is a *passive* power. But it is not passive with the dead passivity of marble under the shaping action of chisel and mallet. It is *passive, but operative.* In other words, while it is not *active* in the sense just indicated, it is certainly *re-active.* It is the power of reacting to suitable impressions received from objects, and of cognizing, of knowing these objects.

There are as many kinds of cognitive faculties

as there are orders of cognition. In man, therefore, we distinguish *sense-faculties* and the *intellectual faculty* or mind. And there are as many sense-faculties as there are different senses. In man there are five external senses and four internal senses; each of these is a *cognitive faculty* or *knowing-faculty*. We shall study all these faculties in some detail in subsequent articles.

SUMMARY OF THE ARTICLE

In this article we have studied the knowing-process. We have seen that knowledge results in the subject by the latter's grasp of the object. Knowledge is the re-presence of the object in the subject, in a manner suited to the subject's nature. We have indicated the knowing act (as exemplified in the operation of the external senses) as the grasp of the object in a truly objective manner. We have learned the meaning of *intra-organic* object and *extra-organic* object. We have noted that the intra-organic object is the *immediate* object of the knowledge of the external senses, and that the extra-organic object is the *mediate* object. We have stressed the fact that the intra-organic object, while a medium, is not recognized as a medium, but is the instrument by which the extra-organic object itself is known directly. Since the individual cognition of the individual sense presents the external reality only under the aspect of

the object proper to that sense, this reality is known only imperfectly in the cognition; repeated cognitions and the cognitions of several senses with reference to the same reality furnish the necessary check-up and experience (which we call "mediate experience") for the perfect knowledge of the reality itself as it exists in the world about us. We have learned the meaning of the dictum, "Immateriality is the root of cognition and of knowledge." We have discussed the principle of cognition, defining *principle,* remote and proximate, and have found that the immediate and proximate principle of any cognition is *a cognitive faculty.*

Article 3. The Trans-subjectivity of the Object of Knowledge

a) Meaning of Trans-subjectivity b) How Knowledge is Trans-subjective

a) Meaning of *Trans-subjectivity*

The object of knowledge is the thing known. This object is either *purely subjective* or it is *trans-subjective.* If the object of knowledge be knowledge itself, or its elements, accidentals, or dependents, then it is an object *purely subjective,* that is, it belongs to the subject and has no existence apart from the subject as *knowing.* Thus, if I make my own *ideas* the object of my cognizance or knowledge, the object is purely subjective, for my ideas have no

existence as such, apart from my knowledge; they are elements of my knowledge. When, for example, I advert, by what is called *reflex* cognition, to my idea *man* (that is, *human being*), considering it either in its content (its make-up, its comprehension) or in its applicability (its extension, its denotation), I have an object of knowledge that is purely subjective. Notice that I am not adverting to the realities that have the essence *man,* that is, I am not adverting to the actual or possible human beings that have or can have concrete, individual existence in the world of realities outside the mind. I am adverting to my idea *man,* as such, *as an idea.* As an idea, my intellectual grasp or concept of *man* is an element of my knowledge, and has no existence outside my knowledge. It belongs to me, the subject; it depends for its existence as my idea upon me as *knowing.* Hence it is a purely subjective object of knowledge. Again: I may make the object of my knowledge something that is not an element of my knowledge, and yet has no existence as an outer, extra-mental, reality apart from knowledge. Thus I may think of *blindness,* or *darkness,* or a *square circle.* Blindness and darkness are not things, but the lack or absence of things; blindness is the lack of the power to see; darkness is the absence of light; a square circle is a nothing, for it is a combination of ideas that cancel each other (for square circle means "a circle that is not a circle"). But I think of blindness and darkness,

I cognize them, *as though they were* positive realities, like sight and light. And I think of a square circle, I cognize it, *as though it were* something instead of a mere cancelled concept, and hence nothing. In a word, my thought of these things *as things,* clothes them with a kind of objectivity. These things are made objective by my thought of them, by my cognizance of them. The only being or existence which they possess is their "being known," their existence in knowledge. And they depend for this being ("being known") upon cognition, that is to say, upon the subject. Thus, when made objects of advertance and cognizance, they are *purely subjective* in character. Such things as darkness, blindness, square circle, are called *logical* beings or entities (from the Greek *logos,* "word," "speech," *"thought,"* "science") to indicate that they have their existence in and from the mind, the thought, the knowledge of the subject. *Logical* beings (which Scholastics call *entia rationis* or *entia logica*) are contrasted with *real* beings, which have, or can have, existence in the world of things independently of the human mind.

To sum up: If I make my knowledge or its elements the object of my cognition, I have an object of knowledge that is purely subjective. Again: if I cognize logical being, I have an object of knowledge that is still subjective, but less perfectly so. Less perfectly so, because my cognition confers upon

logical being an objectivity which it does not confer upon the object of reflex knowledge. For while the object of reflex knowledge (that is, knowledge itself or its elements adverted to by a new cognition by which the subject knows that he knows, or knows his ideas or thoughts) is cognized for what it is, that is, as identified with knowledge itself, logical being is cognized *as though it were* something apart from knowledge, a real entity outside the mind. Thus the object of reflex knowledge is purely subjective on the score of both *subjectivity* and *objectivity,* that is, as an existence and as the thing known it is identified with knowledge. But logical being is subjective on the score of *subjectivity only,* that is, it is identified with the subject inasmuch as it has no existence apart from the latter, it has no being except *being known.* On the score of *objectivity,* as the object of knowledge, it is cognized as something distinct from knowledge; logical being is not an element of knowledge as an idea is; it is cognized as though it were something independent of knowledge.

So much for the *subjective* objects of knowledge, that is, for knowables that have no existence apart from the knower. We come now to consider the "outer," extra-subjective objects that do have, or can have, existence apart from the knower himself.

The objects of knowledge which have their being and existence independently of knowledge are called *trans-subjective.* Trans-subjective objects do not de-

pend upon the knowing-subject *objectively;* that is, they are not projected out of the mind itself as though they were things; they *are* things; they *are* knowables. They are not dependent on the knowing-subject *subjectively,* for their own proper being is not *being known,* but *real being* in the world of extra-subjective realities.

The world of realities (actual and possible, substantial and accidental) is the trans-subjective world. It is called *trans*-subjective to indicate the fact that the subject must, in order to possess this world by knowledge, go across (Latin *trans,* "across") the chasm that lies between the physical and the psychical, between *real being* and *being known.* It is called trans-*subjective* because it is a world that is knowable and hence has reference to the knowing-*subject.*

b) HOW KNOWLEDGE IS TRANS-SUBJECTIVE

Trans-subjective objects of knowledge are distinct in being—*entitatively* distinct—from human knowledge. Human knowledge does not make or project these objects; it receives them. Human knowledge of these things is, therefore, trans-subjective knowledge. Now, there are degrees of trans-subjectivity, and these we must consider in our present study.

An object of knowledge has three aspects, *viz.,* (*a*) matter; (*b*) form; (*c*) presence. The *matter* of an object is its content, its actual being. The *form* of an object is the mode in which it exists. The *pres-*

ence of an object is its attendance, its being *there.* There are three ways in which an object of knowledge (and hence knowledge itself) can be trans-subjective:

1. An object of knowledge may be trans-subjective in *matter* only, and not in *form* and *presence.* Thus trans-subjective are the objects of intellectual knowledge. My idea *man,* for example, represents a real essence, an essence which every human being actually has. The thing, therefore, the essence, which my idea represents, is in no wise produced by the mind. In other words, the *matter* of the object known (*viz.,* the essence *man*) is trans-subjective. Now, the idea *man* is *one* idea, *one* representation or re-presence in the mind of the essence *man,* but this essence is common to *many.* The essence is one in the idea and several in its existence in individual human beings, each of whom has the essence. In a word, the essence *man* is represented *universally* and *abstractly* in the idea, and it exists *individually* and *concretely* in human beings. Thus the mode or *form* of existence which the essence *man* has in knowledge is not the same as the mode or *form* of existence which the same essence has in the real or trans-subjective world. Hence, in *form,* the object of intellectual knowledge is not trans-subjective, although, as we have just seen, it is trans-subjective in *matter.* Further: the re-presence of the essence *man* in the idea is called an *intentional* presence. The term *in-*

tentional, as employed here, has nothing to do with the purposive act of the will which we call *intention* in ordinary speech. Here the term merely indicates the *intent* of nature, and, in special, the natural tendency of knowing-powers to possess their object in their own way. Hence, an *intentional* presence is the presence of *an object known* produced in and by the knowing-subject. Now, the presence of the essence *man* in my idea *man* (that is, in my intellectual knowledge) is an intentional presence due to the tendency or intent of the intellect to lay hold of proper knowables in a manner suited to the nature of the mind. This presence, then, is produced by the mind. But the presence of actual men in the trans-subjective or real world is not produced by the mind. Hence, in *presence,* the object of intellectual knowledge is not trans-subjective. To sum up: The object of intellectual knowledge is trans-subjective in *matter,* but not in *form* and *presence.*

2. An object of knowledge may be trans-subjective in *matter and form,* but not in *presence.* Such are the objects of imagination (or the *fancy* or *phantasy*), which is a cognitive faculty, an internal sense. The *thing* that I imagine,—say a dragon,—may have no existence as such outside knowledge, but its elements have. I cannot construct any imagination-image, no matter how unusual and grotesque, that has not its foundations in actual sense-findings. Imagination may exaggerate or diminish the objects of sense; it

may construct fanciful caricatures and cartoons of reality, but the elements of the image are always garnered by the prosaic process of sensation. Thus my imaginary dragon may be such a creature as was never seen on land or sea, but a little investigation will evidence the fact that I have used in its construction only the materials that my senses have furnished. I may give the dragon the form of an alligator, much enlarged; I may set upon it the head of a horse, wildly exaggerated and distorted; I may color it with the blues and golds of an evening sky, and clothe it with the scales of a colossal fish. Yet in all this I have used only elements furnished by ordinary sensation. For I know what an alligator is like; I have seen one, or I have been told what it is like in terms of comparison with other animals already known to me. I have seen a horse; I have enjoyed blue and gold sunsets; I have seen fishes and their scales. To make my dragon, I have used these ordinary elements, arranging them, exaggerating them, mingling them strangely. The fearsome result, therefore, of the imagination's activity is not a new creation, but merely a new arrangement and distortion. In actual content, the object of the image is solidly grounded in outer reality. I am justified, therefore, in declaring that the imagination-image is trans-subjective in *matter*. Further: it is trans-subjective in *form*. For it is a singular, concrete object, and singularity and concreteness are the marks of the

manner, mode, or *form* in which things exist in the trans-subjective world. But the imagination-image is not trans-subjective in *presence.* The presence of the object imaged is due to the activity of the faculty, the imagination itself. It is produced by the faculty. It is an *intentional* presence, not the real presence which things have in the trans-subjective world. Therefore, to summarize, we say: The object of the imagination is trans-subjective in *matter and form,* but not in *presence.*

3. Finally, the object of knowledge may be trans-subjective in *matter, form, and presence.* Such are the objects of the external senses. These objects are not produced by the senses or by the mind of man; they exist in reality; they are trans-subjective in *matter.* These objects are grasped by the senses as concrete, singular things, and so they are in reality; they are trans-subjective in *form.* These objects are not summoned up to knowledge by the activity of the senses; they are *there* in the world of sensed reality; they are trans-subjective in *presence.*

We conclude this portion of our study by repeating a very important warning. For an object to be trans-subjective, it is not necessary that it be *outside the body* of the knowing-subject, but only that it be outside the knowing-power of the subject, unproduced by the subject, unprojected by the faculty. Objects that are outside the body are called *trans-somatic* (from Latin *trans,* "over," "outer," "across," and

Greek *soma,* "body"); objects that are outside the knowing-power (which is psychical) are called *trans-psychical* or *trans-subjective.*

SUMMARY OF THE ARTICLE

In this somewhat difficult article we have discussed the meaning of the terms *trans-subjective* and *trans-subjectivity.* We have preferred these terms to the far less definite *objective* and *objectivity,* for, after all, anything that is known, no matter how it holds its being, form, or presence, is an *object* of knowledge, and is in so far *objective.* We have been at great pains to explain the precise meaning of *trans-subjective* as distinct from *subjective.* We have indicated the degrees of trans-subjectivity, and have found that intellectual knowledge is trans-subjective in matter, but not in form and presence; that the knowledge of the internal senses is trans-subjective in matter and form, but not in presence; that the knowledge of the external senses is trans-subjective on all three points of matter, form, and presence. We shall revert to this subject when we come to discuss the validity of knowledge, and it is most important that it be thoroughly grasped at the outset.

CHAPTER II

SENSE-KNOWLEDGE

This chapter treats of the knowledge that man acquires by using his *senses*. It treats of the senses in general, and of their object and use. Then it deals with the particular external and internal senses. The chapter is therefore divided into three articles, as follows:

Article 1. Sense and its Function
Article 2. Knowledge of the External Senses
Article 3. Knowledge of the Internal Senses

Article 1. Sense and Its Function

a) Sense b) The Object of Sense c) Sensation

a) SENSE

A *sense* is a capacity for directly perceiving and knowing a certain kind of material object. It is an *organic faculty,* that is, it is knowing-power which operates by means of a special bodily part or member, called *a sensory,* or *sense-organ,* or simply *an organ.* A sense perceives and knows individual material objects which affect it, stimulate it, impress it.

A sense is an *animal* faculty. Plants do not give any sign of possessing senses. All animals have one or more senses, and hence animals are called *sen-*

tient beings. The so-called "higher" animals have *external* and *internal* senses, that is, senses with outer bodily organs, and senses which have their sole organ in the brain. Man has normally all the external and internal senses of which we have any knowledge.

The most commonly accepted division of the senses designates them as *external* and *internal.* The external senses have their organs or sensories in the outer body, the body surface, the periphery, and they function by means of a complex nervous and muscular connection of their organs with the cerebro-spinal axis and the brain. The internal senses have their organ in the brain itself. The external senses are usually enumerated as five, *viz., sight, hearing, smell, taste,* and *touch.* The internal senses are four, *viz.,* the *central sense* (called sometimes the *common* sense), *imagination, sense-memory,* and the *estimative sense* or *instinct.*

Some authorities distinguish two senses in what we call the sense of *touch.* These speak of a *resistance-sense* and a *temperature-sense.* Others assert the existence of a special *muscular-sense,* by which the subject is aware of the feelings of skin, joints, and muscles in bodily movement. For our part, we include all these senses in the single sense of *touch,* or, as the man in the street calls it, *feeling.* Nor do we admit any special *sense of pain* or *sense of pleasure.* Pain is due to over-stimulation of the sense of touch, and sense-pleasure may be loosely

described as the result of perfect functioning of the senses under desirable conditions.

b) THE OBJECT OF SENSE

That which is capable of impressing sense and stirring it to react in the operation of sense-cognition is the *object* of sense. In a word, the object of sense is anything that can be known by sense, anything that can be *sensed.* This is the general meaning of the term *object of sense.* The object of sense is called *sense-object, sensible object,* or *sensile object.* Sometimes the adjectives *sensible* and *sensile* are used as nouns, and an individual object of sense is called simply *a sensible* or *a sensile,* and sense-objects collectively are called *sensibles* or *sensiles.*

A sensible object that can be known directly in itself by any sense, is called the object *per se* of that sense (Latin *per se,* "through itself," "of itself"). Thus the color and the size of an apple are *per se* visible, that is, the color and size are *per se* the object of the sense of sight. The flavor of the apple is not *per se* visible, but it is *per se* the object of the sense of taste.

Besides sensiles *per se,* there are other sense-objects; these are sensible *per accidens* (Latin *per accidens,* "by way of accident," "accidentally," "dependently upon something else"). These objects either do not fall under the senses at all, or they do not fall under the particular sense to which they are

ascribed as objects. They are directly (*per se*) known by the intellect, or by some other sense than that to which they are referred. They are so referred because they are known by experience to belong to, or to be associated with, the *per se* object of the sense in question. Thus a dairyman *sees* that milk has become very sour. The sourness of the milk is not *per se* the object of sight, but it is such an object *per accidens* because very sour milk has a peculiar appearance which is visible. Similarly, one *sees* that the street is wet after a shower. The wetness is not *per se* visible, but experience has taught us that this peculiar appearance is associated with wetness, and hence the wetness is visible *per accidens*. Again, the flavor of an apple is not *per se* visible, but it may be visible *per accidens* to one who is familiar with the qualities of the fruit. If such a person be told, "This apple is sweet," he may answer, "I see it is." What he really sees is the color of the apple, together with its shape and size; these qualities are *per se* visible. And because the person knows by experience that apples of this color, shape, and size, are sweet apples, he is said to *see* the sweetness, not indeed in itself (*per se*), but as a thing known to be associated with what he does see; he sees the sweetness *per accidens,* or *accidentally*. He also sees that the apple is a bodily substance. Now, substance is not *per se* sensible at all; it is known by the intellect. Continual and varied experience teaches us early in life that any object

marked by the qualities of size, shape, and color is a *substantial* thing, is a thing *bodily;* hence material or bodily substantiality is sensed *per accidens.*

Going back now to sensiles *per se,* we find these divided into two classes. Those that are sensed *by one sense alone* constitute the *proper* object of that sense. Those that are sensed by *more than one sense* constitute the *common* object of the senses concerned. Thus colored objects are sensed *as colored* by sight alone and by no other sense. A man born blind can have no notion of what color is in terms of other sensibles. Recently a young man who had been blind from birth submitted to an operation that gave him his sight. When he visited the school for the blind which he had attended for many years, his old friends clustered around him and begged him to tell them what color is like. He was utterly unable to do so. Color (not in the abstract, but in concrete existence, as a quality of bodily things, that is, color *as extended,* or *colored surface*) is the *proper* object of the sense of sight and is the object of no other sense. The size of an object is sensed by sight (through the medium of color; for if it be not colored, it is not visible, and so its size is not visible). The size of an object is also sensed by touch (through the medium of resistance or temperature, for if it have not these, it is intangible, and therefore its size is intangible). Size, then, is known by sight and by touch. I may know the size of an apple by looking at it, and also

by holding it in my hands. A blind man may know the size of such an object as well as a man with normal vision may know it. Therefore, size is not an object proper to sight alone, or to touch alone; it is an object *common* to these two senses. Again rest and motion in bodily objects are knowable to sight and to touch, are objects *common* to the two senses.

The classification of sense-objects as *sensiles per se* and *sensiles per accidens,* and the sub-classification of *sensiles per se* as *proper* and *common* objects of sense, are distinctions of the first importance and must be accurately learned. It is a matter to which constant reference will be made in a subsequent stage of our study. It may be summed up for ready review in the following schema:

Sense-Objects
- *per se*
  - *proper* to one sense alone
  - *common* to two or more senses
- *per accidens*

c) SENSATION

Sensation is the conscious reaction of the subject to sense-impression. A sensile object, falling within range of a sense that can grasp it, impresses the sense by acting upon the sense-organ, and causes the subject to become aware of the impression, or rather, of the object. This *awareness* is sensation. As a result of sensation, the subject is in possession of the object; it has cognitional existence in him; he cog-

nizes it or knows it. This knowing-act of sense is called *perception.*

Sensation and *perception* are really only two distinct aspects of the one operation, which we call sense-cognition. Inasmuch as this operation means an awareness in the subject, it is *sensation;* inasmuch as the same operation means the representation or re-presence of the object within the subject, it is *perception.* I experience *sensation,* and *perceive* the object.

The representation of the sense-object within the sentient subject—that is, the cognitional re-presence of the object in the sentient knower—is called *the percept.* Sense-knowledge is made up of percepts. Each percept is the knowledge of some phase of an object, and the sum-total of the percepts that the senses garner from an outer reality gives full sense-knowledge of that reality. As you take your morning coffee, you perceive (that is, you have a *percept* of) it as colored, by sight; as hot, by touch; as having an aroma, by smell; as flavored, by taste. The sum of the percepts makes up your sense-grasp of this object, this cup of coffee.

The object, falling within range of sense-cognition, under conditions suitable for the operation of the sense concerned, *impresses* the sense-organ. In other words, a sense accepts from its object an influence which results in the representation or re-presence of the object within the knowing-

subject. This operation—the actual nature of which is studied in the sciences of physics and psychology —may be likened (but not with perfect accuracy) to the reflection of an object in a mirror. The mirror receives and reflects an image of what is placed before it, provided the object so placed is suitable, proportionate to the size of the mirror, and properly illuminated. So sense receives and reflects within the subject an image of what impresses the organ, provided the object is suitable for the grasp of such sense, is proportioned to the function of the organ, and is presented under due conditions for the action of the organ. When all these provisions are verified, the image of the object is *impressed* upon the organ, becomes intra-organic, and so is the immediate object of sense-cognition.

The impression which a sense takes of its object is called a *species,* which means here, an *image* or representation. Inasmuch as the species is impressed upon the sense-organ and upon the sense, it is called an *impressed species.* To distinguish this impressed species from the intellectual species (of which we shall speak later), it is called the impressed sense-image or, in the commonly used Latin term, *species impressa sensibilis.* Reacting to the impression of the species, the subject cognizes or knows the object from which the species is received (through the wholly objective instrumentality or mediation of the intra-organic object, as we have already learned).

In seeing a tree, for example, the sense of sight receives the species or sense-image from the object under due conditions of light and distance. But the sense of sight does not see the *species* as such; the species is impressed upon the eye, becomes intra-organic, and is so the means by which the sense of sight sees the objective tree, the trans-subjective object. Vision, like all the external senses, perceives only such objects as are actually present and actually affecting the sense-organ. (Recall that the object of external senses is trans-subjective in matter, form, and presence.) The operation of seeing (like the operation of all external senses) is terminated, reaches its completion and goal, by actually attaining the object there present. Hence the knowing-operation of the external senses begins with the external (trans-subjective) object, which is impressed in species on the subject, and the subject reacts to the impression and (through the objective mediation of the intra-organic object) cognizes the external object itself. With the internal senses the process is somewhat different. For these senses (such as imagination) act when their outer object is no longer present, and for their action, they must produce an image or species within themselves, wherein an object, once present but now absent, is sensed. In a word they must *express* their species, and this expression terminates their knowing-act. An external sense terminates its operation, completes it and

rounds it out, by cognizing an object *then and there present* and acting upon the sense-organ. The imagination terminates the operation by cognizing an object *expressed in sensible species within itself.* The intellect or mind terminates its operation by cognizing an object expressed *in abstract species within itself.* The point we wish to make is this: while the internal senses and the intellect have an *expressed species* as well as an *impressed species,* the external senses have an *impressed species only.* They do not express a species, for they cognize their object itself, there and then present trans-subjectively.

SUMMARY OF THE ARTICLE

In this article we have defined *sense,* and have distinguished the senses as *external* and *internal.* We have defined the *object* of sense, and have classified this object as *per se* and *per accidens;* the *per se* sensiles we have distinguished as *proper* and *common.* We have defined *sensation* and *perception;* we have described *the percept.* We have learned that sense-cognition involves the impression of an image or *species.* We have seen that while the external senses require for their functioning a *species impressa sensibilis* (impressed sense image), they do not require, and do not produce, a *species expressa sensibilis* (expressed species) as the terminus of their

operation, since they cognize the trans-subjective object there and then present to their action.

Article 2. Knowledge of the External Senses

a) The External Senses b) Object of the External Senses

a) The External Senses

Everyone agrees that there are at least five external senses, and some psychologists insist that there are more. It will be best for us to accept the minimum division of these senses, and to leave to scientists the discussion of the question whether any of the five is itself divided into two or more distinct senses.

The five external senses are *Sight* or *Vision; Hearing* or *Audition; Smell* or *Olfaction; Taste* or *Gustation; Touch* or *Feeling.*

Sight and *hearing* are sometimes called the *superior* senses, and the other three are called *inferior.* The reason for this classification lies in the fact that sight and hearing grasp their proper object in a manner that is entirely objective, while the other three senses perceive the subject as affected by objects. Thus I see a flower and hear a melody without being directly aware of myself as experiencing the sensations; my attention is taken up with the objective flower and the objective sounds. But when I smell an agreeable odor, taste a pleasing flavor, or touch a hard

surface, I am aware of *myself* as experiencing the odor, the flavor, the resistance. Of course, the subject makes its own contribution to every sense-act, but the point is that the place and function of the subject is less insistently obvious in seeing and hearing than in other sense acts. One does not know without scientific investigation that colors act *causally* upon sight and sounds upon hearing; one simply sees colored objects and hears sounds. This is what we mean by saying that sight and hearing grasp their proper objects in a manner that is wholly objective. One does know, however, without scientific investigation, that an odorous object is the *cause* of the sensation of smell; that flavored or sapid body is the *cause* of the sensation of taste; that a bodily object is the *cause* of the resistance sensed by touch. One senses *oneself* as causally affected by the objects of the inferior senses. It is no argument against this fact to say that a blinding light makes one aware of pain or distress as caused by the light, or that a piercing shriek makes one advert to the unpleasant act of hearing as caused by the sound. Inasmuch as light pains the eye, it is sensed by touch, not by vision. Inasmuch as noise distresses the ear, it is sensed by touch, not by hearing. The organ of touch is diffused throughout the body, and even through the organs of the other senses. When over-stimulation of an organ occurs, it is touch that perceives the excessive impression as painful.

We must now comment briefly on the several external senses and their sensories or organs:

1. *Sight* or *vision.*—The organ of sight is the eye. More accurately, the organ of sight is made up of the terminals of the optic or seeing nerve. These terminals are called the *rods and cones* of the eye. Sensations of seeing are aroused by waves or vibrations of ether which stimulate these rods and cones. The number of vibrations or waves of ether varies for the different colors.

2. *Hearing* or *audition.*—The organ of hearing is the ear. More precisely, this organ is the terminals of the acoustic or hearing nerve in the basilar membrane of the inner ear. Other parts of the outer and inner ear assist in receiving and transmitting the vibrations which affect this organ. Sensations of hearing are effected by the sound-vibrations of the air, which are carried through the channels of the ear to stimulate the terminals of the acoustic nerve.

3. *Smell* or *olfaction.*—The organ of smell is the nose, or, more exactly, the terminals of the olfactory or smelling nerve, which appear as cells in the membrane that lines the upper nose. The sensation of smelling is aroused when tiny particles of an odorous body are drawn into the nostrils by breathing and are so brought into contact with the olfactory cells.

4. *Taste* or *gustation.*—The organ of taste is made up of the papillae or "buds" which are distributed over the tongue and palate. These buds are the ter-

minals of the gustatory or tasting nerve. The sensation of tasting is aroused when a suitable bodily substance (called *sapid*) comes into contact, *while in solution,* with the taste-buds.

5. *Touch* or *feeling.*—The organ of touch is a system of papillae in the dermis or under-skin, and is distributed, but not evenly, over the whole body. The papillae of the tactual or touching system are the terminals of the touching nerve. When suitable objects come in contact with these terminals, the sensation of touching results. Touch is a complex sense, and it reports several sensations, such as pressure, weight, temperature (that is, hot and cold, not precise degrees of temperature), pain, muscular sensations of movements, strain, friction.

b) OBJECT OF THE EXTERNAL SENSES

1. *Sight.*—The object of sight is light. In light we distinguish intensity and color. It is the latter, *viz., color,* that is the proper object of sight. Color must be extended to have real bodily character, and it takes this extension in or on the surface of bodies. Hence we may say at once that the proper object of sight is *colored surface.* For an object to be visible, it must have color. The color must be neither too vivid and overwhelming (as is the sun at noonday in summer), nor too dim, nor extended over too small a surface. In a word, for sight to function properly, its object must be proportioned to the sense. Further,

the sense itself must be organically normal, and it must be employed in a suitable medium of adequate clear light.

2. *Hearing.*—The proper object of the sense of hearing is sound. Sound may be loosely classified as *noise* and *tone,* and it varies in *volume* and in *pitch.* Sound is emitted by bodily vibrations which are carried by the air to the organ of hearing. For hearing to function properly, sound must be proportioned to the organ, and therefore must be neither too intense nor too faint; the organ itself must be normal, and the medium must be suitable and unobstructed.

3. *Smell.*—The proper object of the sense of smell is odorous bodily substance. To function properly, the sense must be organically normal, and the object must be neither too strong nor too faint for the proper stimulation of the olfactory cells in the membrane of the upper nose. The sense of smell tires very quickly, and if the stimulation be unvaried and long continued, the object will be no longer perceived as odorous at all, or, at least, its precise quality of odor will not be accurately sensed.

4. *Taste.*—The proper object of the sense of taste is sapid substance, that is, bodily substance capable of solution in saliva, and suitable, when in solution, to stimulate the taste-buds of tongue and palate. For proper functioning, the structure and condition of the taste-organ must be normal, and the sapid substance must be suitably flavored for stimulating the

taste-buds, that is, the object must be neither too strong nor too faint. Taste becomes ill-conditioned, and ceases to function normally, when stimulation is unvaried and long continued. Further, stimulation by one flavor renders taste temporarily ill-conditioned for accurately perceiving another. Even a sweet orange tastes sour after one has been eating candy.

5. *Touch.*—It is difficult to name the proper object of touch in a simple word or phrase, for this is a very complex sense. The proper object of this sense may, however, be loosely indicated as *resistance* and *temperature*. For proper functioning, the object of this sense must come in sufficiently forceful contact with the papillae of touch in the dermis or under-skin, and the contact must be effected where the papillae are sufficiently numerous to enable the sense to grasp its object adequately. The papillae are most numerous in the finger-tips.

This is not the place to discuss the validity of sense-knowledge, but it is well to indicate here the conditions that must be verified in external sense-knowledge before there can be any question of validity or any criticism of the value of such knowledge. These conditions are the four that follow: (a) The sense must be normal in organic structure and condition. (b) The sense must be employed upon its proper object. (c) The proper object must be proportioned to the sense, its impression being neither too strong nor too faint. (4) The medium in which

the sense operates must be suitable for its normal functioning. We shall find in a later chapter that, when these conditions are met, the senses give us knowledge that is infallibly true.

SUMMARY OF THE ARTICLE

In this article we have enumerated the five external senses, and have classified them as *superior* (sight, hearing) and *inferior* (smell, taste, touch). We have studied the five external senses in some detail, indicating the organ of each, the stimulus that arouses it to function, and the proper object. Finally, we mentioned the conditions under which the senses must function to give us reliable knowledge.

Article 3. Knowledge of the Internal Senses

a) The Internal Senses b) Consciousness

a) THE INTERNAL SENSES

The senses called *internal* (because their organ is the brain, and not a special part of the outer body) are four in number, *viz.*, the *common* or *central* sense, the *imagination*, the *estimative* sense or *instinct*, and the *sense-memory*.

1. *The common sense* (or *central sense*) is an internal faculty which perceives, distinguishes, unites, and divides the findings of the external senses. When

we sense an external object, we also sense ourselves sensing it. The eye does not see itself seeing, nor does the ear hear itself hearing, but we are inwardly aware of the eye's seeing and the ear's hearing. This inner awareness is the function of the *central* or *common* sense. Further, when we are aware that we see and that we hear, we do not become confused in recognizing which sense is affected; we make the proper discriminations between sense-impressions by the aid of the *central* or *common* sense. The common sense is the same as *sense-consciousness,* which we shall briefly discuss in a separate paragraph at the end of this article.

2. *The imagination* (or *fancy* or *phantasy*) is an internal sense-faculty which preserves the images of objects sensed by the external senses, reproduces these images, and arranges them in new forms. The imagination does not *create* its images. It depends for its materials upon the external senses. It either reproduces what the external senses have experienced, or it constructs new images by rearranging, exaggerating, minimizing, associating, eliminating, images and elements of images once formed upon external sensation.

3. *The estimative sense* (or *instinct*) is an internal cognitive faculty which apprehends material objects (grasped by the external senses) as useful or harmful, as something to be attained or avoided. The mouse fears the cat, even though it has never before

seen a cat. Birds gather twigs for their nests and construct the nests upon a definite plan, although never instructed in the usefulness of these actions. Even young chickens give fluttering evidence of fear when a hawk is in the neighborhood. In man, instinct acts in conjunction with intellect, and it is difficult to draw an accurate distinction between the part played by this sense and that enacted by reason in any given action or series of actions. We may instance, however, as an action following upon human instinct, the jerk to maintain one's balance when the feet slip, or the throwing out of the arms to save oneself when falling. The harmfulness or utility which instinct apprehends in a situation or an action, is sensed with reference to *the individual sentient subject* and also with reference to *its kind or species.* A bird will flee from a cat, but a mother bird will fight to keep the cat from her fledglings, even though she lose her own life. So, normally, will human parents, however timid, be unreasoningly brave and self-sacrificing to save their children.

4. *Sense-memory* (or *sensitive* or *sensuous* memory) is an internal cognitive faculty which recognizes as *past,* as *once experienced,* the external or internal sensations which are preserved and reproduced by the imagination. Imagination and memory work together. Imagination supplies the image of the experience; memory recognizes it is an experience *of the past.* The term *sense-memory* is used here to distin-

guish this sense from the *intellectual memory* (which is a function of mind or intellect), by which the mind recalls and recognizes ideas once formed, thoughts once enacted, reasonings once worked out, meanings once understood.

b) CONSCIOUSNESS

The term *consciousness* is almost equivalent to the term *awareness*. That faculty by which we are sensibly aware of things *as affecting us* is the internal faculty of sense-consciousness. It is simply the central or common sense. We mention consciousness in a special way in order to distinguish this sense faculty from *intellectual consciousness* (a function of the mind or intellect) which we shall discuss in another place. Consciousness gives us knowledge of ourselves and our experiences *as facts;* it offers no explanation of these facts, no comment on their nature, no suggestion of their reasons. We shall find later that, within the limits indicated by this description of its function, consciousness is a reliable source of knowledge.

SUMMARY OF THE ARTICLE

In this very short article we have enumerated the internal senses as the *common* sense (*central* sense), *imagination, instinct* (the *estimative* sense), and *sense-memory*. We have considered the function of

the common sense in general (as consciousness) and in special as the particular awareness by which this sense unites, divides, distinguishes, and recognizes the findings of the other senses.

CHAPTER III

INTELLECTUAL KNOWLEDGE

This chapter deals with that knowing-power in man which is superior to sense, and with the knowledge which man acquires through the use of that power. In a word, the chapter treats of the *intellect* and its *function.* There are two articles, as follows:

Article 1. The Intellect
Article 2. The Function of the Intellect

Article 1. The Intellect

a) Existence of the Intellect b) Various Names of the Intellect

a) Existence of the Intellect

Daily experience teaches us that we have in us a power of apprehending things that do not fall within the sphere of sense-knowledge. If we had no knowing power but the senses, how could we grasp such things as *unity, goodness, truth, being, duty, virtue?* How could we know the meaning of these terms? How could we write their definitions? By what sense can these things be apprehended? Who has seen truth, or touched goodness, or heard unity, or tasted

virtue? The internal senses deal only with what the external senses present to them: it is the finding of the external senses that consciousness is aware of, that imagination reproduces, that memory recognizes as of the past, that instinct apprehends as useful or harmful. In neither external nor internal sense-knowledge have we the explanation of our grasp of the things we have named.

Not only do we know things that the senses cannot grasp, but we know even sense-objects in a way that surpasses the *form* or *mode* of sensation. Take, for example, our knowledge of so material and sensible a thing as a *body*. Not only do we see the body (say, a tree), not only do we know it as this material thing, here present to vision; we know it also as an instance, as one exemplification, of *body* in general. For we know what *body* is, not merely *this* body or *these* bodies. We know what *a* body is, what *any* and *every* body must be, to be a body at all. Now, the senses have given us knowledge of comparatively few individual bodies. Of trees, for example, we have seen very few indeed when we consider the number of trees that have existed, do exist, will exist, or could exist. Yet we *know* exactly what is meant by *tree;* we know what every one of the trees of the past, present, or future, what every *possible* tree must be. And similarly, we know what every actual and possible body is and must be. Our sense experience of a body is always singular, concrete, indi-

vidual. But our knowledge of *body as such* is abstracted from singularity; it is *universal.* Hence, we have something more than percepts of a certain number of bodily things. We have a *concept* of what any and every bodily thing is. We have a grasp of the *essence* of body. And what we say of *body* is to be said of every other object of knowledge. We have not only *sense* to give us individual and concrete experience; we have also a power by which we form universal concepts or universal ideas of the things which our senses experience. More: this power enables us to form universal ideas of things that lie beyond the reach of the senses (as we have mentioned above), and we *rise from sense-data* to the realm of supra-sensible reality. This power of apprehending abstract reality, and of grasping objects of sense in a manner superior to that of the senses, is called *the intellect.*

The intellect is defined as a supra-sensuous cognitive faculty, which apprehends non-material things, and apprehends material things in a manner free from the limitations of sense-cognition. In a word, the intellect is a supra-sensuous faculty which apprehends reality in a non-material manner.

The intellect is supra-sensuous in its ideas or concepts, for these represent *essences* in universal. The intellect is supra-sensuous also in its judgments, or pronouncements upon the agreement or disagreement of ideas, for judgments are often universal, and,

even when particular or singular, they involve ideas which are fundamentally universal. The intellect is supra-sensuous furthermore in its act of reflection, by which it is aware of itself and adverts to its acts and states, for no sense is capable of reflecting back upon itself. The intellect is supra-sensuous in its reasonings, for reasonings are processes which involve ideas and judgments, and these, as we have seen, are supra-sensuous.

We have said that sense cannot *reflect.* To reflect means "to bend back." The intellect can *bend back upon itself,* making itself the object of its cognition. Sense cannot do this. The eye cannot see itself seeing; the ear cannot hear itself hearing; but the intellect can think of itself thinking, can know itself knowing, can understand that it is understanding.

The intellect is, therefore, truly supra-sensuous, that is, it is a faculty of a higher and more subtle power than sense, for it is free from the *limitation to singularity and concreteness* which marks sense and its function. Now, a faculty that is supra-sensuous is *a spiritual faculty,* that is, it is a faculty of a spiritual being, of a spiritual substance. The action of a faculty is a sure index of the nature which exercises the faculty, for "function follows essence." The intellect is free from the limitations of materiality in its action; therefore, the nature which exercises the intellect is non-material. Man, indeed, is a material substance, but it is not as *a body* that

man exercises intellect; it is because he has a *soul* that he can exercise a non-material faculty, and the faculty indicates the non-material or spiritual character of the soul. The intellect is *a soul-faculty,* not a body-faculty. Not being bodily, it does not depend upon a special bodily part or organ for its functioning; it is not an *organic* faculty, but an *anorganic* faculty. Of course, the intellect depends upon the body and its organs (that is, the senses) for its materials, for the sense-data from which it rises to the formation of universal concepts. But this fact is not explained by the nature of intellect itself, but by man's nature in this present worldly existence. Man is composed of body and soul; he is a single being, not a double one; soul and body are compounded in one substance; and while this substance endures, the only contacts that man has with outer reality are the senses; it is from sense-data that the intellect must abstract its concepts. We shall speak more of this in another place.

Here we must notice the clear distinction that exists between the *brain* and the *mind or intellect.* The brain is a bodily organ; the intellect is not organic. The brain is the seat of the internal senses, and it is the necessary central portion of the external sense-system. The point that must be stressed is this: the brain is not the seat of the intellect. But since the brain is the seat of internal sensation, and the focal point of external sensation, and since the intellect

takes the data of sensation as its materials for the formation of ideas, it is usual to say that we "use our head" in thinking, and to call a person "brainy" when we wish to compliment him upon clarity or quickness of thought.

A further point for notice: we have said several times that the intellect "forms" ideas. But the action of the intellect is in no sense creative. The intellect abstracts its ideas from sense-data, and it is justified by reality. The ideas of the intellect are solidly grounded upon the findings of sense, and are legitimately derived therefrom. Hence it is clear that, in any discussion of the validity of human knowledge (a subject that will engage our attention in a later portion of this manual), the basic fact to be established is the validity of *sense-knowledge.*

b) VARIOUS NAMES OF THE INTELLECT

The intellect is often called *the mind* or *the understanding* (although many moderns use the term *mind* for any form of conscious life), and in its special acts the intellect is called *intelligence, reason, conscience, consciousness.* A word in explanation of these names:

1. *Intellect* (from Latin *intus,* "within," and *legere,* "to gather, to read," or perhaps from *inter,* "between," and *legere,* "to read") is the name of the supra-sensuous power by which man *reads within* the experience of sense to find essential reality; it is the

power by which man reads "between the lines" of sense-data and knows *essences.*

2. *Mind* is synonymous with intellect. In our use of this term we maintain this precise meaning. We do not identify mind with sense-consciousness. We do not speak of the "mind" of animals.

3. *Intelligence* (a name with the same etymological origin as *intellect*) is the intellect, inasmuch as it *recognizes self-evident truths,* or *makes immediate inferences.* The act of mind by which we recognize such inevitable truths as that of the proposition, "I exist," is an act of intelligence. By intelligence we recognize the truth of the proposition, "A totality is greater than any one of its component parts." In casual daily speech we often use the term *intelligence* loosely and improperly. We say, "The dog is an intelligent creature." But, as a fact, the dog is not intelligent at all. The dog is lively and alert in the use of its senses, but it is not intelligent. Intelligence is a name for intellect in one of its functions, and hence is identified with intellect as a faculty; it is anorganic; it is a faculty of one who has a spiritual soul.

4. *Understanding* is synonymous with *intellect.* It signifies the power by which man, as it were, *gets under* the experiences of sense to lay hold of essential reality.

5. *Reason* is the intellect inasmuch as it works out inferences by thought or study. It is the intellect inasmuch as it works out truths that are not self-

evident. I know that one and one are two by an act of *intelligence,* but I know that the sum of the angles of a triangle is 180° by an act of *reason.* Intelligence recognizes immediately evident truths; reason works out such truths as are not immediately evident.

6. *Conscience* is reason inasmuch as it works out conclusions that have a moral significance. It is reason (which, in turn, is intellect) inasmuch as it makes inference with reference to the *right* and *wrong* of human conduct. Conscience is the intellectual inference and pronouncement of judgment on the right or wrong of a situation to be faced and decided here and now. Notice that conscience is the actual reasoned *judgment* of the intellect in moral matters. We sometimes speak of conscience inaccurately, as in the expression, "examining one's conscience." We do not examine our conscience; we review in intellectual *memory* its judgments and try to recall whether or not we have acted in accordance with these judgments.

7. *Consciousness* (that is, *intellectual consciousness*) is the intellect inasmuch as it is aware of itself, its states, its acts. Carefully distinguish this consciousness from that of sense. Sense-consciousness is the common or central sense, one of the internal senses already discussed.

We might add another name to our list of titles of the intellect, *viz., intellectual memory,* which is the

intellect inasmuch as it retains and recalls its past conditions, states, acts.

SUMMARY OF THE ARTICLE

In this article we have evidenced the existence of *intellect,* man's cognitive faculty, which excels in character and function the faculties called senses. We have learned that the intellect forms its ideas or concepts, its judgments, and its reasonings, by penetrating within the findings of sense and apprehending essences, and by comparing, compounding, dividing, reflecting upon the understood essences. We have seen that the intellect is spiritual in its action, and we have concluded that it must, therefore, belong to a spiritual substance—the soul. We have listed and briefly explained various names by which the intellect is known.

ARTICLE 2. THE FUNCTION OF THE INTELLECT

a) Acts of the Intellect b) Ideas c) Universals

a) ACTS OF THE INTELLECT

The chief intellectual acts are three: apprehending, judging, reasoning.

1. *Apprehending* (or the exercise of *simple apprehension*) is the act by which the intellect grasps or apprehends an essence. It is the simple act by

which the mind *knows* an essence. When, for example, one learns what *a circle* is, one knows an essence, and is able to define it. Regardless of the size, color, or location of a pictured circle, one knows what *a* circle is, what *any* circle is, what each and every one of *all possible circles* is and must be. One knows what makes a circle a circle; and that is saying that one knows the *essence* circle. Again, when one knows what *metal* is, one knows an essence; one can define this essence and declare what *metal as such* is and must be to be metal at all. The definition applies with full force and value to iron, or gold, or silver, or platinum, or zinc, or copper, or tin, or any other of the large class of metallic things; and this, whether the metals be considered in larger or smaller amounts, or in the abstract without reference to quantity. In a word, one knows what *a* metal is, what *any* metal is, what all possible metals must be in order to be metals. This is saying that one grasps the *essence* called *metal.* Now, the grasping or apprehending of an essence is the first complete act of the intellect. It is called an act of *apprehension,* because it is the *grasp* or the *laying hold of* an essence. It is called an act of *simple* apprehension, because the intellect, in grasping an essence, makes no pronouncements about it, invests it with no affirmations or denials, but lays hold of it and *does no more,* that is, grasps it *simply.* The product of simple apprehension, that is, the "grasped essence," is an *idea* or *concept.*

Sometimes the term *apprehension* is used to indicate *the idea itself* as well as the process or act by which the idea is formed. In this case, the idea is called *a* simple apprehension.

2. *Judging* (or the exercise of *intellectual judgment*) is the act by which the intellect pronounces upon the agreement or disagreement of two ideas which it has formed and holds in comparison. If, for example, I compare my ideas of *man* and *mortal being* (that is, being that must die), I find them in agreement, and I pronounce the *judgment,* "Man is mortal." Comparing the ideas *man* and *spirit,* my intellect perceives lack of agreement, and it pronounces *judgment,* "Man is not a spirit." Judgment, then, involves three things, *viz.:* (a) two ideas in the mind; (b) comparison of the ideas by the mind; (c) pronouncement upon the agreement or disagreement of the two ideas. The first two elements are prerequisite as "materials" of the judgment; the third element is the judgment itself: judgment is pronouncement. Now, pronouncement in this case is *predication.* One idea is *predicated* of another as agreeing or not agreeing with it. In our examples, *mortal* is predicated of *man* as agreeing, and *spirit* is predicated of *man* as not agreeing. The idea predicated of another in judgment is called *the predicate idea,* or simply, *the predicate.* The idea of which the

predicate is enunciated or predicated is *the subject idea,* or simply *the subject.* Notice now that a judgment may be viewed in two ways, *viz.:* (a) in the scope of its subject, and (b) in the accuracy, completeness, or necessity, with which the predicate applies to the subject.

With reference to the first point (that is, the scope of the subject, a judgment will be classified as *universal, particular, singular,* or *indefinite.* Thus the judgment, "All men are mortal," is a *universal* judgment, for its subject is taken in full scope of meaning, or, as the phrase is, in "full extension." The judgment, "Some men like music," is a *particular* judgment, for its subject is taken in partial extension: *some* men, not *all.* The judgment, "This man is my father," is a *singular* judgment, for it refers to one individual alone. The singular judgment is also *universal,* for the subject is taken in its full extension; it has an extension of but one, and if it be taken at all, it must be taken in its full extension. The judgment, "Men like sports," is an *indefinite* judgment, for it does not indicate whether the subject is to be understood in full scope or only in partial extension.

With reference to the second point, that is, with reference to the manner in which the predicate applies to the subject, judgments are *specific, generic, differential, proper,* or *accidental.* The judgment, "Man is a rational animal," is a *specific* judgment, for the

predicate is the *species* or *complete essence* of the subject; the predicate perfectly defines the subject. The judgment, "Man is an animal," is a *generic* judgment, for the predicate is the *genus* or essential class of the subject; the predicate defines the subject, but not perfectly; it defines the subject by that part which the subject has in common with another idea: "animal" is part of the essence *man,* not the whole essence; it is that part of the essence *man* which man has in common with brutes. The judgment, "Man is rational," is a *differential* judgment, for the predicate is that part of the essence *man* by which it is differentiated from the other essence with which it has a common genus: "rational" indicates part of the essence man, namely, the part by which man is differentiated from the brute. The judgment, "Man is a laughing being" ("Man can laugh"), is a *proper* judgment, for the predicate indicates something that belongs to this subject and no other, that is *proper* to this subject alone, although it is no part of the essence of the subject. The judgment, "Man is a reading being" ("Man can read"), is an *accidental* judgment, for the predicate indicates something that *may* characterize the subject, although it is no part of the subject's essence and although there is no necessity of nature requiring that it be associated with the subject. The predicate may *happen* to agree with the subject. The Latin *accidere,* from which we have the term *accidental,* means "to happen."

3. *Reasoning* is the act by which the intellect works out a judgment in a roundabout way when direct judgment is infeasible. Direct judgment on the agreement or disagreement of two ideas may be baulked by obscurity in the ideas themselves, and in their relation to each other. Then the intellect may be able to discover their relation by calling in a *third* idea which is clearly known in relation to each of the first two, and, by judging on the known relations, it may resolve the unknown. Take two ideas; call them "A" and "B." Suppose I am unable to pronounce judgment; I do not know whether "A is B" or "A is not B." I now employ idea "C" which I know in relation to "A" and to "B." Thus then I work the matter out:

A is C
B is C
Therefore A is B

or

A is C
B is not C
Therefore A is not B

This is an illustration of the process or act of *reasoning*. It will be seen that reasoning is a means of reaching a *final judgment,* which is the conclusion of the process. Judgment, therefore, is the basic

thought-process. The idea is an element of judgment; it is *simple;* it is not *thought.* Judgment is the thought-process. When direct judgment is impossible, reasoning is employed to render it possible. The quest is for *judgment.*

When reasoning is developed on the principle that *what is true or false of a whole class is true or false of the members of that class,* it is called deductive reasoning or *deduction.* The following example illustrates deduction:

All animals are sentient (sentiency ascribed to the whole class *animal*)
The lion is an animal (lion declared a member of the class)
Therefore, the lion is sentient.

When reasoning is developed on the principle that *what is true or false of the members of a class is true or false of the class as a whole,* it is called inductive reasoning or *induction.* Induction is illustrated in the following example:

Lead, zinc, iron, gold, silver, etc., are heavier than water
Lead, zinc, iron, gold, silver, etc., are all the known metals
Therefore, all the known metals are heavier than water.

When *all* the members of a class are known to have a certain essence, quality, or characteristic, this is affirmed of the class as a whole by *complete* induction. When *some* of the members of a class are known to have the same essence, quality or characteristic, and when this knowledge is the result of careful investigation, and when the members in question are thoroughly representative of the class to which they are ascribed, then the induction is *incomplete but sufficient.* When, however, investigation is imperfect, or the individuals investigated are not adequately representative of their class, then the induction is *incomplete and insufficient.*

Induction and deduction are not rival processes or methods; they are supplementary. Induction serves the investigator of particular data to the end that, *as a scientist,* he may reach general truths or scientific laws, whence he may, *as a philosopher,* reach further and more explicit conclusions.

b) IDEAS

We have already defined *the idea* as the product of the intellectual act of simple apprehension. The idea is *the representation of the essence of a thing* in the intellect. It is the representation, the represence, of an essence in the mind. To repeat an illustration already given: when one knows what a circle is, one knows an *essence,* that is, one knows what makes a circle the thing that it is; one knows

what makes a circle a circle. When one knows what metal is, one knows an *essence,* that is, one knows what makes a metal a metal.

Now, whence does the mind get its ideas? The senses perceive only individual things; they do not perceive bald essences. Each individual thing has its essence, of course, but it is an essence clothed with individual marks, characteristics, and limitations that do not belong to the essence as such. What my senses tell me about a tree, for example, is not a part of the *essence* tree considered alone. I see that the tree is an evergreen; it is tall; it is rooted in stony soil; it has a rough bark; it bears no edible fruit; its trunk is straight. But I may see another tree which is different in every observed point from this evergreen, and yet the other is just as much *tree* as the evergreen. Again, I can consider tree in the abstract, without reference or advertence to any of the qualities and characteristics of an individual tree; I can consider the *essence* alone. The mind knows essences; the senses do not grasp essences as such. Where does the mind get its grasp of essences, its *ideas?* This question is usually discussed under the caption, *The Origin of Ideas.*

There are four ways in which we can account for the presence of ideas in the mind. These are the following: (a) the senses can grasp all that is knowable about material things, and so-called *ideas* are only collections of sensations; (b) ideas are inborn

(*innate*) in the mind, either full-blown, or in germ, like seeds in the soil; (c) the mind has the power of abstracting from the material conditions and individual characteristics of sense-findings and of laying hold of the essence which is clothed in them; (d) some power outside the mind imparts ideas to the mind upon the occasion of sensation.

Of these explanations of the origin of ideas, only the third is tenable. The first we already know to be false, for ideas are more than sensations or collections of sensations. Ideas represent reality that lies beyond sensation, and they represent material things in a manner which is superior to that of sensation. Nor can it be said that ideas are inborn in the mind. It is unscientific to make this assertion, unless forced to it by the inadequacy of other explanations. We shall have a direct word of criticism to offer on the subject elsewhere. Here it suffices to remark that philosophers have shown that the doctrine of inborn ideas (called *innatism*) is unsound and fantastic. Similarly fantastic is the unwarranted assertion that some power outside the mind imparts ideas to the mind upon the occasion of sensation; such an explanation is not scientific, but merely poetical and imaginative.

We assert a power native to the mind of apprehending the essential reality which underlies the individual findings of sense. We call this power *the*

abstractive power of the human intellect. It is called *abstractive* because, in forming ideas, the intellect *abstracts* from individual marks; it leaves these marks out of account; it does not deny them, but pays no attention to them in the grasp of the reality which underlies them. Thus, in forming the idea *triangle* from several pictures of triangles drawn on a blackboard, I pay no attention to the size, the position, the acuteness or obtuseness of the triangles, nor do I attend to the color in which they are drawn. I *abstract* from the "individuating" marks of the concrete pictures; I *prescind* from these marks; I leave these marks out of account in getting at just *what the thing is* (that is, the *essence*) that is clothed here in short white lines, there in long red lines, there in equal green lines. In getting at just what a triangle is (that is, in forming *the idea* of triangle) I am not concerned with the fact that here is a picture in white crayon, there one in red, and yonder one in green; I am not concerned with the length of the red or white or green lines; I am not concerned with the fact that one picture is on the left, one on the right, and one in the centre; I am not concerned with the fact that one picture is above, one below, and one in the middle. I *abstract* from these things with which I am not concerned. I am concerned with just one thing: I am alert to grasp *what the thing is* that is pictured; whether in white, red, or green; whether

right, centre, or left; whether above, below, or in the middle. In a word, I abstract from *non-essentials* to lay hold of an *essence*.

Thus, by intellectual abstraction, exercised upon the findings of sense, I am enabled to form ideas. And the ideas are not divorced from outer reality. Ideas are not creations of the mind. They are the mind's grasp of basic reality which underlies sense-findings.

Further: the idea may be the mind's grasp of an essence that is *not* clothed in sensile individuating marks. What of the idea *spirit?* What of ideas like *unity, goodness, truth, beauty?* Our doctrine still holds good. These ideas are not directly abstracted from sense-objects, but they are drawn by a second abstraction *from other ideas* already formed by abstraction from sense-findings. These ideas are called *derived* ideas (for they are derived from other ideas already formed), while ideas that are formed directly from sense-objects are called *intuitive* ideas. Thus sensation plays its necessary part in the formation of all ideas. Directly or indirectly, immediately or mediately, sensation is the ground and working-field of the mind's abstractive activity. We recall the saying, "There is nothing in the intellect that is not in some manner founded upon sense-data." To illustrate the manner in which an idea may be derived from other ideas: the idea *spirit* is derived from the idea

body by abstracting from material extension and retaining the note of substance and subsistence.

An objection may be put here. If I have ideas, and if ideas are the mind's grasp of essences, should I not be able to offer a clear definition of every idea that is in my mind? I should be, and I am, able to give some sort of description of every essence grasped by my mind. But ideas do not come suddenly into the clear, distinct, and complete grasp of the mind. Ideas are usually confused at first, and they are brought to clearness and distinctness by studious attention, reflection, comparison, and normally also by instruction. When, by these means, ideas are made distinct, they are capable of being expressed in definition or adequate description.

c) UNIVERSALS

An idea is the mind's grasp of an essence. Now, an essence is usually capable of existing in a plurality of individuals. Thus the essence *circle* is found in every individual circle; thus the essence *man* is found in each and every human individual; thus the essence *metal* is found in every particle of gold, silver, lead, copper, etc.

Taking, for example, the millions of human beings that have existed, do now exist, and will exist in future; adding to these the countless millions that *could* exist if the Creator pleased, we find that our

single idea *man* includes them all. The idea *man* (that is, *human being*) represents the essence that each individual of that vast group of actual and possible beings must have in order to be a human being, or to be thought of as a human being. By reason of the fact that I have the idea *man,* I know *what man is;* I can think of man, can know man, regardless of individual differences that mark this man or that (such as sex, age, size, color, name, etc.), and regardless of the existence of this man or that. My idea squares with what each existing human being is, with what future human beings will be, with what past human beings have been, with what possible human beings would be if they existed. In a word, it is *a universal idea,* and the mind, in forming this idea, has abstracted from all that is individual in men, and has kept only what must be found in each and every man inasmuch as each individual is a man.

Now, a universal idea represents in one single grasp of mind what may be found in a plurality of individuals outside the mind. The question arises: What is this thing that the universal idea represents? What is this essence that the mind grasps as one thing, and which is found, or may be found, equally, in a multiplicity of individuals? In brief, the question is: What is the *object* of the universal idea? It is an essence, of course; our question does not touch that point. What we wish to know is *what sort of thing* the object of the universal is.

Recall the distinction made in an earlier chapter between the *matter* and *form* of an object of knowledge. The matter of an object is its content, its make-up, its constitution as a thing. The form is the mode in which it is grasped by the knowing-power. In the case of universal ideas, the question is this: does the object of the universal idea exist in matter and form outside the mind? Or does the object of the universal idea exist formally (that is, as to form) as a universal only in the mind? Or is the very matter of the object a figment of the mind?

The object of the universal idea is called *the Universal.* We employ the capital "U" to distinguish the object from the idea itself. The universal idea is the mind's grasp of an essence that may be found in a plurality of things; the Universal is the essence which is grasped.

The question of Universals, therefore, amounts to this: Are there *universal things* in the world of knowables? Is there, for example, a universal human essence, existing as a universal thing outside the mind, which is shared by each human individual, or reflected and represented in each individual? Or are there only individual things in the world of knowables? If so, how account for the universal idea in the mind; how explain the object of this idea?

In a later portion of this manual we shall discuss various doctrines that have been offered on this basic question of knowledge and its validity. Here it will

suffice to offer a brief account of the doctrine which we ourselves defend. It is the doctrine of Aristotle and St. Thomas and the Scholastics. It is called *Moderate Realism.*

The universal idea is one idea. It is, in other words, the idea of one thing. Yet things which this idea represents in essential unity are many or can be many. How can this be? The answer lies in the abstractive power of the human intellect, which we have already discussed. The intellect can grasp, can understand, can know, the many individuals that have the same essence, in a single cognition, in one idea. For the intellect abstracts from individual differences, and grasps that which is not different in the individuals, *viz.,* the essence. Each individual has its own essence numerically, or as an individual. But the essence in individuals of the same species is the one kind of thing. The essence of Tom, Dick, Harry, Mary, Rose, and Jane, is the same human essence in each. It is not the same numerically, for Tom is this human being, while Mary is that, and Harry is another. But it is the same in its exact kind, for Tom and Mary and Harry and the rest, are equally human beings. This fact the mind apprehends, abstracting from individual differences that the senses bring to knowledge. Let us trace out the process by which the mind builds up its ideas when it abstracts from non-essential differences. We shall employ the idea *man* as an illustration.

1. The mind knows man as *something,* as a *thing.*

2. The mind knows differences in things. Thus it sees a difference between *man* and *whiteness,* for example, or between *man* and *unity* or *strength.* In a word, the mind knows man as a *subsistent* thing, as a substance, and not as an abstraction like *whiteness,* nor as a quality like *strength.* The mind then conceives man as *a subsistent thing.*

3. The mind conceives man not merely as subsistent like a *spirit,* but as *bodily.* Man is known as *a subsistent bodily thing.*

4. The mind conceives man not only as a bodily substance like *a stone,* but as a *living* thing. Man is known by the mind as *a subsistent, bodily, living thing.*

5. Not only is man a living body like *a plant;* the mind conceives him as having senses and sensibility; in a word, as *sentient.* Thus the idea man presents him to the understanding as a *subsistent, bodily, living, sentient thing.*

6. Man is known not merely as sentient like *an animal,* but as endowed with understanding and will; in a word, as *rational.* The mind conceives man as *a thing* which is *subsistent, bodily, living, sentient,* and *rational.*

So the idea *man* is built up. So are other ideas built up. If we were to stop with the fifth point of those enumerated above, we should have the idea *animal,* that is, a thing that is subsistent, bodily, living, senti-

ent. And that universal idea would be applicable to each and every animal, actual and possible. It would be applicable even to man, for man is truly animal. But it would not be completely definitive of man, for man is something more than animal. In the same way the first three notes (*thing, subsistent, bodily*) constitute the universal idea of *body,* and this universal idea applies to all things, actual and possible, in the world of material realities. It applies also to man, for man is truly a body; it applies to plants and to animals, for these are bodies. But it does not apply with equal completeness to these things. For plant is something more than mere body; plant is a living body. And animal is something more than body (and something more than plant), for animal is not only a living body, but a living body endowed with sentiency. And man is something more than body (and something more than living body, and more than sentient body), for man is rational.

Thus, by observing reality, by noting what the senses bring before it, the mind gets at the essences of things. The abstractive power of the mind, joined to its powers of comparison, analysis, synthesis, and reflection, enable the intelligent subject to grasp the basic reality that is clothed in individual differences and material conditions. Thus, though Tom is Tom, and Harry is Harry, and Jane is Jane, the mind gets at the basic thing that makes each and all of them

human beings. This one thing the mind holds in its universal idea. This one thing is the Universal.

Now, where does the Universal exist? The answer is twofold. The Universal *as such,* as to form, as a Universal, exists in the mind. But the Universal is verified in each and every one of the individuals that have the essence which is present to the mind in the idea. Therefore, the Universal, as to matter, not as to its form of universality, exists outside the mind in the trans-subjective world. In the world of real knowables there are only individual things. The mind, knowing these things as universal, does not merely group them, or clothe them arbitrarily with the form of universality; the mind, resting upon the solid foundation of reality outside itself, invests the essences it knows with universality. It is the mind's mode of knowing, and it is justified in the things known. Thus, while there is no universal essence *man* (to keep our example) existing outside the mind, the mind has a solid ground and basis for conceiving man universally in the fact that what it conceives is verified in each and every, actual and possible, human individual outside the mind.

The answer, therefore, to the question about Universals is this: the Universal as such exists in the mind, and has its universality from the mind, but it is based on reality outside the mind inasmuch as it is verified (not as a universal but as a thing, as an

essence) in each individual that has the essence which the universal idea represents. More briefly: the Universal exists in things, but not in the manner in which it exists in the mind. In matter, the Universal is real; in form, it is mental.

SUMMARY OF THE ARTICLE

In this article we have studied the three chief acts of the intellect, *viz., simple apprehension,* by which the idea or concept is formed, *judgment,* by which the intellect pronounces on the agreement or the disagreement of two ideas, and *reasoning,* which works out judgments in a mediate or roundabout manner when immediate judging is infeasible. We have studied the *idea* and its *origin* in the abstractive power of the intellect by which essential representation is educed from sense-findings. We have discussed the universal character of ideas and have indicated the nature of *the Universal.* The value or validity of the mental acts will be studied in the Book on *Certitude.*

BOOK SECOND

TRUTH

In the First Book we discussed Knowledge. Now, knowledge is not worthy of the name unless it be *true*. In the present Book we study Truth in itself, the mind's states with regard to it, and its criterion. This Book is therefore divided into three Chapters as follows:

CHAPTER I

THE NATURE OF TRUTH

This chapter treats of *truth,* defining it, classifying it, and discussing the possibility of degrees of truth. It also treats of the opposite of truth, *viz., falsity.* We have two articles, as follows:

Article 1. Truth
Article 2. Falsity

ARTICLE 1. TRUTH

a) Definition of Truth b) Classification of Truth
c) Degrees of Truth

a) DEFINITION OF TRUTH

The ancient, and valuable, definition of truth is this: *Truth is the conformity of thought and thing.* The terms of this definition call for a brief explanation.

Thought in our definition means *judgment.* We have seen (Book I, Chap. III, Art. 2) that ideas are the fundamental elements of thought, but *judgment* is the basic thought-process. Judgment is the pronouncement of the mind upon the agreement or disagreement of two ideas. Judgment is also the pro-

nouncement upon the agreement of an idea with its object. In all cases judgment is a pronouncement or an enunciation. And the pronouncement concerns the relation of two things, *viz.,* idea and idea, or idea and object. Hence, every judgment presupposes *comparison* of two things. Now, an idea in itself is the representation in the intellect of the essence of a thing. In itself it is a mental re-presence. An idea is what it is; it is an idea, and an idea of a certain thing, whether it be obscure or distinct. Similarly a snapshot is a snapshot, and a snapshot of a certain person or thing, whether it represents that person or thing clearly or dimly. Of the snapshot we may say, "This is a true picture of you," but to do so we must *compare* the snapshot with the person it represents. We cannot say the snapshot is *true* in itself, without any comparison; it is what it is. In the case of ideas we have the same situation. An idea is what it is. It cannot be called *true,* unless it is brought into *comparison* with its object and considered with reference to the fidelity, or lack of fidelity, with which it represents that object. Inasmuch, however, as a picture necessarily presupposes the person photographed, and therefore bears in itself a reference to that person, there is a sort of *truth* predicable of the picture itself. So, too, with the idea. Inasmuch as the idea has an object, it bears a natural relationship of conformity (more or less perfect) with that object, and hence there is a sort of truth predicable of the idea itself.

But for the proper recognition of conformity or difformity, *comparison* is manifestly necessary, and the knowledge-act that follows comparison is *judgment.* Thus, truth is in the judgment. In ideas, truth is found imperfectly, and in a sort of inchoate manner, inasmuch as the idea itself invites, so to speak, the knowing-subject to notice it in relation with its object. Therefore, the term *thought,* in our definition of truth, means *judgment.*

Before explaining the next term, let us warn the student that the illustration borrowed from photography is not meant to explain the nature of the idea itself. Recall the detailed account of knowledge and the knowing-process presented in the very first chapter of this manual.

In the expression "thought and thing," the term *thing* means the *object* of knowledge. Truth is the conformity of knowledge and its object. It is the agreement between the judgment of the mind and the objective thing judged. Truth involves three things, *viz.,* the judging mind, the judgment of the mind, and the objective thing judged. The relation of conformity between the judgment of the mind and the thing judged is *truth.*

The relation between the judging mind and the objective thing judged may be variously considered. The objective thing thought about or judged may depend *for its existence* upon the thinking mind. Thus creatures depend for their existence upon the

Creator. The Creator does not learn what things are from the things themselves; the things are what they are because the Creator knows them and brings them into existence according to His knowledge. On the other hand, the thing thought about may not depend upon the thinking mind for its existence, but only *for its being known* by that mind. In this manner things "depend" upon created minds. To be known by created minds, the object of knowledge requires that the mind advert to it.

Between the Divine Mind and things there *must* be conformity. For the Divine Mind is *creative.* Things are what they are by reason of the knowledge of the Divine Mind. Things depend on the Divine Mind for existence.

Between the created mind and things there is possibility of difformity. The created mind does not produce its object, but recognizes it more or less perfectly. Inasmuch as there is imperfection in the act of the created mind, there is faulty and even false judgment.

b) CLASSIFICATION OF TRUTH

We distinguish *ontological* truth, *logical* truth, and *moral* truth. Ontological truth is the truth of *things.* Logical truth is the truth of *thought* or *knowledge.* Moral truth is the truth of *speech,* or truth of the *expression* of knowledge. Our interest in Criteriology centres upon *logical truth.* Yet we must study logical

truth as contrasted with the other classifications, especially ontological truth.

1. Ontological truth (also called *metaphysical* truth, and *essential* truth) may be stated simply as the necessary conformity of things with the Divine Mind. Things depend for existence upon the Divine Mind, and hence must be as the Divine Mind knows them. Therefore, ontological truth is necessary truth; there can be no ontological falsity.—We may approach this matter in another way. Truth is conformity of thought and thing, and we may look at it from the standpoint of "thought" or the standpoint of "thing." For an understanding of what ontological truth is, we must look at truth from the standpoint of "thing," that is, from the standpoint of the object judged. We look from the object toward the mind; we regard the object with reference to the judgment of the mind; we see whether the object squares with the judgment. The judgment is the standard; the object is tested by the standard. Obviously, the object *must* square with the Mind from which it takes its being. And it must also square with the created mind which accurately knows it. And if the created mind does not know the object accurately, it is the mind that lacks *logical* truth, not the thing which lacks *ontological* truth. The thing is what it is; it necessarily squares with accurate knowledge of what it is; there is always ontological truth; there is no ontological falsity. When I say, "This is true

gold," I mean that this object is tested by the standard of accurate knowledge of what gold is, and is found in conformity with that knowledge; I mean that this object squares with *what is known,* with the accurate knowledge of what gold is; I indicate conformity of this object to accurate judgment; I indicate conformity of thing to thought; I indicate *ontological truth.* Primarily, ontological truth is the conformity of the object of knowledge to the perfect knowledge of God. Secondarily, ontological truth is the conformity of the object to created (human) knowledge. Other examples of ontological truth: "He is a true friend"; "This is a triangle"; "That is not wine, but vinegar"; "He is sincere." Ontological truth is conformity of thing to thought, of object to judgment.

2. Logical truth (called also *truth of thought* and *conceptual truth*) is the conformity of thought to thing, of judgment to object. In describing ontological truth, we took our stand at the object and looked toward the mind; we measured the object by the standard of the accurate judgment. Now, in discussing logical truth, we take our stand at "thought" and look toward "thing"; we measure our knowledge by the standard of the thing judged. When a human mind learns what a thing is, it must conform to that thing. The thing, the object, is the standard to which the mind must conform if the mind is to know the

object. When the mind actually conforms to the object, then the mind possesses *logical truth.* Logical truth is truth of judgment, truth of thought. The judgment, "This is gold," expresses ontological truth when we regard the object as squaring with accurate knowledge; the same judgment expresses logical truth when we regard it as the judgment of the learning mind which acquires from this object the knowledge of what gold is, and makes its thought meet the requirements of this object. In the latter case, the judgment is equivalent to, *"I know* now what gold is," or "I now possess *true knowledge* of what gold is." From this we learn that the basic question of Criteriology, *viz.,* "Can we know truth; can we know things rightly; can we have true and certain knowledge?" is the same as the question, "Can we have logical truth?" Logical truth is the conformity of thought to thing, of judgment to object.

3. Moral truth (called also *truthfulness, veracity, truth of speech*) is the conformity of thought with its objective expression. It is the agreement of thought and speech. The words of man have moral truth when they express his mind. The man may be mistaken, he may lack logical truth, but if he expresses a thing *as he knows it,* his words have moral truth. Moral truth is discussed in Ethics; it is not the concern of Criteriology.

c) DEGREES OF TRUTH

It may be asked whether there are degrees of truth, whether the term *true* admits of comparison, so that it is logical to say *truer* and *truest*. This question is strictly a question of *degrees* or *grades* in truth. It is not to be confused with an utterly different question about the *relativity* of truth. The question of relativity of truth asks whether truth *changes,* whether truth is in a process of development or evolution, so that what is true to-day may not have been true yesterday or may not be true to-morrow. For the proper distinction of these questions, it seems well to discuss both briefly in the present section.

1. *Are there degrees of truth?* Truth is, properly and formally, the conformity of thought and thing, of mind and object, of judgment and the relation judged. Such conformity either exists or it does not exist; there is nothing further to be said of it; it cannot be somewhat existent or a little absent. Truth, formally considered, is an *absolute* thing. It admits of no degrees or comparisons. It is as absolute as life or death. And we do not speak of a man as "more or less living" or as "somewhat dead." Truth either is there or it is not there, and that is all about it.

But we may turn our mind from the consideration of truth taken *formally;* we may view it *subjectively* and *materially.* Viewed *subjectively,* as it exists in the thinking-subject, truth may be said to

admit of degrees, inasmuch as the mind may have clearer and fuller knowledge or knowledge less clear and less full. If I know that a triangle is a plane figure, my knowledge is true. But when I learn that it is a plane figure consisting of three straight lines and three angles, I have added a "degree" to the knowledge I first possessed. In a word, I have learned more about the object of knowledge. Notice carefully that this is rather a metaphorical use of the word *degree*. It is not *truth* that has developed when I know more of the triangle; it is my *knowledge* that has become clearer and fuller. What I knew at first is true; it did not become *truer* by my added knowledge, nor did it become *less true* in view of my wider information; nor is my fuller knowledge *truer* than my earlier and less complete knowledge. There are no degrees in truth itself; but there are degrees in my knowledge of things, in my possession of truth.—*Materially* truth may be said to have degrees, inasmuch as the object of knowledge presents, so to speak, a wider and wider field for the mind of the investigator. Not only can knowledge grow greater, but the field of knowledge may stretch in further and further reaches as the mind advances. Similarly, new scenes and vistas are continually opening to the traveller. Of course, these are there from the first, but they do not come under the traveller's eye all at once; they are made visible to him by *degrees*.

To illustrate all this: the student of rational

psychology, who is studying the proofs of the immortality of the soul, has a clearer and clearer knowledge of that doctrine as he masters the arguments set forth in his text-book. His true knowledge advances by *degrees,* and thus, *subjectively,* there are degrees of truth. Again, the matter studied presents a field for wider and clearer knowledge. New arguments, new lines of thought, are indicated by the matter itself, as more and more is learned about it, and so it manifests itself *by degrees.* Thus, *materially,* there are degrees of truth.

2. *Is truth relative?* The question means: does truth change for times, places, or persons? Is what is true always true, or is truth in a process of random change or continuous development?

Truth is *absolute,* not *relative.* "Once true, always true." It is no argument against this fact to say that what was once *believed* is now recognized as untrue. It was once almost universally believed that the earth is flat; nevertheless, the earth is not flat. Nor was it flat when it was believed to be so. What was *true* when such belief prevailed, is still true, and will be true. A mistaken judgment has been corrected; logical falsity has been dismissed; but truth has not changed.

Nor is it an argument to say, "Ten years ago I said, 'I am twelve years old,' and the statement was true. If I make the same statement to-day, it is not

true." What was said ten years ago was true; it was *true then;* it will forever be true that it was *true then.* The statement fixes a point of time, and it must always be understood with reference to that fixed point. It means, "I am twelve years old *now,*" and if that *now* be used with reference to any other point of time than the one originally indicated, it is not the same *now,* and the statement is not the same statement. To say, "I am twelve years old *now,*" and ten years later to say, "The statement that I am ten years old *now* is no longer true," is to bring in an entirely new statement, for the *now* is not the same. The statement, "I am twelve years old *at one certain fixed point of time*" is forever true and unchanging.

Again: it is no argument against the absolute and unchanging character of truth to say that the influence of truth varies for times and persons. Christianity did not *become* true when it converted millions. Old beliefs about this bodily universe do not *become* false when more accurate means of judging and more careful investigation bring us knowledge to supplant them. Christianity is *eternally true,* unchangingly true. Old beliefs that have been scientifically discredited were *never* true, but were mistakenly believed to be true. Let the student grasp this fact firmly: "Once true, always true." He will then be able to penetrate the fallacy of much modern talk and opinion about "changing morality" (as though such an absurdity were possible), and "religion

adapted to the needs of the hour," and "a philosophy of life that offers values in terms of this earthly existence." Thousands, nay, millions of minds, are deceived, and countless souls are hurt, by the false theories indicated in those expressions.

Those who assert the relativity of truth destroy their own doctrine even in stating it. For consider: the doctrine is adequately summed up in two words, "truth changes." This is proposed as a *true doctrine,* as *truth.* Therefore, by force of the very doctrine, *this* truth changes. There is or will be a time when relativity itself must change and be untrue. And what then? Why, then truth will be *unchanging,* and we are back at our present position. The sane mind cannot escape the conclusion that truth is unchanging and absolute. We shall have occasion to review this matter again later.

SUMMARY OF THE ARTICLE

In this article we have defined *truth* as the conformity of thought and thing. We have classified truth, and have found that *ontological truth* is conformity of thing to thought, while *logical truth* is conformity of thought to thing. We have mentioned *moral truth* as truthfulness or truth of speech. We have discussed the question of *degrees* of truth. We have investigated the mistaken doctrine of the *relativity* of truth.

Article 2. Falsity

a) Nature and Kinds of Falsity b) Degrees of Falsity

a) Nature and Kinds of Falsity

Falsity is the opposite of truth. When the mind and its object are brought into conjunction by judgment, conformity or agreement constitutes truth, lack of conformity constitutes falsity. Truth is the conformity of thought and thing; falsity is the lack of conformity of thought and thing.

Falsity is classified according to the truth to which it stands opposed. As we have distinguished ontological, logical, and moral truth, so we now distinguish *ontological, logical,* and *moral* falsity.

1. Ontological falsity (*metaphysical* or *essential* falsity) does not really exist, as we have already seen. Things are what they are, and they have a necessary relation of conformity with the accurate knowledge of what they are. Such accurate knowledge exists, primarily and of necessity, in the Divine Mind; secondarily, it exists in the rightly knowing created mind. Therefore, there is no ontological falsity properly so called. But we do speak of *things* as false, and so we seem to indicate the existence of ontological falsity. This, however, is but a manner of speaking. The falsity is not in things, but in the judgment of mind which pronounces the things other than they are. Still, in the things that are called false there

is usually a resemblance or relation to the other things for which incautious judgment may mistake them. For this reason the term *false* is applied (by metaphor) to the things themselves. So it comes that we have a *metaphorical* or *figurative* ontological falsity. But, as we shall see, the falsity is really *logical,* not ontological, for it is always, in fact or in occasion, the falsity of *judgment.* Thus, we may speak of *false money,* of a *false face,* of a *false heart,* of *false conduct,* of *false teeth* and *whiskers.* But false money, false whiskers, false teeth, are not really false; they are what they are; they are not really money, teeth, or whiskers at all. But these things *resemble* money, teeth, and whiskers, and by reason of this resemblance they give occasion to the precipitate mind of making *false judgments* about them, that is, of judging them to be true money, real teeth, and genuine whiskers. Thus the falsity (in fact or in occasion) is in the *judgment,* not in the things, and is, therefore, *logical* falsity. Again, false conduct is called false because it is deceiving, calculated to lead the observer to a *false judgment* about the person exhibiting such conduct. Here again the falsity is *logical,* not *ontological.* The expression, "a false heart," indicates merely a treacherous disposition, a sly and hypocritical mode of action, which amounts to "false conduct," and may lead one to a mistaken judgment. One who has relied upon a person and then finds that person unreliable, may declare that the person has "a false

heart," but must admit that the falsity lies in his own judgment of the person. In a word, wherever ontological falsity appears to exist, it can be known by a little investigation to be logical falsity, and not ontological, except by figure of speech.

2. Logical falsity (falsity *of thought, conceptual* falsity, *mistakenness, error*) is the lack of conformity of mind with object, of thought with thing, of judgment with the thing judged. As logical truth is found in judgment, and only imperfectly and inchoatively in the idea or concept, so logical falsity is found in the judgment, and not in the idea. This kind of falsity is sometimes called *conceptual,* but this name is justified only by extending, as some do, the meaning of the term *concept,* and making it equivalent rather to *judgment* than to *idea.* In casual speech we often use the word *idea* (and its synonym, *notion*) in a loose manner to signify *knowledge, judgment, opinion,* or even the *intention of the will.* Thus we say, "You have a wrong idea of this matter," or "Let me give you the correct notion of our procedure," or "I had an idea that he would come," or "He had the notion of going abroad." Now, this loose use of terms must not distract the student of Criteriology, nor keep him from understanding the terms of his science in their strict technical sense. *Ideas* have neither truth nor falsity in a perfect manner; logical truth and logical falsity are predicable of the *judgment.* Ideas may sometimes be

called false in a figurative sense, inasmuch as they are either the occasion or the result of fallacious judgment.

3. Moral falsity (falsity *of speech, untruthfulness, mendacity, lie*) is the lack of conformity of thought and its objective expression. It is the disagreement existing between the knowledge of the speaker and his serious statement. We have already seen that the study of moral truth and falsity belongs to Ethics and not to Criteriology.

b) DEGREES OF FALSITY

In discussing the degrees of logical truth, we found that, *formally* or considered *as such,* truth admits of no degrees. We also found that truth, considered *materially* and *subjectively,* may be said to have degrees, inasmuch as the field of knowledge spreads more and more widely before the mind, and inasmuch as the mind may learn things more clearly and judge them more unhesitatingly.

Now, in the matter of logical falsity; we assert that *formally,* as well as *materially* and *subjectively,* there are degrees. Falsity is a lack of conformity between the judgment and its object; it is a failure to "measure up"; it is an inequality. Now, all inequality admits of degrees. To have a yard of cloth, one must have thirty-six inches of cloth, no less. But to fail to have a yard of cloth, one may have any number of inches, from one to thirty-five. In a word, there are

no degrees in the yard itself and as such; it is a yard or it is not: but there are degrees in the measure by which one falls short of a yard. So with truth and falsity in their formal aspect. Thus truth as such admits of no degrees, whereas falsity as such does.

Falsity also admits of degrees when considered *materially* or in content, or, perhaps we had better say, *in extent*. For fewer or more points or notes about the object may be falsely judged. And *subjectively* (that is, with reference to the judging-subject) falsity admits of degrees, for a greater or lesser number of influences may induce the false judgment. Thus, the man who thinks than an Indulgence is a pardon of sin, is in error; he makes a false judgment. But the man who thinks that an Indulgence is a pardon for past sin and also a permission to commit sin, is more *widely* in error; materially, his judgment is false to a greater degree than the judgment of the first man. And the man who holds either of these opinions by mere hearsay is less *deeply* in error than the man who has let himself be solidly convinced of the error by reading and study of anti-Catholic writings and by studious attention to bigoted lecturers; subjectively the latter individual is in error to a greater degree than the former.

SUMMARY OF THE ARTICLE

In this very brief article we have contrasted truth and falsity. We have classified falsity, and have

found that there is no real, but only metaphorical, *ontological* falsity. We have found that *logical* and *moral* falsity can really exist. Focussing our attention upon logical falsity, we have discerned the possibility of *degrees,* and have shown that *formally,* as well as *materially* and *subjectively,* there are degrees of logical falsity.

CHAPTER II

STATES OF MIND WITH REFERENCE TO TRUTH

In this chapter we study the states of mind with regard to truth. Some of these states involve no positive adherence of the mind to what is regarded as true, no positive decision of judgment. The other states involve such a positive judgment. We therefore divide the chapter into two articles, as follows:

Article 1. Indecisive States of Mind
Article 2. Decisive States of Mind

Article 1. Indecisive States of Mind

a) Ignorance b) Doubt c) Suspicion

a) Ignorance

When the mind is in a *negative* state with regard to truth, it is said to be in *ignorance* of truth. Ignorance is defined as *a lack of knowledge in a subject capable of possessing it.* Ignorance may be a lack of knowledge which one ought to have, and may reasonably be expected to have, and then it indicates a real lack, a real *privation* in the subject; such ignorance is called *privative ignorance.* Thus, the igno-

rance of legal procedure in a lawyer is *privative ignorance;* so also is the ignorance of the higher mathematics in a graduate of a college of engineering. On the other hand, ignorance may be a lack of knowledge which one is not reasonably expected to possess, and then it constitutes no real privation in the subject; such ignorance is called *negative ignorance* or *nescience.* Thus, the ignorance of legal procedure in one who has made no study of law is *negative ignorance;* so also is the ignorance of the higher mathematics in a farmer. From a moral standpoint, ignorance which is one's own fault, that is, ignorance which due diligence would dispel, is called *culpable* or *vincible* ignorance. Ignorance which is not one's own fault, and which proper diligence does not suffice to dispel, is called *inculpable* or *invincible* ignorance.

The causes of ignorance, in addition to one's own mental limitations, are: want of attention, inept methods of study and instruction, lack of reflection.

b) DOUBT

When the mind hesitates between contradictory judgments, unable to deliver either the one or the other as true, it is in the state of *doubt.* Doubt, unlike ignorance, involves the presence of some knowledge in the mind, granted that it is imperfect knowledge. When one is wholly ignorant, one has no doubts (and

no certitudes) about the matter in which the ignorance prevails.

The mind hesitates, stands undecided, *is in doubt,* for one of two reasons. Either there is an equal weight of value, of reasons, of argument, on each side, or there appears to be no good reason inviting judgment to either side. In this matter of doubt, the mind is aptly likened to the old-fashioned balance-scale which stands level when there is an equal weight on either side, or no weight at all on either side. Now, when the mind is in doubt by reason of apparently equal arguments or reasons for each of two contradictory judgments, it is said to be in the state of *positive doubt.* When there appears no good argument or reason for deciding either way, the mind is said to be in the state of *negative* doubt. To illustrate: the executor of a will, finding among the effects of the deceased person a valuable piece of property, is in doubt whether it is paid for. On the one hand, the executor knows that the testator was an honest man, careful to pay debts promptly, exact in filing receipted bills. On the other hand, there is no record of payment for the property in question, and, while no disregarded bill for the article is to be found, the company from which it was procured have no record of payment. Here the executor is in the state of *positive* doubt. He is in *doubt,* because his mind stands hesitant between two contradictory judgments, *viz.,*

"The bill has been paid" and "The bill has not been paid." He is in *positive* doubt, because sound reasons invite both the one judgment and the other. A further illustration: After hearing two politicians expound opposite views, an auditor may say, "Each of these men has a good argument"; he is in a state of *positive* doubt concerning the political views defended. Another auditor may say, "Neither of these speakers has made any telling point"; he is in a state of *negative* doubt as to which political view to adopt.

With reference to the thing doubted, we distinguish *speculative* doubt and *practical* doubt. *Speculative* doubt is doubt of the truth or falsity of a proposition. *Practical* doubt is doubt as to whether one should act or refrain from acting, or should act in this way or that. Doubt as to which political view is sound, is *speculative* doubt. Doubt as to whether one should vote for this party or that, is *practical* doubt. The man who says, "I don't know what to think," is in a state of speculative doubt. The man who says, "I don't know what to do," is in a state of practical doubt.

Doubt, whether speculative or practical, is called *prudent* when it is based upon honestly digested reasons. Doubt entertained by reason of mere scruple is *imprudent* doubt. One may prudently doubt most statements of politicians, knowing the breed. But to doubt an honest man's word about a simple matter

concerning which he has obviously clear and certain knowledge, and in which he could have no motive for misleading us, would be to doubt imprudently. Imprudent doubt is the mark of a light and insincere mind. Let a man make sure of the state of important affairs; let him give such honest and earnest attention to the motives of judgment as the occasion (the matter in question) calls for. Then his doubt cannot remain imprudent. Either it will disappear and give place to certainty, or it will endure as a prudent doubt.

Causes of doubt, among many that might be mentioned, are: the difficulty of getting at the truth in certain matters; the variety and weight of conflicting authorities; the multitude of diverse opinions current on certain subjects; lightness and inattention of mind that makes one satisfied to entertain imprudent doubts.

Later in our study we shall have occasion to investigate the doctrine of René Descartes (1596–1650), who taught a theory of universal *methodic* doubt. This theory maintains that the philosopher, as a matter of true philosophic *method,* must begin his inquiry by doubting all things except his own existence and his own thought. Upon the single foundation of his *thinking existence,* the philosopher is to build up the edifice of certain knowledge, doubting everything until it is proved by actual demonstration. Descartes' name in its Latin form is *Cartesius,* and his theory

is sometimes called *Cartesian Doubt* as well as *Methodic Doubt.* We shall see that this is not a true philosophic theory at all.

We shall have occasion also, in a later chapter, to study the doctrine of *Skepticism,* which falsely maintains that man cannot achieve certitude in anything (or, at best, that he can have certitude in very few things), but must remain in doubt about most of the things which the normal mind accepts as positively certain.

c) SUSPICION

Doubt is the state of the mind which stands squarely between two contradictories, hesitant but erect, leaning neither towards the one side nor towards the other. But when the mind begins, however slightly, to incline towards one of the contradictories, without definitely accepting it or rejecting the opposite judgment, it is in the state of *suspicion. Suspicion* is a term of ill meaning in daily speech; it implies some poorly grounded thought of "guilt." Of course, no such meaning attaches to the use of the term in philosophy. Here to *suspect,* to have *suspicion,* or to be in the state of *suspicion,* means to incline towards a judgment and away from its opposite, but without a definite decision. It is the state of the mind in its first impulse or movement towards resolving a doubt. It must be carefully noted that suspicion is not yet the pronouncement of judgment.

In suspicion the mind does not definitely leave one judgment and definitely pronounce a contradictory judgment. In doubt, the mind is balanced in indecision; in suspicion, the mind shows a tendency to "come off balance."

SUMMARY OF THE ARTICLE

In this article we have studied the states of the mind that involve no definite judgment; we have called them *indecisive* states of the mind. The mind is indecisive, does not deliver positive judgment, either when it has no knowledge (as in the state of *ignorance*) or when its knowledge is imperfect and inclines it to opposed judgments (states of *doubt* and *suspicion*).

ARTICLE 2. DECISIVE STATES OF MIND

a) Opinion b) Certitude c) Error

a) OPINION

When the mind definitely decides for one of two contradictory judgments, having reasons for its decision, but realizing that, after all, the opposite judgment may be the true one, the mind is in the state of *opinion*. The judgment itself which is delivered in these circumstances is called *an* opinion. Opinion involves *definite pronouncement of judgment* by the mind, but the judgment is not wholly sure and con-

fident. It rests upon real or apparent *probability,* and the opinion-judgment is called a *probable judgment* or *judgment of probability.*

Probability is the weight and force of reasons or motives sufficient to win the assent of the mind, and yet not sufficient to render the assent entirely certain. *Improbability,* the opposite of probability, is the weakness and insufficiency of motives and reasons to win the assent of the normal and prudent mind. Probability is said to be *intrinsic* when it arises from the very nature of the case in which the opinion-judgment is rendered. Thus it is intrinsically probable that a political candidate who pleads for election to a lucrative office that he may serve his fellow citizens, is not unmindful of his own financial advancement. Probability is called *extrinsic* when it rests upon authority, upon testimony. Thus the opinion of a competent diagnostician on the nature of some internal disorder is extrinsically probable. Extrinsic probability (when it is real, and not merely apparent probability) presupposes intrinsic probability; not, indeed, that one who accepts the authority of the learned must weigh all the reasons upon which their decisions are based, but in the sense that the authority must be known to be competent and honest *in the matters involved in his decisions.* Mr. Thomas Edison's opinions and decisions may well be accepted as probable (that is, as probably true) in the department of applied electricity. Mr. Luther Burbank's

statements about the grafting of plants and the blending of fruits recommend themselves as probable opinions. But the fact that a man is an honest and competent authority in one specialized field is by no means a reason for accepting as *probable* his utterances upon matters about which he has no special knowledge and no recognized competence. Thus Mr. Edison's statements about the soul, and Mr. Burbank's casual comment on theology, carry no weight of motive or reason to win the assent of the prudent mind to recognize them as probable opinions. This is a point for the student of Criteriology to notice and to ponder upon. It is a weakness of the modern mind —perhaps a special weakness of the modern American mind—to regard a notable scientist, or a notable sportsman, or a notable gardener, as a master mind, as one equipped to deliver valuable opinions upon any and all subjects. By all means let us consult our Edisons about electricity, our Burbanks about horticulture, our Tildens about tennis, our Lindberghs about airplanes, and our Macks and McGraws about baseball. But let us avoid the sloppy thinking (it is really no thinking, but silly sentiment) which leads us to accept as probable all sorts of opinions merely because their author is prominent in one department of knowledge or activity. But, above all, let us avoid the stupidity of accepting a person as a universal authority merely because he is prominent in the public eye, prominent in the day's news, prominent in the

field of literature, or in polite society. Opinions are worth only the weight of true authority that is behind them; and authority is worth only what it can show in true and valid reasons for its pronouncements. Let the student of Criteriology show fruits of his training, and when his numbers are multiplied, we shall see a sharp decline in the reverent attention that is now paid to charlatans; we shall see a marked decrease in the number of stupid worshippers that are now to be found in the temples of Shaw, Steffens, Wells, Will Durant, Dr. Watson, and many others.

When the attentive mind, making careful study of the motives of probability, renders its opinion-judgment for that which is seen to be really probable, the judgment is a *prudent* opinion. Any other opinion is *imprudent.*

"Opinions differ," says the adage. When this is the case, we distinguish opinions as *equally probable, more probable, most probable,* or simply *probable,* according as they rest upon grounds that are equally good, better, or notably better than their opposites. or simply satisfactory to the prudent mind.

The student of Criteriology is here advised to take note of two expressions that are heard nowadays upon every side. These expressions are: "an open mind" and "freedom of thought." The value of keeping "an open mind" in matters of mere *opinion* is manifest. Where certainty is not available, it is prudent to refrain from espousing any opinion or theory,

however pleasing it may appear, as the final word, the ultimate truth. But, as we shall see in a later part of our study, there is a *field of certitude* as well as a *field of opinion.* And where certitude is available, whether in science or faith, it is fatuous to talk of keeping "an open mind." It would be as silly to advise the "open mind" when it is possible for the mind to close with certitude upon truth, as it would be to advise one to go through life with "an open mouth," with the stupid gape of the imbecile. What should we think of the schoolboy who would say that he regards as most probable the opinion that two and two make four, but that he keeps an open mind on the subject, alert for further possible discoveries? Yet the "open mind" theory is preached universally to-day. Descartes' universal methodic doubt has degenerated in our times into a universal acceptance of mere opinions and viewpoints as things of value in themselves, and to the practical denial of certitude. In matters of opinion, we repeat, we keep the "open mind"; in matters of truth which is knowable with certitude, we clamp our intellectual jaws tightly upon the solid food of the mind. We deprecate the stressing of the "point of view" when there is question of a knowable "point of fact." We deprecate the modern sentiment that the "closed mind" is the prejudiced mind, or the mind that excludes all further instruction. We close our mind as we close our jaws—to take in and assimilate something of value. And when another

item of value is available, please God, we shall open and close upon *that* in its turn, and so be ready for the next. The modern critic of certitudes (and particularly the critic of the certitude of faith) seems to believe that one's mind (or jaws) should be forever open or they will be forever closed, not realizing, it seems, that either the one or the other state must mean intellectual (or physical) starvation. The sane doctrine is, of course, "Here open, here close; now open, now close and retain."

As to "freedom of thought," the expression *ought* to mean "freedom of *opinion*." Unfortunately, it does not. It comes rather nearer to meaning "slavery of thought." Our Lord expressed a philosophical truth when He declared, "The *truth* shall make you free." The knowledge of truth, *certain* knowledge, frees the mind of ignorance, strikes off the shackles that hinder its advance, liberates it into wider realms of reality. One is not freed by doubt; one is enslaved by the short-sightedness and human limitations that impose doubt. Doubt is a burden, not a liberation. Doubt is a thing to be cast off when possible, not preserved in the name of freedom. The person who prates of freedom of thought, regarding himself as superior because he withholds his assent from any doctrine as final (excepting, of course, his own doctrine that there are no finalities!) is not free, but enslaved. He is as much enslaved as the person who refuses to look at a map or to accept directions in making his

way from one city to another. Such a traveller may regard himself as "free" to try all the roads in the world, but he is certainly not free to go to his destination. The man who is free to reach his goal is the man who will liberate himself from ignorance by consulting a reliable map or taking direction from a competent authority.

By all means let us keep an open mind in the field of free opinion, which, by the way, includes the field of the investigator in the unstable and incomplete sciences. By all means let us have freedom of thought when it means freedom to study and weigh motives in the field of mere opinion. But when we may lay hold of a final and unquestionable certainty, let us grapple it to the mind "with hoops of steel." And when we have not yet achieved certitude in a matter wherein it is achievable, let us not surrender to the weakness and the swank of skepticism: let us work on until we have achieved the indubitable truth. In the direct quest of achievable certitude there is no place for "the open mind" and for "freedom of thought." There is place only for open eyes and the acceptance of fact.

b) CERTITUDE

Certitude is the unwavering assent of the mind to known truth. The certain judgment excludes the tentativeness that marks *opinion.* It is confident, sure, convinced. It implies no fear whatever that,

after all, the opposite may be true; indeed, it rigorously excludes such fear.

Certitude is not only constant, confident, unwavering; it is the grasp of known *truth.* Therefore, strictly speaking, there are no false or erroneous certitudes. The constant and unwavering assent of the mind to what is not true is properly called the state of *error,* not of *certitude.* Still, in the language of every day, we speak of being *certain* of things that are not true, as when we say, "I was *sure* I was right, I was *certain* of my position; events, however, have proved me wrong." Therefore, while there are no false certitudes in the strict sense of the term, there are false certitudes in the less strict sense.

The question of certitude and its possibility is the central question of Criteriology. A detailed study of this question is made in the Third Book of this manual.

c) ERROR

Error is the state of mind in which that which is false is judged to be true, or that which is true is judged to be false.

The cause of error is never to be sought in the knowing-power or faculty as such; it is always something accidentally associated with the use of the knowing-power.

Notable among causes of error are the following: intangibility or obscurity in the object of knowledge;

surpassing and overwhelming excellence in the object; false teaching; careless acceptance of common and uncriticized opinions; native weakness of mind; defective organs of sense; very active imagination; confusion of sense-knowledge and intellectual knowledge; passion; prejudice; precipitateness of judgment; inordinate predominance of personal preference; susceptibility to persuasion such as is evidenced in victims of the "high-powered" advertising common in our day.

SUMMARY OF THE ARTICLE

In this article we have studied the *decisive* states of mind with reference to truth, that is, the states in which the mind has made a *decision,* a judgment, and rests in it. So we have discussed *opinion,* which is constituted by a judgment of the mind, but not by a wholly confident judgment; *certitude,* which results from a wholly confident and unwavering judgment of the mind assenting to known truth; *error,* in which the mind exists when it has given wrong judgment, assenting to what is false as though it were true, or rejecting truth as though it were false. We have spoken, in our discussion of opinion, of the fallacies involved in the universal doctrines of "the open mind" and "freedom of thought."

CHAPTER III

THE CRITERION OF TRUTH

This chapter discusses the ultimate test or norm by which truth is known to be truth. It asserts *objective evidence* as the true criterion, and rejects other criteria as inadequate. The chapter is divided into two articles, as follows:

Article 1. The True Criterion
Article 2. Inadequate Criteria

Article 1. The True Criterion

a) Meaning of *Criterion* b) Objective Evidence

a) Meaning of *Criterion*

Criterion is a Greek word that has been taken bodily into the English language. It means a standard or means of judging anything. Hence, a criterion of truth is a standard or means of judging truth, or, more accurately, it is a means whereby truth is manifested as such.

We are all familiar with various *criteria,* and we use them constantly. If I receive an unsigned letter, I may be able to discover the identity of the writer by means of the handwriting or by the style of the composition. If so, I have an *internal* criterion, a

criterion that belongs to the very make-up of the letter itself, by which I may judge or determine the writer. Unsigned works of art have often been ascribed to their true authors by force of internal criteria, and falsifications and forgeries have been detected by the same kind of criteria. There is also another kind of criterion; it is called *external* because it is not part and parcel of the thing judged (like handwriting, or style, or peculiar characteristics in an artist's work), but is something outside the thing judged, something external to it. Thus, an employer takes "references" as external criteria of the honesty and ability of the person who seeks a position. Thus, the word of one who has seen our correspondent writing us the unsigned letter, is an external criterion by which we judge the identity of the writer.

A criterion may be regarded in various ways. We may define criterion as a means which manifests truth, and in this sense, (a) Our knowing-powers, our intellect and senses, are criteria, for they manifest truth to us. They are called *subjective criteria* because they belong to the knowing-subject. (b) Internal and external factors and qualities of the object known are criteria, for they manifest truth to us. These are *objective criteria* because they do not pertain to the knowing-subject itself, but to the object. Again, (c) the criterion here and now used to determine or manifest truth is called the *proximate*

criterion, the *near* criterion, and if this proximate criterion is known to have value by reason of a further criterion, the latter is the *remote* (or "farther off") criterion of the present determination or manifestation of the truth. We may inquire (d) whether, in the chain of criteria, there is an *ultimate and supreme* criterion, which is the test of all truth.

This, then, is the purpose of our present inquiry: to discover whether there is an ultimate and supreme criterion of truth, and, if so, to know what it is.

b) OBJECTIVE EVIDENCE

The ultimate criterion of truth (and, as we shall see later, the supreme motive of certitude) is called *objective evidence.* The term *evidence* comes from the Latin *e-videre,* "to look out," "to see out." When the mind lays hold of truth, truth "looks out" at the mind; in the phrase of an advertiser, it "smiles right back at you"; it is *evident.* Evidence is called *objective* to indicate that the criterion of truth is not something that proceeds from the knowing-power, but belongs to the object of knowledge and marks that object as true for the grasp of the knowing-power.

Evidence is that light and clearness in the object which manifests it to the mind as true. Evidence has been poetically defined as "the splendor of truth manifesting itself to the mind." Evidence is neither more nor less than objective truth, inasmuch as this

causes the mind to enunciate judgments that are logically true. In a word, objective evidence is the intelligibility, the "understandability," of things manifested to the attentive mind. It is *the object itself as clearly known.*

Sometimes truth is so evident that it not only requires no process of reasoning to reach it, but obtrudes itself, so to speak, upon the mind. It is like the daylight in an unshuttered room; its presence is not to be doubted. Such evidence is called *immediate* because no medium, no process of discovery, is necessary to find it and recognize it. Truths that are immediately evident are called self-evident. Thus the truth that the sun is shining to-day, is immediately evident; it is a self-evident truth. So also is the truth that "A totality is greater than any one of its component parts." So also is the truth that "A thing cannot be at the same time existent and non-existent." So also is the truth, "I exist," and the truth, "I can think and reason validly."

Sometimes, however, truth is not immediately known; a medium is required for the mind to reach it, a process of reasoning, a "digging out" of evidence. In this case the evidence itself is called *mediate,* and the truths known by such evidence are not self-evident, but *mediately evident* truths. Such truths are like the daylight that one admits to a tightly shuttered room; the process of loosing and opening the shutters is required before the light shines in.

Thus it is not immediately evident (not self-evident), but *mediately* evident, that "The sum of the angles of any triangle is 180°."

The ultimate criterion of truth (that is, objective evidence) is, therefore, not a mechanical thing, not a device that may be applied to a doctrine to test it, as a socket or "outlet" is used to test an electric bulb. It is the visibility of objective truth, and when this visibility is not immediately evident, it is sought for by attention, by study, by investigation, by analysis of the thing or doctrine in question into its simple elements, by the application of reason. With respect to truths taken on the authority of speakers or writers, objective evidence is found in the bases of such authority, that is, in the known truthfulness and knowledge of the speakers and writers. With regard to doctrines of the experimental order (such as the doctrine that water is composed of two parts hydrogen to one part oxygen), objective evidence is discovered by careful experiment and observation. Often a large amount of evidence eludes the investigator, and leaves him uncertain of truth and constituted in the state of doubt or, at best, of opinion.

That there is a criterion of truth, and an ultimate criterion, is not, therefore, a guarantee that all truth is knowable to man. Nor is it a guarantee that all knowable truth may be fully grasped by means of a simple test, directly applied. It cannot be too often

repeated that objective evidence is not a trick, not a charm, not a mechanical device. It is objective truth itself as manifest through attention, reflection, reasoning, experiment, observation, analysis, synthesis. Truth itself is a lightsome thing. When it is not obscured by complexities, it stands self-revealed, self-evident to the attentive mind. When complexities obscure it, it may be possible (by reasoning, analysis, etc.) to clear these away and allow the native light of truth to shine; then it is mediately evident to the mind. But the evidence, whether immediately or mediately attained, is the light and splendor of truth itself, manifesting itself to the mind.

Error, as we have seen, and as daily experience testifies, is possible. It is possible because objective evidence may not be fully had, or may not be properly sought; because man's mind is lazy and apt to be headlong or precipitate in judgment; because man is prone to allow likes and dislikes to influence his mind, and his will may refuse to allow the intellect to study and investigate a matter with a view to knowing the truth; because man is prone to judge on insufficient evidence; because man's pride leads him to pronounce judgment where judgment is not justified. But in every case where truth is known, it is known because there is evidence for it, evidence that is truly objective, whether internal or external, direct or indirect. And ultimately this evidence resolves

itself into the splendid luminosity of truth itself, shining visibly to the intellectual vision, not to be denied. "It shines right back at you."

SUMMARY OF THE ARTICLE

In this short article we have discussed the meaning of *criterion,* and have distinguished criteria as *internal* and *external, subjective* and *objective, proximate, remote,* and *ultimate.* We have asserted *objective evidence* as the *ultimate criterion of truth,* and have explained the assertion. We have discussed the meaning of *mediate* and *immediate* evidence.

ARTICLE 2. INADEQUATE CRITERIA

a) Instinct b) Sensibility c) Utility d) Authority e) Self-Awareness

a) INSTINCT

Thomas Reid (1710–1796) and his followers, who are known in the History of Philosophy as "The Scottish School of Common Sense," taught that the ultimate criterion of truth is a blind instinct by which the mind is impelled to accept things as true. This instinct is called the "faculty of inspiration and suggestion," or, more briefly, "common sense." According to this theory there is in us a tendency or urge of nature by which we are forced, through the very constitution of our mind, to assent to some things as

true. The theory is altogether inadequate and untenable. A criterion manifests truth; a blind instinct manifests nothing. Given such an instinct, man would still ask *why* it should force his assent to certain things as true. Hence this instinct-theory is neither a *criterion,* nor is it an *ultimate* explanation of our knowledge of truth.

b) SENSIBILITY

Some philosophers have offered as the ultimate criterion of truth a fine feeling of sensibility, a disposition to react delicately and surely to truth, without being able to justify our conviction intellectually. Such was the doctrine of Jacobi (1743–1819). Like the theory of "common sense," this theory of sensibility offers us as a criterion something which has no power to *manifest,* but only to *sway* or *compel.* The reasoning mind still asks why it should be inclined or compelled to accept a thing as true. The mind still looks for a criterion which will manifest the truth, will show it shining in its visibility, will *evidence* the truth. Sensibility for truth can be neither a criterion nor an ultimate explanation of our knowledge of truth.

c) UTILITY

William James (1842–1910) was the foremost exponent of the theory called *Pragmatism,* which maintains that the workableness, the practicability,

the usefulness of a thing for private or public life, is its test of truth, and is the ultimate criterion of truth. That which works is true; that works which is found useful. The doctrine offers us no ultimate criterion. Even if utility be recognized as a criterion of truth, there is still to seek the reason for utility itself. *Why* is this true thing useful? What end or aim or purpose does it serve? The Pragmatist answers, "It serves human life; it offers an enlargement of human life." The obvious reply takes the form of a further question, "What is meant by an enlargement of human life? Unless I know what human life is for, how can I know what serves its ends? I still need *evidence* of the meaning and purpose of human life." Hence, utility is not a valid, nor an ultimate, criterion of truth.

d) AUTHORITY

Authority may indeed manifest truth to us, and, in so far, it is a criterion of truth. But it cannot be the ultimate criterion of truth. For authority is based upon something else, and we must know its bases before we can know its value as a source of truth. We must know that the authority (speaker or writer) is a truth-teller; that he is understood rightly; that he can have no motive to deceive; that he is well informed in the matter about which he bears testimony. Knowledge of these things gives us *evidence* of the

truth which is manifested by authority; thus evidence, and not authority, is the ultimate criterion.

Daniel Huet (1630–1721) taught that Divine Revelation, that is, the authority of God speaking, is the ultimate criterion of all truth. Since the acceptance of authority is faith (Latin, *fides*), this doctrine is called *Fideism.*

De Lamennais (1782–1854) taught that the mind of individual man is powerless to attain truth; the "general mind," the consensus of all humanity, is the means and criterion of truth. Thus the authority of the human race is made the ultimate criterion of truth.

De Bonald (1754–1840) held that God instructed our first parents and gave them speech wherewith to impart truth to their progeny, and so truth has come down through the ages by the authority of human *tradition,* which is the ultimate criterion of truth. This doctrine is known as *Traditionalism.*

e) SELF-AWARENESS

Some philosophers have fallen back upon a *subjective* criterion as the ultimate criterion of truth, and they assert that the mind itself together with its clear and distinct knowledge is such a criterion. Protagoras (5th century B. C.) made man "the measure of all," and so he made the mind and the senses the ultimate test of truth. He also made truth *rela-*

tive, for he taught that what one individual holds as true, is true for him, and what others hold as true, is true, respectively, for each of them. With this ancient skeptical doctrine that of Immanuel Kant (1724–1804) has a close affinity. For Kant does not make knowledge consist in the conformity of the mind to reality, but in the filtering of reality into the mind through innate mental forms which qualify and shape it. Thus the mind's forms become the ultimate criterion of truth. Galuppi (1770–1846) makes our consciousness, our mental awareness of truth, its ultimate criterion.

None of these subjective criteria is acceptable as the ultimate criterion of truth. Even if we could accept any or all of them as criteria, we should still be thrown back upon the necessity of finding reasons for our acceptance; none of the criteria would be ultimate. Only the visibility of objective truth manifesting itself to the mind (that is, *objective evidence* alone) can satisfy the mind and leave no further question; only this can be accepted as the ultimate criterion of truth.

SUMMARY OF THE ARTICLE

In this article we have made a brief study of several fallacious theories about the ultimate criterion of truth. We have found inadequate the doctrines that present as such a criterion a blind instinct, a

sensibility for truth, usefulness, authority, or awareness of mind and its clear ideas. We rejected these faulty theories by reason of their own inadequacy, and in the light of our earlier study of objective evidence as the ultimate criterion of truth.

BOOK THIRD

CERTITUDE

After studying Knowledge and Truth, we come to the study of Certitude. Of course, Truth is not possessed except by Knowledge, and Knowledge is not worthy the name unless it is marked by Certitude. Knowledge, Truth, and Certitude are inextricably bound up together. We have tried to make distinct studies of Knowledge and Truth. Now we are to study both inasmuch as they are possessed with Certitude. This Book is divided into five chapters, as follows:

CHAPTER I

THE NATURE OF CERTITUDE

This chapter studies the meaning of the term *certitude,* classifies certitude, and discusses its degrees. The chapter is divided into two articles, as follows:

Article 1. Definition and Classification of Certitude
Article 2. Degrees of Certitude

ARTICLE 1. DEFINITION AND CLASSIFICATION OF CERTITUDE

a) Meaning of *Certitude* b) Kinds of Certitude

a) MEANING OF *CERTITUDE*

Certitude may be defined as *the firm and unwavering assent of the mind to known truth.*

On the part of the *subject,* certitude requires *a firm and unwavering assent,* a steadfast adherence of mind to object. On the part of the *object,* certitude requires that this be *truth* and known as such.

In itself or *formally,* certitude is a *state of mind.* It is the condition of the *subject.* But it is not something which the subject produces within itself. It is a state of the subject which results from the *manifestation of truth;* the subject is made certain because

truth is manifested to it. Now, the manifestation of truth is, in ultimate analysis, due to *evidence,* which is "the visibility of objective truth manifesting itself to the mind." Hence, evidence is not only the criterion of truth; it is also the *motive of certitude;* it moves the mind to an unwavering assent to truth.

Formally subjective, certitude is *causally* objective. It is the objective truth, the evidenced truth, which begets the state of mind called certitude.

Certitude, as it exists in the subject, is a firm and unwavering assent and adherence of the mind to known truth. Its firmness excludes all hesitancy, all fear that perhaps, after all, the mind may be assenting to what is not true. Thus certitude differs from *doubt* and *suspicion,* in which there is no definite assent of mind, and from *opinion,* which is, at best, a hesitant or tentative assent involving fear that the opposite of what is assented to may be true. Certitude rigorously excludes all fear of error.

The firmness of the certain judgment, the certain assent, is due to a reasoned grasp of the motive of certitude. It, therefore, involves some measure of reflection on the part of the mind, some weighing and evaluating of motive. The so-called "spontaneous certitudes" are not full and perfect certitudes until the mind adverts to the weight of motive, of evidence, which calls for its firm assent. Of course, this does not mean that a true certitude requires of the mind a definite process of point-by-point checking ac-

cording to a precise schedule of counts; it means that the mind not only gives firm and full assent, but, in some measure, realizes that it is right and reasonable to give such assent, before it is constituted in the state of perfect certitude.

As we have remarked in an earlier paragraph, it is usual to speak of "false certitudes," that is, of the state of the mind as *certain* when it firmly assents to what is not true. Such a false certitude is indicated in the statement, "I was certain I was right, but I discovered that I was in error." Now, in spite of this usage, in spite of this custom of speaking of false certitudes, we reaffirm our definition of certitude as the unwavering assent and adherence of the mind *to known truth.* The interest of Criteriology does not centre on the existence or possibility of false certitudes, but of true certitudes. Criteriology is interested in discovering and proving that the mind can know *truth with certainty.*

Sometimes we find certitude defined as the state of the mind which adheres firmly *to one part of a contradiction* without fear that the other part is really true. This definition is quite satisfactory if we understand that the *part* adhered to is *known truth.* The terms of the definition, however, call for a word of explanation. By a *contradiction* is meant the opposition of two judgments which stand flatly and accurately opposed. By *one part of the contradiction* is meant one of the two contradictory judgments. Two

contradictory judgments exhaust the possibilities; they leave no ground between them. Between "it is" and "it is not" there is no neutral ground; it is one or the other; the possibilities are exhausted; and these are *contradictories*. Now, any relation which a judgment may express is capable of being considered in contradictory aspects, in *two* and *only two* contradictory aspects, for these two exhaust the possibilities; hence, one of the two must be true, the other false. Between the two judgments, "It is black" and "It is not black," there exists perfect contradiction; one of the judgments must be true, the other must be false. There is nothing actual, nothing possible, in the realm of things of which color may be predicated, that is, neither "black" nor "not black." Thus the two contradictory judgments "exhaust the possibilities." The two contradictory judgments constitute *a contradiction* of which each judgment is *a part*. This explains the definition of certitude just given. The student is warned, however, to hold fast to his accurate knowledge of contradiction, and not to allow it to become confused with *contrariety*. Contrary judgments are opposed, and flatly opposed, but they are not *accurately* opposed; they do not exhaust the possibilities; they leave a middle or neutral ground between them. Thus the judgments, "It is black" and "It is white," are opposed, but there is a wide ground of possibilities between them; many things of which color is predicable are neither black

nor white, but red, or green, or yellow, or blue, and so on. The judgments, "It is white" and "It is black," are *contrary* judgments, not *contradictory* judgments.

To sum up: Certitude is the unwavering assent and firm adherence of the mind to known truth. It is the adherence of the mind to the true part of a contradiction, without fear that the other (false) part is really true. The mind which unwaveringly adheres to what appears to be true, but is really false, is constituted in the state of *error,* and not of true certitude.

b) KINDS OF CERTITUDE

1. *Subjective and Objective Certitude.*—Certitude is properly a state of mind with reference to truth; it belongs to the thinking subject. Hence, certitude is formally *subjective.* Yet causally it is *objective,* and hence the term *certitude* is sometimes transferred to the objective truth to which the mind assents. Therefore, the term *subjective certitude* means the unwavering *assent of the mind* to known truth; *objective certitude* is the *truth* to which the mind assents. The statement, "I am certain that God exists," indicates subjective certitude. The statement, "The existence of God is a certainty," indicates objective certitude.

2. *Metaphysical, Physical, and Moral Certitude.*—Metaphysical certitude is the unwavering assent of the mind to what things in their essence and nature

must be. Our certitude that man is an animal, or that a totality is greater than any one of its component parts, is *metaphysical,* for the very concept of man's essence, the very ideas of totality and part, make the judgments inevitable. Metaphysical certitude is also called *absolute certitude.*

Physical certitude is the unwavering assent of the mind to what expresses the order of nature and the consistency of natural laws. Our certitude that a dead man will not return to earthly life is *physical;* so also is our certitude that snow must be white, and that good seed will sprout when planted under favorable conditions in fertile ground.

Moral certitude is the unwavering assent of the mind to what expresses the normal mode of human conduct. Thus we have *moral* certitude that a mother will love her child. It is to be noted in passing that the expressions, "It is morally certain," and "It is a moral certainty" are "newspaper English" for a greater or lesser degree of "probability." These expressions, as used casually in unscientific speech, are not to be confused with the terms *moral certitude* and *morally certain* as used in Criteriology. For these terms do not indicate a mere *opinion,* however probable, but a true certitude, a full and unwavering assent of the mind upon evidence taken from the normal human mode of action, evidence which the mind finds sufficient to win its full assent.

That which is metaphysically certain cannot be

otherwise, cannot even be conceived of as existing otherwise. That which is physically certain can be conceived of as existing otherwise, but not unless the order of nature be suspended by virtue of a higher law. Thus physical certitude is certitude of that which must be, unless a miracle intervenes. That which is morally certain can be conceived of as existing otherwise, and may in fact exist otherwise without the intervention of a miracle, but not without the intervention of a human will which acts in a manner contrary to the normal and rational mode of *human conduct,* that is, of such conduct as proceeds from the deliberate will of a normal person. The basis and evidence of metaphysical certitude is the very essence of things; that of physical certitude is the constancy of nature; that of moral certitude is the constancy or normal human conduct.

I am metaphysically certain that a circle cannot be square. I am physically certain that bodies at rest tend to remain at rest. I am morally certain that a man of virtue will not suddenly become vile.

Another phase of moral certitude is that which the mind achieves by adverting to *the evidence of normal human conduct in the circumstances.* If I am in doubt whether a bill is paid; if I can find no evidence in writing that it was or was not paid; then I consider the character of the debtor, and the character of the creditor. I find that the debtor is scrupulously honest. I find that the creditor is exact in keeping accounts.

By the evidence of these facts, by the evidence of *what an honest debtor and a business-like creditor would normally do in the circumstances,* I can arrive at moral certainty that the bill was paid. But if I am unable to determine the issue by such investigation; if the character of the debtor and the creditor leave me in doubt about the bill, then I fall back upon a *reflex* principle, *viz.,* "A law of doubtful application cannot bind to certain obligation." This principle expresses the normal, sane view of prudent men; it is a dictum of common human sense. Hence, direct methods failing, I may resolve my doubt by invoking this reflex principle and may achieve *moral certitude* thereby.

3. *Certitude of Science and Certitude of Faith.*— The certitude of science is the unwavering assent of mind to a truth that is *understood* in itself, a truth that is known because it is self-evident (*immediate scientific certitude*) or because it has been clearly reasoned out (*mediate scientific certitude*). The certitude of faith is the unwavering assent of the mind to a truth known on authority. If the witness, the authoritative propounder of the truth to be believed, is God Himself, then our certitude is that of *divine faith.* If the witness be a man, or men, the certitude is that of *human faith.*

Certitude of faith is not a blind or unreasoning certitude; indeed, certitude is by definition a reasonable assent of the mind to known truth. The truth to

which the assent of faith is given is known indirectly, that is, it is known in *the recognized validity of the testimony which evidences it,* but the point is that *it is known.*

The certitude of science and that of faith will be discussed in detail in a later chapter.

4. *Natural and Supernatural Certitude.*—Natural certitude is the unwavering assent of mind to truth manifested (scientifically or by human authority) to unaided human reason. Supernatural certitude is the firm assent to truth manifested under the light of Revelation to a mind fortified by divine grace.

5. *Common and Philosophical Certitude.*—Common or vulgar certitude is the certitude of daily experience, the certitude into which we make no scientific investigation. By common certitude we are sure of our surroundings, of our own feelings, of our likes and dislikes, of our actions and employments. By common certitude a man knows that he is hungry or thirsty, that he feels well or ill, that he is called by name, that he is successful or unsuccessful in business, that he must go to work or that he may take a holiday, and so on. In many matters this vulgar or common certitude is true certitude or can become full-fledged certitude by a little reflection. For *common certitude* is our state of mind with regard to many self-evident truths that bear upon the rational conduct of life, individual and social, physical, mental, and moral. In these matters the spontaneous move-

ment of nature which leads to the assent of common certitude cannot be deceiving or nature herself is deceiving; and if nature be deceiving, there can be no trusting of natural powers, and no achieving of science or certitude at all.

Philosophical certitude is that which comes of the mind's explicit investigation and grasp of the ultimate reasons and motives for its unwavering assent.

SUMMARY OF THE ARTICLE

In this article we have defined *certitude* and have studied the definition in detail. We have listed certain kinds or varieties of certitude, explaining each in turn. All these varieties are aptly grouped into two classes, two kinds of certitude, *viz., certitude of direct evidence,* and certitude of indirect evidence, that is, *certitude of faith.*

ARTICLE 2. DEGREES OF CERTITUDE

a) Meaning of Degrees of Certitude b) Actual Degrees of Certitude

a) MEANING OF DEGREES OF CERTITUDE

A "degree" or "grade" suggests a step in a series, like a rung in a ladder or a stage in a stairway. If there are degrees of certitude, this must mean that some things are more certain, some things less certain, some things most certain.

Certitude has two points about it that may be considered when we ask whether there are or can be degrees of certitude. One of these is the fact that certitude is a firm assent of the mind *excluding fear of the contradictory.* The other point is that certitude rests upon motive, upon evidence, and this may be investigated to see whether it admits of degrees.

Considering the first point, *viz.,* the exclusion of fear of being wrong, we find no degrees of certitude. For every certitude, to be certitude at all, must perfectly exclude all fear of error. This is part and parcel of the very definition of certitude.

Considering the second point, *viz.,* the motives of certitude, we discern degrees, and we shall study them in the next paragraph.

b) ACTUAL DEGREES OF CERTITUDE

The assent of the mind to known truth may be regarded as subject to grades or degrees according to the character of the motives upon which the mind relies in giving its firm assent. Thus *metaphysical certitude,* founded as it is upon the very essences of things, is wholly *absolute,* knows no conditions, no "if's" or "provided that's." *Physical certitude* rests on the regularity of nature, and depends upon the uninterrupted and unthwarted continuance of natural processes. It rests upon the condition, "provided that nature is not interfered with; provided there is no miracle." Hence metaphysical certitude is a higher

grade or degree of certitude than physical certitude, inasmuch as the absolute or unconditioned is a higher grade than the conditioned. To illustrate: my certitude that a circle is "perfectly round" is metaphysical certitude, for perfect roundness is the very essence of the circle. Thus I know that a "square circle" is impossible, that it simply cannot be, even by a miracle. My certitude that the dead and buried Lazarus will not walk again among men in earthly existence is physical certitude; it rests upon the constancy and consistency of nature and upon the condition that no miracle intervene to make an exception to that consistency. But a miracle does intervene; the condition is not fulfilled; Lazarus comes back to life. Thus physical certitude is a lesser grade of certitude than metaphysical certitude.

Again: moral certitude, while true certitude, depends upon the rational and normal conduct of men. I am certain that a mother loves her child, even though a rare exception to this rule may occur without the intervention of a miracle. Hence moral certitude rests upon a condition that is more likely to have an exception than the condition upon which physical certitude rests; in so far, moral certitude is a lesser degree of certitude than physical certitude.

Metaphysical, physical, and moral certitude are, therefore, not only classes of certitude; they are *grades* or *degrees* of certitude. They are degrees of

certitude because they rest upon motives of graded necessity for their acceptance by the mind.

In a word, there are degrees of certitude founded upon the motives which impel the mind to give its unwavering assent. But there are no degrees of certitude in the sense of degrees in the exclusion of the fear of error which characterizes the unwavering assent. If the smallest fear of error should creep in, the assent of mind would no longer be *certitude,* but *opinion.*

SUMMARY OF THE ARTICLE

In this very short article we have studied the interesting and important matter of degrees of certitude. We have seen that certitude admits no degrees in its exclusion of the fear of error, but does admit degrees with respect to the motives upon which it rests. The degrees of certitude in the descending scale are *metaphysical, physical,* and *moral* certitude.

CHAPTER II

THE EXISTENCE OF CERTITUDE

This chapter studies the doctrines that have been propounded by philosophers on the existence of certitude. We choose to arrange our discussion under four heads, *viz., Dogmatism,* the doctrine which asserts the existence of certitude, that is, the human possibility of acquiring certitude; *Skepticism,* the doctrine which denies the existence or possibility of true certitude; *Agnosticism,* the doctrine which limits the field of certitude; *Relativism,* the doctrine which teaches that truth changes and that certitude is, therefore, a temporary and tentative thing, itself subject to change. The chapter is accordingly divided into four articles, as follows:

Article 1. Dogmatism
Article 2. Skepticism
Article 3. Agnosticism
Article 4. Relativism

ARTICLE 1. DOGMATISM

a) Meaning of *Dogmatism* b) Exaggerated and Qualified Dogmatism c) The Procedure of Dogmatism

a) MEANING OF *DOGMATISM*

Dogmatism is the doctrine of those who make an unqualified affirmation of the existence of certitude.

It is the doctrine that truth can be known with certitude.

The term *dogmatism,* and its cognates *dogma* and *dogmatic,* are derived from the Greek verb *dokein,* which means "to think." Thus it appears that there is no etymological ground for the repulsive meaning which attaches to these terms as used in modern casual speech. Most persons of our day think that a *dogma* is a declaration, defiant and somewhat brutal, which docile persons are expected to accept as truth, without asking for evidence. And a *dogmatist,* or *dogmatic person* is currently understood to be a hard-headed (and thick-skulled) individual, equipped with a set of ready-made judgments that are warranted to resist the action of reason. It would come as a surprise, and perhaps as a shock, to the modern mind to find that the hated word *dogma* is a very mild synonym for *thought,* and that a *dogmatist* or *dogmatic person* is merely a person who thinks. But *thought* and *thinker* are the literal translations of *dogma* and *dogmatist.* And thought may be true and certain thought, and a thinker may think rightly and validly. So we employ the term *dogma* to mean a true and certain thought, or, more precisely, that which may be known by true and certain thought as *a self-evident truth.* And a *dogmatist,* in our use of the term, is a philosopher who professes the doctrine that certitude is achievable by the human mind.

A *dogma* is a self-evident truth. That is the mean-

ing of the term as used in philosophy. In religion, a dogma is an official pronouncement of what belongs to the body of truths and laws delivered by Christ to His Church for the acceptance and belief of all His followers. But for Criteriology, a dogma is a self-evident truth. And dogmatism is the doctrine which maintains that all certitudes are built up upon the ultimate basis of self-evident truths.

b) EXAGGERATED AND QUALIFIED DOGMATISM

1. *Exaggerated Dogmatism* maintains that it is necessary to begin our study of the possibility and existence of certitude with the assertion of fundamental truths. These truths are self-evident, and hence incapable of *demonstration.* For demonstration is a proof which manifests a truth by analyzing it and showing it in more simple and elemental terms than those of its complete expression. Demonstration is the setting forth in more evident terms of that which is in itself less evident. But self-evident truths are *simple;* they cannot be analyzed into terms that are less complex than themselves, for they have no complexity in themselves. There can be nothing more evident than what is self-evident. Hence self-evident truths are incapable of demonstration. A *demonstrable* truth is one that is not self-evident, but is to be evidenced by demonstration. Thus the truth that the angles of a triangle are equal to two right angles is capable of demonstration, and it is demonstrated by

the schoolboy as he works out the theorem step by step and exhibits a detailed proof. His proof is the "demonstration"; it is the detailed analysis of a truth that is not self-evident. A self-evident truth cannot be demonstrated, and it *does not need* demonstration, for it contains in itself the light of truth which evidences it to the mind. Such a truth needs only to be known, and the knowing mind, in its very act of knowing the truth, sees that *it must be so* and cannot be otherwise.

The fundamental truths which are necessarily to be accepted before any beginning of the study of certitude can be made, are three, and only three. These truths are: (a) *The First Fact,* "I exist"; the existence of the thinker must be admitted before we can raise the question as to the value or validity of his thought. (b) *The First Principle,* "A thing cannot be at one and the same time existent and non-existent." This is called the *Principle of Contradiction.* Unless it be admitted, of what use could our study of certitude be? We might find certitude an existent thing, but, unless we employ the principle of contradiction, it might be non-existent at the same time, and our study would be futile. Unless the principle of contradiction be admitted, no thought has any value, and science perishes. (c) *The First Condition,* "I can know truth; I can reason validly." Unless this condition be admitted, our inquiry is fatuous from the start. Of what use will my studies into this ques-

tion be, if my studies themselves are without value?

The three primary truths, the three fundamental *dogmas,* are self-evident truths. Nay, such is their self-evidence that they cannot be denied without being implicitly asserted. If I should say, "I deny the first fact; I deny that I exist," I should contradict myself and assert my existence, for my statement amounts to this, "*I* (who am here to make a statement) do not exist (I am really not here)." If I do not exist, how can I make any statement? To deny my existence is to assert it, for I assert myself as existing to make a real denial. Similarly, to deny the principle of contradiction is to assert it. For if I deny that "a thing cannot be at one and the same time existent and non-existent," I must mean that this state of affairs indicated by my denial is so *and not otherwise;* I contradict myself; my denial turns into an affirmation of what I deny. Again, to deny the validity of thought is to assert it. For if I say, "I cannot know truth; thought is not valid," I present that very statement as true and as the expression of valid thought.

Upon the firm basis of the three primary and fundamental truths the philosophy of certitude is built up. True, the existence of certitude cannot be demonstrated without "begging the question," but it can be proved indirectly by: (a) The fact that all men admit perforce the primary certitudes; (b) The natural tendency of the mind to grasp things with unwaver-

ing assent; (c) The requirements of individual and social life which cannot be conducted rationally without recognition of *certain* facts, *certain* duties, *certain* obligations.

2. *Qualified Dogmatism* does not begin its theory of certitude by asserting incontrovertible truths. It refrains from considering them at the outset, and merely engages in a close study of the acts of the mind, that is to say, those acts that can express truth if it be attainable, *viz., judgments.* If the judgments of the mind are found to square with reality, then the validity of thought is *inferred* from this agreement, this "squaring with facts." As Cardinal Mercier puts it, "To use a homely comparison, a good digestion is the only proof of the stomach's ability to digest properly." So the squaring of the mind's judgments with reality is the only proof of the mind's ability to think validly. The mind makes some spontaneous and necessary assents; it is the part of philosophy to examine these assents, to reflect upon them, and to find what force or power is in them to win the unwavering adherence of mind. Reflection will show that certain spontaneous assents are due to the fact that the propositions which express them are identical in subject and predicate, or, subject and predicate are such as to require conjunction. Such propositions (that is, expressions of *judgments*) are *seen* by the reflecting mind to be necessary and cer-

tain; they are *seen* to be true; the light of truth is in them and it draws and compels the assent of the mind. In a word, such propositions or judgments are *self-evident*. Other true and certain judgments that are not spontaneously or necessarily known as such, require demonstration, and demonstration will ultimately show them to be based upon *self-evident* certitudes.

Whether one favors Exaggerated Dogmatism or Qualified Dogmatism, one sees that the basis of certitude in each system is the same, to wit, *evidence,* and that the roots of demonstration are the same, *viz., self-evident truths.*

Of the two systems, Exaggerated Dogmatism (called so by its enemies rather than by those who follow it) seems to be the more forthright and scientific. It begins with a plain assertion of indemonstrable truths, but its assertion is not blind or unwarranted; it is a wholly reasonable assertion. It is the recognition of something that is *there,* and so undeniably there that denial means assertion. It does not reject, but asserts the need of reflecting upon one's judgments to discover their motive and objective value. On the other hand, Qualified Dogmatism starts with a great profession of fairness, of neutrality with regard to the primary truths. Yet it assumes them at the outset, no matter how warily it moves to avoid the assumption. If (as in Cardinal Mercier's

"homely example") a good digestion is the only proof of the stomach's ability to digest properly, it may be pointed out that there can be no question of digestion or ability to digest unless the existence of the stomach is admitted to begin with, and the possibility of getting food into it. Nor will reflection upon the mind's acts bring any valuable conclusion, unless the principle of contradiction be tacitly assumed. Nor will it avail to assert the need of reflection if the value and validity of reflection be questioned. The "neutrality" of the Qualified Dogmatist quickly disappears. Indeed, it must be so. Neutrality in this matter is impossible. To be neutral is to be caught "on dead centre." To be neutral is to render oneself incapable of making a start. To be neutral is to paralyze one's powers at the outset. And, for the matter of that, to assert neutrality, to say, "One must have no positive position as to the primary truths," is to make a very definite and positive declaration of position. The exponents of Qualified Dogmatism speak of Exaggerated Dogmatism in a very unfair manner. They seem to think that the assertion of the primary truths is a piece of unwarranted theorizing divorced from experience. They seem to think that the assertion of the fact of existence is like the assertion of the existence of the stomach by one who has never digested a morsel of food. They appear to regard the assertion of man's capacity for valid thought as on a par with the assertion of the ability to walk by one

who has never used his legs. Nothing could be more unjust; nothing could be less truly critical of the position of Exaggerated Dogmatism.

c) THE PROCEDURE OF DOGMATISM

A dogma is, as we have said, a self-evident truth. It is a truth too simple to be further analyzed, and hence it is indemonstrable. But to say that such a truth cannot be demonstrated is not to say that it cannot be proved. It may be proved (but not demonstrated) in two ways. First, by its own luminosity, its own light of truth, which draws and compels the assent of the normal mind. Secondly, it may be proved by the absurdities that follow its denial. Obviously, in studying the truths, it is wise to begin with simple self-evident truths. This procedure does not "beg the question" (that is, does not assume as proved at the outset the very thing to be proved). It is a justified procedure, for it recognizes the requirements of rational life that must be taken into account before we can even begin to study the question of certitude. Even the skeptic who denies the existence of scientific or philosophical certitude admits the existence of common or vulgar certitude by which one is aware of one's own existence and of the ordinary facts and experiences of life. The skeptic denies, however, that this common or vulgar certitude has the character of true certitude, and he reduces it to a mere working probability. It is precisely here that

the Scholastic (the Dogmatist) differs from the skeptic. The Scholastic asserts that in many instances vulgar certitude has the right to the name of true certitude. He argues that it is wholly inconsistent and unscientific to deny the character of scientific certitude to that which is so simple that it cannot be demonstrated by analysis into elements more simple than itself. Surely, the whole drive and effort of proof is towards laying bare the solid foundations of knowledge. And surely the quest for detailed proof leads at the last to that which is not resolvable into further details. We begin with self-evident truths. We assert that these are true certitudes. We base our assertion upon the argument that such truths are seen by the reflecting mind to be inevitable, that they contain in themselves the light of objective truth, which compels the assent of the mind, which makes the mind *see* them. We base our assertion upon the further argument that it is impossible to deny such truths, for the very denial amounts to an affirmation.

Some certitudes, then, are self-evident and inevitable. But most certitudes are not of this character. Sometimes the evidence is truly in the truth or certitude, but requires analysis and demonstration to bring it to view. So, in addition to the truths that are immediately self-evident, we have a second class of truths whose evidence is *mediate,* but still *internal* to the truths. Such a truth is well exampled by our familiar mathematical theorem, *viz.,* the angles of a

triangle are equal to 180°. The young student of geometry does not see the necessary truth of this theorem at the outset. He must work it out; he must prove it, moving with careful and connected steps; in a word, he must demonstrate it. Once the demonstration is made and fully understood, it is impossible for the mind to withhold its assent. And it is obvious that the mind does not yield its assent by reason of the authority of teacher or text-book; it is equally clear that the mind is not merely following a bent or bias. The mind yields its assent to the truth because *it sees that the truth is there.* It yields its assent in a true certitude-judgment, because it has objective evidence, evidence which not only invites, but compels its assent. The mind sees the objective truth just as truly as one sees the contents of a wrapped-up parcel that is opened and cleared of its wrappings in daylight.

In self-evident truths, and in truths which are demonstrated by the laying bare of their internal evidence through demonstration, the mind yields an assent that it is impossible to withhold. Now, to deny value to this necessity of our rational nature, this necessity of assenting to what is intellectually apprehended as objectively true, would be to destroy all possibility of discussing this or any other question. All science, and all scientific inquiry, rest squarely upon the fact of the consistency of nature, a consistency not blindly asserted, but hourly expe-

rienced as a fact. And nature would be utterly inconsistent if she imposed upon us the necessity of living a rational life and at the same time imposed the further necessity of assenting irrationally to falsity and illusion in the guise of certitude.

To proceed. Some certitudes are neither self-evident truths nor truths demonstrable by laying bare of mediate but internal evidence. Some certitudes are the fruit of *external* evidence. When we assent with certitude to a historical fact, such as the discovery of America by Columbus in 1492, we do so by reason of objective but external evidence. There is nothing in the statement, "America was discovered by Columbus in 1492," to warrant or require our immediate assent. Nor will any analysis of the proposition show it to be the expression of objective truth. This is something that we accept on *authority,* upon *testimony.* But where is the *evidence* of authority? We can accept nothing as a certitude without evidence, and evidence does not consist in the fact that somebody or anybody has said that a thing is so. No, the evidence is found in the *bases of the authority.* If it can be known that this statement, "America was discovered by Columbus in 1492," is made by one who: (a) knows whereof he speaks; (b) is a truth-teller; (c) has no present motive to depart from his truthfulness and deceive us; (d) has expressed himself in a plain and unmistakable manner, then the mind can assent confidently and can have true certitude.

And if the statement be the enunciation of an important fact, well known to many, and amply warranted by many reliable documents or witnesses, the mind gives assent all the more readily. Yet the certitude is not *metaphysical;* such a degree is impossible in the case. It is true moral certitude, based upon the objective evidence found in the reliability of the testimony rendered, and in the practical impossibility of deception.

Finally, there are some certitudes in which the unwavering assent of mind is given by a still more indirect sort of evidence than that which lies back of authority. This is the *evidence of the imprudence of doubt.* In this case the bases of authority are not manifested, but there is sufficient reason shown in the situation and its circumstances to indicate that doubt would be silly, and that the firm assent of mind should be yielded. If you inquire of a passing citizen the way to a public building in his city, it is indeed possible that he should misinform you. Yet you accept his word unhesitatingly, provided he appears to know perfectly what you ask him, and provided his manner is not that of a practical joker, and there appears to be no reasonable motive for trickery or deception. From the situation and its circumstances you conclude that it would be imprudent to doubt, and the normal reaction of your mind to the information given is that of unhesitating assent. Your certitude is, of course, moral certitude. The evidence for your

certain judgment is indirect; it is not found in the truth to which you assent; it is not found indirectly in your knowledge of the sound bases of authority which gives testimony; it is found indirectly in the fact that *doubt in the circumstances would be imprudent.*

In all these cases we have investigated we have seen that the ultimate motive of certitude is *evidence,* not bias of mind, not slavish acceptance of somebody's word, but the *objective and manifest presence of truth,* which is *evidence.*

What of *error,* the so-called "false certitude"? We have already instanced the causes of error, and we have found them, in all cases, to be things extrinsic to the mind itself. The mind of man tends towards truth. Man naturally wants to *know,* and he is not satisfied with any sort of information, but wants *truth.* The child may be satisfied with the story of Santa Claus as a true story; he may accept his father's statement that the moon is made of green cheese as a statement of truth. But he would not be satisfied with these mistaken bits of information if he *knew* them to be mistaken. It is because he accepts them *as true* that his mind is satisfied. The natural tendency and appetite of the mind is, we repeat, for truth. Hence, when the mind assents unwaveringly to what is not true, the cause of the error is not to be found in the natural tendency and function of the mind itself, but, as we have seen, in the misuse

of the mind, in precipitate judgment, in passions that bias, in confused knowledge, in defective organs of sense, in personal susceptibilities, and so on.

It is clear, then, that our certitudes are based objectively outside the mind (on evidence), and are not due to any bent or bias of the mind, nor to blind acceptance of authority. On the other hand, it is equally clear that mistakes and errors are accounted for by accidentals and circumstances of cognition, and are not ascribable to the native power of the mind itself. Therefore, Dogmatism is justified in asserting the existence of true certitude. Dogmatism is justified in presenting the following scientific conclusion: The mind has no natural tendency to error, but is capable of achieving true certitude based in all cases on objective evidence.

One final word: Let it not be supposed that Dogmatism holds the mind capable of knowing all truth with certitude. Only the Infinite Mind is capable of that. The question of Criteriology is not: "Can man know everything with certitude?" but: "Can man know anything with certitude?" The answer of Dogmatism is: "Yes, man can know such truths as it is possible for him to know, with certitude."

SUMMARY OF THE ARTICLE

In this article we have defined Dogmatism as a philosophical doctrine. We have distinguished Exag-

gerated and Qualified Dogmatism. We have outlined the procedure of Dogmatism in arriving at certitude, and have found the procedure justified. In the articles that follow we shall evidence the inadequacy of doctrines opposed to Dogmatism, and we shall find the falsity of these doctrines an indirect argument and proof for the truth of Dogmatism.

Article 2. Skepticism

a) Meaning of *Skepticism* b) Critique of Skepticism
c) Universal Doubt

a) Meaning of *Skepticism*

Skepticism is a term derived from the Greek verb *skeptesthai,* which means, "to consider, to look about carefully." But this term of worthy meaning has lost its literal force, and has come to mean the doctrine of those who deny the existence and possibility of certitude, or who qualify certitude in such a way as to destroy its true character.

Skepticism has several varieties. *Universal* Skepticism denies the possibility of any certitude whatever; *Partial* Skepticism admits some certitudes; *Absolute* Skepticism denies the mind's capacity for certitudes or even probabilities; *Qualified* Skepticism admits probabilities.

Skeptics generally admit the thing called common or vulgar certitude by which we accept as certain our own existence and that of the world about us and

the ordinary facts of daily experience. But skeptics deny that this is true certitude; they regard it as an unexplained and inexplicable condition of what we are naturally compelled to regard as our life and being. In a word, they regard it as an unexplained "psychological fact."

Notable skeptics of ancient times were: *Gorgias* (5 century B.C.), who denied the existence of everything, and was called "The Nihilist" in consequence; *Pyrrho* (4–3 centuries B. C.); *Arcesilaus* (4–3 centuries B. C.); *Carneades* (3–2 centuries B. C.); *Sextus Empiricus* (3 century after Christ).

In later times, the following were notable exponents of Skepticism: *Montaigne* (1533–1592), famous essayist, who sought in Skepticism a refuge from the bickerings of doctrinaires, but who did not include in his doubts and denials the fundamental truths of morality; *Pascal* (1623–1662), author of the famous *Pensées,* who held that man can know nothing for certain unless aided by supernatural grace; *Hume* (1711–1776), Scotch idealist; *Balfour* (1848–1930), who asserted that authority is the sole basis of certitude.

b) CRITIQUE OF SKEPTICISM

The arguments for Skepticism may be summarized as follows:

First Argument: Our knowing-powers often de-

ceive us. Hence we must not trust them. But if we cannot trust our knowing-powers, the quest for certitude is vain.

Second Argument: Perhaps we are the creatures of a power that delights to see us deceived in a dream-world that is but a maze of unrealities.

Third Argument: To have certitude means that one has a criterion whereby the certitude is known as such. But this criterion is known as certitude, and there must be a further criterion for it. And this further criterion requires a criterion, and this requires another, and so on, forever. Manifestly, we can never reach a first and fundamental criterion. Hence, there is no foundation for certitude; certitude is impossible.

To these arguments we may make reply as follows:

To the First Argument: (a) Our faculties do not deceive us. Misuse of faculties, employment of faculties upon objects not proper to their function; accidentals such as defects of organs or unsuitable medium for the function of faculties—these and other accidentals may lead us into error. But these causes of error can be noted and checked; error can be eliminated, and the faculties allowed to function in proper and suitable manner, and to achieve their natural and normal tendency, which is the acquiring of their object truly. (b) The argument is a contradiction in itself. The skeptic says, "It is *certain* that our faculties deceive us; therefore *nothing is certain.*"

To the Second Argument: The fantastic theory of a malign power that delights to deceive us is proposed with a "perhaps," and is best answered with a "perhaps not." The theory does not square with experience, with the constancy and consistency of nature, with the character of knowing-powers, with the wondrous design of sense-organs which so well adapts them for their use.

The theory is to be rejected as unphilosophic and whimsical.

To the Third Argument: This would be an unanswerable argument if each and every act of knowledge required a new and different act to recognize the grounds for assent. But in knowing fundamental truths, the mind grasps truth and the evidence for truth *in one and the same act.* When this is so, the truth is *self-evident.* Thus the mind, in grasping the truth that a totality is greater than one of its parts, apprehends the truth and the necessary character of the truth in one understanding act. The mind needs only to know the terms of such a proposition to understand that the truth of it is inevitable. Thus there *is* a foundation for certitude, and the skeptical argument falls to nothing.

We, therefore, reject Skepticism as a theory wholly inadequate. Its arguments are not sound, and it contradicts itself by teaching that it is certain that there is no certainty, and by using reason to prove that nothing can be proved by reason.

c) UNIVERSAL DOUBT

René Descartes (1596–1650) proposed, and defended as the true philosophic method, a Universal Methodic Doubt. He taught that the mind must doubt all things until it fixes on something that *cannot* be doubted, even by a fiction, by a deliberate effort of mind. He finds that this one indubitable fact is his *thinking existence;* a person cannot, even by an effort of the mind, doubt that he is making an effort of mind; he cannot doubt himself or his thought. Descartes summed up this fundamental and indubitable fact in the famous phrase, *"Cogito, ergo sum,* I think, therefore I exist." This is no inference; it is the simultaneous recognition of thought and thinker; it is the recognition of the *thinking self.* Upon this indubitable fact is built up a series of certitudes. But, while its author would have rejected Skepticism, Universal Doubt leads logically and immediately to Universal Skepticism. For, once everything possible is doubted, there is no longer any means of getting out of the doubt. Nor will the indubitable fact of the *thinking self* serve as such a means. For to be certain of myself thinking, is not to be certain that my thinking has any objective value. It is only to be certain of an inexplicable "psychological fact." Hence, the Universal Methodic Doubt of Descartes is to be rejected as inept method and as false doctrine, amounting as it does to Skepticism, which, as we have seen, is inadmissible.

SUMMARY OF THE ARTICLE

In this article we have studied Skepticism, the doctrine of those who deny the existence of true certitude. We have mentioned notable skeptics. We have considered the arguments for Skepticism, and have found them unsound. We have seen that the Universal Methodic Doubt proposed by Descartes amounts to Skepticism and is to be rejected.

Article 3. Agnosticism

a) Meaning of *Agnosticism* b) Criticism of Agnosticism

a) Meaning of *Agnosticism*

Agnosticism is derived from the Greek word *agnostikos,* which means, "not knowing, ignorant." The term is used in theology and in philosophy. In theology, it indicates the doctrine formulated by Thomas Huxley (1825–1895) to distinguish his position that God is *unknowable* from that of the Atheists that God is *non-existent.* In philosophy, Agnosticism is the doctrine of those who limit the field of certitude in one way or another, and declare that outside the assigned limits there is no certitude to be had. Of the intellectual outland, man must be content to remain *in ignorance.*

Agnostics are not agreed upon the exact location of the field of certitude. Some say that we have certainty only of consciousness, that is, of our own sub-

jective states. These are called *Subjectivists* and their type of Agnosticism is known as *Subjectivism.* Other Agnostics contend that we can have certitude of positive sense-findings and of nothing else. These are called *Positivists* (and sometimes *Sensists*) and their doctrine, *Positivism.* Hippolyte Taine (1828–1893), French critic and historian, who furthered the agnostic doctrines of Auguste Comte (1798–1857), declares for Subjectivism, and holds that outside of consciousness nothing has real existence. Herbert Spencer (1820–1903) declares for Positivism when he states that we must limit certitude to the field of sense-findings, even though there is an absolute Being outside the range of sense ("The Unknowable"), in which we must believe. Comte was the most notable Agnostic, with Spencer as a close second. Important names associated with Positivism are: Thomas Huxley (1825–1895); John Tyndall (1820–1893); Emil Durkheim (1858–1917).

b) CRITICISM OF AGNOSTICISM

1. *Subjectivism.*—If there is evidence for the existence of trans-subjective reality, it is unscientific to limit the field of certitude to subjective states. But there is evidence for the existence of trans-subjective reality, as we have seen in our studies of Evidence and of Dogmatism. Therefore, we reject Subjectivism as unscientific.—Again, Subjectivism holds that nothing is reliable but states of consciousness. What

of those states of consciousness by which we are aware of outer reality? In how far are these reliable? If they are reliable, inasmuch as we may be certain of what they represent, then Subjectivism is done for, and the field of certitude is extended to outer or trans-subjective reality. If they are reliable merely in the sense that we are aware that such states exist in us, then Subjectivism is neither more nor less than Universal Skepticism, and is to be rejected as such. In any case, Subjectivism is inadmissible.

2. *Positivism.*—If there is evidence for the existence of reality in the supra-sensible order, it is unscientific to limit the field of certitude to the positive data of sense. But there is such evidence, as we have seen in our studies of self-evident truths. The primary truths themselves are supra-sensible, inasmuch as they are intellectual principles which find concrete illustration and exemplification in sensible reality and in the "squaring" of knowledge with sensible fact. Positivism contradicts itself, for its essential expression, "Only sense data are to be trusted," is itself something proposed to be *understood* and not *sensed.* Hence, Positivism is inadmissible.

We cannot admit as true any theory which upsets all science. Agnosticism, whether subjectivistic or positivistic, does precisely that. For science is ever a quest of causes, and an explaining of effects in the light of known causes. But Agnosticism denies the possibility of knowing causality, for causality is

neither the object of a purely subjective consciousness, nor is it the object of any sense.

For these reasons we reject Agnosticism as a wholly inadequate and fallacious theory of knowledge.

SUMMARY OF THE ARTICLE

Our brief study of Agnosticism included a definition of the name and an explanation of its use in philosophy. We have found Agnosticism divided into two main forms, Positivism and Subjectivism. A critical investigation of each of these has shown us their unscientific character.

ARTICLE 4. RELATIVISM

a) Meaning of *Relativism* b) Criticism of Relativism

a) MEANING OF *RELATIVISM*

Relativism is the doctrine of those who deny that the human mind can know absolute, necessary, changeless truth, and who assert that truth changes for times and persons and places. Hence a thing is true only *in relation* to its temporal, personal, or local circumstances.

The term *relativism* is indefinite, and may be used in a variety of meanings. Thus the Agnostic is a sort of relativist when he asserts that we can have certitude only in relation to, or *relative to,* a limited field, *viz.,* sense-findings or conscious states. Thus Im-

manuel Kant (1724–1804) and his followers are relativistic, inasmuch as they teach that we cannot know things, but only appearances of things which filter into the mind through mental molds that shape and qualify them; truth is relative to the constitution of the mind. Thus the ancient Protagoras (5 century B. C.), who taught that "man is the measure of all," is a relativist, inasmuch as he makes truth relative to the individual judging things as he apprehends them. We employ the term *Relativism* in our present study as the doctrine defined in the first sentence of this article. Relativism denies that there can be any knowledge, any certitude, that is everlastingly true. Even the truth that two and two make four may not have been always so, may not be so in future, may not be so even now in places other than this earth.

Perhaps the spread of Relativism may be attributed to the general favor which has been extended to an all-embracing theory of evolution. Evolution means growth, expansion, improvement, progress. Truth itself cannot have been stagnant in this gloriously progressive world. Such is the gratuitous assumption that is present, consciously or not, in many modern minds when they come to the consideration of any problem whatever. Now the theory of Evolution, or more properly, of *Transformism,* has not been proved, even for biology; certainly it can have no

significance, proved or unproved, in the field of mental philosophy.

Another source of the favor with which Relativism has been received is doubtless to be found in the welter of doctrines that have come to be known collectively as *Modernism,* and which have for their core and centre the notion that all things must be "brought up to date" and "expressed in terms consonant with modern progress and modern advance in science." Thus, truth itself is to have a continuously renewed "restatement," which means that truth is growing and changing. One modern theory of such growth and change is *Pragmatism,* chief exponent of which was William James (1842–1910), American psychologist and philosopher. Pragmatism (sometimes called *Humanism,* although not to be confused with the earlier Humanism of the Renaissance, nor with the new Humanism of More and Eliot) teaches that truth is determined by its consequences for human life and action, and that that is true "which works." But that which "works" for one may not "work" for another; and that which "works" to-day may not have "worked" yesterday, and may not "work" to-morrow. Hence Pragmatism proposes truth as relative.

Now there is a true sense in which truth may be called relative. It is relative, inasmuch as one may learn more and more of it, and hence may progress,

and grow, and change in one's mental equipment. But this is not saying that what is true can become false, or what is false can become true, or what is known with metaphysical certitude as an absolute truth can ever have been different or can ever become different. This is not a growth in truth, but a growth in knowledge of truth.

b) CRITICISM OF RELATIVISM

Relativism is wholly inadmissible, and this upon three counts: it is self-contradictory; it stands in conflict with reason; its arguments are not sound.

1. *Relativism is self-contradictory.* Relativism is offered as a true philosophical doctrine. But Relativism is a doctrine that maintains that all truth changes. Hence, Relativism itself must change. It may cease to be true; it may have long since ceased to be true; certainly some day it will cease to be true. Hence, Relativism is a theory that destroys itself. If the Relativist insists that his doctrine is constant and absolute, then he is no longer a Relativist, for he has admitted the unchanging character of at least one truth—something that Relativism will not allow him to do. We, therefore, reject Relativism as self-contradictory in teaching as an unchangingly true doctrine that all truth changes.

2. *Relativism conflicts with reason.* Indeed, reasoning becomes impossible if Relativism is admitted. For reasoning depends upon the constant and un-

changing value of ideas, of mental terms. Unless I know what "truth" means, and must always mean, how can I discuss the relativity of truth? How can I even assert that truth changes, if I have no constant and unchanging idea of what it is that changes? And how can I talk of "change," unless I know the absolute meaning of the verb "to change"? How can I say that what was false may become true, if I have no unchanging concept of what is meant by *false* and *true?* And if I do not know the absolute and unchanging meaning of *good* and *evil,* how can I speak of one changing into the other?

Again, there are truths which the mind recognizes and expresses in judgments that are absolute, necessary, unchanging. In *the ideal order,* we have judgments such as, "The whole is greater than its part"; "A thing cannot be at once existent and non-existent"; "An effect demands an adequate cause or sum of causes." In these judgments reason apprehends the predicate as something demanded by the very nature of the subject, and hence as something *always* predicable of that subject, and of *unchanging necessity* predicable of that subject. Yet this manifest requirement of reason is contradicted by Relativism. In the *order of concrete fact* there are judgments such as "This is a hot day," or "The fire burns brightly," in which the predicate is exacted by the subject by *necessity of fact.* That the day grows cooler towards evening, that the fire presently burns low, does not

give the lie to the fact that, at the moment of actual and justifiable predication, the fire *does* burn brightly, and the day *is* hot. Such judgments, if true at all, are *hypothetically* changeless, that is, they are changeless in the actual circumstances of the predication. Thus, if to-day is hot, it will be forever and forever true that to-day *was* hot. A short time ago I could have said with truth, "Herbert Hoover is President of the United States." At the present time I cannot make the same statement with truth. Does this mean that truth changes? Not at all. It only means that concrete facts—and Presidents—change. The statement *was* true when made, and it will be forever true, given the conditions at the time of its utterance. The statement really means: "At a point of time (which is *now* for the speaker, *to come* for ages past, and *then* for subsequent times) Herbert Hoover is President." No one denies that there is change in *things;* indeed, there is nothing in this world of concrete contingent realities that does not change; all things in our bodily universe have their origin, their cessation; their time of waxing and of waning; their exits and their entrances. But there is no change, there can be no change, in *truth.* Once true, forever true. Relativism stands in contradiction to this doctrine; this doctrine is a requirement of reason; therefore, Relativism stands in opposition to reason, and is inadmissible.

3. *Relativism rests upon unsound arguments.* Some of these arguments have been considered in the

preceding paragraph. Relativists aver that such a judgment as "This is a hot day" is true for the speaker at the moment it is uttered, but is not true for him very long, for the day grows cooler; nor is it true for all men, for some men live in cold regions. We have seen the invalid character of this argument. The statement is true by necessity of fact, and the fact is determined by the circumstances and material conditions of the moment the judgment is uttered. The change in these circumstances, and the contemporaneous existence of different circumstances, make no difference at all in the changeless truth that "here and now, it is a hot day." Again, Relativism illogically assumes that truth is an evolutionary development. We have seen that truth is conformity of things (in changeless essence or in hypothetically changeless concrete fact) with the unerring Divine Mind (*ontological truth*), and in the conformity of the created mind with things in their changeless essence or hypothetically changeless fact (*logical truth*). There is no room in the concept of *truth* for evolutionary development and change. The arguments of Relativism are in conflict with reason, in conflict with fact, and based on unwarranted assumptions. Therefore, Relativism is to be rejected as inadmissible.

The special form of Relativism called *Pragmatism* has a peculiar interest for the student of Criteriology. Pragmatism makes the truth *of matters of morality and religion* depend upon their utility in relation to

life and its requirements and conveniences. Such a doctrine is not only unscientific, but subversive of all order and decency, of all virtue and peace. Pragmatism as a theory stands refuted with Relativism, and we need no further arguments to disprove it. But we do need to notice it. We need to be on guard against its horrible and insidious influence on our own lives. Let us keep clear minds; let us realize that truth is changeless, "the eternal years of God are hers," and that duty does not die. What is right and good now, has always been right and good, and always will be right and good. What is wrong now, has always been wrong, and always will be wrong. The Relativist, the Pragmatist, the Modernist, the Evolutionist, are preaching to us, and writing for us, and shouting at us, that certain things are needed "in our times," and that it is right and moral and good to practice birth-control, to advocate sterilization of criminals, to ease the burden of the marriage bond. They tell us that these things are required by "society" of the present day; that the religion and morality suitable to our times has freed itself of "outworn dogmas" and is being adapted to "the newest discoveries of science." All this is fundamentally false, and its acceptance is working untold evil in the world to-day, even among many that call themselves Catholics. The Catholic student must be equipped to destroy these faulty and futile arguments and to drive their protagonists from their false position. Truth in morality and religion is

one and the same for all ages; it is forever and forever true. It depends on no necessity of concrete fact, but has the unchanging necessity of necessary judgments of the ideal order. As such, it is to be defended against the degraded attacks of the Relativist under whatever name he may present himself—Indifferentist, Modernist, Social Scientist, Humanitarian, or what you will.

There is another point of signal importance to be noted here. There is a good deal of befuddled and dangerous thinking that arises from the relativistic notion that *one's own viewpoint* makes a difference in objective truth. How often do we hear such expressions as, "I don't look at it in that way," or "I can't *see* that at all." Now, *where certitude is available,* one's opinion (that is to say, one's "view") makes no difference at all; it counts not a fig, not a farthing. The question that should concern the sincere thinker is not a question of mere "viewpoint," but of truth. One should not be wedded to a point of view, but to a point of fact, or rather, to a point of truth.

SUMMARY OF THE ARTICLE

In this article we have defined Relativism, and have indicated the forms in which Relativism may appear in philosophy: Modernism, Humanism, Pragmatism. We have indicated the sense in which truth may be said to be relative, and have shown how far removed

Relativism is from this reasonable position. We have examined the tenets of Relativism and have found them in conflict with reason. We have mentioned the prevalence of Pragmatism on matters of morality and religion, and have seen that this is a great evil that the student of Criteriology must steadily combat.

CHAPTER III

THE CERTITUDE OF SENSE-KNOWLEDGE

This chapter inquires into the trustworthiness or validity of the knowledge that man gains by means of the senses. It is divided into the following articles:

Article 1. The Validity of External Sense-Knowledge
Article 2. The Validity of Internal Sense-Knowledge

ARTICLE 1. THE VALIDITY OF EXTERNAL SENSE-KNOWLEDGE

a) Place of External Sensation in Knowledge b) Requisites for Validity in Sense-Knowledge c) Sense-Knowledge is Valid

a) PLACE OF EXTERNAL SENSATION IN KNOWLEDGE

At the outset, the student of Criteriology should impress this fact upon his mind and memory: there can be no knowledge in the intellect that has not in some manner come from external sensation. There have been philosophers in the remote past, and a few in relatively recent times, who taught that our ideas and judgments, or some of them, are born in us. This theory of inborn ideas is called *Innatism* (from Latin

in-natus, "born in"). The theory has been refuted time and again from Aristotle onwards. Scholasticism rejects it as false. Among non-Scholastics who have ably refuted it, John Locke (1632–1704) stands eminent.

Our knowledge begins with external sensation; from sense-data the mind abstracts ideas, and employs the ideas in judgments and reasonings. This does not mean that knowledge of the mind is of the same essential order as that of the external senses. Intellectual knowledge is not merely a refined or elaborated sensation. It is a different sort of knowledge. But the mind does get its "materials" from the senses, and uses its native power of abstraction to draw from these materials its understanding of the essences of things. So the mind, in a true sense, *depends* upon the external (and internal) senses; not, indeed, in its being or powers, but in the circumstances of this life, in which soul and body are joined in a single human substance. Man has no direct contact with outer reality except the senses. Only when these have functioned, can the mind (in this union of soul and body) go into action and exercise its power of apprehending things. Thus, ideas are not inborn, but are formed by the intellect from the findings of sense. St. Thomas translates an expression of Aristotle to describe the mind of man before he has had any sense-experience: he calls such a mind *tabula rasa,* that is, a slate upon which nothing has as yet been written.

It is not necessary to undertake a long or involved argument in refutation of Innatism. Most modern philosophers are quite at one with us in regarding it as a fallacious theory. But we must briefly notice its inadequacy.

Innatism is a gratuitous theory, that is to say, it is presented without any show of real proof. Indeed, it is impossible to formulate a direct argument for Innatism. New-born babies can give us no evidence, and the memory of adults is powerless to recall the experiences of infancy. On the other hand, ideas are amply accounted for in the activity of sense, plus the abstractive function of the mind. Study of the mental processes and states gives evidence that all ideas, even those of things that lie beyond the grasp of sense, are the product of sensation, plus mental abstraction. The doctrine of Innatism is, therefore, not required to explain ideas. On the contrary, it conflicts with the findings of introspection and study of the knowing-processes. For these reasons we find Innatism inadmissible.

All knowledge, then, begins with external sensation. It is to the external senses, therefore, that we turn first when we take up the study of the validity of human knowledge.

b) REQUISITES FOR VALIDITY IN SENSE-KNOWLEDGE

The senses give us knowledge of *things* in the material world about us. Knowledge of extra-organic

objects is *mediate,* for it is effected in the subject by the medium of intra-organic objects, but the intra-organic object is not recognized as a medium of knowledge, and its very existence is unknown, until it is discovered by scientific investigation of the sensing-process.

For external sensation, the outer or trans-subjective object must be impressed upon the organ of sense. This impressed object is taken into the organ physically and so becomes intra-organic. It is the intra-organic object that is immediately sensed. We learn things "as they are" (that is, as they exist for normal experience, not in their atomic and sub-atomic structure) by the action and experience of the several senses and by the check-up which such experience affords. This check-up and extended experience is called *mediate experience,* and it is by means of it that we gain our perfect sense-knowledge of the material world about us.

The object of the external senses must be trans-subjective in *matter, form,* and *presence.* This is required by the very nature of external sensation. Such sensation is not creative; it does not produce its object, but apprehends it. Nor does it clothe its object in a mode or form of singular and concrete existence; the object has such a mode of existence. Nor does external sensation project its object by evoking an image; its object is *there,* localized within the range of the sense which it affects.

For valid sensation, it is obvious that the senses must be normally and perfectly constituted. Not that a person imperfectly endowed in point of senses can gain no true knowledge, but such a person has to make continuous correction through mediate experience before he can be certain of the findings of senses even moderately defective, and if some sense be lacking, he can have no perfect knowledge of the proper object of that sense at all. When we ask whether knowledge of the senses is valid and true knowledge to be relied upon with certitude, we must surely consider such knowledge as is gained by senses which are *organically sound.* This is a prime requisite. Secondly, judgment on the validity of sense-knowledge would be unfair, were the senses to be judged by the data which come through them, but do not constitute their proper object. The second requisite, then, is that the sense, which is to be judged as to validity, be engaged *upon its proper object.* The third requisite is that the organically perfect sense be engaged upon its proper object *under due conditions* and *in a proper medium* for the exercise of the sense. Obviously, it would not be a fair judgment of sense-validity to judge of sight, for example, when the organ is much fatigued or used in insufficient light.

To sum up: for validity of sense-knowledge, the perfectly sound sense must be engaged upon its proper object, which is truly trans-subjective in matter, form, and presence, and which falls within proper

range of the sense under due conditions and in a proper medium for the action of the sense.

When the requirements indicated are met, sense-knowledge is valid and *infallible.* This point will engage our attention in the next section of this article.

c) SENSE-KNOWLEDGE IS VALID

Our senses give us knowledge of an external world. They do not create this world, but apprehend it. Now, sense-knowledge is basically valid if the external world is *there.* And sense-knowledge is thoroughly valid if the external world is there *as known to the sentient subject* through the mediate experience of the senses, external and internal.

Is the external world there? Some philosophers have taught that it is a projection of the *ego,* that the sentient subject is the creator of his world, or is merely an element in some general "awareness" which belongs to an Absolute Being. To admit such a theory is to lapse at once into Universal Skepticism, which, as we have seen elsewhere, is a wholly impossible doctrine, essentially self-contradictory. The skeptic has no right to speak and to argue; such action would suppose the existence of what he is concerned to deny, and would surrender his whole position; the skeptic can only settle into eternal silence.

Things about us in the world are *there.* We do not create the world by projecting it out of ourselves in a series of "externalizations." To say so would be to

declare the world a world of dreams. Nay, it would be to declare the dreamer himself a part of his dream. Yet everyone makes a clear distinction between himself and the thing he knows. The veriest subjectivist will admit that his *knowing* is not the object of his sensation. He will admit that the eye does not see itself seeing, nor the ear hear itself hearing. He will admit that the eye does not see sound, nor the ear hear color. He will, in short, admit that the knowing-process of external sensation perceives proper objects as things distinct from the knower and his senses. Now, if this be mere seeming, upon what sort of argument are we to base our acceptance of it as seeming? The person whose theory contradicts universal experience is in the position of the defender of a thesis. It is "up to him" to make good his position. And one may rather pity him in his futile attempt to offer argument to the unreal projections of his own *ego*. On our part, we have sound and sufficient reasons for rejecting the "appearance theory." For consider: if the objects of external sensation are not really trans-subjective, then they must be subjective, they must be internal to the knower. And the knower himself, is he trans-subjective to another knower who knows him? If so, his theory falls. If not, his own existence as a sense-endowed being is the projection of some knower. Of whom or what? Of himself? The thought is impossible; it involves a "short circuit" and an annihilation of this theory and all others.

Of something else? But that something else must be trans-subjective, and again the thesis falls. The subjectivist may insist that he and the objects of external sensation are but the projections of *something unknown and unknowable*. But this is Agnosticism, which, as we have seen, is a theory wholly untenable, and, in the present case, amounts to Universal Skepticism.

If there be no "externality" in the objects of external sensation, how is it possible even to know what *external* and *externality* mean?

If we assume with Huxley that the ego is a thing partly conscious and partly unconscious, and that the unconscious part projects itself and the conscious part is aware of the projections as the external world, we face insuperable difficulties. How shall we account for the strange conduct of the unconscious ego? It is certainly part and parcel of the subject. What drives it to the amazing feat of presenting itself as its opposite, that is, as objective (trans-subjective) when it is really subjective? The theory is gratuitous and whimsical.

Again, if we regard the world about us as a myth-world, how shall we explain the general acceptance of it as a real world? Some philosophers have taught that we regard things about us as existent and real because we have acquired the habit of doing so. How, then, did this habit originate? A habit results from repeated acts. The first "externalizations" must have

been effected without the aid of any habit at all. How did they come to be made? The original question returns.

The theories, therefore, which deny real trans-subjectivity to the objects of external sensation all lead to absurdities and contradictions. We must reject them as inadmissible.

On the positive side, we call upon experience for our argument. When we undergo the thing called external sensation, we are aware that we do not so much act as receive; we are aware that we are acted upon. True, we know that we ourselves do the sensing, but we are also aware that the thing sensed is not produced by ourselves, but *is there to be sensed.* When I speak to a friend whom I meet casually in the street, I am aware that it is really I that see him and hear his voice replying to my greeting. Awhile since, I did not see him; now I do see him. A moment ago I did not hear his voice; now I do hear it. Something not myself, something trans-subjective, has obtruded itself upon my external senses of sight and hearing; something has *come to me* from the outer world of the non-ego. My friend was not here before me; now he is here before me. This thing has *happened* to me. It is a thing I did not foresee, a thing I did not conjure up, a thing I did not produce. It is a thing that came objectively into the range of my senses and impressed itself upon them.

The external senses, therefore, do not produce

their object. They do not produce the *thing* that is their object; that is to say, their object is trans-subjective in *matter*. The external senses do not invest their object with a mode of being; they apprehend the object as a concrete, singular, material reality, and this is the mode which things in nature must have; that is to say, the external senses have an object that is trans-subjective in *form*. The external senses do not evoke images of objects that have been sensed and held somehow as retained experiences to be projected in image; the object must be here and now present within the range of the sense which perceives it; that is to say, the external senses have an object that is trans-subjective in *presence*.

The object of the external senses is, therefore, wholly and perfectly trans-subjective. External sensation is, in consequence, based upon the most solid grounds of reality. External sensation is valid. Of course, imperfections in sense-organs, imperfections in the medium in which the senses work, disproportion in the objects sensed, and so on, may lead to mistakes and errors. But the error will always be found to be an error of *judgment*. One errs because one *judges* precipitately, and without taking into account the imperfections mentioned. When due allowance is made for these, when the check-up of mediate experience is applied, then even imperfect sensing-powers may give grounds for valid judgments and for true and certain knowledge.

Granted that the senses grasp objects that are really *there,* it may be asked, Do the senses grasp objects *as they are* in nature? It is hardly fair to put the question in this form. Certainly, the sense of sight, for instance, is not equipped for microscopic work. I look at a glass of clear water; it seems to have perfect transparency and translucency. I say that there is nothing in the water, it is free from extraneous objects. But any drop of that clear water, when put under a powerful microscope, will disclose multitudes of tiny bodies that are *not* water. Therefore, may I say that my eyes deceive me? Not at all. No more than I could say that my ears deceive me because they do not bring me all the sounds that are made in a city a hundred miles away. When I ask whether the senses grasp objects *as they are,* I mean to ask whether they grasp objects *as presented* to their normal apprehending power. My answer to that query is affirmative. The senses do grasp their objects as presented.

Again, in asking whether the senses grasp their objects as they are in nature, I must recall that most sensations are complex; they are composed of several percepts of different senses. My morning cup of coffee appears to sight as a dark brown object; to smell it offers a special and peculiar aroma; to touch it offers resistance and temperature; to taste it offers a distinctive flavor. By the union of the percepts of sight, smell, touch, and taste, I *know* coffee as it is in

nature. But strictly, I do not *see* coffee; I see that it is colored. I do not *smell* coffee; I smell its aroma. I do not *touch* coffee, but touch makes me aware of its resistance and temperature. I do not *taste* coffee; I taste its flavor. Hence, I may be deceived (but not by my sense of sight) if I *judge* a certain liquid to be coffee, whereas it is not coffee at all. Some practical joker may put into the cup on my breakfast-table a liquid that has the color of coffee, and I do not discover that it is not coffee until I have had the experience (probably unpleasant) of tasting it. My judgment is erroneous; my sense of sight is not. I see what is there; I see the colored object. If the circumstances of the occasion impel me to a wrong judgment, it is in judgment that I err, not in sensation. I judge upon the percept of sight, whereas judgment cannot be delivered safely except upon the combined percepts of sight, taste, smell, and touch. Even then, a "coffee-substitute" might be near enough in flavor and aroma, in color and temperature, to deceive me, and to make me judge the object to be coffee, whereas it is not. But the senses do not deceive; they perceive what is there; if the combination of percepts that I have learned to know as coffee is approximated closely enough to make me judge as coffee a liquid that is something else, the combination of percepts is still valid; I do perceive this combination of color, aroma, flavor, heat, and temperature; I do perceive what is there. My judgment is wrong, but my

senses are not; and judgment could be corrected only upon authority (of the cook or the manufacturer of the coffee-substitute) or upon investigation of the ingredients of the coffee-substitute. Similarly, when I mistake a man for his twin, my senses are not deceived; I mistake in judgment. The senses perceive the thing that is there, *as presented.*

Therefore, we may not give a direct and unexplained answer to the question, "Do the external senses perceive things as they are?" We must first distinguish the proper object of each sense; and we can answer that a sense perceives its proper object *as presented.* We must also assert the complexity of objects known by sense, and indicate the combination of various percepts that enter into a *thing known.* We indicate the error that is very likely to occur if one *judges* on a single one of these percepts without taking all the others into consideration. But such error of judgment is capable of correction. Judgment can be made safely and soundly when due allowances are made, and from the valid findings of sense, valid knowledge is acquired.

We know, therefore, by the action of external senses the object as presented. This knowledge is direct, immediate, accurate grasp of the intra-organic object. That, of course, is the meaning of the phrase, "as presented"; it means, as intra-organically impressed. Our knowledge of the extra-organic world *as such* is mediate.

The extra-organic objects that make up the bodily world are presented to the external senses as really extra-organic, but not until the sentient subject has had some experience, especially through the sense of touch, with things about him in this world. A newborn baby will reach for the moon as readily as for the lamp or candle close at hand. Nor is this a question of mere distance. It is a question of knowing the outer or extra-organic object as such. The baby has not had the experience of repeated actions and applications of touch to enable it to judge the localization of the object. It merely sees the bright object—the moon or the lighted lamp. It is in no way enabled by vision to judge the intra-organic object as such, nor the extra-organic object as such. It merely grasps the object. To know the extra-organic object as such requires the "mediate experience" of which we have spoken. This mediate experience comes of the fact that the internal senses of memory and imagination are led by different external sensations that occur together, and again occur separately, to a kind of association and severance of sensiles, and so recognize one sensile as calling for, or excluding, another. Thus one learns to associate the sound which one hears with the bell which one sees swinging, perfume with the flower, depth and distance with the colored surface perceived by sight. Thus sound and perfume and color are apprehended as extra-organic, as outside the body and apart from

the organ of the sentient subject. Even touch and taste do not perceive their object as extra-organic until the sentient subject has been schooled by "mediate experience" to recognize it so. This experience enables the subject to distinguish the taste-contacts and touch-contacts as changeable and occasional, and thus as different from the permanent inner contacts of parts of the sentient body. So the outer object which comes in contact with the sentient body through taste or touch is distinguished from the body itself. A new-born baby which suffers pain from some outer contact (from touching a very hot object, for example, or from tasting a bitter medicine) will experience the pain and will cry. But the baby will not localize the cause of the pain as an outer (extra-organic) object, nor will it make a conscious withdrawal from the painful contact. Mediate sensile experience has not yet enabled the child to make distinction between the intra-organic and the extra-organic object. By mediate sensile experience we distinguish the object as intra-organically presented, from the outer or extra-organic object as the latter is in itself. We learn this from such facts as these: that sounds die away or increase, that odors weaken, that colors, shapes, and sizes vary, that temperatures change. Imagination (which preserves and reproduces the images of past experience) is, so to speak, the repository of mediate sensile experience, and it corrects or checks external sensations

and enables the subject to apprehend the extra-organic object as it is in nature. So, by the power of imagination, the intra-organic object (which is in itself *an imperfect image* of the extra-organic object) becomes perfect, and faithfully represents the extra-organic object as it is in sensible nature. When thus, by mediate experience, the extra-organic object is known as such—as it is in itself—then the intra-organic object is also known as such, but implicitly and confusedly known. Clear and distinct recognition of the intra-organic object as such is the fruit of scientific investigation.

The extra-organic object, then, is known as such by the aid of mediate experience. Now, the basis of all mediate experience is the sense of *touch*. The simple touch-sensation does not, indeed, enable the subject to know the object as distinct from his own body. But repeated and varied contacts soon force the subject to recognize this distinction. And upon this distinction, as upon a firm basis and foundation, reposes the knowledge of other outer objects as outer, as extra-organic.

The external senses, therefore, can and do give us a valid knowledge of things. External sensation is a true source of certitude.

Our argument is based, of course, upon the uniformity of nature. But this uniformity must be admitted. Those who would deny it make all science

impossible and involve themselves in contradictions that carry them at once into Universal Skepticism. And against the convinced universal skeptic, there is no argument available. Such a skeptic admits no certainty. Were he to argue, he would admit the existence of himself and of his opponent; he would admit a valid reasoning power in himself by which he would frame his argument, and he would admit an equally valid reasoning power in his opponent, who would be expected to understand the argument. In a word, were the universal skeptic to utter the slightest defense of his position, he would be no longer a skeptic, but a dogmatist. All who take up the investigation of the validity of knowledge must admit, to begin with, the existence and uniformity of nature and must proceed perforce upon that assumption. Now, if nature is uniform and consistent, as sane apprehension shows it to be, then the senses, equipped with organs which are manifestly constructed and marvellously adapted to perform a certain function, must really perform that function. Therefore, if nature is consistent, and not vain or deceiving (and if nature were that, we would be plunged into the intellectual despair and ultimate insanity of Universal Skepticism), then the senses, properly constructed and used under due conditions, are the source of reliable knowledge, of certitude.

But errors, as we have said, do occur. We have

instanced errors, and have given the obvious explanation of them as errors, not of sense, but of judgment on sense-findings. It may be well to mention an additional error or two by way of further illustration.

Looking at a spoon partly immersed in water, one sees the spoon as *bent* or *broken*. Removing the spoon from the water, one sees that it is not bent or broken. Is sight deceived? No. Sight has for its proper object colored surface, not shape. If the colored surface of the visible object is presented partly through one medium (air) and partly through another medium (air and water), it is still true that the sense of sight perceives its object as presented, that is, perceives it truly as intra-organically impressed. But if one bases judgment as to *shape* upon the finding of sight, without taking into account the variance in medium, and without the check-up of touch (to which shape appeals as a *common sensile* as well as to sight), then the judgment is apt to be erroneous. The error is accidental, not essential; that is, the error comes from precipitate and ill-conditioned judgment on sense-findings, and not from sense-findings themselves. Checking up on the shape of the spoon by the sense of touch, one is able to make correction of the accidental error of judgment based on sight alone, and so to achieve true knowledge of the object.

Again: approaching the golden dome of St. Peter's Basilica from the west on a late summer afternoon, one sees the dome as silvery. Is sight deceived? Not so. The error is accidental. The object as presented to sight is truly seen. The special angle of sunlight produces an effect of silver, and the effect is really there. Under that precise light, the object is really silvery. Add to the angle of light, the distance of the object from the beholder, and the effect of intervening atmosphere. Check this effect by a nearer view under a different light, and the erroneous judgment, "That is a silver dome," will be corrected. Mediate experience enables one to learn the object as it is in sensible nature.

Let the student consider the following instances of erroneous judgment on sense-findings, and let him explain the error as accidental and not essential to sense as such:

1. A man buys a scarf in a shop lighted by electric lights. He examines the scarf and finds it a solid black in color. Later, in daylight, he discovers that the scarf is deep blue.

2. The characters in a "talking picture" appear to move and to talk. Investigation shows that the reel consists of hundreds of motionless photographs, and that the sound does not come from the pictured actors at all.

3. A straight line with sloping projections at the

ends looks longer than an equal line without the projections.

4. Hearing the booming of the great bell in the church tower at Notre Dame University, one close at hand senses a continuous roar, while one two miles distant hears distinct bell-strokes.

5. An oculist places his patient in a dark room and turns on a tiny light fifteen feet away from the patient's eyes. The oculist then places a red lens over the left eye, and a clear lens over the right eye. Presently the patient sees two lights, one red, one white.

SUMMARY OF THE ARTICLE

In this lengthy article we have discussed the importance of the knowledge of the external senses in any study of the validity of human knowledge. We have seen that the theory of Innatism, or inborn knowledge, is to be rejected, and that all human knowledge rests upon the foundation of external sensation. We have listed the requisites for validity in sensation. We have discussed the subject of validity in sensation, and have found that the senses give us true and reliable knowledge, and are therefore a source of certitude. We have seen that error in sensation is accidental, and that it is always error of judgment, and not error of sense as such.

Article 2. The Validity of Internal Sense-Knowledge

a) The Internal Senses b) Validity of Internal Sensation c) Consciousness

a) THE INTERNAL SENSES

We recall that the internal senses are four: the *common* or *central* sense, which perceives and distinguishes the action and product of external sensation *here and now exercised;* the *imagination* or *phantasy,* which conserves, reproduces, and rearranges sensiles once externally sensed, but not here and now affecting the subject externally; the *estimative* or *instinct,* which apprehends the findings of the other senses as useful or harmful; the *sensitive memory,* which apprehends a sensile (externally present or reproduced in imagination) as *perceived in the past.*

b) VALIDITY OF INTERNAL SENSATION

We need no special argument to instruct us in the character and validity of internal sensation. The internal senses elaborate the findings of the outer senses, and hence rest for their validity upon the validity of external sensation. It is to be noted, however, that the inner sense of imagination has an object that is trans-subjective in matter and form, but

not in presence, for imagination can evoke images of things sensed in the past, but not now externally present to the subject.

In themselves and in their organic structure, the internal senses (seated organically in the brain) are faculties naturally adapted for perceiving definite objects. We find consistency in nature; nature of itself does not err. Hence, these natural faculties are normal sources of that for which they are obviously constructed; they are valid sources of truth and certitude. When error occurs, it is accidental, attributable to precipitate judgment, as we have seen in discussing external sensation.

We often hear of "errors of imagination." A timorous person hears sounds at night, may distinctly hear the step of an intruder upon the stair, may even see window or door begin to open, or the shape of a wholly non-existent person within the very room. Here we have an over-active imagination, stimulated by what psychologists call "expectant attention." The error is one of judgment upon the findings of an abnormally excited sense. The check-up of mediate experience and the application of other senses to the fanciful findings will dispel the error and give truth. When senses are normal, when the check-up of mediate experience is applied, then erroneous judgment does not occur. The error is accidental, not essential to sense as such.

c) CONSCIOUSNESS

Consciousness is the common or central sense whereby we are aware (that is, *conscious*) of things affecting us, and of ourselves as affected. Within its proper limits, consciousness, like other senses, is a reliable source of certitude. The object of consciousness is so vivid, is so direct an intuition, that one cannot deny its existence at the moment it is perceived. Nor can one deny the testimony of consciousness without at the same time affirming it. For one who doubts or denies the testimony of consciousness affirms that he is conscious of himself and of what he considers doubtful. Now, testimony of this kind, testimony that is so necessary that it cannot be denied, is inevitable and veracious. Hence, consciousness is veracious, and a source of certitude, *when used within due limits.* The limits of consciousness are indicated by its nature. It is a faculty that makes us directly aware of things here and now affecting us, and indirectly it makes us aware of ourselves as affected. These things consciousness reports as *facts.* But when, upon the testimony of consciousness, we reach a fanciful explanation of the *nature of the facts,* we are basing more on consciousness than it is meant to bear; we are using consciousness outside its limits; we are likely to err.

SUMMARY OF THE ARTICLE

This brief article has been a simple study of the internal senses and their validity. The basic argument for validity in sensation is that presented in the preceding article on the external senses. We have indicated the reliability of the internal senses as natural faculties for the apprehending of definite objects. We have noted the nature of so-called "errors of imagination." We have studied the function of consciousness, and have found that this faculty, when used within due limits, is a true and reliable source of certitude.

CHAPTER IV

THE CERTITUDE OF INTELLECTUAL KNOWLEDGE

This chapter inquires into the trustworthiness or validity of the knowledge that man gains by the use of his mind or intellect. Since intellectual knowledge is made up of *ideas, judgments,* and *reasonings,* the chapter is divided into three articles, as follows:

Article 1. The Objectivity of Ideas
Article 2. The Validity of Judgments
Article 3. The Validity of Reasoning

ARTICLE 1. THE OBJECTIVITY OF IDEAS

a) Ideas b) Objectivity c) Universals

a) IDEAS

An *idea* is the representation of the essence of a thing in the intellect. It is the re-presence of an object in the mind, and in a manner suited to the nature of the mind. It is the intentional presence of an object in the intellect.

We have more than once exemplified the formation of ideas. It will be of benefit to give a summary review of the process here.

If I see the picture of a triangle drawn in white chalk on a blackboard, I see one individual picture with its distinguishing or individuating marks. Thus, I see that this triangle has a certain size, a certain color, a certain position. Now, if I have never before seen a triangle, I can learn from the study of this picture just what *a* triangle is; what *any* triangle is; what *all* possible triangles must be. What my sense of sight perceives is a material, limited, individual picture. What my mind conceives through the study of this one picture, is the *essence* of triangle. This concept of an essence is an *idea.*

The process of forming the idea is as follows: The material picture of the triangle is impressed upon sight. This constitutes the *impressed sensible species.* Sight, reacting to the impression, beholds the objective material picture then and there present before the eyes; sight does not *express* a species in which to contemplate the reality; sight terminates its perception by apprehending the object itself there present. Now, the sense-finding of sight is reflected inwardly to the imagination, where it is held and preserved. The mind or intellect (either here and now while the eyes behold the picture, or later when the image is evoked) pays attention to the picture as held in the imagination, and sees *what it is* that the picture represents. The light of the mind, like a sort of X-ray, penetrates the individual and material marks and conditions of the picture, and gets immediately at the

essence which is given individual expression in the picture. The mind does this by its abstractive power (or prescinding light). In a word, the mind, by abstracting from color, size, position, etc., of the picture, lays bare *the essence* which is expressed in this picture, with this size, in this color, and so on. The essence, thus abstracted, is impressed by the mind upon itself, and is the *impressed intelligible species.* The mind, reacting to the impression, apprehends the essence. Rather, the mind expresses the intelligible essence within itself; for the mind does not react to the material picture nor to the percept of it, but to the *abstracted essence.* This abstracted essence is not present before the eyes nor in the percept; what is on the blackboard and in the percept is the material thing, with essence unabstracted. So the mind *expresses* the abstracted essence within itself, and this is the *expressed intelligible species* or *idea.*

Ideas are not merely percepts in a high state of elaboration. The mistake of confusing the fields of sense and of intellect (of percepts and of ideas) has been the fundamental error of many critical philosophers: of John Locke (1632–1704), of Thomas Reid (1710–1796), of George Berkeley (1684–1753), of David Hume (1711–1796), and of many another gifted and sincere thinker. Perhaps no other error has led to such evil and widespread consequences to philosophy as this confusion of the fields of sense and intellect.

The difference between sense and intellect (between percept and idea) is an essential difference. Sense perceives individual bodily reality as such; intellect does not, but becomes aware of individual bodily things as such only by a kind of reflection, when ideas have already been formed. Sense grasps its object by perceiving the very qualities which the intellect ignores (abstracts from) in forming the idea. Sense grasps bodily objects in an individual manner; intellect grasps bodily and non-bodily objects in a universal manner. There is nothing in sensation itself that leads by natural necessity to intellection. Brute animals have sensation, yet they manifest no tendency towards intellection, no *élan* for ideas, no *nisus* after understanding, no straining and effort for abstraction and reasoning.

b) OBJECTIVITY

If the essence which the idea represents exists in things outside the mind, or can so exist, then ideas have *objectivity*. Objectivity is but another word for validity, when the question is one of the value of knowledge. Ideas have objectivity if the *matter* of the thing known (the essence) exists or can exist in reality outside the mind. Even though the mode or *form* of existence of the essence conceived in the idea is singular and concrete in outer reality and universal in the mind, the objectivity of the idea stands. What is required for objectivity in ideas, is that *the*

thing conceived be capable of existing outside the mind. In a word, objectivity or validity of ideas requires that their objects be *trans-subjective in matter.*

We assert that ideas have objectivity. Our argument for this true doctrine may be presented as follows:

1. The mind forms ideas by abstraction from the individual marks and material conditions of sense-findings. Now, sense-findings are objective, as we have seen in another place. Therefore, ideas, which are truly drawn from sense-findings, are also objective. In a word, what the mind draws from sense-findings by abstraction *must be there,* to be drawn out. The mind, in abstracting, does not inject anything into the sense-data; it gets at what is there, expressed and, so to speak, exemplified in the sense data. The basis of the intellectual process is objective; that which is built, so to speak, upon this basis is justified by reality; therefore, that which is built upon the basis of sense-findings is objective and valid. Putting the point in another way: the matter of ideas is trans-subjective; it does not come from the mind; it is no contribution of the mind. This objective matter may surely be grasped in this mode or that without losing its objectivity. The manner in which a reality is grasped does not destroy the reality. Hence, ideas, being objective (trans-subjective) in matter, are truly objective and valid.

2. The objectivity of ideas is denied by some phi-

losophers, but always for reasons that are false. Various as these reasons are, they all tend to one point, *viz.*, that ideas do not represent reality. If that were the case, then ideas could come only from the mind itself, without reference to reality, or ideas would be imperfect representations of reality. If ideas are imperfect representations of reality (and we are not concerned to deny the point), then the case is ours, for an imperfect objectivity is objectivity. If ideas come from the mind as from a mental mill or factory, then we have Subjectivism, which, as we have seen, is a doctrine entirely inadmissible, for it is self-contradictory, offers no single sane argument for its acceptance, and utterly destroys all science.

c) UNIVERSALS

The idea is by nature a *universal* idea. It represents an essence, and most essences are capable of existence in a plurality of individuals. Essences that are not so capable, and that can exist only in one being (such as the essence of God, the Infinite Being) are so perfect that the mind has no exhaustive grasp of them, and is apt, because of obscurity in the idea, to hold them *as though they were* capable of existence in a plurality of individuals. Thus men speak of the "gods" of the pagans. Thus an apologist begins the development of the proof that there can be but one God by saying, "Now, let us suppose for a mo-

ment that there are two Infinite Beings . . .", and goes on to show that the supposition leads to absurdity.

The idea, then, is a universal idea. The idea *as such* is universal. Now, the object of the universal idea, the essence conceived in universal, is called *the Universal.* What is the nature of Universals? Do essences, which the mind conceives in universal, exist as Universals in nature outside the mind? This is a question that we have considered and answered in our study of the nature of intellectual knowledge. It recurs here, for the nature of Universals is manifestly a point of importance in the study of the validity of knowledge.

There are four, and only four, possible doctrines on the nature of Universals. They are the following:

1. *Nominalism.*—This doctrine holds that Universals do not exist in nature, or, for that matter, in the mind. Universals are not essences, they are only groups to which the mind gives *names.* The doctrine is called *Nominalism,* from the Latin *nomen,* "name." It is a convenience, nay, a necessity (say the Nominalists), to have some means of grouping the multitudinous things that the mind considers. I cannot know every possible man; so I group men, and label the group *man,* or *mankind.* I cannot know every single blade of grass or every grain of sand; I have need to lump these things together as *grass* and *sand,* else I will find it impossible to think of them or speak

of them at all. The so-called Universal is merely the group into which the mind gathers things so that it can handle them. Outside the mind there are only individual things. Inside the mind there is no basic grasp of essences of these things. The mind merely exercises an arbitrary function of grouping things that seem similar, and gives each group a common group-name. Such names are "universal ideas," and the arbitrarily formed groups are "Universals."

2. *Conceptualism.*—This doctrine asserts that the "groups" into which the mind gathers things are formed, not arbitrarily as the mind pleases, but in a manner imposed by the nature of the mind itself. The mind has a structure that determines its mode of forming *concepts* or ideas, and according to this mode things must be known, if they are known at all. Therefore, ideas are not truly universal ideas; they are not apprehensions of essences; they are merely expressions of the mind, pre-determined by the mind's own structure. Nor do Universals exist truly. These are but groups of things which the mind, by natural necessity, gathers together in concepts.

3. *Ultra-Realism* or *Exaggerated Realism.*—Universal essences exist as such outside the mind. Hence the Universal is a real thing, existing as a Universal, in nature apart from the mind. The individuals share or participate or reflect the universal essence in an individual way. Thus, for example, there is a universal essence, *man.* Tom, Dick, Harry, Mary, Rose,

and Jane, and all other human individuals, share this essence, or each has part of it, or each reflects all of it, as several mirrors reflect the same scene. The essence itself is *a universal thing,* and the mind's grasp of this thing is a universal idea. Ultra-Realism, therefore, maintains that Universals as such exist in nature outside the mind.

4. *Moderate Realism.*—Outside the mind there are only individual things. The mind, however, by its abstractive power, penetrates the non-essential marks and material conditions of the individual thing and gets at the *essence* which makes the individual the real basic thing that it is. This essence the mind holds in universal concept or idea. And this idea is verified in reality, for each of the individuals that have the essence which the idea represents, is really, truly, and faithfully represented by the idea. The idea *man,* for example, though one idea, applies with equal force and validity to Tom and Mary, to Indian and Caucasian, to sane and insane, to infant and adult, to each and all possible men. Thus the Universal (that is, the universal essence) exists *as such,* as invested with universality, *only in the mind;* but it is founded solidly on things outside the mind, inasmuch as it is verified in each and every individual that has the essence which the mind grasps as the Universal. In a word, Universals as such, formally, exist only in the mind; fundamentally, they exist in nature outside the mind.

Now, for a word of criticism on each of these doctrines:

1. *Nominalism* cannot be true. It contradicts itself. How can the mind classify things without a basis of classification? If, as H. G. Wells says, "all chairs are quite different," how can we speak of "all chairs"? How do all men come to make the same classifications? If men did not make the same classifications, how would speech be possible; how could we understand one another? When the Nominalist says, "Universals are groups; universal ideas are group-names," he contradicts himself, for his words express his grasp of the *meaning* (the *grasped essence*) of "Universals" and "group" and "name" and "idea."—Notable Nominalists mentioned in the History of Philosophy are: Heraclitus (5 century B. C.), Antisthenes (4 century B. C.), Roscelin (about 1050–1121), and the empiricists, sensists, and positivists of more recent times, such as Hobbes (1588–1679), Locke (1632–1704), Hume (1711–1776), Condillac (1715–1780), Comte (1798–1857), Stuart Mill (1806–1873), Spencer (1820–1903), Wundt (1832–1921).

2. *Conceptualism* cannot be true. It makes the mind a sort of concept-factory and destroys all objectivity of thought. For, even though Conceptualism admits the existence of things in the world about us, it destroys all relation of our knowledge to these things; it makes true knowledge impossible. Thus

does Conceptualism lead directly to Skepticism, and thus does it merit the rejection which Skepticism deserves by reason of its self-contradictory character. If the idea is formed by the mind, not upon instruction from reality, but from the mind's natural structure and necessity, then reality has no part in the idea, and all knowledge is subjective. The step from Subjectivism to Skepticism is short and direct. Hence, Conceptualism is not an acceptable doctrine. —Notable names associated with Conceptualism are: Zeno (3 century B. C.); the ancient Stoics; William of Ockam (about 1280–1348); John Buridan (14 century); Peter d'Ailly (1350–1420); Immanuel Kant (1724–1804).

3. *Ultra-Realism* cannot be true. For, according to this doctrine, the Universal must either exist apart from individual things, or it must constitute the essence of individual things. If it exists apart from individual things, then it is not the essence of these things, it is not in the things, and the mind which perceives it there is mistaken. Thus is the objectivity of knowledge destroyed, and we lapse into Skepticism. If, on the other supposition, the Universal constitutes the essence of each individual, then we have things that are at the same time individual and universal—an obvious contradiction—or we have the individuals of the same essence existing as mere accidents of a *common* essence, and again the validity of knowledge perishes, and Skepticism casts its cloud of dark-

ness and silence over all minds and all science.—Notable among ultra-realists (of one sort or another) were: Plato (5–4 centuries B. C.); William of Champeaux (1070–1120); the Neoplatonists; Hegel (1770–1831); Schelling (1775–1854).

4. *Moderate Realism* is the true doctrine. We have already shown this by exclusion, since the other three systems are manifestly inadmissible, and since Moderate Realism is the only possible doctrine left to us. We have a positive argument for the truth of this doctrine in the fact that it squares perfectly with both theoretical logic and practical experience. Nay, so certain is this doctrine, that those who oppose it are forced to exemplify its use in the very expression of their doctrine and argument.—Among the exponents of Moderate Realism we find: Aristotle (4 century B. C.); St. Anselm (1033–1109); St. Thomas Aquinas (1225–1274); Scholastic philosophers.

SUMMARY OF THE ARTICLE

In this article we have defined *idea,* and have reviewed the process of its formation. We have indicated the danger of confusing the fields of sensation and intellection. We have defined *objectivity* of ideas and have offered arguments to show that ideas are truly objective, and hence the basis of certitude. We have discussed the doctrines possible on the na-

ture of Universals, and have found Moderate Realism true, while we have rejected as false Nominalism, Conceptualism, and Ultra-Realism.

ARTICLE 2. THE VALIDITY OF JUDGMENTS

a) Judgments b) Validity of Judgments

a) JUDGMENTS

A *judgment* is the pronouncement by the mind of the agreement or disagreement of two ideas. It is the enunciation whereby one idea (*predicate*) is asserted as applying or not applying to another idea (*subject*).

The *material element* of a judgment is constituted by two ideas and their comparison by the attentive mind. The *formal element* of a judgment (that which makes a judgment the thing that it is) is the enunciation, the pronouncement, the predication, whereby one idea is affirmed or denied of the other.

Judgment is the basic thought-process. Ideas are not thoughts. Ideas are simple apprehensions of the essences of things. But thought is something that the mind does with its ideas. It pronounces upon them, in the light of what they are. Out of true pronouncements other pronouncements emerge; that is, pronouncements give evidence and occasion for further pronouncements. And "pronouncement" of the mind is judgment. Thus thinking is carried on by means of

judgments, and we are justified in declaring the judgment the basic thought-process.

The judgment finds outward expression in the *proposition.*

b) VALIDITY OF JUDGMENTS

The validity of a judgment is based directly upon the objectivity of the ideas used in the judgment. While judgment, formally considered, is the enunciation of the connection or relation existing *between the ideas,* the ideas themselves must be truly valid and objective, or their connection will be illusory.

Now, as we have seen, ideas have objectivity. And when the mind enunciates judgment, this is by reason of *evidence* which the mind discovers in the ideas themselves, or upon reliable authority. Of course, there can be, and there often are, erroneous judgments. But, as we have many times insisted, the errors of judgment are due to accidental causes, chief of which is precipitateness of mind in pronouncing before the evidence is properly obtained and evaluated. The point here is not that all judgments as such must be true and certain. Here we are concerned to show that judgment, when legitimately evidenced, is true and certain.

The mind does not make its evidence for judgment, nor does the mind pronounce judgment by any natural necessity, independently of objective evi-

dence. The argument for our position appears in the following considerations.

1. There are some judgments that are self-evident. When the mind is possessed of two ideas, and when it attentively compares them, the "truth itself shines out," and the mind sees that these two ideas belong together. Thus the mind sees the relation of the two ideas "whole" and "part" to be such that the judgment, "The whole is greater than a part," follows of necessity. The mind sees that it is so, and cannot be otherwise. The connection between subject and predicate is, therefore, not contributed by the mind; it is objective; the mind *sees* the relation between subject and predicate as a thing that is *there*. Such judgments, therefore, are objective, valid, true, and certain.

2. Sometimes the relation of ideas is not at once obvious. The mind is ignorant or dubious of the relation until it works it out by studious reasoning. The mind does not know at first grasp that the angles of a triangle are equal to 180°. But the evidence can be made clear by slow, connected, attentive steps of thought. When the truth is at last understood thoroughly, then the mind sees that it must be so. Truth and certitude are reached, not by an impulse or natural bent of mind (for the mind was ignorant or dubious at the start), and the assent of certain judgment was given only when the mind's study convinced it that the thing is so. And this conviction is not one of

mere persuasion; the mind reasons out the judgment and sees that it must be so, and not otherwise. Hence, there is objectivity in the reasoned judgment. It is not a subjective product.

3. Sometimes the judgment enunciates a *fact* of experience, as in the expression, "This coin is gold." My senses may grasp polished brass, and my experience may lead me to pronounce at once, "This is gold," but the mind may avoid precipitateness; it may require tests and proofs; it may hold itself in the state of doubt or opinion, and not give its assent to what appears obvious to the sense-grasp. And when satisfactory proof is adduced, then, and not till then, the mind is equipped for certain judgment. Thus it appears that the judging mind is not forced into action by its own nature, nor by the force of circumstances, nor by the experience of the senses. The mind can (and, of course, should) require proper evidence suited to each pronouncement, and when the evidence is obtained and understood, then the judgment is enunciated. Judgment, therefore, is truly objective. It has objective value and validity. It can be the expression of truth and certitude.

4. Sometimes judgment is rendered upon authority. We have already seen the requirements for valid authority. When judgment reposes on valid authority, it is itself valid, and objective. It does not come of a necessity imposed by the structure of the mind,

nor does it come from gratuitous choice or whim. It comes of objective evidence, and is itself objective.

SUMMARY OF THE ARTICLE

This brief article has given us the definition of *judgment,* and has enumerated the material and formal elements of which it is composed. It has set forth the assertion that judgments can be valid, true, and certain. It has proved the assertion by considering various sorts of judgments and showing that these come from the clear vision of mind which makes obvious the connection of subject and predicate in judgment. Thus have we shown that judgment depends upon evidence, upon something objective and valid, and so we conclude to the validity of judgments themselves.

ARTICLE 3. THE VALIDITY OF REASONING

a) Reasoning b) Valid Reasoning

a) REASONING

Reasoning is neither more nor less than a roundabout way of reaching a judgment that cannot be reached directly. It is a process by which the mind, unable to pronounce upon the agreement or disagreement of two ideas, resolves the difficulty and reaches pronouncement by bringing in a third idea which it

knows in relation to the first two. If, for example, my ideas of "oak" and "plant" are obscure; if "oak" suggests rugged strength; if "plant" suggests tender greenness in a living thing; then my ideas are not clear enough for me to bring them together in judgment. Something (intrinsic to the ideas or extrinsic) may give me my first suspicion that the ideas belong together, that the judgment, "The oak is a plant," ought to be enunciated. But I doubt; I am unable, by reason of obscurity in my ideas, to make the judgment. On the other hand, I am not able to make the opposed judgment, "The oak is not a plant." Now, I call in the third idea, "tree." I do know "tree" in relation to "oak": I know that the oak is a tree. I also know "tree" in relation to "plant": I do know that trees are plants. Thus, through the idea "tree" I am able to reach judgment on the ideas, "oak" and "plant." This process is called *reasoning*. I may express it thus:

All trees are plants
The oak is a tree
Therefore, the oak is a plant.

Thus, by reasoning, I have reached the judgment; I have obtained the evidence to enable me to enunciate the judgment, "The oak is a plant."

The example of reasoning here given is *deductive*. There is also a form of reasoning called *inductive*.

Deductive and inductive reasoning are, as we have seen, not opposed methods of reaching a conclusion, but supplementary methods. The student is referred to Chapter III, Art. 2, a, of Book First.

b) VALID REASONING

We speak here of the validity of *deductive* reasoning. Induction needs no argument for validity, once the validity of sensation and of ideas and judgments is admitted. But some philosophers, notably John Stuart Mill (1806–1873), have attacked deductive reasoning and its instrument, the syllogism, as futile. Against this attack we need a short word of defense; we require a proof that the attack is itself futile and unwarranted.

A *syllogism* is a form of argumentation (that is, of *expressed reasoning*) which consists of three propositions so connected that, when the first two are given, the third follows of necessity. We have given an example of the syllogism in the last section. We offer another here:

All circles are plane figures
This figure is a circle
Therefore, this figure is a plane figure.

The first two propositions are *the premisses,* and the last is *the conclusion* of the syllogism. The conclusion is drawn out of the premisses. Therefore, the

conclusion must exist in the premisses. The conclusion is latent or implicit in the premisses, and it is drawn out explicitly by the reasoning expressed in the syllogism.

Mill says that the syllogism is useless. His reasons are two. (a) He says that the conclusion must actually be known before the premisses can be enunciated. (b) He says further that the conclusion gives no new knowledge, adds nothing to science, and leaves the mind informed to precisely the same extent as it was before the syllogism was formulated.

His first reason is not valid. In a true syllogism, the conclusion is not known *explicitly* before the premisses are formulated, but is implicitly contained in the premisses, and is *explicitly deduced from them.*

His second reason is without value. The syllogism does not give entirely new knowledge, but it gives *more explicit* knowledge. The syllogism clarifies knowledge, makes it more definite, precise, usable. Hence, the syllogism does serve science, and it leaves the mind in a much more effective state of information than it was before the syllogism was formulated.

Thus, the syllogism serves a notable purpose. It is far from useless to bring knowledge to explicit and definite form. It is far from futile to work out the implications of premisses. One who possessed a treasure wrapped tightly in a parcel, would not con-

sider it futile or useless to unwrap the parcel and render the treasure visible and available for use.

SUMMARY OF THE ARTICLE

This brief article on the validity of reasoning completes what we learned about the reasoning process in Book First, Chapter III, Art. 2. We have reviewed our definition of reasoning, and have shown that deduction and its instrument, the syllogism, are valid and useful. In special we have shown the fallacy of the argument directed against the syllogism by John Stuart Mill.

CHAPTER V

THE CERTITUDE OF FAITH

This chapter inquires into the trustworthiness or validity of the knowledge that man gains on *authority*. The effect of authority is *faith*. We will treat of authority and faith in the following articles:

Article 1. Authority in General
Article 2. Divine Authority
Article 3. Human Authority

Article 1. Authority in General

a) Meaning of *Authority* b) Testimony c) Credibility and Faith
d) Value of Authority

a) Meaning of *Authority*

Authority, as we employ the term here, is a moral power which determines the mind to give its firm and unwavering assent to a proposition, not evident in itself, upon the testimony of one who is truthful and knows whereof he speaks. Authority is a moral power, not a physical power, which, of course, could have no direct effect upon the mind. It consists in

the truthfulness and the knowledge of the one who gives testimony, and it rests upon the evidence which shows that this truthfulness and knowledge are actually present and not mere seeming. A moral power does not *necessitate* the mind as intrinsic evidence does. Before its influence can be exercised upon the mind, the will must consent to allow the mind to advert to, or to investigate, the bases of authority, that is, the evidence which manifests the truthfulness and knowledge of the witness. The will can refuse to do this. More: the will can refuse to allow the mind to contemplate the authoritative statement as the testimony of one who is *here and now* telling the truth, no matter how well established the witness's general truthfulness and knowledge may be. Assent to authority is *belief* or *faith*. And the formula for belief is this: "I believe because I will to believe; I will to believe because I realize that it is reasonable and right to believe."

A truth that is manifested by authority may be a fact or a doctrine. Doctrine is sometimes called dogma. The authority of the historian manifests factual truths. The authority of a theoretical economist is dogmatic or doctrinal. A fact is *public* when its witnesses are many; otherwise it is *private*. A dogma or doctrine is *natural,* when it is a theory excogitated and, mayhap, proved by the unaided researches of man's mind. It is *supernatural,* when it is drawn from Divine Revelation. A *strictly super-*

natural doctrine or dogma is one that unaided human reason could not of itself achieve, nor completely understand and explain, even after revelation of its truth is made; such a doctrine is a *mystery*. A mystery is not something vague, something uncertain in outline, something indefinite in content; it is a clear and plain expression of a truth that we *cannot fully understand and explain*. We know *what* the mystery is; but *how* and *why* it is, we do not fully know.

b) TESTIMONY

One who manifests his knowledge to another is a *witness* for what he reveals. The content of his revealings is his *testimony*. More strictly, a witness is one who gives testimony of *facts*. He who gives testimony of dogmas or doctrines is not usually called a witness, but a *teacher*. A witness is called an *eye-witness* if he reveals what he himself has seen. He is a witness *by hearsay* if he reveals what he has heard, that is, what he has come to know on the testimony of others. The eye-witness is sometimes called *immediate* witness; the witness by hearsay is called *mediate*.

Testimony is the sensible expression which manifests what the witness has to reveal; it is simply the content of his revelation made manifest. Testimony may be given in various ways, chief of which are *oral tradition, history, monuments*.

1. *Oral tradition* is the testimony of a series of

witnesses, bearing on past events, or doctrines delivered in the past, and coming in an unbroken chain, through the witnesses, even to the present time. Oral tradition is tradition handed on by word of mouth.

2. *History* is the written narration of events. History, as we understand it in ordinary speech, involves more than a mere written narration; it implies some investigation into the causes and reasons of the events narrated. A simple written account of events is found in *annals* and *chronicles*. Here, however, we take history to mean a chronicle. The manifestation of causes and reasons which the historian-philosopher may weave into his narrative will have the value of the evidence that is back of it; opinions will have the value of the grounds shown for them; interpretations will be acceptable in the measure in which they are justified. We do not, or should not, take the philosophy of the historian on authority; what we accept on historical authority is the chronicle of events. Events may bear out the interpretation and the philosophy of the historian, but in that case the events themselves are evidence for the philosophy; it is not taken on authority.

3. *Monuments* are durable works of art (temples, statues, coins, pictures, inscriptions) which carry the memory of fact or doctrine to posterity.

Testimony (oral, historical, or monumental) is *human* or *divine,* according as it reports the doctrines and deeds of men or the revelations of God.

c) CREDIBILITY AND FAITH

Authority begets *faith.* That which is accepted by faith is *believed.* Notice here that belief may be true and certain knowledge. In ordinary speech, the words "belief" and "believe" indicate mere opinion. In our use of the word we mean, not mere opinion, but that certain knowledge for which we have only the evidence of testimony, of authority. Now, before a thing can be believed or *credited* (Latin *credo,* "I believe"), it must be believable or *credible;* it must have *credibility.*

Credibility is the suitableness or fitness of a thing to be believed. For credibility, a thing must involve no contradiction in itself, and it must be attested by witnesses worthy of belief. If something is declared as a fact by persons who are known to be *truthful* and well *informed* about the subject in question, and if, moreover, that which is declared bears the likeness of truth (or *verisimilitude*), inasmuch as it involves no contradiction in itself, then the declaration is *credible.*

When something is proposed for belief, the mind must judge of the credibility of the proposition. This *judgment on the credibility of a thing proposed to belief* is the function of the intellect. When such judgment is rendered, that is, when the mind sees that there is no contradiction in the proposition, and that it is proposed by witnesses whose knowledge and

truthfulness are ascertained, then comes the *judgment of faith.* The judgment of faith comes from the intellect under the orders of the will. The intellect first sees the matter to be credible; it enunciates the judgment of credibility. The will, instructed by the judgment of credibility, finds *good* to be attained in accepting what is credible (for it is ever good to choose what is right and reasonable), and so orders the intellect to assent in the certain judgment of faith. The intellect enunciates the judgment of credibility: "This is credible." The will orders, "Believe it." The intellect assents with, "I believe." Again, we repeat, the formula of faith is this: "I believe because I will to believe; I will to believe because I realize that it is reasonable and right to believe." Faith, then, comes by the will, not blindly choosing, but choosing in the light of the judgment of credibility. Faith is a "genuflection of the will." A perverse will may refuse to believe even when the judgment of credibility invites the assent of faith. Thus, perversity in the will is the cause of error. On the other hand, a whimsical or precipitate judgment of credibility may be rendered without due evidence, and the will may order the assent of the mind. Again, we have a cause of error. To achieve true certitude in matters of faith, the will must be a *reasonable* will, not stubbornly set against allowing the mind to assent to due motives of credibility, nor, on the other

hand, too easily led by a precipitate and over-credulous mind to order assent where such motives are lacking.

When a thing is known on intrinsic evidence (whether this is immediately present or is discovered mediately by the reasoning process), the mind assents to it of necessity, not awaiting nor consulting the dictate of the will. Thus, I know, by intrinsic and immediate evidence, that the whole is greater than a part, and no orders of the will can change my knowledge. Thus, I know, by intrinsic and mediate evidence, that the hypothenuse of a right-triangle is equal to the square-root of the sum of the squares of the other two sides, and no orders of will can make me know it otherwise. The knowledge that comes of the necessitating force of intrinsic evidence is *scientific knowledge* or simply *science*. Knowledge that comes of the extrinsic evidence of authority is *faith*. There can be no object of knowledge that is simultaneously, and in the same subject, the object of both science and faith. A thing may be known by one and believed by another, or it may be first believed and then known by the same subject. But it cannot be the object of both faith and science in the same subject at the same time.

d) VALUE OF AUTHORITY

Authority is a true source of certitude. It gives, or may give, true and certain knowledge. Certitude is

the unwavering assent of the mind to that which is known to be true (whether by intrinsic or extrinsic evidence). Authority begets this assent of the mind. It is, therefore, a true source of certitude. It is surely reasonable to accept as true the word of witnesses known to be *truthful* and *informed.* One may have a thorough grasp of the truthfulness and knowledge of witnesses; the circumstances of the testimony, the nature of the case, the multiplicity of witnesses, the "check-up" of related authorities, may confirm such knowledge and show that error is morally impossible. Then the mind, under order of the will, may assent with true moral certitude. Nay, the witness may be such that error and deception are *absolutely* impossible (as is *Truth Itself* or God), and then the assent of faith, under order of the will, gives not *moral* certitude, but *absolute* certitude, that is, *metaphysical* certitude.

The necessity and utility of authority as a source of certitude appear from the following facts:

1. Man requires instruction, and a learner must believe, or progress in his instruction is impossible. The spontaneous faith of youth may later become reflex and scientific certitude, but that does not alter its necessity and utility in the first place. Man may learn much by his own efforts and by his experience, but he learns much more by authoritative instruction.

2. Our human society (in all departments, civil, domestic, religious) rests upon facts that are known

to most persons by faith, by the witness of authority. History-books, codes of laws, chronicles, newspapers —what appeal have these to the mind but the appeal of authority? Man is a social being, and an important and necessary instrument of social life is *speech.* How many social relations stand or fall with the "word" of man, that is, with human authority! Lies are possible, of course; deception may be practiced. But the point is that truth is also possible; that a human word, judged rightly as to credibility, may be a true and reliable word. Upon this possibility, and upon the normal realization of this possibility, rests the structure of human social institutions. No wonder that perjury is the basest of crimes; it strikes at the foundations of social life. Unless there can be reliance of men on men, a reliance that amounts to trust in human speech, there can be no peace or prosperity here on earth, no justice, no security.

3. Experimental science requires faith, else it cannot progress. The scientist of to-day must take on faith, on authority, a great many investigations, observations, and experiments of his predecessors. If he did not, he would merely go over ground that has been gone over before. Thus science would always be beginning anew, and no true progress could be achieved.

SUMMARY OF THE ARTICLE

In this article we have learned to define *authority*

and to recognize the bases of sound and acceptable testimony. We have listed the means in which authority ordinarily gives its testimony, *viz., tradition, history, monuments.* We have distinguished authority as *human* and *divine.* We have discussed *credibility* and have seen that the judgment on the motives of credibility may lead, under the will, to the judgment of faith. We have contrasted *faith* and *science.* We have shown that authority is a true and valid source of certitude.

Article 2. Divine Authority

a) Revelation b) Certitude from Divine Authority c) Rationalism

a) Revelation

Divine authority is the authority of God. It is the authority expressed or manifested in divine testimony. Now, divine testimony is called *Revelation.* Revelation (from the Latin *re-velare,* "to draw back the veil") is the manifestation by God of truths to men. The truths so revealed may be such as the natural powers of man's reason could discover, or they may be such as reason is powerless to discover or even to explain thoroughly after they are manifested. The latter truths are *supernaturally revealed truths* in the strictest sense of the term.

Now, is Revelation possible? If not, the impossi-

bility must exist on the part of (*a*) God, (*b*) man, (*c*) the truth revealed, or (*d*) the manner or mode of revelation. But there is no impossibility of Revelation on the part of God; God is all-knowing and has truths to impart; God is all-powerful and can impart them. There is no impossibility on the part of man; man is teachable; man needs instruction; man can receive the needed instruction. There is no impossibility on the part of the truth revealed; truth is something that can be known; if man cannot know the revealed truth perfectly, he can know it at least imperfectly according to his capacity, and he can have certainty of its existence. There is no impossibility on the part of the means of communication between God and man, for God is all-powerful and can devise means; He is all-wise and can choose most suitable means. Revelation, then, is possible.

But is Revelation a fact? Yes, it is a fact. The evidence for this fact is found in the internal and external criteria of Holy Scripture and Tradition. It is found in the character of the revealed writings, in indubitable miracles, and in accurately fulfilled prophecies. If any historical fact can be known to man, the fact that God has revealed truths to his children is such a fact. To reject the fact of Revelation would be to reject more compelling evidence than we have for the discovery of America or for the historicity of Napoleon.

b) CERTITUDE FROM DIVINE AUTHORITY

The certitude that we draw from divine authority is not a moral, but an absolute or a metaphysical certitude. The proof of this proposition is simple and direct.

Metaphysical certitude is the firm and unwavering adherence of the mind to truth, based upon the very essence of the things known. Such, for example, is the certitude with which I know that the whole is greater than any of its parts; such is the certitude with which I know that man is an animal. Now, the assent to divine testimony on account of divine authority is assent based on the very essence of God. For God's knowledge and truthfulness are one with His essence. God *is* Truth; God *is* Veracity. Therefore, assent to divine testimony is the assent of metaphysical certitude.

c) RATIONALISM

Rationalism is the doctrine of those who deny the existence or the need of divine authority, for they assert that there are no supernatural truths. Rationalism asserts that human *reason* (Latin, *ratio,* "reason," whence the name *Rationalism*) is adequate to cope with all truths that exist. In a word, Rationalism teaches that there are no truths outside the reach of the human mind. It finds Divine Faith opposed to reason.

Now, there are truths outside the reach of the human mind. Who can fail to know this? Is there not always more and more to learn, not only in general, but about any individual object of study? Has there ever existed a scientist or philosopher who presumed to say that he had exhausted a single topic of investigation? Is there anything in the realm of sense or intellect that does not lead the mind on and on in learning, and finally bring it face to face with mystery? And does not the mind, when faced with mystery, still reach out after further and unattainable truth? Truly has the prince of philosophers, Aristotle, declared that the human mind, compared to the First Being, is like the eye of the bat in the midday sun.

Rationalism amounts to atheism, to a denial of God. Grant the existence of God (as reason demands of you), and you grant Infinity. Grant Infinity, and you grant Boundless Knowledge. Grant Boundless Knowledge, and you grant the existence of truths which the limited mind of man cannot compass. Grant such truths, and you deny Rationalism.

Divine Faith is not opposed to reason; it aids and perfects reason. Divine Faith confirms reason in its findings on such matters as the origin of the world and the immortality of the soul. And in matters strictly supernatural, Divine Faith enriches reason with truths that could not be otherwise known and certainly possessed. The thing that is opposed to reason is not Faith, but Rationalism.

SUMMARY OF THE ARTICLE

In this short article we have learned that Divine Authority is manifested to man in Revelation. We have considered the possibility of Revelation, and have briefly indicated that Revelation is a fact. We have discovered that Divine Faith (faith in what is manifested by divine authority) is the source of metaphysical certitude. We have discussed Rationalism and have found it a wholly inadmissible doctrine.

Article 3. Human Authority

a) Varieties of Human Authority b) Value of Human Authority

a) VARIETIES OF HUMAN AUTHORITY

The testimony of man to the truth of anything may take the following forms:

1. *Universal agreement or universal consent.* This is the consensus of all men, or of practically all, regarding some fact or truth.

2. *Oral testimony.* This is testimony that is given by word of mouth. It may be testimony for contemporary events or for events of the past. Oral testimony for events of the past is called *oral tradition* when the attested events are of the remote past, and the testimony has come in an unbroken chain through the generations of men intervening between the event and its present expression in testimony.

3. *Written testimony.* This is the testimony of authors and writers.

4. *Monumental testimony.* This is the testimony of ancient temples, coins, statues, inscriptions. It is the testimony usually made available by the archæologist.

5. *Historical testimony.* This (whether written or oral) is testimony of past facts and events, not of doctrines.

6. *Dogmatic* or *doctrinal testimony.* This reports doctrines and the historical warrant for doctrines; it does not report mere facts or events.

b) VALUE OF HUMAN AUTHORITY

1. *Universal consent.*—Men may agree on the nature or cause of a physical fact, and they may agree on a truth that belongs strictly to the rational order. Universal consent on the nature or cause of a physical fact may be fallacious. This is because men may judge such things precipitately and without due investigation; men are prone to judge by mere appearances. Thus it was once universally agreed that the earth is flat; it was agreed that the succession of night and day is caused by the movement of the sun around the earth. These universal agreements were wrong, because men judged a physical fact, and assigned a cause to physical fact, by reason of mere external appearances. In such matters as these, the universal consent of mankind, unsupported by scien-

tific investigation, is not a reliable source of certitude. A too popular ballad declares that "Fifty thousand Frenchmen can't be wrong." In such matters as we here consider (that is, physical facts, their nature and cause, judged on appearances), fifty thousand may be wrong, and fifty million or fifty billion may be wrong. Mere numbers of those agreeing gives no weight of argument to their agreement.—But universal consent is a true source of certitude in matters of the rational order. In matters that pertain to reason or depend upon reason, the universal consent or agreement of mankind cannot be erroneous. Such universal consent is the very "voice" of rational nature, and if that can be false, there is no longer any certitude in human reasoning at all. Thus men may be wrong in judging that the earth is flat; but men cannot be wrong in judging that the finite earth had a beginning. Men may be wrong in saying that the sun moves round the earth; men cannot be wrong in agreeing that motion requires a mover. Men may be wrong in judging on appearances that a certain triangle is equilateral; men cannot be wrong in concluding that the angles of a triangle are equal to 180°. Thus we may set down the principle: that which is declared by the universal consent of mankind *as a judgment of rational nature,* must be true. Such universal consent is, therefore, a valid source of certitude.

2. *Oral testimony.*—Oral testimony on *contemporary* facts or events may usually be "checked" by

investigation, and so the testimony is at least a contributory factor to the certitude attainable in the case. Oral testimony of *past* facts or events (*tradition*) is a valid source of certitude when it meets the requirements of certain precise conditions. These conditions are: (a) The fact or event attested must have been *public* and of *great importance*. The immediate witnesses, therefore, must have been many, and the importance of the event assures us that their attention was not casual or careless, and that their immediate testimony was "checked" by their contemporaries. (b) The chain of testimony called *tradition* must be unbroken; there must be a continuous, uninterrupted series of witnesses leading from the present back to the event attested. (c) The tradition must be *uniform* in substance and in essential circumstances. When these conditions are fulfilled, we can have certitude of the knowledge and the truthfulness of the witnesses, immediate and mediate. But to have certitude of the knowledge and truthfulness of the witnesses is to have a sound and valid basis for authority, and for the moral certitude of that which authority attests. Hence, under due conditions, oral testimony, even of events long past, is a valid source of certitude.

3. *Written testimony.*—The testimony of books and documents is a valid source of certitude when due conditions are fulfilled. These conditions are: (*a*) The document must be *authentic*, that is, it must be

known to be the writing of *the man,* or at least of *the time,* to whom or to which it is ascribed. Otherwise the document is *apocryphal.* To know the authenticity of a document we must appeal to *internal criteria* (style, formation of letters, character of paper or parchment on which it is written, etc.), and to *external criteria* (tradition or writings ascribing the document to a certain man or age; casual reference to the document by contemporaries, etc.). (*b*) The document must be *intact,* that is, it must be substantially as the writer left it, not changed by additions, excisions, corruptions. A document that is not intact is said to be *interpolated.* To know the intactness or *integrity* of a document we look to the internal criteria of uniformity of style, harmony of development, unity of achievement; we look also to the external criteria of accuracy in quotation reported in other documents; substantial uniformity of various copies of the document, etc. (*c*) The document must have *authority,* that is, the writer must be *truthful* and must *know* whereof he speaks. To judge the truthfulness of the writer we look to the nature of the narrative; the importance of the data narrated; the possibility or impossibility of deceiving contemporaries who could know such data from other sources or from their own experience; circumstances of the time and of the writing which would make deception useless or harmful to the writer; the character of the writer as known from other

sources than his own writings; the love of truth (or lack of it) that marks his efforts, etc. To judge the knowledge of the writer, we look again to the nature of the narrative to discover whether it contains any contradictions or impossibilities; we look to the perspicacity of the writer as evidenced in the work; we discern his prudence or lack of it; we note the adequacy of his account of matters that can be known with certainty from other sources. If these conditions are met, if a writing be *authentic, intact,* and *authoritative,* it is a valid source of moral certitude.

4. *Monumental testimony.*—Monuments (temples; statues; coins; pictures; cuneiform writings; writings in hieroglyphic, hieratic, or demotic; inscriptions) are a valid source of moral certitude within the limits imposed by due conditions for *authenticity* and *authority.* These conditions have been described in our account of written testimony. Archæology teaches us the importance and utility of monumental testimony.

5. *Historical testimony.*— Historical testimony is contained in oral tradition, written documents, and monuments. We have seen the conditions required for validity in such testimony. The facts of history are public facts, and, in ordinary circumstances, are easily known. Man has a natural tendency to tell the truth as he knows it, and this tendency receives support from the fact that deception in reporting public and important events could easily be discovered. Hence,

generally speaking, the knowledge and truthfulness of the historian may be accepted as adequate unless the contrary is certainly known. Now, if the knowledge and truthfulness of a witness is known, his testimony is a valid source of moral certitude. If, however, the knowledge and truthfulness of the historian is only *probable,* then his testimony may be regarded as a valid source of opinion, but not of certitude.

6. *Dogmatic or doctrinal testimony.*—The authority of philosophers, and theologians, and others who propound doctrines, is not, *as such,* the source of certitude, but only of probability. If the doctrine is propounded with compelling reasons, we give the assent of certitude, but the evidence is in the reasons given for the doctrine, not in the authority of the teachers. The certitude in such a case is that of *science,* not of *faith.* In the case of *theological* doctrine, evidenced by Revelation, the certitude is, as we have seen, certitude of faith, but not moral certitude; it is absolute or metaphysical certitude. In the case of *theological reasoning,* in which reason deduces truths from Revelation, the certitude is that of faith, inasmuch as the deduction is made from Revelation, and also certitude of science, inasmuch as the reasoning process is scientifically correct and true.

SUMMARY OF THE ARTICLE

In this article we have listed the forms in which

human authority may present its testimony. We have explained each, and have given detailed notice to the value of each sort of testimony as a reliable and valid source or certitude.

APPENDIX

On Science and Method

SCIENCE

The word *science* is derived from the Latin *scire,* "to know." In its broadest sense, science is any sort of knowledge. In a sense less broad, science is *certain* knowledge. In its strict sense, science is that certain knowledge of a thing that comes of the understanding of its reasons and causes. Science, therefore, is knowledge that is root-deep. It is knowledge with how's and why's. It is knowledge that results from demonstration.

A science is a body of demonstrated doctrines that relate to one subject and that are available with order, consistency, and completeness.

Science is often contrasted with *art.* A science is a body of truths; an art is a body of rules. A science aims at truth; an art aims at the beautiful and the good. A science deals with necessary and universal principles; an art is concerned with particular and contingent realities. A man who knows the theory of music, is, in so far, a scientist; a man who knows how to play, is, in so far, an artist.

Every science has a twofold object. The matter with which it deals is its Material Object. The special end and aim in dealing with the Material Object constitutes the *Formal Object Quod* of the science. The medium through which the *Formal Object Quod* is attained, the body of principles by the light of which this Formal Object is known, is the *Formal Object Quo* of the science. The Material Object is the immediate field of quest; the Formal

Object Quod (that is, Formal Object *which*) is the goal of the science within the field; the Formal Object Quo (that is, Formal Object *by which*) is the light which makes possible the attainment of the goal.

Sciences are distinguished one from another by their Formal Object, and ultimately by their Formal Object *Quo.* Philosophy and theology both deal with God, man, and the world. Their Material Object is one; they are in the same field of inquiry and study. Both sciences seek *ultimate causes and reasons* for their knowledge of the Material Object; they are much at one in their Formal Object *Quod.* But philosophy seeks ultimate causes and reasons by the unaided light of the human intellect, whereas theology seeks ultimate causes and reasons by the supernatural light of Revelation. The sciences are distinguished one from another by their Formal Object *Quo.*

Sciences may be variously grouped and divided. In view of the end to which they tend, or which they serve, sciences are *speculative* or *practical.* Speculative science aims at enlightenment and culture of mind; practical science aims at action; it is like art in this respect, but it is unlike art in the fact that it seeks the causes and reasons that indicate its conclusions.—In view of their source or origin, sciences are *experimental, rational* (*philosophical*) or *theological.* Experimental science draws its principles directly from the data of sense; rational science draws its principles from reason; theological science draws its principles from Revelation.—In view of their object, human sciences are *physical, mathematical, metaphysical, logical,* and *moral.* These sciences have for their respective objects: the bodily world, quantity, abstract being, the acts of the mind, human conduct.

METHOD

The word *method* is derived from the Greek *met'-hodos,* "a way after." Method is "a way after" truth. It is *an orderly mode of procedure* in seeking truth.

A method is *analytic* or *synthetic*. Analytic method is procedure from particular data to universal principles and laws; it is procedure from known effects to the causes of these effects. Synthetic method is procedure from universal principles and laws to particular data; it is procedure from cause to effect. The analytic method is, for example, the method of the laboratory sciences. Individual data are gathered and observed and subjected to experiment; then the general laws governing such data and their activity are formulated from the observed phenomena. The synthetic method is, for example, that of the grammarian who states a general rule and then proceeds to consider the particular exemplifications and applications of it. The analytic method examines data, and, by *induction*, arrives at the general law necessary to account for them. The synthetic method states the general law, and, by *deduction*, justifies it in the particular data which it explains. These methods are not opposed, but supplementary.

Method is orderly procedure, and all such procedure (whether analytic or synthetic) is governed by certain general rules. Then there are special rules for the various types of sciences.

Important *General Rules of Method* are the following:

1. Begin with the easier and better known elements of the science or subject studied, and proceed towards those that are more difficult and less well known.

2. Let the procedure be gradual and continuous; let the reasoning be without gaps or "jumps"; let the nexus of truths discussed be kept steadily in sight; let the relation of conclusions to their principles or premisses be clearly indicated.

3. The same grade of certitude is not available in all things. Sometimes it is possible to achieve metaphysical certitude, sometimes physical certitude is obtainable; there are cases, too, where moral certitude is scientific and sufficient. Let the proper and available certitude be sought.

4. Let the procedure be clear, its development as brief as may be without being obscure, its content solidly scientific

and not frivolous; let loose opinions be kept apart from clear certitudes. This rule of clarity and consistency requires: (a) *Clarity in preliminaries:* the point of inquiry plainly determined, the field of study mapped in a general way, the terms accurately defined. (b) *Clarity in development:* division of the matter into suitable sections—parts, books, chapters, articles; plain and thorough treatment of each part, keeping clear its relation to the matter as a whole, and to what precedes and to what follows; omission of irrelevancies—"hold to the line"; honest facing of difficulties and objections; thorough refutation of notable fallacies.

That good method is useful is an obvious truth. As a man may ramble and wander, and yet come eventually to the city he desires to reach, so it may happen that haphazard readings and studies may give the student a satisfactory knowledge of a science. But the probabilities are that the wanderer will not reach his goal without direction and instruction, and that the student will not acquire a science without good method. Good method is as useful to the student as a road-map to the tourist, or as a schedule of trains to a traveller. The value of method may be summed up in four points: It makes the road to learning *easier, surer, shorter, more satisfactory and fruitful.*

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