UNIVERSITY OF CINCINNATI

May 28 1949

I hereby recommend that the thesis prepared under my supervision by Campbell Crockett

entitled The Problem of Universals

be accepted as fulfilling this part of the requirements for the degree of Doctor of Philosophy

Approved by:

Howard D. Roelofs

Form 668—G. S. and T. C.—1M—6-41

THE PROBLEM OF UNIVERSALS

A dissertation submitted to the

Graduate School

of the University of Cincinnati

in partial fulfillment of the
requirements for the degree of

DOCTOR OF PHILOSOPHY

1949

by

Campbell Crockett

A.B. University of Cincinnati 1940
A.M. University of Cincinnati 1941

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION

The central function of this essay is to analyze the problem of universals. The technique that we have adopted to accomplish this end is to examine the major, conflicting theories about universals. Our first task, however, is to present the data that provoke the problem and to explain why these data produce conflicting views.

In the first analysis, questions about universals are questions about human knowledge. Observe how the philosopher operates in his investigations about knowledge. He attempts to discover the sources of our ideas, distinguishing between perception, testimony, and reasoning. These are ways in which our knowledge is increased but its ultimate beginnings are a mystery. It is true, of course, that we teach our children, e.g., we point to several objects and utter the word 'dog' each time. Eventually the child points to one of these objects and pronounces the word 'dog' without prompting. What has the adult taught the child in this situation? He has not taught the child what dogs are. He has directed the child's attention to certain objects and the child somehow learns what these objects are. The child acquires the knowledge

for himself. The adult has taught him when to make a sound and which sound to make.

Hence the materials with which the philosopher deals in his study of cognitions are obtained originally by all of us. The setting for him is a situation in which knowledge is obtained by individuals and they increase and extend their learning by a mental activity called reasoning. The fact that we are familiar with knowledge and reasoning before we study philosophy does not mean that philosophers are unable to instruct us. The ability to make cognitive distinctions is a sine qua non condition of all rational quests, i.e., if we were unable to distinguish dogs from mountains, and mountains from trees, the zoologist, the geologist, and the botanist would not be able to impart information to us.

Philosophy begins, then, with materials produced in non-philosophical fields. Universals constitute an important portion of this pre-philosophical matrix. This can be seen by noting a technical distinction made in logic between singular and general terms. A singular term is one that is applicable to one, and only one, individual in the same sense, e.g., Rover, Franklin D. Roosevelt, Chair No. 7 in Room 22 of the University of Cincinnati Library. A general term is one that is applicable to an indefinite

number of individuals in the same sense, e.g., man, red, dog. While this is a technical distinction, our use of singular and general terms in everyday discourse indicates a recognition of the distinction between them. We would never think of saying that this animal now before us is a Fido, but we would say that he is a dog, and, perhaps, assign the name of Fido to him.

General terms are universals and that we are well acquainted with them can be seen by observing that all sentences contain universal words. We shall observe here some characteristics of universals in order to get the data before us. Once the data have been produced, the problem evoked by them will be explained.

Both singular and general terms are expressed in language by words, i.e., written or spoken symbols. All words are particular existents: as written marks or spoken sounds, words used to express general terms are just as particular as words used to express singular terms. Both singular and general terms are capable of being objects of thought. When we think of either singular or general terms, the thought qua psychological fact is a particular occurrence. A mental happening has a precise temporal reference and depends upon definite physiological conditions, whether the content of that event be singular or general terms.

The assignment of singular terms to individuals is an arbitrary procedure in the sense that the name ordinarily does not describe the individual. From the fact that the name of some unknown individual is Joe, I cannot infer that he or it is man rather than beast, four-legged rather than two-legged. It is true that there are instances where singular terms become transformed through use into general terms. The name, Benedict Arnold, originally designated one, and only one, individual, and this individual became a traitor. We now use the phrase, Benedict Arnold, to signify anyone who is a traitor. But singular terms, so long as they are singular terms merely, designate individuals by convention. If, in a given case, we are not acquainted with the convention, the most thorough examination of the name will not tell us its referent; and the most thorough examination of a person will not disclose his or her name. On the other hand, general terms have meaning in a sense not appropriate to singular terms. The term, man, signifies an indefinite number of individuals. There is no reason why the word, man, is better fitted to signify these individuals than the word, dog, or the group of letters, tihpx. Yet once a word is chosen to designate these individuals, the meaning which we attach to the word is fixed by the natures of the things denoted by the word.

These individuals are rational animals, and it is because they are rational animals that we can denote all of them with one arbitrarily-chosen word.

The description that has been given of universals would be accepted by most philosophers of most schools as an uncontroversial description. There are some, however, who would deny that the natures of things determine the meanings that we attach to general terms. We shall give concise statement of this position and explain why we reject it.

A typical example of the view that meanings consist of linguistic relations is found in Etienne Bonnot de Condillac's La langue des calculs, where it is maintained that every science is nothing more than a well-made language. The significance of mathematics, according to Condillac, is completely exhausted in the internal relations of the elements of mathematical language. To ask what a mathematical expression means over and above the relations of the verbal elements to each other, is to ask a meaningless question. For Condillac, numbers are not real entities. When the mathematician says that two plus two equals four, he is saying nothing about entities having existence independent of the language of mathematics. He is simply using signs and performing operations according to certain linguistic rules.

Our objections to this kind of procedure are two: (1) mathematics so conceived possesses trivial consistency at the expense of logical necessity; (2) language so conceived continues to have external reference to what is itself not language.

In regard to the first point, let us try to forget what mathematics is about, and simply arrange the terms of the language according to the rules of the language. The rules are chosen arbitrarily and we, in effect, are playing a game which allows us to make certain marks in certain orders. So long as we follow the rules, we are playing the game fairly. Let us take the signs: 'a', 'plus' and 'equals', and establish a rule that allows us to say: 'a plus a equals a'. I am playing the game fairly, but is the expression, 'a plus a equals a', true or false? It has no significance to say that the expression is either true or false, until we have assigned a meaning to the signs. Since we know that it is false that 'two plus two equals two', we can say that the expression, 'a plus a equals a', is false in a quantitative algebra. We know that the expression is false in view of the relations that exist among the entities which are the referents of our signs. If a language is not about something other than itself, the only necessity which it possesses is a necessity

of convention and such a necessity is not a necessity of logic. If the language is about something other than itself, the language qua language does not possess logical necessity; but it may be that the relations among the entities to which the language refers are necessary.

Our second consideration is to point out that the nature of language is such that it must refer to extra-linguistic elements. That which does not possess this referential character is, for that reason alone, not a language. It is a matter of common knowledge that we use language to talk about language. In full realization of this fact, medieval philosophers instituted a distinction between 'first intentions' and 'second intentions'. Concepts of first intention are signs of entities that are themselves not signs, e.g., book, coat, etc. Concepts of second intention are signs of entities that are themselves signs, e.g., noun, adjective, etc. But what this distinction shows is that among the huge varieties of entities that are referents of languages are languages themselves. This is a fact about the referents, and it certainly cannot be used as a basis for asserting that there are no referents. Elements of language that do not refer to something beyond themselves are no longer elements of language, but merely marks or sounds. The conclusion

that follows from these comments is that language in its essential nature is referential.

For these reasons, we shall assume that the nature of universal concepts is determined to some extent by extra-linguistic entities. Now that we have stated and justified our characterizations of universals, we proceed to a statement of the problem of universals.

The controversy over universals arises when either of two questions is asked: (1) What is the referent of general terms? (2) How do we know the meaning of general terms? The first question is predominantly metaphysical, and the second is predominantly epistemological. These questions are distinct but very closely related.

The obvious answer to the question of the referent of general terms is that they refer to individuals. This is a good starting point, but no more than a starting point. The reason why this is so is because any given general term, e.g., man, will denote some individuals, e.g., Socrates, Caesar, Luther, etc., and will not denote other individuals, e.g., my dog, Deke; Lee's horse, Traveler; your copy of Hamlet; and so on. The question then becomes: What is is that makes Socrates and Luther referents of the term, man, and prevents Deke and Traveler from being referents of that same term? At this point, conflicting

theories arise. Some philosophers have said that there is a common nature, 'Manness', possessed by Socrates and Luther, and that the successful use of a general terms depends upon the possession of common natures by individuals. What this means is that a common nature is that characteristic or those characteristics by virtue of which individuals are the kinds of individuals they are. This red patch and that blue patch differ qualitatively, but one is not a more genuine color than the other. They are equally colors, i.e., they possess the common nature, Color. Other philosophers, for reasons to be explained subsequently, assert that the concept of common natures is hopelessly ambiguous and should be discarded. Their explanation of the reason why different individuals can be denoted by one term is that these individuals resemble one another in this or that respect, and resemblance becomes the basic concept. These are two examples, and nothing more, of interpretations of the ontological problem of universals.

An obvious answer to the question of how we know universals is that we know them through perceptual experience. This, too, is a good start, but only a start. Some universals seem to be derived from perception through the action of contrast, analysis, comparison, and abstraction.

I find, for example, that several things 'look red' and eventually I am able to abstract the rednesses from the particular things with their different qualities, and I have acquired the idea of redness. But some philosophers have believed that there are some concepts that are not derived from perceptual experience because the content of our perceptual experience does not furnish an adequate basis for the content of these concepts. For example, the idea of circularity does not denote elements of our perceptual experience, i.e., although some particulars are more or less nearly circular, none are exactly circular. On the basis of such considerations, some believe it necessary to postulate innate ideas as the necessary condition of the existence of some concepts. Again, these are specific interpretations of the epistemological problem of universals and by no means exhaust all possible ones.

Our final introductory comment concerning the nature of the problem of universals is that the problem is never <u>whether</u> universals exist. No one has denied in every sense that universals exist, for the sufficient reason that the very formulation of a denial would involve using universals. At the very least, universals are signs that denote, confusedly or clearly, several individuals. And we recognize that in experience universals have a decided

unity. While they function plurally and are integrally related to things, they are substantial in the sense that we can refer to them with the confidence and assuredness that we have in our dealings with concrete things.

It is important, then, to recognize that universals are genuine elements of our experience. The fusion of universals and particulars is a generic characteristic of experience. Hence we should avoid the mistake of saying that experience is particular and that the problem of universals is how universals can be elicited from particulars. Inevitably, we think not only of this particular sensation or that specific object, but of this red something and that man. The fact that ordinarily we are acquainted with universals as they qualify particulars does not warrant the inference that particulars are given and the problem is to discuss how they produce universal concepts. In the first analysis, universals appear to be just as ultimate factors of experience as particulars. Those who say that particulars are given and that universals are derivative are interpreting the data, i.e., theorizing; and the same is true of those who say that universals are given and that particulars are derivative.

CHAPTER II: STATUS OF THE PROBLEM TODAY

We have noted some features of universals and why these concepts present a problem. We shall now investigate the status of this controversy today, as reflected in modern works on the history of philosophy and in systematic treatises written by contemporary philosophers. The inadequacies of the modern attitude will be explained. The purpose of these undertakings is to show that this controversy over universals requires new examination.

Standard histories of philosophy introduce students of our times to the problem of universals with the famous controversy between Aristotle and Plato. They point out that Plato believed that general terms refer ultimately to form or essences that subsist by themselves; e.g., these individual things are trees by virtue of participating in the form of Treeness and that form exists independent of the particular trees. Aristotle believed in forms or essences, but he did not believe that these forms subsisted in a realm of their own. Concrete substances, e.g., men, trees, etc., are his metaphysical ultimates. Concrete substances are individuals and they are individuals of one kind or another. This object before me is an individual pencil. It is unique in that it differs numerically from

all other pencils, but it is an instance of a universal in that it is a pencil. These histories tell us, then, that Aristotle believed that general terms designate essences that exist in things. They generally give Plato's theory of reminiscence and Aristotle's doctrine of abstraction as explanations of how universal concepts are found. These Platonic and Aristotelian theories were criticized by some of the contemporaries of Plato and Aristotle, e.g., Diogenes, and these criticisms usually are mentioned. With this, the problem is dropped.

Ordinarily historians next discuss the problem of universals within the context of medieval philosophy. Competent historians approach the problem in the middle ages within the context of the historical factor of Christian theology. Christianity provided new premises that made consideration of the problem especially urgent. For example, the question of the 'oneness' or 'threeness' of the Trinity was the center of controversy throughout the middle ages; and Roscelin, a nominalist, found himself accused of heresy on the grounds that nominalism commits one to a belief in three Gods. The dogma that all individuals sin because it is in the nature of 'manness' to sin finds its most natural expression in a realism. Again, salvation is offered to all individuals and these indi-

viduals have a unique value of their own. This principle can be urged on nominalistic grounds in virtue of the emphasis placed upon individuality. Yet this message is brought to individuals by a single, universal church. Questions of these types were efficacious in bringing the problem of universals to the attention of medieval philosophers.

Most historians analyze the problem in the middle ages via the classification of universalia ante res, in rebus, and post res. John Scotus Erigena is said to be an extreme realist because he held that universals exist as essences before things. St. Thomas Aquinas is said to be a moderate realist because he held that universals exist in things. William of Ockham is said to be a nominalist because he held that universals exist after things, i.e., that the mind creates and does not discover universals. Sometimes a position called conceptualism is added, and Peter Abelard is often named as the proponent. It is said that the essential characteristic of conceptualism is the attempt to bridge the gap between moderate realism and nominalism.

Historians sometimes seem to feel that the problem of universals is the exclusive property of the middle ages. They note that the middle ages begin with extreme realism, move on to moderate realism, and terminate in nominalism

and scepticism. The problem again disappears from view.

The next time this problem is raised by the historians is in the controversy over innate ideas among Descartes, Leibniz, and Locke. Unfortunately these historians do not make clear the relationship between acceptance or rejection of innate ideas and theories about universals. Is a belief in innate ideas the condition or the consequence of realism? Can a nominalist accept innate ideas without weakening his nominalism? Such questions are not discussed. The reader almost universally is told that Locke's attack upon innate ideas was so withering that the doctrine of innate ideas was destroyed. He then reads that Berkeley and Hume waged a devastating polemic against abstract ideas. Once more, it is said, scepticism terminates discussion of the question.

In modern times philosophers do not seem to be very much concerned with the problem of universals. Many contemporary philosophers feel that philosophy, in the beginning, got off on the wrong foot and see it as their function to redirect philosophical inquiry. In order to avoid what they regard as the errors of Greek, Medieval, and Renaissance philosophers, they have decided to abandon metaphysics as a fruitless, self-stultifying mode of inquiry. These philosophers assert that modern developments

in psychology, anthropology, sociology, semantics, etc. have shown that the problem of universals is an artificial problem instituted by a false dichotomy between man and nature. Some urge an event-continuum ontology to replace the substance-attribute ontology and go on to proclaim that universals are verbal re-organizations of experience elicited by adjustive situations and determined by the context in which conceptualizing occurs. This naturalistic philosophy is based upon the conviction that ideas and beliefs are not unchanging and ever young like the eternal gods of Olympus; instead, these ideas and beliefs are born, grow, mature, and die. It is difficult to understand what such assertions mean. But independent of a complete comprehension of the meaning of these assertions, it is clear that there is no longer a problem of universals for these philosophers. Ultimately, what these philosophers do is deny that contrasting theories of universals make distinctive assertions about the nature of reality. They would say that what have been regarded as alternative theories are, in fact, alternative languages. For example, when Aristotle asserts, contra Plato, that universals are in things and not apart from them, he is recommending a new verbal usage and that is all he is doing. Hence the decision as to whether one is to be a Platonist

or an Aristotelian in regard to universals should be settled entirely on linguistic grounds. Still once again discussion of universals terminates in scepticism, and some contemporary philosophers feel that the last nail has been driven into the coffin that contains, among the remains of other traditional problems, the controversy over universals.

From the foregoing, it is evident that discussions of the problem of universals in the different historical periods reflect the same pattern. The formulation of a theory of universals presents the problem to an age. This is followed by criticism of the theory. The problem then disappears from view. Special significance attaches to its disappearance in our times due to the conviction on the part of some philosophers that it is not a genuine philosophical problem.

The production of this essay is based upon the belief that the attitude of contemporary philosophy toward the problem of universals indicates an essential lack of understanding. This problem is an integral part of the structure of philosophical inquiry. It is true that there are special circumstances surrounding the appearance of the problem in the different ages, and these circumstances have some effect upon its disposition. These facts are

particularly evident in the middle ages. But these comments apply to all philosophical questions. The error that should be assiduously avoided is to assume that because there are special historical factors that make a problem crucial for a certain age, it follows that this problem has significance only for that age. The fact that philosophers of the middle ages, in general, were Christians meant that the problem of universals had a pressing significance for them. But this question must be faced by all philosophers, Christians and non-Christian, ancient, medieval, and modern. Logicians study laws of thought, propositions, variables, etc. Esthetic ians study beauty, ugliness, form, expression, empathy, etc. These are, without exception, universal concepts. What the logician says about the relation of laws of thought to things, what the ethicist says about the subjectivity or objectivity of goodness, all such assertions involve attitudes as to the nature of universals. The logician and the ethicist qua philosophers should state explicitly and systematically their accounts of universals.

Ideas, as our contemporaries persistently urge, do have consequences. And one of the consequences of the dismissal of the problem of universals seems to be relativism in regard to values. This is not to say that

relativism follows logically from such a dismissal. But those philosophers who say that the controversy over universals is artificial seem to feel that this belief either furnishes a solid basis for relativism or that this belief entails relativism.

To the extent that the position of these philosophers is intelligible, it involves the following principles.

(1) Our ideas and beliefs change. But no one has ever denied this and it is incredible that anyone would deny it. These philosophers seem to mean something special, i.e.:

(2) The central meaning of <u>any</u> idea is dependent upon the special circumstances surrounding its origin, i.e., that definite customs and traditions edit our ideas so that we never look at reality with pristine eyes. That there are, for example, noteworthy variations and divergencies between different moral codes is affirmed by all philosophers. But what some contemporary philosophers deny is that these variations and divergencies are compatible with the constancy of fundamental moral rules, and they conclude that no moral rules are constant.

These philosophers do not present us with a clear idea of the grounds upon which they come to this conclusion. Perhaps they deny that universal concepts denote real essences because of their disbelief in the existence of real es-

sences. Or perhaps they mean that we must remain content with nominal essences because we can never penetrate the underlying reality of real essences. Perhaps they mean that things and events in nature undergo constant change so that our concepts must change to keep up with them. Perhaps they mean that while nature retains some kind of identity throughout different ages, we choose different aspects of reality to symbolize in the different ages, and this selective factor explains the cognitive changes. In view of the fact that these philosophers claim to discard the problem of universals, these are nothing more than guesses. But it is evident that the reasons these philosophers present for affirming relativism in value have their origin in some interpretation of universals. Now it is not our function to evaluate relativism. It is our function, however, to point out that this relativism is theoretically powerless, unless it includes some coherent theory of universals.

What has been said in regard to current philosophical attitudes toward the problem of universals is based upon an analysis of a considerable portion of contemporary philosophical literature. This writer, however, has not intended to build a straw man and he recognizes that the viewpoint depicted above does not comprehend all contem-

porary philosophical opinions. Such outstanding philosophers as C. D. Broad, H. H. Price, and R. W. Church are of the opinion that some theory of universals in its traditional form is necessary to provide an adequate philosophical explanation of experience. Frege, the famous 19th century German mathematician, said that any mathematician who knows what he is doing is a Platonist. In the Harvard Law Review, Morris R. Cohen said:

> "It may seem a bold and reckless statement to assert that an adequate discussion of cases like Berry vs. Donovan, Adair v. United States, or Commonwealth v. Boston and Main R. involves the whole medieval controversy over the reality of universals. And yet, the confident assertion of 'immutable principles of justice inhering in the very idea of free government' made by the writers of these decisions, and the equally confident assertion of their critics that there are no such principles, show how impossible it is to keep out of metaphysics." (1)

These are healthy opinions and it is unfortunate that they are not more widespread.

An adequate history and systematic analysis of the problem has not yet been produced, and it is deplorable to see that some philosophers really believe that it is a psuedo problem; that it is antiquated and outmoded; that it is artificial; that it is a controversy confined to that strange medieval period; and so on. This essay is a systematic analysis of the problem of universals, and

this analysis is accomplished through examining characteristic theories of universals in the history of western culture. The essay is above all an attempt to show the tremendous significance of this problem to philosophy, and there is no attempt to convert the reader to some special view -- unless the belief that universals do constitute a problem be a special view.

We have indicated that the modern attitude toward universals and the problem of universals is inadequate. We have pointed specifically to the fact that some just ignore the problem. But even within the ranks of those who recognize its importance, we discover confusions and ambiguities. For example, some philosophers regard nominalism as a scientific and realism as a non-scientific or anti-scientific theory. We shall observe that these characterizations are either misleading or erroneous. Others say that nominalism entails scepticism, and we shall see that these two concepts are logically independent of each other. Many do not seem to understand the relation between theories asserting or rejecting innate ideas, and theories about universals; and to fail in understanding this relation is to fail in understanding Plato's theory of knowledge. Most important of all, philosophers generally have assumed that the problem of universals is

nothing more than the necessity of choosing between realism and nominalism. Too much attention has been paid to this alternative, i.e., either realism or nominalism, and too little attention to the problems that generated it. We shall contend that there are persuasive realisms, e.g., Plato's theory, and persuasive nominalisms, e.g., Ockham's theory; and that there are inadequate realisms, e.g., William of Champeaux' theory, and inadequate nominalisms, e.g., James Mill's theory. In addition, it is difficult to see why it has been assumed that there must be one, single explanation that applies to all general terms. Perhaps some universal concepts can best be explained on one hypothesis, others on some different hypothesis or hypotheses.

CHAPTER III: THE ORIGIN OF NOMINALISM

When the terms 'realism' and 'nominalism' are used to characterize theories about universals, these terms sometimes are regarded as being mutually exclusive and jointly exhaustive. According to this usage, a realist theory is necessarily incompatible with a nominalist theory, and any theory about universals must be either realistic or nominalistic. We shall follow this usage to the extent that it is possible to do so. But just as some books are not clearly either poetry or prose, but embody elements of both types of literature, so too some theories about universals are not clearly realistic or nominalistic, but embody elements of both theories.

Since one of the purposes of this essay is to discover what are the meanings of realism and nominalism, it would be inappropriate to define them at this stage in the development of the essay. The attempt will be made to define these terms in the context of the history of the problem. Nonetheless, it is advantageous to have some working conception of the meanings of these terms, and it is possible to provide such a conception without prejudging controversial issues.

The facts that confront both the realist and the

nominalist are that nature contains an indefinite number of individual entities, i.e., things, qualities, and relations, and that we observe relations of resemblance and difference between these entities. We construct general terms on the basis of some of the observed resemblances. The question that now presents itself is this: How is it that two or more discrete particulars can resemble one another and thus make it possible for a single term to denote more than one particular? The realist says that these individuals share in the same essence, that they partake of a common nature. The common nature is those characteristics by virtue of which individuals are members of the species to which they in fact belong. The reasons for this assertion will be given later. The nominalist, on the other hand, asserts that the realist appeal to a tertium quid is unnecessary and that there are no common natures to which appeal can be made. He asserts that individuals resemble one another by virtue of their own intrinsic, individual natures, and gives (or, at any rate, should give) an analysis of resemblance.

We shall proceed with the development of this essay by examining some of the characteristics of nominalism in its first appearances in the history of philosophy. It is recognized, of course, that to begin the examination of a

theory by noting its origin is sound procedure. But it is especially appropriate that we do so with nominalism, for this theory frequently has been the object of misunderstanding; and this misunderstanding goes back to its beginnings. If we can clear away this misunderstanding, then the realist will be presented with a sine qua non condition of refuting nominalism, i.e., understanding it.

The outstanding discussion of the problem of universals in Greek philosophy is found in the famous controversy between Plato and Aristotle. Prior to Plato, however, an awareness of this problem can be discerned in the views of Antisthenes the Cynic, contemporary of Protagoras, Gorgias, and Socrates. The opinions of Antisthenes are known to us primarily through his critics, Plato and Aristotle. If Antisthenes can be called appropriately the first nominalist, and there are good reasons for this designation, nominalism received severe treatment at the hands of historians of philosophy from the outset.

Diogenes Laertius notes that Antisthenes was the first to define statement, by saying that "a statement is that which sets forth what a thing was or is."(2) But, according to Aristotle,(3) he conceived the identity of an existent thing in such a radical manner that he believed every existing entity could be defined only through itself.

Antisthenes seems to have thought that the individual alone exists and that the predication of one attribute of many individuals is not significant. Thus, "A man is a man" and "A good is a good" are legitimate assertions, but "Man is good" is meaningless.(4) As Aristotle indicates,(5) falsehood and contradiction in this scheme are impossible and judgment trivial. If the foregoing constitutes a fair construction of Antisthenes' position, general words are meaningless and the position itself cannot even be articulated without contradiction. Granted this, it would follow that Antisthenes is a 'foolish' and 'uneducated' man, as Aristotle alleges. Instead of dismissing the beliefs of Antisthenes as mere nonsense, it is possible to discern the germs of a coherent nominalism in his thought. This is possible when one interprets the few disconnected comments concerning Antisthenes in the philosophical and historical context of his times.(6)

All philosophically-minded Greeks of the 5th century B.C. were familiar with the problem of the One and the Many as reflected in the controversy between the Eleatic and Heraclitean doctrines. Heraclitus had pointed to the universality of change and Parmenides had asked us to observe that change is rationally inconceivable. And the 4th century B.C. Greeks of a philosophic temper were familiar

with the reconciliating attempts of Empedocles, Anaxagoras, and Democritus. Generally the pre-Socratic philosophers were not concerned with questions concerning the possibility of knowledge, but devoted their energies to ascertaining the characteristics of reality. But with the advent of Sophism and the 'failure of nerve', philosophers began to question seriously the possibility of acquiring knowledge. The conditions of the times were such that philosophers were more concerned with the problem of how the individual could live the good life than with the problem of what is ultimately real. The belief in the importance and uniqueness of individuals culminated in the self-centered attitude of the ethical schools.

Antisthenes was a student of Socrates. While he did not accept the positive achievements of Socratic philosophy, he must have been impressed with the Socratic technique of arguing, whereby an individual ultimately was forced to admit that he did not understand the meaning of pleasure, courage, and other general terms. This sceptical attitude of Antisthenes was based on the acceptance of radical pluralism. In view of the failure, first, of the pre-Socratic monists, and, second, of attempts to reconcile monism and pluralism, it is not difficult to see why Antisthenes came to the conclusion that the unique individual

alone exists. Just as ethical standards, which imply the real existence of some common nature, were believed to be spurious, so all class names were believed to be artificial. All that one could say of any entity was that it was itself. Hence, to say "This man is good," is to commit a double fallacy. First, it is assumed that this individual is the member of a class, men. Second, the fictitious class, men, is confused with the fictitious class, good. On the basis of this doctrine, it is no wonder that Antisthenes recoiled so violently from Platonism. We should keep in mind for later discussion the fact that one of the factors determining the position of Antisthenes was his aversion to extreme realism.

There is some reason to believe that Antisthenes was not content with the bald assertion of an unmitigated pluralism, for Aristotle says:

> "Therefore the difficulty which used to be raised by the school of Antisthenes and other such uneducated people has a certain timeliness. They said that the 'what' cannot be defined (for the definition so called is a 'long rigmarole') but of what <u>sort</u> a thing, e.g. silver, is, they thought it possible actually, to explain, not saying what it is, but that it is like tin." (7)

This statement suggests that Antisthenes allowed the possibility of comparisons between simple, indivisible things, which allowance would entail the sacrifice of the utter

uniqueness of things. This statement also suggests that Antisthenes believed that only complex entities can be defined, and this is the interpretation that Aristotle gives the statement. If so, the argument is that since silver is simple, it cannot be defined; but it can be related to other simples, e.g. tin. This principle of the intrinsic similarity of individuals has become the central idea of nominalistic theories. Antisthenes lacked the tools and ingenuity to set forth a positive theory of the function of general terms. At the period when Antisthenes taught, most logical principles and methods had not been explicitly formulated. Much later in the history of philosophy, nominalists attempt to provide a positive theory of universals upon the basis of the logical distinction between predication and signification. Antisthenes did provide the basis for such an attempt.

The next nominalist we shall discuss is Roscelin who lived in the 12th century. Roscelin is universally regarded as an extreme nominalist and here again, we are forced to construct his theory on the basis of comments made by critics. Anselm mentions

> "those dialecticians of our times . . . who think that the so called universal substances are only emissions of sounds by the voice (flatum vocis); who are unable to understand

> that color is anything apart from the body in which it inheres, or that the wisdom of man is other than the soul of man . . . . If any one pronounces the word 'black' or 'white', he will not indicate thereby any particular thing, unless he says 'white' or 'black man' or 'white' or 'black horse'." (8)

In order to understand the meaning of this selection, it is advisable to examine the setting in which Roscelin set forth his views.

Medieval philosophers approached the problem of universals in terms of the translation and commentary of Porphyry produced by Boethius in the sixth century. Porphyry, in his Introduction to the Predicaments of Aristotle, had raised the problem of universals in his famous sentence:

> "I shall keep away from the deeper questions but shall aim rightly at the simpler; i.e., I shall refuse to say whether genus and species are subsistent or are located only in naked concepts, and if subsistent, whether they are corporeal or incorporeal, and whether separate from sensibles or subsisting in them and around them." (9)

In the ninth century, the problem of universals became a focal point of philosophical attention. The first group of philosophers to take an explicit position on this problem were extreme realists. In view of the tremendous influence of Plato, the Neo-Platonists, and Augustine, this stand is not surprising. But what would have dismayed both Plato and Augustine was the crudeness of these realisms. There

is good reason to believe that Roscelin in his criticisms was objecting particularly to the views of William of Champeaux, a 12th century realist. Abailard has this to say of William's doctrine:

> "Certain philosophers, indeed, take the universal thing thus: in things different from each other in form they set up a substance essentially the same; this is the material essence of the individuals in which it is, and it is one in itself and diverse only through the forms of its inferiors. If these forms should happen to be taken away, there would be absolutely no difference of things, which are separated from each other only by a diversity of forms, since the matter is in essence absolutely the same." (10)

Apparently, the reference to universals as 'things' was not just a verbal convention of the times. William seemed to believe that universals are kinds of objects (11) and Abailard criticizes his theory upon the premise that such was William's belief. Perhaps the most appropriate remark to make on the accuracy of Abailard's criticism is to note that William abandoned the doctrine in the face of the criticism.

In view of these considerations, let us now return to Anselm's description of the position of Roscelin. The description does not indicate that Roscelin believed particulars to be absolutely unique. More than this, the fact that Roscelin ascribes significance to such phrases as 'white man' and 'white horse' indicates, logically, that a

term can be predicated of more than one individual as represented in language; and it indicates, ontologically, that individuals are resembling. But what then about the 'vocal sounds'? The selection indicates clearly that 'universal substances' are vocal sounds. It would seem that Roscelin is criticizing the position of extreme realism by asserting that universals, considered as substances apart from the context in which they appear, lose significance, i.e., are nothing more than vocal sounds. 'White', Roscelin believed, signifies an indefinite number of particulars that in fact are white, but 'white' does not signify some entity apart from these particulars.

Two important principles, then, in an understanding of the nominalism of Roscelin are, first, his reaction to the crude versions of extreme realism prevalent in his time; and, second, the belief that individuals resemble one another and that universal concepts are constructed post res on the basis of these resemblances.

The close similarity between the nominalisms of Antisthenes and Roscelin are obvious. As we shall see in a later chapter, subsequent nominalists build upon principles asserted by Antisthenes and Roscelin. But what we wish to do now is to note characteristic misinterpretations of nominalism presented by contemporary philosophers.

One characteristic misconception of nominalism is exemplified in H.W.B. Joseph's claim that nominalism holds that all individuals are utterly unique, so that individuals called by the same name have only the name in common.(12) A nominalist, according to this interpretation, would have to assert that there is no more reason for calling Socrates, Plato, and Aristotle by the same name than there is for calling Socrates, courage, and ice cream by the same name. If nominalism entails the belief that there is no ontological basis whatever for common names, then this theory does not merit serious consideration. Now let us see what nominalists themselves say about this question.

Antisthenes, as we have seen, allows for the possibility of comparisons between simple, indivisible things. Roscelin clearly believes that the ontological basis of common names is resembling individuals. Abailard, who has been called a moderate realist, a conceptualist, and a nominallist, asserts that the term, man, names individual things by virtue of a likeness among individual men.(13) Durand, a 14th century nominalist, said:

> ". . for nothing exists in the external thing except the individual or the singular, hence, the being of the individual is not like anything in virtue of something added to it, but it is like something else in virtue of that which it is."(14)

William of Ockham asserts:

> "I admit that Socrates and Plato really agree and really differ, since they are alike specifically and differ numerically." (15)

Hobbes explains:

> ". . one universal name is imposed on many things for their similitude in some quality or other accident; and whereas a proper name bringeth to mind one thing only, universals recall any one of those many." (16)

Berkeley explains that words may become general

> ". . by being made to stand indiscriminately for all particular ideas, which, from a mutual resemblances, belong to the same kind, without the intervention of any abstract general idea." (17)

These illustrations are sufficient to show that the outstanding nominalists in the history of philosophy do not adhere to the principle which Joseph believes is characteristic of nominalism. No attempt has been made to persuade the reader of the virtues (or vices) of nominalism. In point of fact, the systems signified by the above exerpts are defective in various ways. But they do not contain the assertions that individuals are absolutely unique and that the imposition of common names upon individuals is arbitrary. Perhaps Joseph means to say that there is no middle ground between realism and the theory which he calls nominalism. Perhaps nominalism fails completely to give a satisfactory analysis of the origin and nature of common

names. But careful philosophical analysis would be required to effect this reductio ad absurdum, if indeed it can be effected; and it is just careless to identify the above point of view with nominalism.

Another distortive treatment of nominalism is reflected in the assumption that nominalism and scepticism are interdependent notions. This assumption is prevalent today. Now, of course, if one means by scepticism the theory which denies the real, prior, and separate existence of universal forms, then it follows that all nominalists are sceptics, and the converse without limitation. Aristotle would be a sceptic in regard to Platonic realism, and Aquinas a sceptic in regard to Augustinian realism. But custom has assigned a different meaning to scepticism, as indicated by Webster: "Scepticism is the doctrine that all knowledge is uncertain." This is the meaning that we shall use.

Maritain, outstanding contemporary Neo-Thomist, asserts that scepticism is always traceable to "the old error of nominalism."(18) John Wild, in a recent book, makes some interesting comparisons of realism and nominalism. His treatment, however, is vitiated by the identification of nominalism with "extreme scepticism."(19)

The historical evidence for the independence of

scepticism and nominalism is the fact that, for example, Durand was a nominalist and not a sceptic, while Nicolaus of Autrecourt was a sceptic and not a nominalist. The systematic evidence for this independence will be presented in Chapter VI. Scepticism and nominalism are not interdependent notions.

What we have done in this chapter is to examine the main characteristics of primitive nominalisms and to eliminate misconceptions of nominalism that have been attached to that position since its origin.

CHAPTER IV:

THE CASE FOR AND AGAINST EXTREME REALISM

I. Introductory

Plato's theory of forms is the center of gravity for the many significant conceptions that Plato contributed to philosophy. This theory of forms is a theory about universals. What it asserts is that the ultimate referents of general terms are eternal essences that subsist in a realm of their own. These essences, about which we will have much to say in this chapter, are called forms. This position is realistic because the referents of general terms exist independent of the human mind. The position is extreme because these referents have a reality independent of the world revealed to us through our senses. The function of this chapter is to show both the strength and weakness of extreme realism. Plato's theory will be used as our model because this theory, after all these centuries, continues to be the main fortress of extreme realism.

The interpretation of Plato's theory of forms that is given in this chapter is standard. That is to say, this interpretation, in its essentials, agrees with the interpretation settled upon by scholars and historians. Wherever there is disagreement with this tradition, that fact will be noted. John Burnet is the outstanding representative of a

small group of scholars who hold that Plato's theory of forms is radically different from the traditional interpretation of it. This minority point of view cannot be ignored. But its disposition requires detailed and complex analysis that would interfere with the development of this essay. Consequently, this matter is discussed in Appendix A.

No attempt is made in the essay to discuss the problem of whether Socrates or Plato is the author of the theory of forms. In the opinion of this writer, however, Socrates provided the groundwork and Plato the expansion and final development to the theory of forms.

II. The Theory of Reminiscence

In Plato's theory of universals, there is an irreducible gap between sense data and general concepts. Yet he affirms a connection between them, since a single general concept can stand for many sense data. Plato tries to explain this connection by postulating a realm of forms:

> "Whenever a number of individuals have a common name, we assume them to have also a corresponding idea or form." (20)

The particular objects we touch and see are liable to change; they come into being, alter while in being, and then pass away.(21) But the content of general ideas is not subject to comparable change. This factor leads Plato to believe that sensory experience is the occasion of

the psychological genesis of universal concepts, but neither the cause nor the principal content of them.

> "Indeed, Socrates, I cannot answer; my only notion is that these, unlike objects of sense, have no separate organ, but that the mind by a power of her own, contemplates the universals in all things." (22)

General ideas are grasped by the mind and the immediate problem is to trace their origin. In view of the transitory and particular character of sense data, how is this unchanging and universal aspect of our experience possible? Plato does not ask whether knowledge exists, but he inquires concerning the mental and extra-mental conditions of the knowledge that we have.

The theory of reminiscence is presented appropriately in the setting of an epistemological dilemma. In inquiry we do not learn what we already know, for if we already know it, we cannot subsequently learn it. And how can we inquire after something we do not know since we wouldn't recognize it if we found it? (23) Socrates tells of a 'glorious truth' related by certain wise men and women. According to them, the soul is immortal; it dies and is reborn again and again but is never destroyed. In virtue of this pre-existence, the soul has knowledge of all things and, ideally, is able to call to remembrance all that it ever knew. (24)

> "For a man must have intelligence of universals, and be able to proceed from the many particulars of sense to one conception of reason; -- this is the recollection of those things which our soul once saw while following God -- when regardless of that which we now call being she raised her head up towards the true being . . . For every soul of man has in the way of nature beheld true being; this was the condition of her passing into the form of man . . . For there is no light of justice or temperance or any of the higher ideas which are precious to souls in the earthly copies of them; they are seen through a glass dimly; and there are few who, going to the images, behold in them the realities, and these only with difficulty." (25)

All inquiry and learning is recollection and present experience of sensible things makes us aware of rational conceptions that occurred in a previous existence. To say that knowledge was acquired in a former state of existence is not simply to move the problem of knowledge back a step without resolving it. The generic problem of knowledge stems from the fact that man is a sentient as well as a rational creature. The senses provide particular, fragmentary data; the mind somehow forms universal conceptions. The process is possible because the soul had a previous existence in which it was not attached to a body and was able to learn universal truth directly.

The specific arguments Plato advances to support this theory of reminiscence are not extremely important for our purposes. The main point to be urged is that sensory

objects suggest conceptions that are not knowable via the senses alone.(26) Sensory experience is said to be imperfect. This imperfection is most evident in the field of mathematics, e.g., circular objects in nature are never more than approximations of mathematical circularity. Man, therefore, possesses standards in virtue of which these objects are said to be imperfect, but he does not begin life with these standards in his conscious possession. Our apprehension of the standards, when it does arise, cannot come from experience, for these standards are used in arranging and evaluating experience.

This is not the naive theory of innate ideas often attributed to Plato. Plato really does not mean that we come into the world armed with several packages of knowledge. It is difficult to see why Locke's diatribe against innate ideas has been received as a serious criticism of the Platonic theory of reminiscence. John Dewey is impressed by Locke's denial of the existence of innate ideas because:

> "He (i.e. Locke) sees almost every old idea, every hereditary prejudice, every vested interest of thought, defended on the ground that it is an innate idea." (27)

This is a strange argument for a philosopher to present. It is comparable to arguing that Packards are inferior cars on the ground that some people have claimed that inferior cars of other makes are Packards. In the Middle Ages, some

evil acts were committed in the name of Christianity, but we recognize that the nature of Christianity is not to be determined by historical perversions of it. If true, it is too bad that the doctrine of innate ideas has been contaminated by perverted applications. But this by no means proves that there are no innate ideas.

Locke's criticism of innate ideas has frequently been regarded as devastating to Plato's theory of reminiscence. Locke argued that if an idea were innate, we would be conscious of it at birth. But when Plato said that ideas are innate, he did not mean that babies are born thinking of God, Causation, Substance, Triangularity, and so on, and that these ideas are the object of their attention until death. Nor did Plato mean that if the correct stimulus were presented to babies, they would be able to generate the ideas of God, Substance, etc.

What Plato did mean can be discerned by means of an analogy. Babies cannot speak a language when they are born. But babies can acquire the capacity to speak a language. They can acquire this capacity provided they are trained correctly. Give the same training to fish and plants and the capacity is not developed.

Now Plato believed that experience shows that we need to postulate special intellectual capacities to explain the

knowledge that we have. We have, for example, the capacity to form the idea of causation when the appropriate stimuli are presented, i.e., the constant conjunction of two characters. We have the capacity to form the idea of substance when groups of qualities appear together over a period of time. We have the capacity to form the idea of justice when we experience a particular kind of emotion in a particular kind of situation. And so on.

Plato did not work out his theory of innate ideas in any detail. If he had done so, it might have been necessary for him to distinguish between powers to acquire intellectual capacities to form ideas and the simple acquisition of ideas where no special powers or capacities need be postulated. But we should not expect the founder of a doctrine to give the definitive treatment of it. Of course, the rash postulation of innate ideas is rash. Perhaps some philosophers have used theories of innate ideas to conceal intellectual weaknesses and prejudices. And it is true that babies, savages, and idiots do not think very significantly, if at all, about Substance and Causation. But the Platonic theory of reminiscence is not affected by these admissions.

Too often, Plato's theory of reminiscence is regarded as a trick to avoid the fundamental problems of knowledge.

We have tried to show that this theory is based upon careful, empirical analysis and thorough recognition of these problems. Plato does not present this theory as a neat solution to these problems. He does not believe that he understands thoroughly the activity of cognition.

On the other hand, the Augustinian theory of illumination does tend to explain too much. Augustine, with Plato, asserts that we know universal essences or forms and that this knowledge could not have been derived from experience. But Augustine takes a much more radical attitude toward this situation than does Plato. Plato's theory of reminiscence provides for our antecedent acquisition of concepts; but sensory experience does remind us of them and it is up to the individual to remember them for himself and by himself. For Augustine, however, knowledge of the intelligible world is essentially revelation or illumination. The intuitive knowledge of the intelligible truths is not construed to be an independent production of the mind out of its own nature. The individual consciousness takes an expectant and purely receptive attitude. At this point, Augustine's theory of knowledge reflects a characteristic Neo-Platonic pallor that is not typical of clear-cut Platonism. Plato, then, does not use the theory of reminiscence to bypass the problem of knowledge.

The question may yet arise as to whether this explanation resolves the original epistemological dilemma. Should the whole affair be regarded as a misleading burst of poetry? Some philosophers emphasize the point that the theory of reminiscence is presented by Plato in the language of the Orphic doctrine of pre-existence and re-incarnation, that Socrates is made to say he has learned this doctrine from poets and priests, and that the main function of the theory of reminiscence is to suggest that the soul is immortal.

Plato does say that his description of the soul and her mansions need not be taken as literally true, but he also says that something of the kind is true nevertheless.(28) Elsewhere, Plato remarks that he is not altogether confident of the theory.(29) Yet these comments do not justify the inference that the theory of reminiscence is a poetic fiction enjoyable only esthetically.

> "But that we shall be better and braver and less helpless if we think that we ought to inquire, than we should have been if we indulged in the idle fancy that there was no knowing and no use seeking to know what we do not know; -- that is a theme upon which I am ready to fight, in word and deed, to the utmost of my power." (30)

The point of the myth is to show that we do not possess a rational understanding of knowledge, as regards both its acquisition and its nature. This is what Plato believed and one reason why he believed it is because he thought

that sense experience suggests truths that it does not adequately embody. He believed that there are characteristics, e.g., circularity, that do not characterize actual particulars. How do we acquire knowledge of these truths? Plato believed that sense experience does not provide the answer, and he cannot find the answer anywhere else. To indicate man's inadequacy to explain some of his possessions, he formulates a myth. When Bertrand Russell (31) asserts that Plato's myth is 'fantastic', he is asserting a fact of which Plato was well aware. But what Plato regarded as even more fantastic was to try and explain knowledge without a myth.

III. The Extent of the Forms

Plato realized that the fact that a concept is innate is no guarantee of its validity. Human minds might be constituted in such a way that reality is inaccessible to them. In this event, innate ideas would impede rather than facilitate cognition of reality. Hence, the ontological corollary, universalia ante rem, which constitutes the essence of extreme realism, is necessary to provide a foundation for Plato's theory of reminiscence.

As observed previously, Plato asserts that whenever a number of individuals have a common name, they are assumed to have a corresponding form. On the basis of this cri-

terion, all universal concepts, concrete and abstract, absolute and relative, have corresponding forms. Virtues such as temperance, courage, liberality, and magnificence have forms.(32) Esthetic values are treated as forms in the Symposium where Socrates urges that men pass from the perception of finite beautiful things to the contemplation of absolute beauty.(33) There are forms of physical qualities such as health and strength;(34) of sensory qualities such as color and sound;(35) of states such as swiftness and slowness;(36) of natural objects, if we are to accept the testimony of Aristotle, who says that Plato believed there were as many forms as there are kinds of natural objects;(37) of artifacts such as beds and tables;(38) and of relations such as greater and smaller, likeness and unlikeness.(39)(40) The obvious conclusion to be drawn from these textual citations is that forms exist as ontological corollaries to all common names.

This conclusion, while it may give a consistency to Plato's thought that it otherwise does not possess, is difficult to maintain in view of other passages from the dialogues. Parmenides, in questioning Socrates concerning the extent of the world of separate forms, receives the unequivocal answer that there are forms of mathematical entities and of moral and esthetic qualities. But in

regard to the question of whether there are forms of the species of living creatures and of the four elements, Socrates is in doubt:

> "I have often been puzzled about those things, Parmenides, whether one should say that the same thing is true in their case or not." (41)

At this point, it seems necessary to distinguish between the beliefs of the young Socrates, on the one hand, and the Platonic philosophy with which we are concerned, on the other. In this dialogue, Parmenides says that philosophy has not yet taken hold of Socrates as firmly as he believes it will some day. Socrates, with his predominant concern for ethical inquiries, may never have applied the theory of forms systematically to the whole of nature. But statements in other dialogues make it certain that Plato does affirm the existence of forms of the species of living creatures and of the four elements. (42)

Parmenides goes on to ask if such things as "hair, mud, dirt, or anything else which is vile and paltry" also have forms separate from these actual particulars.

> "Certainly not, said Socrates: visible things like these are such as they appear to us, and I am afraid that there would be an absurdity in assuming any idea of them, although I sometimes get disturbed, and begin to think that there is nothing without an idea; but then again, when I have taken up this position, I run away, because I am afraid that I may fall

> into a bottomless pit of nonsense, and perish; and so I return to the ideas of which I was just speaking (i.e., justice, beauty, goodness) and occupy myself with them." (43)

The attitude expressed in this passage cannot be attributed entirely to the youth and philosophical naivete of Socrates. There is the tendency in Platonism to assume that what is most valuable is eo ipso most real. In accordance with this tendency, universal concepts of positive value, e.g., beauty, goodness, have objective counterparts, and no other universal concepts have an ontological referent. The dilemma which is invoked by the dichotomy between moral and logical requirements is not resolved elsewhere in the dialogues. This ethical bias is in evidence again in the moral twist given to the theory of reminiscence at the ends of the Gorgias and the Republic. The extent to which the realms of fact and value are merged is an important metaphysical consideration. But for purposes of development of this essay, it is sufficient to note that the statement of extreme realism as a logical and epistemological doctrine does not permit the exclusion of "even the meanest things" for fear "there would be an absurdity in assuming any idea of them." That Plato sometimes is aware of this fact is (44) evident in the dialogues.

IV. Sense and Thought

Plato is convinced that man has a mind which can apprehend reality and that this reality possesses unqualified existence. The theory of reminiscence is employed to give an explanation of the fact that our minds can apprehend reality. The phenomenal world is continually in the process of becoming, and Plato believed that change is ineffable. These immutable and eternal entities which exist outside of the phenomenal world are the forms. The forms are simple and individual, on the one hand, and are universal and function complexly, on the other; and yet the individuality of the forms is not opposed to their universality.(45) Each form is individual since its existence is not the consequence of the reception of anything outside of itself nor of the extension of itself to any other thing.(46) The restriction of place, therefore, is inapplicable. But while the forms are simple and individual qua essences, they are universal and function complexly with respect to all the phenomena which are imitations or representations of them.

Plato emphasizes the point that the forms are apprehended only by the mind.(47) That the forms are free from any taint of imagery or sense is indicated by their mode of apprehension. Yet, Aristotle criticizes Plato on precisely this point:

> ". . the most paradoxical thing of all is the statement that there are certain things besides those in the material universe, and that these are the same as sensible things except that they are eternal while the latter are perishable . . For they were positing nothing but eternal men, nor are the Platonists making the Forms anything other than eternal sensible things." (48)

This procedure, Aristotle claims, is comparable to the conception of Gods as eternal men and just as anthropomorphism is objectionable in religion, so this analagous procedure in metaphysics is untenable. Aristotle is asserting that Plato attributes substantial existence to general concepts and that this attribution transforms general concepts into particular things, which is contradictory.

What is the force of this criticism? Some would deny the legitimacy of such an interpretation of Platonism, pointing out that Aristotle is notoriously an unreliable critic, and the criticism would thus be dismissed. But the philosophical approach to this situation is to regard as irrelevant the fact that Aristotle uttered the criticism and then examine the criticism rather than Aristotle. (49) In fact, the criticism is a significant one and there are emphases in Plato that furnish a basis for this interpretation.

In order to answer this Aristotelian criticism, it

will be helpful to consider systematically the relation between thought and sense. When one tries to think about thought, he realizes the extent to which his ideas are entangled in sentience. When I think of the dinner that I ate last night, I recall the color, odor and shape of the steak, the texture of the potatoes, the sweet taste of the ice cream, and so on. These colors, shapes, tastes, etc. are images, i.e., recalled sensations. Some philosophers have believed that the reason why our thoughts are so entangled in sentience is because ideas are images. Accordingly, to have an idea of x is to have an image that resembles x. In this tradition, David Hume asserted that to have an idea of something is to have an image of that something and that if there is no image, there can be no idea. And Berkeley had shown that we cannot have general images. For if there were a general image corresponding to the general idea, color, this image could not be red, blue, etc., nor any determinate series of hues. It would have to be an indeterminate color image, and no such image can be found.

Now if Hume is right and all ideas are nothing more than images, our <u>ideas</u> of the Platonic forms would be images. Any description that we could give of the forms would be in terms of sensory elements. It would not necessarily follow that the forms themselves were sensible

things, but, nonetheless, we could not use our knowledge to maintain that they were not. The cogency of Platonism, therefore, would be seriously impaired.

A recognition of the integral relation between images and ideas need not drive us to the absurd conclusion of Hume. If we keep in mind the distinction between the epistemic conditions of cognition and the constitutive conditions of reality, then we see that Plato can admit certain relations between sense and reason and at the same time maintain that the forms qua ontological entities are free from any taint of sense or imagery.

Of the many questions that could be raised concerning the relation of thought and sense, two are particularly pertinent for our purposes. First, can we think without images? It is difficult to establish the occurrence of imageless thought. The Associational School in psychology had the effect of strengthening the belief that thought and imagery are inseparably connected. But Ostwald Kulpe began some empirical, experimental tests around the beginning of this century that culminated in the establishment of a widespread belief in imageless thought. Of course, the extreme behaviorists deny the occurrence of imageless thought since they deny the occurrence of thought altogether. But such representative psychologists as Messer, Buhler, Alfred Binet, and Woodsworth either accepted the

results of Kulpe or established independently similar results. And A. W. Moore in 1915 found that the meanings of words tend to rise more quickly than the corresponding images. These results are not conclusive, but they should not be ignored. So far as our first question is concerned, however, it is by no means certain that imageless thought occurs.

Whether imageless thought occurs or not, it is still significant to ask, secondly, whether images and ideas qua meanings are identical. The evidence would indicate that in some cases images and meanings are identical, in others, not. The general idea, crimson, denotes a determinate quality that has been repeated several times in my experience. When I think of crimson, I have an image of a shade that has been repeated several times in the past. This is the only meaning that crimson has for me. The image and the meaning are one and the same.

And yet the work of Kulpe, Moore, and others indicates that there is a distinction between images and meanings in some situations. The language of mathematics and logic has a precision and exactitude that is unaccounted for if the meanings of the words of this language consist of images. This is not to deny that experienced and recalled sense data are necessary conditions of the acquisition of logical and mathematical knowledge. Nor are we denying

that images accompany such cognitive processes. We are insisting upon a distinction between images and meanings in regard to some concepts. The phrase, moral obligation, has meaning for me. Introspectively, I discover that whenever I am under moral obligation, I experience a certain kind of emotion. Let us say that when I recall emotions experienced in the past, I have images of those emotions. There are no images, no data of introspection which tell me whether these emotions are fitting or unfitting to the objects toward which they are directed. Genuine moral obligation involves an emotional state and it also involves the notion of appropriateness of emotion to object. I am unable to conceive what such an image would be. And it is difficult to see what image could possibly be employed to represent implication and noncontradiction. Analyses of causation and material thinghood also show a distinction between image and meaning. Someone might object to the fact that I have used my introspective powers as a means to distinguish between image and meaning. That is true and it is possible that my introspective powers are defective. If there are others who have better introspective powers, let them speak, if they can. Until they do, I shall rely upon mine.

These comments lead to the necessity for distinguishing between imagery and thought and, at the same time, indicate the difficulty of separating them. The admission that imagery and thought are distinguishable but not separable is consistent with Plato's assertion that the forms are free from any taint of sense or imagery. All or most of our thinking has its sensory components, but in some cases we can distinguish sense and meaning. This provides Plato with an epistemic foundation for the ontological assertion that entities free from sensory components exist in a realm of their own.

Aristotle's comparison of Plato's eternal sensibles with anthropomorphism in religion is not merely of historical moment. In all religions deity is described in anthropomorphic terms to some degree. If the attempt is made to purge religion of descriptive terms, religion will be inadequate in the sense that the content will be indeterminate. And to the extent that characterization of a deity is adequate, representation is introduced. The effect of this introduction of representation, however, may not be as disastrous as Xenophanes, in the one case, and Aristotle, in the other, believed. So long as one remembers that he is dealing with a representation and that the representation is not the entity, deception does not occur.

So there may be a residual element of imagery in all thought, and unless extreme care is taken in the interpretation of this residue in the case of the Platonic form, the criticism made by Aristotle will be applicable. But the criticism would be effective only if Plato had maintained that ideas and images are identical, and no one has ever connected Plato with this view.

V. The Universal Essences

The doctrine of reminiscence indicates that the senses suggest the forms to us and Plato does not believe that the senses contain the standards they suggest. With this emphasis in mind, the assertion that sensible things imitate forms becomes intelligible.(50) Elsewhere, Plato speaks of sensibles participating in the forms,(51) but he is severe in his criticisms of the standard interpretations that his adversaries gave to the relation of participation.(52) As the dilemma of participation is presented, if particular things partake of forms, either the forms must be reduplicated in their entirety in each of their instances (in which case there is a multiplication of forms) or any single form is divided among the things participating in it. Either alternative is absurd.

What, then, is the relation between forms and phenomena?

Plato gives several answers but is satisfied with none. For example, he says that the forms are patterns of which there are likenesses in things. Participation here means the resemblance which a copy has to its original. Plato puts the following objection to this argument into the mouth of Parmenides: original and copy are alike and therefore have a common character, and so another form must be postulated in which the original and copy participate, and so on ad infinitum.(53) This appears to be the so-called 'third-man argument' to which Aristotle refers.(54) Although Socrates is represented as being unable to meet this argument, it is fallacious. This is such a fundamental criticism of Platonism that we should examine the argument carefully in order to see why it is fallacious. The best statement of the argument is presented by Alexander as follows:

> "If a term truly predicated of a number of things actually exists in separation from the things it is predicated of -- and that is what those who assert Forms believe they show, since their reasons for the existence of a Self-man is that man is truly predicated of a number of things and is a different 'Man' from the individual men -- then there will be a third man. For if the 'Man' which is predicated is different from the things it is predicated of and has an independent existence, and if it is predicated both of the individuals and of the Form, there will be a third Man over and above

> the individuals and the Form. And similarly a fourth predicated of the third and of the Form and the individuals, and a fifth, and so on indefinitely." (55)

This argument is a conditional of the following form: if (a) the 'Man' which is predicated truly of a number of individual men is different from individual men, and if (b) this 'Man' has an independent existence, and if (c) this 'Man' is predicated of individual men, and if (d) this 'Man' is predicated of the Form, then it follows that there will be a third man over and above the individuals and the form, and so on. It cannot be denied that the conditional is true. The real question, however, is whether Plato does affirm the antecedent. Now the antecedent in this case is complex and there is no doubt that Plato does affirm the following parts of the antecedent: that the 'Man' which is predicated truly of a number of individual men is different from individual men; that this 'Man' has an independent existence; and that this 'Man' is predicated of individual men. The remaining part of the antecedent in question concerns the predication of this 'Man' relative to the form.

It must be admitted that Plato's language sometimes commits him to the assertion of this last antecedent and thus exposes him directly to the devastating attack of the 'third man'. In the Protagoras it is said that justice

is just and holiness is holy; indeed, for emphasis, it is added that nothing can be holy if holiness is not holy. (56) Yet, we should not allow the occasional use of loose language to obfuscate the exactitude with which Plato elsewhere states the doctrine; for he is both aware of and protects himself against this interpretation. The absolute unity of the forms precludes the possibility of predicating something of them. Socrates is a man and Plato is a man because particular things participate in forms. But it is false that Manhood is a man just as it is false that the form of twoness has two or any other number as a quality. In the above quotation, then, the 'Man' which is predicated of individual men is not also predicated of the form of Manhood, for the predicated 'Man' as it occurs in discourse stands for the form itself. Manhood does not have 'Man' as a character but is that character itself; the relationship, then, is one of identity, not one of predication. We therefore conclude that the 'third-man' argument contains a true conditional but does not apply to Plato's statements about participation.

It remains true, however, that to defend Plato's theory of forms against a particular attack is not to give a positive answer to the question of the relation of forms to things. Plato admits the many difficulties that attach

to the postulation of the forms and he does not explain precisely and systematically the relation between forms and sensibles. These difficulties constitute the reason why the theory of forms is 'hard to accept and hard to reject'[57] and demonstrate that it 'is marvelously difficult to convince anyone who raises objections'.[58] But Plato persistently urges that recognition of the difficulties that inhere in the postulation does not erase the necessity for the postulation. Although he does not explain what the relation of participation is, the Heraclitean flux is still in the background. It really is not strange that Platonism is built upon the acceptance of the Heraclitean flux. The flux of Heraclitus is not chaos but is ordered change, and Heraclitus believed that there is a 'hidden harmony' which rules nature,[59] and that the wise man is he who discerns 'the thought by which all things through all are guided'.[60] And Plato is convinced that if there is to be communication, discourse, and philosophy, there must be objects of thought that exist unchanging and independent of the flow of sensible things.

> "And yet, Socrates, said Parmenides, if a man, fixing his attention on these and the like difficulties, does away with ideas of things and will not admit that every individual thing has its own determinate idea which is always one and the same, he will have nothing on which his mind can rest; and so he will utterly destroy the power of reasoning, as you seem to me to have previously noted." (61)

When we pass from the problem of the relation of forms to things to the problem of the relations among the forms themselves, we find Plato arguing that there must be some relationships among the forms to explain the knowledge that we have. Otherwise, it would not be possible to predicate one general term of another significantly. If the statement, 2 plus 2 equals 4, is necessarily true, its truth must be in virtue of a relationship between the forms of Twoness and Fourness.

In the Republic, Socrates simply asserts that universals taken singly are individuals but when combined appear many.(62) In the Phaedo, it is briefly indicated that some essences can participate in one another (Snow and Cold), provided the participations are based upon the eternal relations of being. Contrary essences (Cold and Hot, Life and Death) cannot participate in each other without losing their identities, and this is impossible.(63)

In the Sophist, Plato discusses the possible kinds of relationship between forms. All forms might have communion with any others; or some forms might have communion with some or all other forms. The first two possibilities are eliminated and it is decided that some forms are capable of intermixture with others, some forms are contained under a higher form, and many forms exist in separation and

isolation. The philosopher through the use of dialectic can apprehend some of the relations that hold between forms.(64)

The information provided thus far is necessary to a complete explanation of the relationship among forms but is not sufficient. Once the attempt is made to specify the relationship of 'participation', 'communion', 'blending', 'intermixture', etc., insoluble difficulties present themselves. The fact that these different terms are used indifferently to signify the relation suggests that Plato did not want the reader to take any one term in its literal meaning. 'Verbal puzzles' arise when one tries to understand this relation, and Plato again reminds us that to separate the forms from one another is a "barbarism and utterly unworthy of an educated or philosophical mind."(65)

Yet something has been accomplished in that the difference between the unknown relations between forms and sensibles, on the one hand, and the unknown relation among the forms themselves, on the other, can be stated. For the relationship of sensibles to forms is unilateral or asymmetrical: sensibles participate in forms but forms do not participate in sensibles; and forms are in no way affected by the participation of sensibles in them.(66) The relationship among forms, contrarily, is reciprocal or symmetrical. Each form possesses unqualified existence and is

what it is by virtue of its own intrinsic nature. And this account is sufficient to show conclusively that Plato did not intend to represent the forms as derivative from some single ideal principle; i.e., the Good or the One. Hence, the transformation from Platonic pluralism to Neo-Platonic monism should not be regarded as simply an explication of Platonism.

VI. Evaluation and Criticism

Now that the Platonic theory is before us, we shall consider some of the objections traditionally brought against the theory. No attempt will be made to give a complete list of all the criticisms that have been or could be directed against Platonism. Some of the objections that could be discussed at this point apply more directly to other systems of thought and they will be discussed in the contexts of these systems. Our main concern is to discuss those points that are significant for a systematic analysis of the problem of universals.

Plato asserts that universal concepts designate some real natures outside the soul, intrinsic and essential to those things of which they are the common natures, and yet distinct from them. Universal forms are alleged to be distinct from the things to which they are common for several reasons noted previously, e.g., because universal en-

tities are incorruptible whereas singulars are corruptible.

The One and the Many argument has been applied vigorously to the various types of realisms repeatedly in the history of philosophy. It is an argument with which any realistic theory of universals must reckon. It is convenient to use it as the basis of this evaluation for reasons that will become evident. Although the One and the Many argument is familiar, its complicated character necessitates careful analysis. This argument is applied to positions which assert (1) that there are distinct particulars in nature, and (2) that the universal form is a numerical unity. The first assumption is complex but at the very least it involves the principle that the being of any particular cannot be wholly explained in terms of any other being, universal or particular. It appears extremely likely that Plato holds to such a view, notwithstanding the fact that certain tendencies in his philosophy have generated monistic trends that are incompatible with this pluralistic conception. In regard to the second assumption, whatever stands in any numerical connection with anything distinct from itself must have a numerical value. The form is distinct from the many of which it is properly predicated and must therefore have a numerical value, i.e., unity.

On the basis of such assumptions, the following four arguments are possible (they are listed in the order in which they will be considered): (1) the qualitative unity of the form is incompatible with the numerical diversity of the things that participate in the form; (2) the numerical unity of the form is incompatible with its numerical diversity among the things that participate in it; (3) the numerical unity of the form is incompatible with the qualitative diversity among the things that participate in it; (4) the qualitative unity of the form is incompatible with the qualitative diversity among the things that participate in it.

The first argument can be dismissed at once, for it is not true that numerical diversity implies qualitative diversity. That qualities are often repeated in the sensory life of man is one of the indubitable facts that form the subject-matter for the controversy over universals, and to recognize that these repetitions occur does not commit one to any specific theory of universals.

The second argument is the one generally associated with the One and Many argument. According to it, the numerical unity of the form is incompatible with its nmerical diversity among the things that participate in it. Since the form is distinct from the singulars, it is argued that

the form must be numerically distinct from them, and, as a form, a numerical unity. To the extent the form is essential to the singulars, it is numerically as many as there are particulars. So the universal, being a one in a many, must be at once an undivided unity and at the same time a plurality -- which is logically impossible. It seems difficult to answer this argument by denying that the forms are numerical unities. For any two forms are numerically distinct; there is a numerical plurality of forms. Now Plato was aware of this difficulty and yet he did not abandon his position. He was not content with the above contradiction, but appeared to believe that the situation seemed contradictory to us because of our inability to comprehend the reality of the forms in their relation to particulars. To comprehend this relation would be to discover the reason why forms can be communicated to particulars without variation in themselves. Perhaps Plato believed that the fact there is a numerical plurality of forms need not imply that any form stands in a numerical relation to its singulars. If so, the unity of the universal form becomes a different kind of unity from that of the individual. In any event, we are unable to say more in this connection than we said when discussing the relation of forms to things. It is reasonable to assume that Plato believed that it was absolutely necessary to postulate the

reality of the forms. He then noted that serious difficulties develop out of this postulation. To the extent that the difficulties are explained at all by Plato, they are attributed to epistemic limitations. On logical grounds, this is a very dangerous procedure. But until the fact is established that the universe is completely accessible to human cognition and its laws, we cannot be certain that Plato's position is invalidated.

We shall consider the third and fourth arguments together. The question is whether the numerical and qualitative unity of the form is incompatible with the qualitative diversity among the things that participate in it. This red patch and that green patch are qualitatively different and yet both are called colors. Is there a single form, color, in which they both participate? It is not clear just how Plato would answer this question. Philosophers generally have assumed that he would give an affirmative answer. It is not even clear that Plato recognizes the distinction between exact and inexact resemblance of particulars. But Aristotle makes a comment about Plato that contains a very interesting suggestion, a suggestion, we shall maintain, that is significant for the problem of universals.

The comment of Aristotle is this:

> "The men who introduced this doctrine did not posit Ideas of classes within which they recognized priority and posteriority (which is the reason why they did not maintain the existence of an Idea embracing all numbers). ." (67)

Aristotle asserts that Plato did not posit a form of number. It is tempting to interpret this assertion to mean that for Plato there are no forms of numbers. The reason why this interpretation is tempting is because of Plato's remark in the Republic that the mathematicals occupy a third realm intermediate between the forms and things. The problem of the mathematicals is a difficult, perhaps insurmountable, problem. But, as we have shown in Appendix A, the solution of this problem is not essential to asserting that there are forms of numbers. Granted that there are forms of numbers, what can the above quotation mean?

What it means is that there is no form of number in general, i.e., number as comprehending the entire series of numbers. Numbers taken collectively constitute a series and the members of this series are connected by the relation of priority and posteriority, e.g., three comes after two and before four. The ordered series of integers, therefore, is not a form, but a series of forms. In our discussion of the third-man argument, we saw that the unity, simplicity, and uniqueness of the forms precludes the possibility of predicating qualities or characteristics

of them. That which the term, number, denotes is not simple and indivisible. It follows that number cannot designate a form. Aristotle also reports that for Plato there is no form corresponding to figures and constitutions. Plato apparently believed that the term, figure, denotes a series of forms, e.g., triangles, squares, etc.; that the term, constitution, denotes a series of forms, e.g., aristocracy, democracy, etc. It is easy to see how the relation of priority and posteriority generates the series of constitutional forms in view of Plato's conviction that democracy, for example, follows (in time) oligarchy and that democracy precedes (in time) tyranny.(68) It is difficult to see just how this relation of priority and posteriority orders the geometrical figures, and, for our purposes, it is unnecessary to pursue the subject.

At the beginning of this essay, we noted that philosophers have assumed that there must be a single explanation that will account for all general concepts. We also noted that the assumption is not self-evident. The traditional interpretation of Plato's theory of universals is based upon the principle reflected in the following quotation:

> "Wherever a group of individuals have a common name, we assume them to have a corresponding form." (69)

The viewpoint depicted above would necessitate the rejection of this statement. If a and b are the same, we use one term to denote both of them. For example, if a is a red patch and b is a red patch, then they are the same hue, i.e., they are qualitatively identical. If we used different terms to designate repetitions of qualities, communication would be practically impossible. But it does not follow that if one term is used to designate two items, then the two items must be qualitatively identical. To assume that it does follow is to commit the fallacy of affirming the consequent. For example, this red patch and that blue patch are both called colors, but this is not to say that they are qualitatively identical.

What this means is that for Plato there are at least two different kinds of universal concepts that we might designate as simple and complex. Simple universals are those that pertain to particulars in respect to qualities that are common to the particulars. Complex universals refer to groups of simple universals when these groups form series. Plato, of course, did not make this distinction explicitly between simple and complex universals, but Platonism does contain the basis for such a distinction. There would be little value in additional discussion of this question within the confines of Plato's philosophy. If this distinction had been noted before, the history of the problem of

universals might have assumed a different form. Philosophers might have recognized that it is important to analyze kinds of resemblance prior to swearing allegiance to either nominalism or realism.

We need to make two more points in regard to the position of extreme realism, as this position is expressed in the philosophy of Plato. There are some today who do not believe that extreme realism is an appropriate object of contemporary philosophical attention. Some of the reasons for the generation of this belief are the criticisms, e.g., the One and Many argument, applicable to extreme realism. We have noted, just as Plato noted, that some of the criticisms are difficult to answer, but in no case have we discovered anything amounting to a refutation of the position. Therefore, these reasons are not sufficient to sustain this negative attitude. Some persons believe that Platonism, the archtype of extreme realism, is a dogmatic, prescientific, superstitious philosophy, and that 20th century man with his scientific temper and objective techniques cannot be expected to take such a position very seriously.

We should recognize from the outset, however, that the Socratic-Platonic theory of universals is not dogmatic in the sense of being uncritical. Socrates and Plato

lived in immediate contact with radical scepticism. They were besieged by firsthand statements of various forms of scepticism and relativism and these statements are so definitive that, in some instances, they have not been improved upon to this day. We should not forget that one of Plato's teachers was Cratylus, a Heraclitean, who was just as impressed in the fifth century B.C. as Professor John Dewey is in the 20th century A.D. with the fact that we are living in a changing world. Antisthenes, as we have seen, denied that general terms could be significantly predicated of one another. Diogenes had complained to Socrates that he could see horses but not horseness. Protagoras had maintained that man is the measure of all things. Gorgias had argued against the existence of reality, knowledge, and communication. These men were Plato's seniors and that they thoroughly understood the kind of realism Socrates and Plato were advocating is demonstrated in the Protagoras and elsewhere. Not only did they understand it. They criticized it severely and well, and Plato was familiar with their criticisms.

In any age a vigorously-applied scepticism will make reflective people aware of the precarious and contingent phases of their lives. More than this, such a scepticism may also convince them initially of the instability of

all standards and beliefs. Yet, even in the most extreme cases, people do not behave as though the world were a succession of incoherent changes. We continue to plant corn and get corn, to breed horses and get horses, to jump in water and get wet, etc. So far as we can judge, our knowledge is reliable, true, and of the real. In this situation, one may become distrustful of his scepticism and again proceed to examine his experiences critically before settling permanently with the dogma of scepticism.

Socrates and Plato felt that these sceptical philosophies did not provide adequate empirical descriptions of the experiences that we have. They noted that experience has recurring factors. This individual thing was generated and will be dissolved and it will not recur. But other individual things will appear and disappear in the future and they will resemble the objects before me now. They observed that experience suggests truths that it does not adequately embody. I can observe that these two oranges plus those two oranges make four oranges, but I cannot observe that any two plus any other two equals four -- and yet it is true. I can observe that this red patch is not green, but I cannot observe that whatever is red cannot be green at the same time and in the same sense, -- and this too is true. Particular experiences enabled me

to apprehend these truths, but the experiences do not function in any sense as premises which embody or justify the principles. The occasion of particularities makes us aware of general laws, but the latter cannot be resolved without remainder into the former.

Such considerations as these impelled Socrates and Plato to construct an elaborate philosophical system that would provide an adequate framework for the explanation of the empirical facts that confronted them and that confront us. That they were aware of the internal difficulties within the system is evident from the arguments Plato had Parmenides give in the Parmenides. Although they admitted that it was extraordinarily difficult to explain the being of universal forms, they thought it impossible to explain experience without them.

In view of the foregoing remarks, it should be scarcely necessary to point out that modern science has not invalidated the Platonic position of extreme realism. The difficulties that confront Platonism precede and are unaffected by modern developments and discoveries in psychology, anthropology, sociology, etc. The scientific evidence no more demonstrates the truth of the view, e.g., that universals are verbal reorganizations of experience than it does the view that universals are real entities existing prior to and apart from experience; just as, analogically,

Hume's theory of causation is no more scientific than Aristotle's.

It is interesting to observe that one modern 'scientific' attitude toward this problem is no more scientific than Plato's attitude. Professor Ralph Barton Perry is convinced that philosophers should be objective, dynamic, behavioristic, naturalistic, and scientific -- these are the terms that he uses. Professor Perry objects to the perpetuation of Platonic superstitions in regard to innate ideas and forms. But it turns out that he does not feel at all uncomfortable about adopting "an inherited mode of intelligence," provided we understand that this use does not involve any mysterious pre-established harmony between man and nature.(70) Now the employment of a 20th century sophisticated language and the self-application of honorific terms in the introduction of a theory of innate dispositions really does not conceal the fact that a theory of innateness has been introduced. Perry and Plato both require some form of innateness to explain experience as we empirically have it, and if the term 'scientific' must be used at all in this regard, let it be applied to those who recognize that one must go beyond experience to explain experience as it 'naturally' occurs.

Our last observations on extreme realism concern the relation of extreme realism to the belief in innate ideas.

It is impossible to understand Platonism without appreciating the internality of the relation between the theory of reminiscence and the theory of forms. If we did not possess innate ideas, we would never know the forms. If the forms did not exist, the power of innateness would be a snare and a delusion. The force of Platonism resides in the fusion of these two theories, one supplementing the other. We have emphasized the central importance of this fusion throughout this chapter and it is unecessary to repeat that emphasis here.

But it would be erroneous to assume that the two theories which Plato fuses must always stand in that relation in any philosophical system. On logical grounds, it is false that the belief in innate ideas is a property of extreme realism. A property, in Aristotelian terminology, is a characteristic that is both common and peculiar to a something. There is no reason to believe that one could not be an extreme realist and yet not believe in innate ideas. For example, one could assert that all of our ideas come from sensory experience. If this position held, it might turn out either that the eternal essences were unknowable or that they were eternal sensible things; but there are no <u>a priori</u> reasons why such conclusions should be regarded as self-contradictory to the premise, i.e., extreme realism. There is, however, a more attractive

and plausible type of theory which rejects innate ideas and still is a kind of extreme realism. Philosophers, quite properly, exhibit a kind of uneasiness about innate ideas. One reason why they do is that there is always lurking the fear that man does not know independent reality as it is in itself. We may be using innate ideas to transform the independantly existing entities. And most philosophers, with the exception of the idealists and pragmatists, believe that cognition is a process that does not alter its object. How, then, explain the knowledge that we have of entities that are not sense data or groups of sense data? Perhaps man has a non-sensory capacity of power of intuition by means of which he apprehends essences. Perhaps when our perceptual experience takes a certain form, certain real structures are made available to the mind via this intuition. We are not trying to argue for the truth of such a position. We are arguing that the position is a perfectly respectable one. In view of these statements, extreme realism obviously need not have the belief in innate ideas appended to it.

On the other hand, there are no logical objections to the acceptance of innate ideas and the rejection of extreme realism. It may be that objects of our everyday experiences have certain characteristics that we would never apprehend

were it not for the assistance of innate ideas. The reality of these characteristics may be totally exhausted by their presence in our world. There is no doubt but what a moderate realist could maintain such a view. And we do not see why a nominalist could not maintain a similar view. It is true that nominalism is generally associated with sensationalism, the belief that all of our knowledge is derived ultimately from sense data. Perhaps the strongest case for nominalism can be urged on empirical grounds. But nominalism need not be based upon empiricism. In this connection, philosophers have ignored certain statements of Descartes[71] and Spinoza[72] that are strongly nominalistic in character. And, certainly, these two philosophers believed in innate ideas.

Extreme realism and theories of innateness are distinct philosophical theories. But this does not deny that Plato needed and used both of these theories to explain the possibility of human knowledge.

CHAPTER V: MODERATE REALISM

I. Aristotle's Critique of Platonism

The position called moderate realism is an alternative to the extreme realism of Plato. Whereas Plato maintained that universal concepts designate real entities that exist by themselves, the moderate realist maintains that universal concepts designate real entities that are existentially inseparable from the particulars that embody them. Historically, Aristotle has been designated as the founder of moderate realism, and St. Thomas Aquinas is regarded as the champion of moderate realism in the Middle Ages. We shall encounter some difficulty in stating the position of Aristotle and Aquinas on the problem of universals, and we should attend particularly to the causes of the difficulty. Perhaps the position of moderate realism is intrinsically ambiguous. Or perhaps Aristotle and Aquinas are not moderate realists: they might be extreme realists, nominalists, or eclectic in their views. We shall try to specify the source of difficulty wherever possible.

In view of the fact that Aristotle was a student of Plato and a critic of the theory of forms advanced by Plato, we shall begin by noting the nature of Aristotle's criticisms. Aristotle formulated many objections and there is no need

for us to examine each one of them. There are two types, however, that provide considerable information as to Aristotle's own views on universals. We shall name these types the ontological and epistemological objections, and examine each of them.

The core of Aristotle's ontological criticism of Plato's forms is his contention that the forms are nothing more than eternal sensible things.(73) Plato observed that sensible things are in constant flux. He was also aware of the fact that characteristics in some cases can be predicated of an indefinite number of sensible things. The sensible things change, the characteristics do not. But how can the characteristics be unchanging if they exist in these transient sensible things? According to Aristotle, the inability of Plato to answer this question resulted in the separation of the forms from things. But, Aristotle continues, once the common characteristics are separated from sensible things, they lose their universality and are distinguishable from sensible things only in virtue of their eternality.(74)

This is a very interesting criticism. For Aristotle, concrete particulars are substances and no universals are substances. The evidence for these two assertions will be presented in a later portion of this chapter. It is in

terms of these two principles that Aristotle advances his ontological criticism of Plato. In the context of Aristotle's thought, to say of an entity that is a universal is to say that it is a common predicate. To say of an entity that it is a substance is to say that it is a concrete particular that is numerically one. What Plato does, according to Aristotle, is to take a predicate and separate it from the particulars to which it is common. But when this is done, this predicate gains substantiality and loses universality simultaneously. This is what Aristotle means by calling the forms eternal sensibles. If the forms are to be universals, they cannot be substances. If the forms are to be substances, they cannot be universals. It is important to note that this criticism, which appears in many portions of Aristotle's writings, relies upon the acceptance of the principles that we have cited. These principles are not the exclusive property of moderate realism. A nominalist could assert the same criticism on the same bases with complete equanimity.

The core of Aristotle's epistemological objections to the Platonic theory of forms lies in his conviction that it is inconceivable that an idea be innate to a person and that this person be unaware of the idea. Thus, in speaking of innate ideas, Aristotle says:

> "Now it is strange if we possess them from birth for it means that we possess apprehensions more accurate than demonstrations and fail to notice them." (75)

This is essentially the criticism that Locke directs against innate ideas. Locke interprets innateness to mean the original conscious possession of certain truths, and then easily shows that men do not possess such truths from birth:

> ". . it seems to me near a contradiction to say, that there are truths imprinted on the soul, which it perceives or understands not: imprinting, if it signify anything, being nothing else but the making certain truths to be perceived." (76)

Perhaps the only thing easier to prove than that man does not possess innate ideas in the sense that Locke specifies, is that no outstanding philosopher has ever maintained that we have such ideas. Let it be agreed that Locke has shown that there are no innate ideas stamped or imprinted on the mind at birth. Neither Plato nor Descartes nor Leibniz maintained that innate ideas are independent of and prior to the mental development of the individual. But these philosophers did not believe that the universality and necessity that characterize some of the ideas that we acquire, can be explained by resolving these ideas into transitory sense data. And this is precisely

the problem that Locke's empiricism does not and cannot handle.

Now Aristotle criticizes Plato's theory of innateness in the sam way that Locke criticizes theories of innateness. If Locke intended his criticism to apply to Descartes, then the argument is an ignoratio elenchi. In view of the fact that Plato is careful to distinguish between memory and reminiscence,(77) clearly recognizing that we are not aware of universal truths from birth, Aristotle's criticism of him, as cited above, misses the mark. Locke, on the basis of his extreme empiricism, is unable to account for the universality and necessity of some ideas. The question that we now wish to ask is whether Aristotle too attempts to account for universals on the basis of an extreme empiricism. We should not ignore the fact that Leibniz placed Plato and himself in one tradition, Aristotle and Locke in the other.(78)

This concludes our preliminary considerations. We have found that Aristotle, in directing ontological and epistemological criticisms to the Platonic theory of universals has used certain principles or standards in the formulation of these criticisms. We shall examine Aristotle's explanation of the origin of universal concepts, nothing whether he is able to avoid, on the one hand, a

theory of innateness, and, on the other, extreme empiricism.

II. The Origin of Universal Concepts

Aristotle emphasizes the principle that all knowledge arises from sensory experience.(79) No one can learn or understand anything in the absence of sense.(80) He arrived at this principle by noting that we learn either by induction or demonstration. Demonstration develops from universals, and since we derive universals from particulars, the source of universals is induction from particulars. These particulars are grasped by sense perception.

> "Thus demonstration develops from universals, induction from particulars; but since it is possible to familiarize the pupil with even the so-called mathematical abstractions only through induction -- i.e. only because each subject genus possesses, in virtue of a determinate mathematical character, certain properties which can be treated as separate even though they do not exist in isolation .. it is consequently impossible to come to grasp universals except through induction. But induction is impossible for those who have no sense perception. For it is sense perception alone which is adequate for grasping the particulars." (81)

Yet Aristotle is careful to distinguish his position from the Protagorean identification of sensation and knowledge. We know things insofar as we can predicate attributes

universally of them, and sense is unable to tell us that something is common to a whole set of individuals.

> "The ground of this difference is that what actual sensation apprehends is individuals, while what knowledge apprehends is universals, and these are in a sense within the soul." (82)

The central Aristotelian problem of knowledge is now before us. While sensory experience is the source of all knowledge, knowledge is in no case to be identified with sensation. Since perception is of particulars and knowledge involves recognition of universals, knowledge is not attained through the act of perception alone.(83) This is the dilemma that confronted Plato, and the theories of reminiscence and forms constitute his solution. Aristotle, in answering both Plato and Protagoras, asserts that we recognize the universal in the particular. Now we wish to see how this can occur.

While Aristotle does not believe that the mind possesses knowledge prior to experience, yet he affirms that the mind must possess the basis for acquiring knowledge. We possess, first of all, the congenital discriminative capacity called sense perception.(84) If this were the only native capacity that our minds possessed, our cognitions would be very primitive indeed, consisting in successive appearances of sense data. But sense impressions

persist in our minds; they are preserved by the innate faculty of memory.

> "So out of sense-perception comes to be what we call memory, and out of frequently repeated memories of the same thing develops experience; for a number of memories constitute a single experience . . . We conclude that these states of knowledge are neither innate in a determinate form, nor developed from other higher states of knowledge, but from sense perception. It is like a rout in battle stopped by first one man making a stand and then another, until the original formation has been restored . . . When one of a number of logically indiscriminable particulars has made a stand, the earliest universal is present in the soul: for though the act of sense-perception is of the particular, its content is universal." (85)

It is difficult to analyze this position. Aristotle does have a theory of innateness, but it differs significantly from that of Plato. Aristotle affirms the existence of such capacities as perception, memory, comparison, abstraction, and intuition, whereas Plato affirms the latent existence of specific universal concepts in the mind. But does Aristotle's account differ from that of the British Empiricists? We shall consider that question now.

The factor that clearly distinguishes Aristotelian epistemology from the epistemology of the British Empiricists is the selective abstraction that is at work even in the early stages of sensation. Aristotle tries to repudiate Plato's contention that it is impossible to derive

universals from sense data by assigning discriminatory power to sensation. But do we know the particular before the universal on Aristotle's account? It would seem that Aristotle's own theory of the relation between potency and actuality would necessitate that in order to recognize a universal in a particular, we need antecedent to know existing universals.(86)

But, one might object, this is forcing upon Aristotle distinctions that he would not make. For the concrete particular consists of the union of individual and universal traits, and it is in the process of cognition that these traits are known. We cannot apprehend the one without the other -- to this extent Plato is right. But the universal need not exist antecedently to the particular. If the universal literally is <u>in</u> the particular, waiting, so to speak, to be apprehended by the mind equipped with innate capacities, then this would seem to be an answer to our question.

But again we encounter difficulties. Aristotle's assertion that universals exist within the soul(87) and his emphasis upon abstraction as a means of producing universal concepts, suggest the possibility that universals do not exist in things. To do justice to Aristotle's theory of knowledge, we must give a more detailed account of the

process of acquiring universal concepts.

Aristotle asserts that when an individual knows something else, he in some sense becomes that something else. The fact that an individual gets outside of himself in the process of knowing requires the identification of the knower with that which is known.

> ". . the soul is in a way all existing things; for existing things are either sensible or thinkable, and knowledge is in a way what is knowable and sensation is in a way what is sensible." (88)

It is difficult to explain just how this identification of knower and object known can occur. If, in apprehending the stone, I become the stone in all of the latter's concrete materiality, it would seem that my mind would become petrified. At this point, Aristotle could have said that what the mind apprehends is a representation distinct from the object, but this would have deprived cognition of the union of mind and object. And so he says that the mind identifies itself with the form or species of the object, and this form is literally part of the object. The intellect becomes the form of the object which it knows. Now the universal concept is not identical with the form. The form is inseparable from the object, whereas the concept is distinct from the thing. St. Thomas points out that the concept which the mind produces is a representa-

tion of the form.(89) The universal concept is created by the mind and resides in the soul. The form, then, is the ontological basis of universal concepts, and the form is an essence, a common nature. St. Thomas explains that the common nature is realized in each individual object.

> "Now it belongs to such a nature to exist in some individual, and this cannot be apart from corporeal matter; for instance, it belongs to the nature of a stone to be in an individual stone, and to the nature of a horse to be in an individual horse, and so forth." (90)

III. The Doctrine of Substance

We have noted the logical realism of Aristotle and Aquinas, i.e., the view that universal concepts denote common natures that exist independent of the act of conception. Now Aristotle is also an ontological realist and the core of his ontology is that substances, i.e., concrete particulars, are fundamentally real. It is essential to an understanding of the distinctiveness of moderate realism to recognize that neither universal concepts nor their proper referents, common natures, are substances. It is easy to confuse this point in view of the distinction between first and second substance advanced in the Categories. We shall analyze that distinction and then show that the doctrine of substance found in the Metaphysics is compat-

ible with the discussion of substance in the Categories.

What Aristotle says in the Categories is that he is distinguishing between two kinds of terms included in the category of substance.

> "All substance appears to signify that which is individual." (91)

First substances are those terms that stand for one and only one individual, e.g., Socrates and 'this man'. Second substances are those terms that stand for many individuals understood by a single univocal concept. Any term in the category of substance then, must stand for individuals. There is no reason to believe that first substances denote one kind of substance and second substances another. It seems clear that we are confronted with a logical distinction between kinds of terms. This logical distinction shares with many other logical distinctions the feature of being based upon ontological considerations. The reason why some terms in the category of substance can designate many individuals is because these individuals possess common natures.

There is no doubt but what the discussion of substance in the Metaphysics is primarily ontological. As we have noted, this ontological discussion is the basis of the real distinction between Plato and Aristotle. Let us see just what the doctrine of substance is. Aristotle does not

present the doctrine of substance as a report of observation. It is an interpretation of what is observed. The facts that are the basis of the interpretation are as follows: First there are things in experience that are relative independent. Second, these things cannot occupy the same place at the same time. Third, these things are identities through change. Fourth, these things are capable of causal action, i.e., they possess powers or potencies. Aristotle interpreted these facts to mean that there are unique entities in nature that are independent of one another; that these entities persist through change and are causally active and passive.

This doctrine shows conclusively that Aristotle was not a sensationalist or positivist, i.e., the belief that knowledge consists of sense data. Modern positivists vigorously investigate all theories that assert knowledge of entities that transcend sensory experience. They are quite right in insisting that all such theories should be tested, first, for meaning; second, for truth. But they go on to maintain that statements involving substances are nothing more than descriptions of sense data. Thus, if I say: "There is a green Van Gogh print in my living room," I mean (a) that I had certain sense data in the past in my living room and (b) if I now go to my living room, I will

have similar sense data. But Aristotle really means more than this, and that he does can be seen by noting the following statement; "If I were in my living room now (which I am not), I would see my green Van Gogh print." There is no indicative conditional of the "if . . then" form in either material or strict implication that can adequately express this meaning. I am asserting the independent existence of a material object that has the characteristics noted above. This doctrine of substance forms the basis of the Aristotelian belief that we can learn from experience, that experience is reliable. Aristotle did not believe that the regularities he recorded in his experimental observations were purely accidental runs of events.

John S. Mill, who speaks with more candor than his contemporary representatives, uses the phrase, "permanent possibility of sensation," in place of the word, "substance." Yet, this permanent possibility of sensation seems to have all of the characteristics that Aristotle ascribes to substance. Perhaps, then, to borrow the procedure of contemporary positivists, we should interpret Mill's phrase as simply a verbal recommendation. If so, I think we may drop Mill's phrase by applying the law of parsimony.

Now that we have examined the doctrine of substance

and have seen that it is unquestionably an ontological doctrine, let us determine what bearing it has upon Aristotle's theory of universals. He states unambiguously in the Metaphysics that substance is individual and that universals are therefore not substances.

> "For it seems impossible that any universal term should be the name of a substance." (92)

Again:

> ". . it is plain that no universal attribute is a substance." (93)

Aristotle notes that matter cannot be substance because

> "both separability and 'thisness' are thought to belong chiefly to substance." (94)

Aristotle agrees completely with Plato that the forms must be substances, if they are separated from things. But then, as we noted previously, they lose their universality. Aristotle's conviction, then, is that universals are not separable and not individual, and therefore cannot be substances. We do not find in the Metaphysics a substantiation of the ontological interpretation of the distinction between first and second substance found in the Categories.

IV. Conclusions

Before we draw conclusions from this examination of Aristotle, let us observe a feature of the historical controversy over universals. The controversy between the

realist and the nominalist often has been interpreted as a controversy between those who believe that general terms have denotation and those who deny that general terms have denotation. Such an interpretation, we have maintained, is fallacious, since all outstanding nominalists and realists maintain that general terms have denotation. The real controversy, rather, concerns the nature of what is denoted by general terms. The nominalist, as we shall see in the next chapter, maintains that general terms designate resembling particulars. Whether these particulars are sensory data or ontological substances, depends upon whether the nominalist is a positivist or an ontological realist. The realist, on the other hand, has been represented by the nominalist as maintaining that general terms designate something over and above resembling particulars. They are said to designate a tertium quid. In the case of Plato, this tertium quid is the form which exists separate from individuals.

Our question is whether there is a tertium quid in Aristotle's philosophy. It might seem that our conclusion that second substances denote individuals eliminates the tertium quid. But this is not so. Second substances can denote an indefinite number of individuals in virtue of the possession by the latter of common natures. This is the distinctive characteristic of moderate realism.

There is an important aspect to Aristotle's theory of knowledge that merits special emphasis. In regard to the question of how we acquire knowledge, Aristotle has given a substantial account of the operations of sense perception, memory, comparison, and abstraction. These processes account for the formation of many general concepts. But Aristotle is not a sensationalist. He does not believe that all universal concepts are resolvable into sense data. His emphasis upon intellectual intuition indicates that what we know, in some cases, is more than sense data. The intellectual act of apprehension grasps what the sense data suggest but do not thoroughly embody. When we finally intuit, for example, that any two plus any other two must equal four, the knowledge that we have is universal and certain. Mere abstraction is insufficient to explain this kind of knowledge. This knowledge is certain and an accumulation of instances does not produce this certainty. What this means is that in such apprehension, we grasp something that we regard as rationally certain, and this is different from deciding, say, to use the word, red, to designate a sensory quality that is repeated in our experience. This intuitive act is responsible also for such assertions as: "Orange is between red and yellow." "Malice is bad." "The hammer drives the nail

into the wood." "The chair exists independently of my awareness of it." And so on. The fact of intellectual intuition clearly differentiates Aristotle from one who would assert that all knowledge is acquired through the outer or inner sense.

Granted, then, that Aristotle is not a positivist, it does not follow that he is an extreme realist concerning universals. We have been able to show how Aristotle carves a path between Platonism and positivism. Contrary to Plato and consistent with positivism, he denies that there is a separate realm of forms and he asserts that concrete particulars are basic and real. Contrary to positivism and consistent with Platonism, he denies that sense perception is the source and stuff of all knowledge. Some of our cognitions pertain to entities that are not sensory and yet are <u>in re</u>.

CHAPTER VI: NOMINALISM

I. Introduction

Nominalism can be characterized negatively as the view that universal concepts do not designate common natures, but such a characterization does not provide sufficient information. Nominalism, positively, is the view that universal concepts designate resembling particulars. In an earlier chapter, we considered the beginnings of nominalism in the thoughts of Antisthenes and Roscelin. We noted that these two men were reacting to the extreme realisms prevalent in their times, and were more interested in destructive criticism than in constructive exposition. The information that we have does not permit the inference that they worked out a systematic philosophical framework for their nominalistic expressions.

The first systematic statement of nominalism appears in the 14th century in the philosophy of William of Ockham. Many of our comments in this chapter will center around the nominalism of Ockham. One reason why he has been chosen is because of his general philosophical competence. Too often examinations of nominalism have consisted of citing assertions made by incompetent philosophers who happened to be nominalists. If extreme

realism as regards universals were held responsible for the crude version stated by William of Champeaux, it would not be a very respectable position. So too, of one goes to the writings of James Mill to discover what nominalism is, he will find that Mill regarded it as

> "obvious and certain, that men are led to class solely for the purpose of economizing in the use of names. Could the purposes of naming and discourse have been as conveniently managed by a name for every individual, the names of classes and the idea of classification, would never have existed. But as the limits of human memory did not enable men to retain beyond a very limited number of individuals; and even if it had, as it would have required a most inconvenient portion of time, to run over in discourse as many names of individuals, and of individual qualities, as there is occasion to refer to in discourse, it was necessary to have contrivances of abridgement; that is, to employ names which marked equally a number of individuals, with all their separate properties; and enable us to speak of multitudes at once." (95)

This is an inept explanation of the origin of general terms. The real question of how it is that we can form these classes, granted the need for them, is not answered at all. This is a specific illustration of the general philosophical incompetence of James Mill and has very little to do with nominalism as a philosophical theory.

Another reason for making Ockham the central figure in this chapter is that he is an ontological realist. A nominalist need not be an ontological realist. But it is important, nonetheless, to examine nominalism in the

context of ontological realism because many historians of philosophy have believed that nominalism is inimical to ontological realism. This belief has been the source of unfounded charges against Ockham and against nominalism. If we can show that ontological realism is a legitimate foundation for nominalism, then a basis will have been provided for obtaining a better understanding of the position of William of Ockham in the history of philosophy and a better understanding of the problem of universals. Again, let it be noted that the primary function of this chapter is not to show that nominalism is true. Our main efforts are directed to a discovery of what is nominalism. Once that has been determined, speculations as to its truth or falsity become appropriate.

We first shall consider some of the characteristic interpretations of Ockham that are, in our opinion, erroneous. In showing why we regard these interpretations to be erroneous, we will be led directly into the heart of Ockham's philosophy.

II. Representative Interpretations of Ockham's Nominalism

Many philosophers assert that Ockham is a sceptic and that he is a sceptic because he is a nominalist. St. Thomas Aquinas and Duns Scotus affirmed the necessity of

positing the existence of intelligible species as the means of informing the intellect for knowledge. Ockham, on the other hand, maintained that the intelligible species is an unnecessary postulation, that the mind cognizes reality directly in an intuitive act. The basis for Ockham's view, ultimately, is the famous principle:

> "frustra fit per plura quod potest fieri per pauciora." (96)

Anton C. Pegis believes that this is scepticism, (97) but it is difficult to see why. It was Ockham's expressed intent to remove an obstacle to the direct apprehension of an external reality. He believed that to place an intermediary between the mind and reality was to encourage scepticism, in that it became difficult for our minds to get beyond the intermediary. We, today, should appreciate this situation in view of the outcome of the representationalism of John Locke. If what the mind knows when it thinks is an idea, how can one ever be assured that reality corresponds to his ideas that allegedly represent reality. The answer to this question is found in the scepticism of Hume.

There are other bases on which the charge of scepticism has been urged against Ockham's nominalism. Pegis points to Ockham's acknowledgement

> ". . . that in seeing a stone he can be absolutely certain of his seeing, but not of the existence of the stone. In this conclusion Ockham has all but formulated the Cartesian closed Cogito as the starting point of evident knowledge; and he has just as certainly forced European thought to prove the existence of an actual world of things outside man." (98)

This is strange reasoning on the part of Pegis. It suggests that a sine qua non condition of avoiding scepticism is the conviction that we have demonstrable knowledge of an independently existing world. Price, Broad, Moore, and other contemporary realists distinguish between the given element of experience and the material thing. The given is indubitable, but not the material thing. How else can one account for hallucination, for any non-veridical perceptions? It seems more reasonable to say that unless one makes this distinction, he must either accept scepticism or populate the world with strange entities.

Still another basis for the allegation that Ockham's nominalism is scepticism is provided by Father Bittle who asserts that for the nominalist

> "there is no foundation in the things themselves which would justify the intellect in forming universal ideas. Our universal ideas are thus purely subjective products of the mind without a correlative in nature; in other words, there is nothing in the individuals in nature which is genuinely represented by these universal ideas." (99)

The simplest way of disposing of this view is to quote Ockham:

> "The universal concept expresses or explains, declares, imports and signifies the substances of things, or the essence of things -- i.e., their nature, which is their substance." (100)

John Wild claims that Ockham is not and could not be an ontological realist in view of the fact that nominalism is the basis of his scepticism.

> "William of Ockham attacked realistic epistemology from a nominalistic point of view which lies at the root of his skeptical philosophy . . . Reality is thus dissolved into a chaos of individual entities with no stable causal structure open to our intelligence. Such a philosophy provides no foundation for a realistic metaphysics or philosophy of nature. So Ockham devoted his energies primarily to details of formal logic. At least we can manipulate the symbols and intentions of intelligible discourse, though we can never be sure as to what they stand for." (101)

We shall provide in this chapter a statement of Ockham's nominalism that will show clearly its compatibility with ontological realism. We can note at this point, however, that there is no justification for Wild's statement that we can never be sure as to what symbols stand for. Ockham's elaborate theory of supposition is developed on the basis of the conviction that sometimes symbols denote extramental things and sometimes they denote other symbols. It is true that Ockham was concerned with details of formal

logic. So were Aristotle and Aquinas, but in none of these three cases did a concern for fomal logic spring from a Freudian mechanism of excape from metaphysics. Indeed one function of Ockham's logical distinctions was to extricate Aristotelian philosophy from its Neo-Platonic web. Thus the doctrine of supposition taught by Ockham is used to restore the Aristotelian doctrine of the predicables to its proper status as a logical scheme of classification and to eradicate the Neo-Platonic interpretation fostered by Porphyry. Wild's statement that Ockham dissolves reality into a chaos of individual entities is contradicted by Ockham's belief that reality consists of individual substances that are in causal relation to one another. Perhaps Nicolaus of Autrecourt is guilty of this dissolution, but not Ockham.

No statement of misinterpretations of Ockham would be complete without some reference to Etienne Gilson who, more than anyone else, is responsible for the belief so prevalent today that Ockham, being a nominalist, was a sceptic. In reference to Ockham, Gilson says:

> "He was convinced that to give a psychological analysis of human knowledge was to give a philosophical analysis of reality. For instance, each intuition is radically distinct from every other intuition, hence, each particular thing is radically distinct from every other particular thing." (102)

Gilson then asserts that Ockham, like Hume, is a sceptic in regard to causal relations, basing his assertion upon Ockham's admission that by looking at a statue of a man, one will never know whom the statue represents, if he has never seen the man before. This scepticism, according to Gilson, was

> ". . inevitable and will always occur whenever a philosopher mistakes the empirical description of our ways of knowing for a correct description of reality itself . . . Granted that a concept is but a particular sign that stands for several individuals, it does not follow that reality is exclusively individual; otherwise, how could several individuals be signified by the same sign?" (103)

Gilson's criticism contains errors of interpretation and unjustified inferences. First Gilson seems to be using 'radically' as a question begging word rather than as a term descriptive. Ockham does say that each intuition is numerically distinct from every other intuition, and that each particular thing is numerically distinct from every other particular thing. But, as we shall see, this numerical diversity does not imply qualitative diversity. Since all philosophies other than unqualified monisms affirm numerical diversity of entites, it is misleading to refer to this as 'radical". Second, Ockham was not a sceptic in regard to causal relations. He does say that by looking at the statue, we do not have a primary

cognition of the individual man, unless we have known him personally in the past. He also says that the appearance of distinctive tracks in the mud will permit us to infer that an ox made the tracks, but it will not give us a primary cognition of the particular ox who made the tracks. In modern terminology, Ockham is saying that knowledge by description is to be distinguished from knowledge by acquaintance. But he does not deny that inferences from effects to causes and from causes to effects give us legitimate and valuable knowledge. Surely this is not scepticism. Third, it is true that the proposition, "Reality is exclusively individual," does not follow from the proposition, "A concept is but a particular sign that stands for several individuals." But here again, Gilson attributes to Ockham an inference that he, Ockham, does not make. As we shall see, Ockham bases his claim to the individuality of reality upon the Aristotelian dictum that individual substances are the metaphysical ultimates. This may be a bad answer, but it is not 'psychologism'.

III. Ontological Realism and Nominalism

The examples of critical interpretations of Ockham that we have examined show that Ockham has not received a fair hearing. Only when these kinds of criticism are

recognized as specious, does it become possible to give an unbiased analysis of his nominalism. On the basis of the preceding analysis, it appears to be false that Ockham's nominalism is a general philosophical scepticism. We find, moreover, that Ockham criticized certain scholastic philosophers because the latter embued Aristotelianism with Platonic thought. Professor Moody says:

> "We might, for example, take him at his word and assume that he was seeking to effect a return to a pure aristotelianism -- the scholastic interpretations of the peripatetic philosophy being, in Ockham's eyes and in his time, encrusted with alien elements derived from the augustinian tradition and from the arab commentators." (104)

We have noted the difficulties in ascertaining what pure Aristotelianism is, and we shall not try to decide whether Ockham accomplished this return or not. But it is evident from Ockham's criticisms of Augustine and Scotus, in which he appeals regularly to the text of Aristotle, that scholastic Aristotelianism was very impure. Now Ockham directs many criticisms, specific and detailed, against several varieties of realism as regards universals, and it is unnecessary to consider all of these for the purpose of stating his own position. Yet, it is important that we understand his method of criticism, since it reveals the starting-point of his own positive statement.

Ockham states that some argue that the designatum of universal terms is some real entity outside the mind that is both essential to those things of which it is the common nature and at the same time distinct from these things. Take, for example, two things that are perceived as being spatially separate, and that have the same, identical character, red. When these two things share the same characteristic, they are said to share an entity called a universal. This entity must be distinct from the things to which it is common because concrete things are corruptible while universals are incorruptible. This entity must be common to the things from which it can be distinguished because of the predication of the same term of the two terms that denote the two things.(105)

Ockham's most basic criticisms of realistic interpretations of universals rest upon his conviction that being and oneness (ens et unum) are universally convertible. He maintains that it is impossible for a universal to be an undivided unity and a plurality at the same time. The universal must either be a one or a many. Since it is said to be distinct from the things of which it is predicated, it must be a numerical unity. On the other hand, since it is essential and intrinsic to its many singulars, it will be as multiplied as those singulars.

The principle of the convertibility of ens et unum cannot itself be demonstrated, according to Ockham, since it is presupposed in all discourse. Everything that is, is singularly. Any being will be either simple or compound. If simple, it is numerically one. If compound, its parts are numerically one.

> "It must be maintained undoubtedly that anything imaginable whatsoever, which subsists by itself, is without any addition to it a singular thing and one in number, so that no imaginable thing is singular through having something added to it, but this (scil. being singular) is an attribute belonging immediately to everything, because every thing is per se identical or diverse from others." (106)

From the foregoing, it is evident why Ockham believes it improper to start with universal natures and ask for a reason of their individuation. Just as Aristotle had asserted that all being is determinate, so Ockham starts with singular things. The problem of universals thus becomes the endeavor to find out how it is that our concepts are universal. That concepts are universal and that all things outside the mind are singular are the data with which he begins.

> "It is not to be asked how the universal becomes singular but rather how the singular becomes universal. Individuality does not come from anything added to or divisible from the real universal. Everything which exists is singular." (107)

Ockham asserts that the ultimate subject of knowledge is

the concrete individual whose existence is revealed in intuitive sensory cognition. Ockham is thus an ontological realist. He believes that individual substances are the immediate and direct external referents of cognition.

> "Although universals are the principles of art and science, every discipline starts out from individuals . . . just as all our knowledge has its origin in sense, so also every discipline has its origin in individuals, although no doctrine should treat of singulars significantly or no science properly so-called is about individuals but is about universals for individuals." (108)

We begin, then, with intellectual intuition of singulars. Subsequent to this first intuitive act of the understanding (notitia intuitiva intellectiva), there follows a second abstractive act of the understanding (notitia abstractiva intellectiva). It is this second act which produces the universal, the general concept. Ockham describes the joint functioning of these processes in the following quotation. (The scholastics use the term 'objective' to mean 'representational' and the term 'subjective' to mean 'existential'.)

> "Our intellect first intuitively understands some really existing singular thing, which thing having been understood, the intellect is able to construct something similar to what was previously understood. The thing thus constructed will not be able to have subjective being but only objective being . . . Thus the constructed thing is merely

> such as was previously understood in objective being and is not in subjective being, but it will be an image, as it were, exactly similar to the thing previously understood in objective being." (109)

Ockham does not give detailed information concerning the psychological processes whereby universal concepts are produced. He does, however, consider seriously and at length the question of what manner of being the universal concept has in the soul. His first theory, the fictum theory, states that universal concepts have representational being; they are fictions similar to things which exist beyond the mind. The universal is thought of as a unique kind of being, a logical content or pure meaning. (110) He later criticizes the fictum theory by applying the law of parsimony. He decides that the act of understanding explains whatever can be explained by the representative being. Since this is so, the logical content becomes superfluous. He asserts, further, that this fictive being impedes cognition of reality, since it functions as an intermediary between the act of cognition and reality. His second theory, the intellectio theory, thus consists in eliminating the representative entity, and asserting that the psychical fact, qualitas animae, is better suited to serve as a sign of several singulars. Here the universal is thought of as an existential entity modifying the cognitive act.

> "But what, in the soul, is this thing which is a sign? It must be said that with regard to this there are various opinions. For some say that it is nothing but a certain fiction produced by the soul. Others say that it is a certain quality existing subjectively in the soul, distinct from the act of understanding. Others say that it is the act of understanding. And in favour of these there is this to be said: what can be explained on fewer principles is explained needlessly by more. Everything, however, which is explained through positing something distinct from the act of understanding can be explained without positing such a distinct thing. For to stand for something and to signify something can belong just as well to the act of understanding as to this fictive entity; therefore one ought not to posit anything else beyond the act of understanding." (111)

But regardless of whether the *fictum* theory or the *intellectio* theory is accepted, the central tenet of Ockham's nominalism remains that

> "nothing universal, unless per chance it be universal by voluntary institution (e.g., a written or spoken word), is something existing in any manner outside the mind, but everything which is universally predicable of many in virtue of its very nature is in the mind either subjectively or objectively." (112)

Two central tenets of Ockham's nominalism have been explained: (1) That concrete, individual substances are the ultimate constituents of reality; (2) That universals exist in the mind and not outside of the mind. The opponent of nominalism who recognizes the existence of these two characteristics generally will criticize nominalism in this manner: he will assert that if there are no common

natures in the external world and if universals exist only in the mind, then universal concepts have no denotative force, so far as the external world is concerned. It would seem, he argues, that universal concepts for Ockham are distortive and impede cognition of the real.

Ockham's answer to this criticism constitutes the third and last tenet of his nominalism. He believes that singular existents resemble and differ from other singular existents, and that there need be no incompatibility between the fact that one thing resembles another and the fact that the first thing is still different from the other.

> "All real unity is numerical; all real diversity is numerical; so that even specific difference is numerical . . . Hence numerical diversity is more important than specific or generic diversity because it follows that if things are diverse in genus or species they are therefore diverse in number but not conversely." (113)

Ockham is thus asserting that qualitative difference involves numerical difference, but that numerical diversity need not involve qualitative diversity. Qualitative identity and qualitative difference are incompatible; numerical identity and numerical difference are incompatible. But two entities may be qualitatively identical and numerically diverse. The reason why this last proposition is true, according to Ockham, is that the resemblance of things depends solely on their individual natures.

> "I admit that Socrates and Plato really agree and really differ, since they are alike specifically and differ numerically ... and thus you say that the same thing is the cause of the agreement and disagreement. It must be said that the same thing is not the cause of an agreement and of a difference opposed to that agreement, but such is not in question here. For between specific likeness and numerical difference there is no opposition at all. It must be admitted therefore that Socrates agrees specifically and differs numerically from Plato by the same thing." (114)

Now the critic will seize upon the above passage and observe that Ockham admits that Socrates and Plato resemble 'by the same thing'. Hence, the critic concludes, the common natur re-enters the picture and nominalism is shown to be inadequate by its own proponent. But Ockham is careful to guard against this criticism, as the following quotation indicates:

> "Strictly speaking, it ought not to be conceded that Socrates and Plato are alike in virtue of something or some things, but we ought to concede that they are alike by means of some thing because they are alike by means of themselves, and thus that Socrates is like Plato not in something but by means of something, because he is like Plato by means of his own self." (115)

In perceiving and conceiving entities, we <u>discover</u> similarities. The similarities are no more mental constructs than are the beings that are similar. The universal concept, which is a construct, signifies several individuals in virtue of their existential similarities. There is no doubt but what this is Ockham's considered view.

IV. The Concept of Resemblance

Nominalists often criticize realism because of what they feel to be an obscurity in the notion of common natures. The realist, however, can and does retort that the concept of similarity or resemblance is obscure. What we shall do now is to see what the nominalist has to say about resemblance. First, there is no attempt to define resemblance; it is regarded as an indefinable notion. We have seen that Ockham discusses the relation between resemblance and numerical diversity, but he does not try to give a systematic analysis of resemblance. Some nominalists have attempted to analyze the meaning of resemblance, and we shall examine these attempts.

A beginning of the analysis of resemblance can be found in a footnote Hume appended to his Treatise:

> "It is evident, that even different simple ideas may have a similarity or resemblance to each other; nor is it necessary, that the point or circumstance of resemblance should be distinct or separable from that in which they differ. Blue and green are different simple ideas, but are more resembling than blue and scarlet." (116)

Let us ignore the philosophical context and just attend to this resemblance: Blue resembles green more than it resembles scarlet. Obviously, this is different in kind from other resemblances we note, such as: This patch of blue is qualitatively identical with that patch of blue.

And: Blue and green resemble in that they are both colors.

A contemporary nominalist, R. W. Church, has attempted a systematization of resemblances and an arrangement of them according to kind.(117) The first is the case where two patches are qualitatively identical, i.e., a shade of color is repeated. For example, we say that this cobalt blue is exactly the same as that cobalt blue. We are pointing to two patches of color that are numerically diverse but qualitatively identical. If the nominalist is asked what is meant by saying that the two patches are qualitatively identical, he must resort to the denotative method. He will point and that is all he can do.

Often, however, we do not compare single qualities, but things or substances. Thus, for example, we might say that Object A resembles Object B more than it resembles Object C. What may be meant by such an assertion is this: that more qualities are repeated in A and B than are repeated in A and C. This is another, though secondary, kind of resemblance.

But we do often compare qualitatively diverse characteristics. We say, for example, that orange is more like red than orange is like blue. All that we can say, in explaining this third kind of resemblance, is that in the analagous order of hues, orange is closer to red than it

is to blue, i.e., there are more hues between orange and blue than there are between orange and red.

Sometimes when we say that Object A resembles Object B more than it resembles Object C, we mean something like this. Assume that A is a surface containing scarlet, brick red, pale orange, and chrome yellow patches; that B contains crimson, salmon pink, canary yellow, and cobalt blue patches; that C contains Prussian blue, sea green, light grey, and white patches. Observe that there is no repetition of hues; no one hue characterizes more than one surface. But the hues which characterize A are closer to the hues which characterize B than they are to the hues which characterize C. And this is what is meant by the assertion of resemblance.

None of the foregoing kinds of resemblance, however, explains the statement: Blue and green are colors. Does this mean that at least in this one case the nominalist will say that color is a nature or essence common to blue and green? According to Church, however, this assertion is not explanatory:

> "Nevertheless, we must reply that this common nature is a chimera. Colouredness could be no determinate hue, and it could be no range of determinate hues. Therefore, this common nature could only be colour indeterminate. The indeterminate would be in no wise distinct from anything else. It would be nothing at all." (118)

All that one can say, on nominalist grounds, is that the term, colour, refers to the intrinsic order of hues. Blue, green, red, etc. differ uniquely from each other. Diverse hues are signified by the term, color, because they resemble one another in the sense that they constitute an intrinsic order. In W. E. Johnson's terms, they are determinates under a single determinable. The nominalist does not try to answer the question of why, e.g., below and soft do not fall in between red and yellow. He just asserts that they don't and once again resorts to the denotative method.

Whatever one may say about this analysis of resemblance, it is neither relativistic nor sceptical. To deny that resemblance denotes a common nature does not deny the reality of determinate resemblances. Their reality has not been questioned.

CHAPTER VII: CONCLUSION

In this chapter, we shall review five conclusions about universals and the problem of universals that have been suggested to us in the development of this essay. The first conclusion concerns the relationship of particulars and universals in the act of cognition. There has been a tendency among some philosophers to give a compositional interpretation to the origin and acquisition of knowledge. According to this interpretation, we first become aware of isolated, individual facts. These cognitions produce simple, indivisible, unanalyzable ideas. We then compose complex ideas through the processes of abstraction, comparison, and other allied mental activities. Universal concepts are then said to be complex ideas made up of simple ideas. Many realisms and nominalisms embody in varying degrees this erroneous interpretation of cognition. The most extreme statements of this theory, however, are found in the writings of Locke and Berkeley. But both of these men were too competent as philosophers to remain content with their expressed commitments to compositionalism. There are various places in the Essay where Locke admits that not everything 'given' to the mind is simple and that not all composites are complex

ideas.[119] In the fourth edition of his Essay, Complex Ideas and General Ideas are listed under separate headings.[120] Locke thus recognizes that compositionalism is inadequate. And Berkeley is forced to introduce the concept of a 'notion' to explain ideas that cannot be explained on the compositional theory. In the Siris he says that "the principles of science are neither objects of sense nor of imagination," and that "intellect and reason are alone the sure guides to truth."[121]

Now the reason why the compositional theory is ultimately inadequate is because it assumes a sharp separation between perception and conception. Hume's epistemology is vitiated by his adherence to the principle that whatever is distinguishable must be separable. We can distinguish between perception and conception, and it is assumed by Hume that these acts are temporally separate in cognitive operations. Once this assumption is made, sense data are viewed as isolated entities that are mechanically produced, and it becomes necessary to postulate separate acts of the intellect to explain the concepts that we have. Within such a framework, the classical principle, Nihil est in intellectu quod non fuerit prius in sensu, becomes the guiding principle.

The trouble with the British Empiricists, in this

regard, is that they are not empirical enough. We are not first aware of determinate particulars and then build universal concepts out of these particulars. We never perceive individuals as individuals merely. We can distinguish sensory cognitions from other cognitions and it is true that knowledge begins with sensory cognitions. But the great truth of Kant's theory of knowledge is that the fact that all knowledge begins with sensory experience does not imply that all knowledge comes from sensory experience.

Neither Plato, Aristotle, nor Ockham succumb to the fallacy of compositionalism, and these three philosophers represent respectively the extreme realistic, the moderate realistic, and the nominalistic traditions. This is one reason why we said at the beginning of this essay that we should not assume that the most important or the only important question about universals is whether realism or nominalism is true.

The text-book versions of Aristotelianism are sometimes guilty of interpreting Aristotle's description of the learning process in a compositional manner. Aristotle does say, as we have noted, that knowledge begins with sense perception and that we arrive at general principles by induction. Nonetheless, he does not believe that learning is comparable to collecting marbles. That is why he says that although sense-perception is directed to the

particular, its content is universal. Sensation has a discriminatory power; selective abstraction is operative from the beginning. It is false, then, to say that we know the particular before we know the universal.

A second conclusion suggested by us by the development of this essay was the realization of the varieties of universal concepts. This realization has suggested the possibility that different theories are needed to explain different types of universals. Consider such concepts as red, blue, sweet, sour, soft, hard, loud, etc. In the final analysis, it is impossible to give a detailed, lucid analysis of how we acquire concepts. But we can discern by analysis the major factors involved in the acquisition of such concepts. Aristotle, Abailard, St. Thomas, and Ockham agree that sensation, comparison, abstraction, and memory are the central processes at work in the acquisition of these concepts. None of these men would assert that the mind is a tabula rasa in the sense that these capacities are not a part of the native endowment of the human mind. But they would deny that it is necessary to postulate either specific innate ideas or a separate realm of essences to explain such cognitions.

Now St. Thomas asserts that there are common natures which are the existential referents of the concepts listed

above. Ockham, contrarily, asserts that the concepts designate intrinsically resembling individual natures. This writer is, in general, very suspicious of those philosophers who resolve philosophical disputes by asserting that disputes expressed in language are nothing more than linguistic disputes. But, in this case, it does seem that there is less difference between these two assertions of the moderate realist and the nominalist than has been conceded traditionally.

Consider, now, a second group of concepts, those comprehending such diverse classes as material things, e.g., trees, dogs, rocks; causal relations, e.g., the stone breaking the window, the hammer driving the nail into the wood; and value characteristics, e.g., good, bad, beautiful, ugly. We noted that the factors involved in the origin of the first group of concepts are sensation, comparison, abstraction, and memory. Let us ask the question whether our knowledge of material things, causal relations, and values can be explained by the coordinated action of these factors. It seems quite clear that Hume showed us that the answer must be no. These factors are sufficient to explain the fact that we cognize bundles of qualities, regular sequences of events, and perceptual situations that elicit characteristic types of emotions. These cog-

nitions are necessary but not sufficient for the genesis of universal concepts such as trees, hammer-driving-nail-in-wood, and good. We need to postulate the existence of additional intellectual capacities in order to explain such knowledge. Now this is not to say that the mind generates this knowledge. The mind discovers things, causal relations, and values. But this discovery seems to be mediated by a kind of non-sensuous intuition. It does not seem necessary to postulate a separate realm of essence to explain such universal concepts; these concepts designate characters of the world that surrounds us. The fact that the stone breaks the window is just as much a part of our world as is the fact that the stone is white.

Let us consider a last class of universals and choose as examples circularity and straightness. It seems to us that this is the type of universal that Plato had most often in mind when presenting his theory of forms. Take these two relations: smoother than and straighter than. My shirt is smoother than my jacket. This I know by means of the processes necessary and sufficient to acquire the first type of universal concept we examined. This line that I draw is straighter than this other line I drew. Now it may be that I know this fact by the same means that I knew my shirt was smoother than my jacket. But there is a

difference in regard to the knowledge that I obtain in the two cases. In regard to the relation of straighter than, I understand that there is a superlative, i.e., absolute straightness, and this is a concept that I possess that I have not acquired from experience by the usual means. It differs from concepts in the first class in that it was not derived from sensation. It differs from concepts in the second class in that it does not characterize particulars of my experience. On the other hand, I no more know what absolute smoothness is than I know what absolute hotness or absolute sweetness is. If this analysis is, in the main, correct, then it seems likely that we need to postulate special conditions for the acquisition of such concepts. And these conditions may involve still different innate capacities and a separate realm of essences. I am not as certain that there must be this third type of concepts as I am that we must distinguish between the first two types. But neither am I certain that we can give an adequate explanation of our concepts without such a postulation.

We have listed three classes or types of concepts, and we have needed both nominalistic and realistic principles to explain the origin and nature of these concepts. If our analysis is sound, this would mean that the classical as-

sumption that either realism or nominalism (and not both) explains all universal concepts, is unjustified.

Our third conclusion is the observation that too much attention in the past has been devoted to the battle between nominalism and realism. The consequence of this procedure has been an unwarranted production of a wide chasm between these two theories. We have noted how modern readers are confronted with corrupt versions of both theories. We are told that "if you reject universals . . and treat abstractions as mere names,"(122) then you are a nominalist. Professor Dewey tells us that nominalists are committed to the belief that meanings are "adventitious and arbitrary."(123) Surely, if this were the state of affairs, no sane person would voluntarily adopt nominalism. On the other hand, if we wish to lose touch with actual life, if we wish to claim absolute finality for our beliefs, if we think that truth is eternally ~~embalmed~~ ENTOMBED in the noble architecture of our philosophical systems, if we wish to be subjective and unscientific, then, William James tells us, we should embrace realism.(124) Again, who would voluntarily accept this intellectual burden?

This essay, then, has not been so much an attempt to solve the problem of universals as it has been an attempt to re-present the problem clearly to ourselves. The main

impediment to an understanding of nominalism is the belief that nominalism must be relativistic and sceptical. We have seen that it need not be either. It can be both. The main impediment to an understanding of realism is the belief that it is anti-scientific. Again, it can be, but it need not be.

On the basis of our examination of realistic and nominalistic theories, it becomes evident that they are not as flatly opposed as often thought. This is particularly evident in regard to the relation between the theories of Aristotle and Ockham. It may well be that historical accident is responsible for the chasm between realistic and nominalistic theories. The first realism, Platonic realism, was extreme. The first nominalism, that of Antisthenes, was, in many respects, relativistic and sceptical. Aristotle accepted neither of these theories. He certainly was emphatic in his denunciation of the relativism and scepticism that characterized the nominalisms of his time. We believe that one reason, though not the only reason, why philosophers have characterized Aristotle's position on universals as realistic is because that position is neither relativistic nor sceptical. So far as we have been able to ascertain, a nominalism that is based upon ontological realism is significantly similar

to what has been called, traditionally, moderate realism. This is not an attempt to 'read out' of Aristotle, tendencies that can be discerned in his thought. But it is an attempt to recognize tendencies in his thought that have hitherto been ignored. While we do not wish to urge that philosophers either do or should always agree, it is encouraging nonetheless to discover bonds, unacknowledged until now, among some of the great philosophers of the western tradition.

The fourth conclusion is that the problem of universals extends beyond the province of linguistics. We have noted at various points in the development of this essay certain conflicts in the interpretations of universals presented by Plato, Aristotle, and Ockham. But these philosophers agree that we must go to reality in order to explain the origin and application of universal concepts. They are concerned with a philosophical problem. Others, however, say that the problem of universals is merely a syntactical question. The reason why, for example, the word, dog, designates Rover, Buster, Tray, etc. is a linguistic rule. Now it is true that we can play meaningless games with symbols. For those who like that sort of thing, it can be harmless amusement. But language, as we asserted in the introduction, is essentially referential.

I speak to others in order to express my thoughts and attitudes about things and persons which exist independent of the language I am using. It is difficult to believe that reality is so obliging that she will continuously modify herself to keep up with our linguistic conventions. A guiding principle in the production of this essay is the conviction that a fundamentally-adequate theory of universals must be based upon conclusions concerning the natures of things.

The fifth conclusion is not one that has been argued for in any specific portion of this essay. It is simply the great significance of the problem of universals to philosophical inquiry. When one sees the part that interpretations of universals play in the philosophical systems of Plato, Aristotle, Ockham, and others, it is to be hoped that the pervasive nature of this problem becomes evident. The current obsession with new terms and new keys has created an atmosphere inimical to a serious consideration of the problem of universals. The indifferentism manifested toward the problem of universals today is, in part, a specific illustration of the anti-rationalistic attitude which interprets intellectual curiosity as a biological error. When man is regarded exclusively as a physiological organism concerned with the gratification

of organic drives, the problem of universals becomes a luxury that this creature cannot afford. Philosophy becomes an artificial exercise of powers resulting in simulated actions. The problem of universals is an artificial problem for animals. It is a genuine problem for man.

APPENDIX A

So far as a systematic treatment of the problem of universals in the history of philosophy is concerned, it would seem to make little difference whether or not Plato is the author of the theory of forms. The theory of forms is one of the most significant conceptions in the history of ideas and debates as to authorship presumably would have little bearing upon the theory itself. It is important to recognize that the theory of forms is the 'center of gravity' for what are ordinarily believed to be the written works of Plato, appearing both in his early (125) and late (126) writings.

But John Burnet has maintained that Plato was not the author of the theory of forms and, in attempting to justify this assertion, he significantly alters the theory of forms contained in the dialogues. Harold Cherniss (127) points out that in support of his (i.e., Burnet's) denial that the theory of forms contained in the dialogues belongs to Plato, Burnet cites Aristotle and others who refer to a theory of idea-numbers and to Plato's oral teaching. The consequence is the construction of a theory of forms based on the identification of ideas and numbers. So far, so good. But now a curious twist is given and it appears

in the form of a collateral effect of this procedure: the Platonic dialogues are re-examined and re-interpreted to support this new theory of forms. The final consequence is that what was originally a dispute over authorship of a theory culminates in the partial disintegration of the theory itself. Thus Burnet says:

> "One thing, at any rate, seems clear. Aristotle knows of but one Platonic philosophy, that which identified the forms with numbers." (128)

Since this consequence can be and has been drawn, the question of authorship is therefore pertinent. The most important purpose for considering this question is to establish the point that the Socratic-Platonic dialogues contain a theory of forms in which forms and numbers are not identified. That is the function of this appendix.

Two questions are to be distinguished in this controversy. The first concerns the identification of all forms with numbers. According to this interpretation, Platonism becomes a kind of Pythagoreanism. In connection with this general question, it is necessary to consider the specific Aristotelian assertion that for Plato the 'One' is the cause of the essence of the forms. The second question concerns the construction of a third realm of mathematicals intermediate between the realm of forms and the realm of sensible particulars. Here the traditional interpretation

of the theory of forms is, in the main, preserved. The evidence for these assertions is not the same and the two questions will therefore be considered separately. The outline presented below may give some indication of the structure of a complex subject.

I. The identification of all forms with numbers.
   A. The 'One' is the cause of the essence of the forms.
      (1) "Forms' meaning both math. and non-math. forms.
      (2) "Forms' meaning all forms are numbers (forms qua numbers).
II. The Third Realm of mathematicals between forms and particulars.
   A. There are no forms of mathematical objects and math. objects therefore exist only in the Third Realm.
   B. There are forms of math. objects and also a Third Realm of mathematicals.

The first question for consideration is whether Plato identifies all forms with numbers. Aristotelian writings are generally used as the basis for asserting that Plato does in fact identify forms and numbers, but an examination of these writings reflects that they do not justify the identification. Aristotle provides a foundation for the standard interpretation of Plato's philosophy in the Metaphysics (129) where he notes that Plato in his youth had become familiar with Cratylus and with the Heraclitean doctrines that all sensible things are in flux and that we have no knowledge of them. Aristotle explicitly states

that Plato held these views even in later years and this statement is verified in the Theaetetus. He also mentions that Plato accepted the Socratic teaching that the universal is the proper object of knowledge and that Plato goes on to urge that the object of knowledge will not be found in particular things and that particular things participate in objects of knowledge. These statements suggest, although they by no means prove, that Aristotle believed Plato to be the author of the theory of forms found in the dialogues.

Yet it is true that elsewhere (130) Aristotle does say that those who speak of Ideas say that the Ideas are numbers. But Aristotle does not mention the name of Plato. It is significant to observe that Aristotle criticizes the theory of idea-numbers on the ground that the numbers are limited to ten (131) shortly after he has ascribed to Plato the doctrine that there are as many ideas as there are natural classes. (132)

More conclusive evidence is available. One criticism that Aristotle makes of the theory of forms simply would be inappropriate if the theory of forms involved the identification of forms and numbers. That criticism, which appears more than once in Aristotelian writings and is referred to by his contemporaries, is that the only differ-

ence between forms and sensibles is that the former are eternal, just as anthropomorphic gods are nothing more than eternal human beings.(133)

The writings of Aristotle, then, do not suggest that Plato was the author of the theory which identifies forms and numbers. On the contrary, the testimony from these writings tends to substantiate the attribution of the traditional interpretation of the theory of forms to Plato, although this testimony does appear to be inconclusive and perhaps inconsistent. Those who claim that Plato was the author of the idea-number theory base their claim primarily on the writings of Aristotle and Plato's oral teachings. In regard to the second source, it may be true that Plato's oral doctrine which he expounded to Aristotle and others was one in which forms and numbers are identified, although the evidence for this is not compelling. Regardless, the theory of forms contained in the dialogues does not identify forms and numbers; and we have argued that Plato is the author of the theory contained in the dialogues.

In regard to this general question of whether Plato identified forms and numbers, attention should be paid to Aristotle's assertion that the One is the cause of the essence of forms.(134) This assertion might very well be

taken to mean that Plato makes the forms derivatives from Oneness. So far as Plato's written works are concerned, this is not true. In trying to ascertain the meaning of the statement that the One is the cause of the essence of forms, we should consider two possible ways in which the term 'forms' may be used in such a context. First, 'forms' might signify both mathematical and non-mathematical entities, i.e., Rationality, Beauty, Circularity, Twoness, etc. Second, 'forms' might signify forms gua numbers, i.e., Twoness, Threeness, etc. If we assume, in the first place, that Aristotle meant 'forms' in both the mathematical and non-mathematical sense, the assertion is misleading. For Plato each form is a unique entity. As such, it is a unity and the unity of each form must come from participation in the form of Oneness. To say that all forms participate or blend in the form of Oneness is not to say that the latter is the generative principle of the forms. And the dialogues do not contain any statements that would make the form of Oneness primary in any other sense. In regard to the second interpretation of 'forms' given above, Oneness cannot be taken as the generative principle of the forms of numbers. The relationship among the members of the ideal numerical series is as eternal as the members themselves. The process of addition may assist us in

discovering, for example, Twoness; but Twoness is not produced by any arithmetical operations. So the members of the ideal numerical series are not derived from the form of One. (135)

The second general question to be considered is Aristotle's assertion that Plato constructed a third realm of mathematicals intermediate between the realm of forms and the realm of sensible particulars. (136) There are two ways of interpreting this assertion. First, it may mean that there are no forms of mathematical objects, that idea-numbers, idea-shapes, etc. exist only in this third realm. Or, second, it may mean that there are forms of mathematical objects and that mathematical objects also exist in the intermediate realm. In either case, concern is not with the alleged Platonic theory that all forms are numbers, but rather with the interpretation of the mathematical objects contained in the dialogues.

Let us take first the question of whether there are forms of mathematical objects. Since there is an idea for every collection of particulars to which a common name is applied, there must be an idea or form for each number. (137) Elsewhere, Plato denies that the addition of one and one is the cause of two because all things come into existence by participation in their proper essences. The proper

cause of a sensible pair therefore, is participation in Twoness.(138) Additional evidence for this interpretation is found in the Cratylus(139) where Plato, exhibiting his extraordinary ability to anticipate his most severe critics, states that the relation of ectype to archetype is not difficult to grasp in many cases, for no particular triangle is the perfect triangle and no particular circle the perfect circle. But in what sense, he asks, does this particular collection of ten items before me fall short of the form of ten. It would seem that if this collection were an imperfect copy of Tenness, it would be, say, nine or eleven. Plato then argues that since all forms are simple, unique units, the collection of ten items is an imperfect copy or imitation simply because it is an aggregation, and the unity of aggregation is not as complete a unity as the unity each form possesses.

This interpretation of numbers makes the <u>forms</u> of numbers inaddible as Aristotle notes:

> "If the ideas are a kind of number other than mathematical, we could have no comprehension of it; for who of most of us understands any other number?" (140)

Plato again anticipates this criticism:

> "Oh my friends, what are these wonderful numbers about which you are reasoning, in which, as you say, there is a unity such as you demand, and each unit is equal, invariable, indivisible, -- what would they answer? (141)

When we say that five plus six equals eleven, we mean that five units and six more units total eleven units. But, according to Plato, the form of five is a unity and the form of six is a unity and the form of eleven too is a unity; and each of these indivisible unities is unique. Numbers qua forms or meanings are quantitatively indifferent and each number qua form is unique, i.e., no numerical form is a part of another numerical form.

It seems certain, then, that Plato did posit forms of mathematical objects. But what can be done with Aristotle's statement that the Platonists did not posit a form of number? (142) The evidence produced above certainly shows that Plato did believe in forms of numbers, and Aristotle is not denying this. What Aristotle is asserting is that Plato did not postulate a form of number in general, i.e., number as comprehending the entire series of numbers. Numbers, taken collectively, constitute a series and the members of this series are connected by the relation of priority and posteriority. Hence the ordered series of integers is not a form but a series of forms. We have seen, that Aristotle's assertion that Plato does not postulate a form of number does not contradict Plato's postulation of forms for other mathematical objects.

It seems evident that Aristotle's ascription of a

third realm of mathematicals to Plato does not eliminate forms of mathematical objects. Attention now will be directed to the question of whether Plato in his written works suggested that there is a third realm of mathematical objects.

Aristotle claims that for Plato mathematical objects constitute a third class of entities intermediate between the sensible particulars and the forms; that mathematical objects resemble forms in that they are eternal and immobile; that mathematical objects resemble sensible particulars in that there are many of each kind.(143) If it is maintained that Aristotle here is reporting upon Plato's oral doctrine, nothing conclusive can be said by way of substantiation or repudiation. There are, however, two factors which tend to discredit the position. First, the fact that Aristotle is inconsistent in making this report tends to cast some doubt upon the validity of the report. At one point, Aristotle complains that Plato has said nothing about the mode of existence of these intermediates.(144) At another point, he objects that the twoness of sensible twos and the twoness of mathematical twos is said to be one and the same thing while the form of two is something different.(145) The second objection to this position is the character of the textual evidence used to

support it. Advocates of the three-realm interpretation point to Plato's meager discussion of mathematicals in the Republic,(146) but an examination of the passage in question shows that mathematical objects are forms, although in mathematics these objects are not treated as forms. The 'habit' or mental process of the mathematician is said to be 'intermediate between opinion and reason'. As Plato states the distinction in this passage, it appears to be epistemic, not ontological.

Textual references, however, do not take us very far, and, from a systematic perspective, it is difficult to see how the problem can be resolved within the framework of Platonism. The numbers with which mathematicians operate are certainly not sensory objects. Nor are figures, although their spatial character draws them closer to the sensory world. For the mathematician's circle contains precisely 360 degrees, something that cannot be said of the rough image he draws on the blackboard. On the other hand, since all forms are inaddible, indivisible, unique units, the mathematical objects with which the mathematician deals do not appear to be the forms of mathematical objects. When we add three and three and three, there must be several threes, and we speak of large and small squares as though there were several squares. And the use

of numbers in the study of economics, psychology, sociology, etc. certainly falls far short of the contemplation of Platonic forms.

But these considerations do not seem to take us nearer to a solution of the problem. It can be said that mathematical objects do not occupy a third realm and that to explain the being of mathematical objects, one simply makes a distinction between indispensable conditions of cognition and constitutive conditions of reality. Then the conclusion is drawn that mathematicians speak of adding two units to three units to get five units because this procedure is necessary in the learning process and should not be construed as a reflection of the reality imperfectly represented by these operations. But the objects of mathematical thought are just as genuinely objects of thought as the forms. We can add, divide, and multiply in complete independence of sensory factors and the numbers we use are vastly different from simple universal forms. Perhaps, then, the general structure of Platonism requires a third realm. For if the mind is capable of creating such precision instruments as addible units, the way is open for the attempt to explain all objects of thought as mental constructions.

Consideration of this general question of the function

of mathematical objects in Platonism has produced some problematic conclusions, some of which rest rather securely on substantial evidence. It seems highly unlikely that Plato is the author of a theory that identifies the objects of thought with ideal numbers. The evidence for this negative conclusion suggests that Plato is the author of the theory of forms contained in the dialogues. That is to say, the primary reason why some have suggested that Plato is not the author of this theory of forms is because the other theory has been attributed to him. This conclusion is made on the assumption that there is a theory of forms in the dialogues and this theory has been examined in Chapter IV. No definite conclusions were reached concerning the question of the intermediate realm of mathematical objects.

Footnotes

1. Cohen, Morris R., Harvard Law Review, XXXiX, p. 628 (as quoted in Realists And Nominalists, Carre, Meyrick, H., Oxford, 1946, p. 124)

2. Diogenes, Laertius, VI, 3

3. Aristotle, Metaphysics, 1024b33

4. Plato, Sophist, 251B

5. Aristotle, Metaphysics, 1024b33

6. References to Antisthenes, cf: Plato, Philebus, 14C; Theaetetus, 201C,E; Parmenides, 132B; Euthedemus, 285E and 301A; Cratylus, 429A; Aristotle, Metaphysics, 1091a7; Soph. El, 175b15; Physics, 185b25; Topics, 104b20

7. Aristotle, Metaphysics, 1043b23

8. Anselm, De Fide Trin., Ch. 2

9. Porphyry, Introduction to the Predicaments of Aristotle, p. 4, The St. John's Press

10. McKeon, Richard (ed.), Selections from Medieval Philosophers, Vol. 1, pp. 222,223

11. Carre, Meyrick H., Realists and Nominalists, pp. 45, 46, Oxford Press

12. Joseph, W.H.B., Introduction to Logic, p. 31, Oxford, 1916

13. Ibid., Selections from Medieval Philosophers, pp. 236, 237

14. Pelster, Harclay und seine Quastionen, Miscellaneous I, p. 338

15. Wm. of Ockham, Summa Totius Logicae, I, 17

16. Hobbes, Thomas, Leviathan, Chapter IV

Footnotes, contd.

17. Berkeley, Minute Philosopher, #7; cf. Principles, #7, #22

18. Maritain, Jaques, The Degrees of Knowledge, The Centenary Press, London, 1937

19. Wild, John, Introduction to Realistic Philosophy, p. 449

20. Republic, 596A

21. Phaedo, 79

22. Theaetetus, 185; Phaedo, 66,67

23. Meno, 80

24. Meno, 81

25. Phaedrus, 249, 250

26. Phaedo, 72-77

27. Dewey, John, Leibniz's New Essays Concerning the Human Understanding, Chicago, 1888, S. C. Griggs & Co., p. 75

28. Phaedo, 114

29. Meno, 86

30. Meno, 86

31. Russel, Bertrand, Human Knowledge: Its Scope & Limits, Simon & Shuster, New York, p. 238

32. Republic, 402C

33. Symposium, 210, 211; Phaedo, 100

34. Phaedo, 65D

35. Cratylus, 423E

Footnotes, contd.

36. Republic, 529D

37. Aristotle, Metaphysics, 1070a17

38. Republic, 596A

39. Phaedo, 100E

40. Parmenides, 130

41. Ibid., 130C

42. Sophist, 266B; Timaeus, 30C and 51B

43. Parmenides, 130D

44. Republic, 402C and 475E-476A

45. Republic, 296A; Aristotle, Metaphysics, 990b

46. Timaeus, 52

47. Phaedo, 79A

48. Aristotle, Metaphysics, 997b5-13

49. Often one feels that Cherniss (The Riddle of the Early Academy) would rather give Aristotle a bad name than analyze the philosophical ideas with which he, i.e., Cherniss, presumably is concerned.

50. Phaedo, 76

51. Ibid., 100C

52. Parmenides, 130E-131C

53. Ibid., 132C-133A

54. Aristotle, Metaphysics, 1039a1

55. Cornford, Alex. on Metaphysics, 990b15, p. 62, 33 (Ar., Frag 188R) as quoted in Plato And Parmenides, p. 89

Footnotes, contd.

56. Protagoras, 330

57. Republic, 532D

58. Parmenides, 135a,B

59. Bakewell, Source Book in Ancient Philosophy, Charles M. Scribners, 1907, Fragment 54 of Heraclitus

60. Ibid., Fragment 41 of Heraclitus

61. Parmenides, 135

62. Republic, 476A

63. Phaedo, 102B105B

64. Sophist, 251A-259D

65. Ibid., 259D

66. Symposium, 211 A-B

67. Aristotle, Nich. Ethics, 1096a15

68. Republic, Book VIII

69. Ibid., 596A

70. Perry, Ralph B., A General Theory of Value

71. Descartes, Principles of Philosphy, LIX

72. Spinoza, Ethics, Pt. II, Prop XL, Note 1

73. Aristotle, Metaphysics, 997b1-13

74. Aristotle, Metaphysics, 1086b6-11; Aristotle, Magna Moralia, 1182b12-16

75. Aristotle, Posterior Analytics, 99b25

76. Locke, John, Essay Concerning Human Understanding, Book I, Ch. I, 5

Footnotes, contd.

77. Plato, Philebus, 34B

78. Leibnitz, G., New Essays Concerning Human Understanding, Preface

79. Aristotle, Metaphysics, 980-982a1

80. Aristotle, De Anima, 431b15

81. Aristotle, Posterior Analytics, 81a4-81b1

82. Aristotle, De Anima, 417b22

83. Aristotle, Posterior Analytics, 87b27--88a5

84. Ibid., 99b35

85. Ibid., 100a4--100b1

86. This suggestion is made by Ralph Cherniss in Aristotle's Criticism of Plato and the Academy, Vol. I

87. Aristotle, De Anima, 417b22

88. Ibid., 431b20

89. Aquinas, St. Thomas, Summa Contra Gentiles, I., 53

90. Aquinas, St. Thomas, Summa Theologica, Book I, Qu. 84, Art. 7

91. Aristotle, Categories, 3b10

92. Aristotle, Metaphysics, 1038b8

93. Ibid., 1038b35

94. Ibid.

95. Mill, James, Analysis of the Phenomena of the Human Mind, Vol. I, Chapter VIII, p. 260 (1869)

96. William of Ockham, Summa totius logicae, I, 12

Footnotes, contd.

97. Bohner, Philotheus, Traditio, 1944, p. 469, "Concerning William of Ockham"

98. Ibid., p. 479

99. Bittle, C. N., Reality and the Mind, Epistemology, p. 237

100. William of Ockham, Summa totius logicae, I, 17

101. Wild, John, Introduction to Realistic Philosophy, pp. 28, 29

102. Gilson, Etienne, The Unity of Philosophical Experience, p. 87

103. Ibid., pp. 89-90

104. Moody, E. A., The Logic of William of Ockham, p. 8

105. Sent. I, d. 2, qu. 4 a

106. Exp. aur., I, fol 8v

107. Ibid.

108. Expos. de specie

109. Sent. I, d. 13, qu. I J

110. Weinberg, J. R., The Philosophical Review, Vol. L, No. 5, Sept., 1941, "Ockham's Conceptualism"

111. William of Ockham, Summa totius logicae, I, 12, 6r

112. Sent. I, d. 2, qu. 8 Q

113. Sent. I, qu. 6 AU

114. William of Ockham, Summa totius logicae

115. Sent. I, d. 2, qu. 6 AA

116. Hume, David, A Treatise of Human Nature, Book I, Ch. 7

Footnotes, contd.

117. Church, R. W., An Essay on Critical Appreciation

118. Ibid., p. 21

119. Locke, John, Essay Concerning Human Understanding, II, 12, 1; II, 15, 9

120. This point is well-established by R. E. Aaron, John Locke

121. As quoted by Dawes-Hicks, Berkeley, p. 264

122. Bease, A. M., The Fortune of Montaigne, Intro. xvii

123. Dewey, John, Experience And Nature, p. 184

124. James, William, Some Problems of Philosophy, pp. 35-36

125. Plato, Phaedo, 100B

126. Plato, Timaeus, 51B-52C; Laws, 965B-E

127. Cherniss, Harold, The Riddle of the Early Academy, U. of Calif. Press, 1945, Lecture I.
I am indebted to Cherniss for several of the textual citations contained in this Appendix.

128. Burnet, John, Greek Philosphy, Macmillan, London, 1914, Part I, p. 313

129. Aristotle, Metaphysics, 987a29-987b13

130. Ibid., 1073a15

131. Ibid., 1073a14-22

132. Ibid., 1070a18-19

133. Ibid., 1040b30-1041a3

134. Ibid., 987a29

135. Phaedo, 101B-C; Theaetetus, 155, 204

Footnotes, contd.

136. Metaphysics, 987a29ff, 1059b10-15

137. Republic, 596A

138. Phaedo, 101B-C

139. Cratylus, 432

140. Aristotle, On Philosophy, frg. 9, Ross ed.

141. Republic, 526A

142. Aristotle, Nicomachean Ethics, 1096a15

143. Aristotle, Metaphysics, 987b15, 1002b

144. Ibid., 991b29-30

145. Ibid., 991a3-5

146. Republic, 511

BIBLIOGRAPHY

Works:

(1) Church, R. W., An Essay on Critical Appreciation, Cornell University Press, Ithaca, N. Y., 1938

(2) Condillac, Etienne Bonnot de, La Langue des Calculs, Paris, 1798

(3) Hume, David, A Treatise of Human Nature (in two volumes), Everyman's, 1934

(4) Jowett, B. (ed.), The Dialogues of Plato (in two volumes), Random House, N. Y., 1937

(5) Leibnitz, G. W., New Essays Concerning Human Understanding, MacMillan, Y. Y., 1896

(6) Locke, John, An Essay Concerning Human Understanding (in two volumes), Oxford at Clarendon Press, 1894

(7) McKeon, Richard (ed.), The Basic Works of Aristotle, Random House, N. Y., 1941

(8) McKeon, Richard (ed.), Selections from Medieval Philosophers (in two volumes), Charles Scribner's Sons, 1929

(9) Ockham, William of, Summa totius logicae, Venetiis, 1508

(10) Pegis, Anton C. (ed.), Basic Writings of St. Thomas Aquinas (in two volumes), Random House, N. Y., 1945

Commentaries:

(1) Aaron, R. I., John Locke, Oxford Press, London, 1937

(2) Broad, C. D., Examination of McTaggart's Philosophy (in two volumes), Cambridge University Press, London, 1938

(3) Carre, Meyrick H., Realists And Nominalists, Oxford University Press, London, 1946

Bibliography, contd.

(4) Cherniss, Harold, Aristotle's Criticisms of Plato and the Academy, Vol. I, The Johns Hopkins Press, Baltimore, 1944

(5) Cherniss, Harold, The Riddle of the Early Academy, University of California Press, Berekeley and Los Angeles, 1945

(6) Cornford, F. M., Plato and Parmenides, K. Paul, Trench, Trubner, & Co., London, 1939

(7) Gilson, Etienne, The Philosophy of St. Thomas Aquinas, W. Heffer & Sons LTD, Cambridge, 1929

(8) Gilson, Etienne, The Unity of Philosophical Experience, Charles Scribner's Sons, New York, 1941

(9) Hicks, G. D., Berkeley, Oxford University Press, London, 1932

(10) Joseph, H.W.B., An Introduction to Logic, Oxford at the Clarendon Press, 1916

(11) Moody, E. A., The Logic of William of Ockham, Sheed & Ward, Inc., N. Y., 1935

(12) Prantl, G., Geschichte der Logik im Abendlande, Vol. 3, Leipzig, 1927

(13) Wild, John, Introduction to Realistic Philosophy, Harper & Brothers, N. Y., 1948

Periodical Literature:

(1) Boehner, Phil.,"The Realistic Conceptualism of William of Ockham," Traditio, 1946

(2) Pegis, Anton C., "Concerning William of Ockham," Traditio, 1944

(3) Sachs, David, "Does Aristotle have a Doctrine of Secondary Substance?" Mind, Vol. LVII, No. 226, April, 1948

(4) Weinberg, J. R., "Ockham's Conceptualism", The Philosophical Review, 1941