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THREE TYPES OF LOGICAL
THEORY

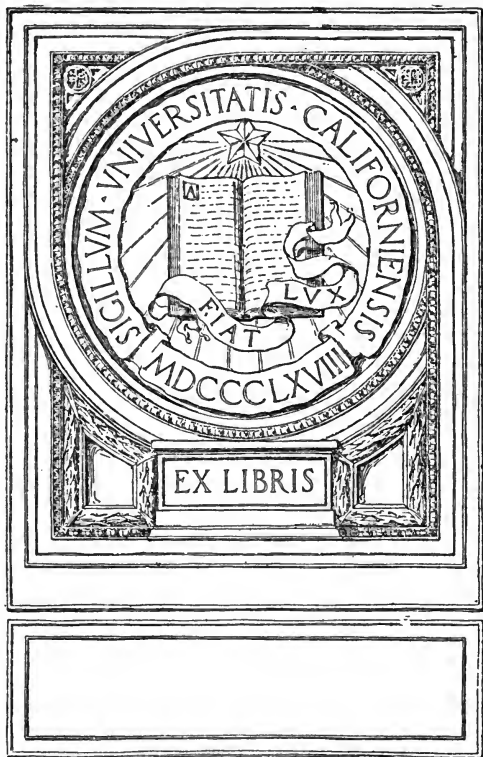
A DISSERTATION
SUBMITTED TO THE FACULTY
OF THE GRADUATE SCHOOL OF
ARTS AND LITERATURE
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
DEPARTMENT OF PHILOSOPHY
BY
HOLLY ESTIL CUNNINGHAM

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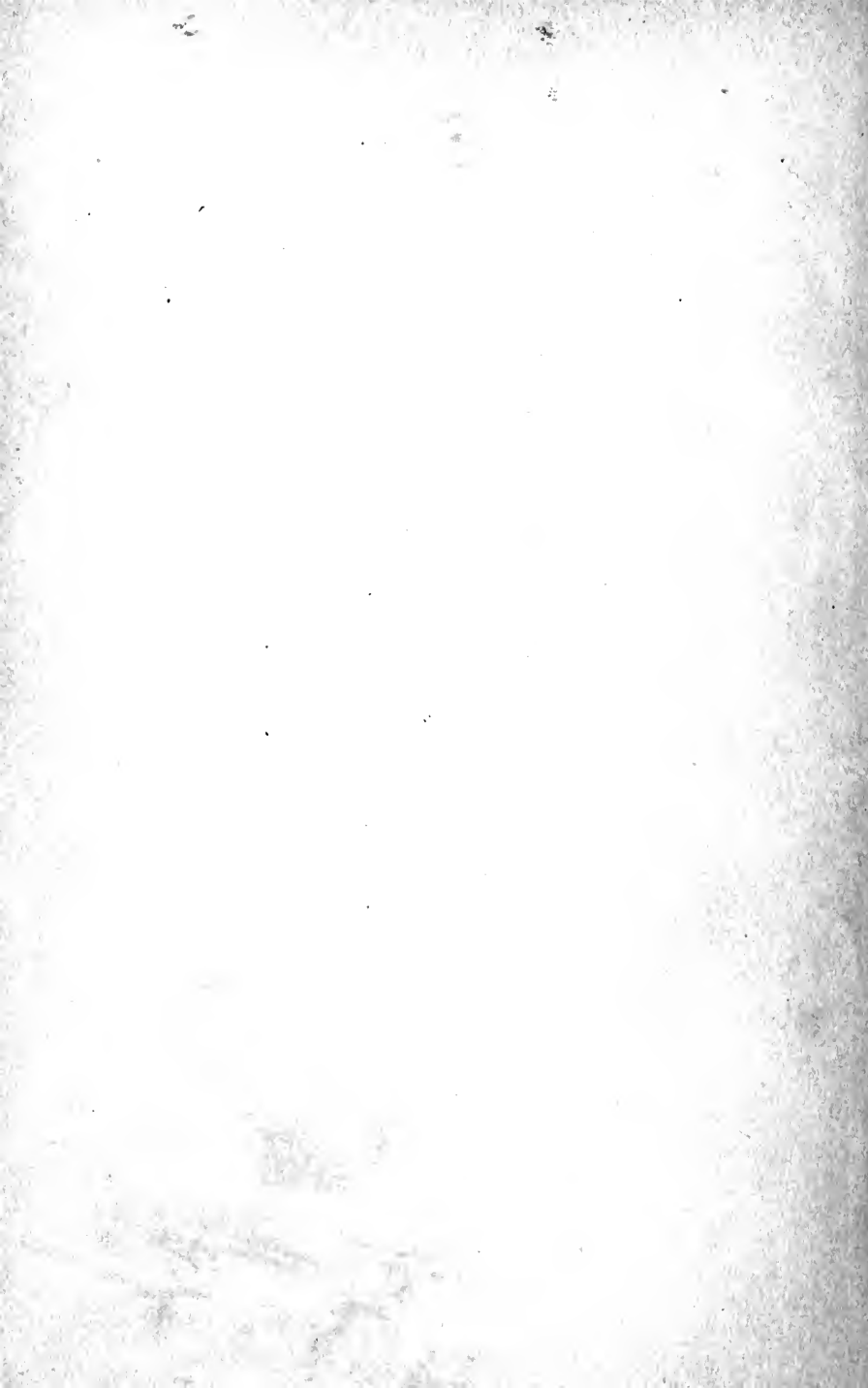
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INTRODUCTION

The appeal to time or to the verdict of history is legitimate in cases of political, economic, scientific, and even of mathematical theories, for it is recognized that these are cases in which the temporal element enters—that their successes and failures will come out in the give and take of experience. The contract theory of the state, the Malthusian principle, the Ptolemaic astronomy, the Euclidian geometry, Aristotelian logic—all these and many other “truths” have been tested in the laboratory of time. History seems strewn with the wrecks of “Prolegomenas to any future Metaphysic”, with Unknowables, with Absolutes, with Limits, with Force and Matter, with Souls—all these signifying in their day the efforts of men to interpret the data of experience. Philosophical systems, too, yield to the biting of time—that is *some* do for those that are *timeless* can not appeal to time either for verification or rejection. Such systems, indeed, would find it improper to treat historically the social and political conditions out of which and from which the system in question originated, for such processes are in no case germane to a timeless system. It might, however, be profitable from the standpoint of the history of the knower, as a part of his personal biography, to have in mind for social occasions, the historical setting of his system.

The fact that questions once considered of vital significance have not been solved but shunted, lived over, has value to him whose interests lead to an historical consideration of problems. It has significance because it is evidence of the constant shifting of problems due to conditions which the older students of the problem did not have to face. For a thousand years the best intellects of the world were engaged on the “other world” problem, with the result that little was accomplished for there were few means, save by dialectics, for accomplishing anything. A shift in the problems which confront a people carries with it a shift from older theories to ones which attempt to meet the situation at the present time. Not that the old is wholly abandoned, but it is modified in the presence of newer data, so that a more agreeable and satisfactory method of behavior is established. When an attempt is made to select a certain type of successful behavior, analyze it, and thereupon set it aside as a

model for all future generations, we have that type of philosophical system which cannot appeal to time because of the very nature of its assumptions. When that attempt is made, the assumption always present, tho not necessarily made explicit is, that at that moment all history, all progress, all achievement, is forever ended. The influence of metaphysical concepts on the place, nature, and function of science indicates well the temporal nature of systems. Both change with the coming of contradictions, but the type of metaphysical doctrine in which the age is planted determines the sphere in which science is able to move. Admitting that progress has been made in the world of science, it can be shown that this progress is possible only in terms of changed metaphysical conceptions; or, on the other hand, if a 'correct' doctrine of a metaphysical nature had been launched in the beginning, there is reason to believe that scientific progress would not have occurred, for the facts of experience would, in the first instance, have been interpreted in terms of the correct metaphysical theory.

For the Greek scientist the purpose was to discover the essence of the object—the object being outside of the experience of the individual. The essence of the object could be discovered by careful and numerous perceptual observations, and when this was discovered a judgment consisted in predication of an attribute to the thing. But essential to the observation of phenomena was the fact that the observer had the idea or the form. He could not, that is, observe facts as they were themselves, but he could observe them only in and thru the form which was already known. "He tests his theory by the observed individual which is already an embodied theory, rather than by what we are wont to call the facts."* As logic was subsumptive, so was science a matter of Classification. The space of the Euclidian Geometry determined the advance that was possible in mathematics. The axioms of mathematics were interpreted in terms of content; that is, the axioms are statements of the essence of the objects to which they refer or include—a statement of the law of the object. It thus came about that it was impossible for the Greek mind to treat mathematics "subsistentially" rather than "existentially." The conception of finite space and of the earth as the center of the planetary system rendered it impossible to employ the heliocentric hypothesis suggested by Aristarchus and others. During the middle ages the

*Creative Intelligence, Professor Mead's paper. p. 177.

dogma of the church marked the limits within which scientific procedure could take place. The Aristotelian conception of finite space which was taken over by the church, the view that the earth was the center of the system, rendered astronomical theories half scientific and half mythological.

The notion of substance has had various metaphysical statements each of which has had its influence on science. It is true that when the substance doctrines were most strenuously advanced, physics reacted against this notion and sought to interpret its data, not in terms of forms, essences, or attributes, but in terms of the relation between things. But what is true of physics is not true of all sciences. When the soul is defined as "thinking substance", if it *by nature* thinks, such a statement closes the door on any scientific statement as to origin, history, or growth. It is already *defined*, nothing more need be attempted. Variations on the substance theme occur, such as determining the faculties of the soul, but this process of apparent analysis is nothing more than an analysis of experience and thereupon attributing to the soul as faculties those facts which experience revealed.

In fact the substance doctrine suggests an origin in a social life in which everything must *belong* to something. A slave belongs to the master, the master in turn to a higher master, until the whole social group becomes "possessed" by some one else. So it was with attributes—those of matter, which functioned in physical theories until recent days, and of mind which to this day find expression in certain types of psychology. The mind or consciousness *has* ideas, feelings, images. When the notion of substance is driven from psychology because of its failure to take into itself the peculiar case, then will the way be clear for a scientific psychology.

This apparent digression has as its object to make clear the relation between certain elements of progress. If we grant that such has been made, it is evident that it is made only on the breakdown of older systems, for, as has been pointed out, if a fact is to be explained it must be explained in terms of the theory then in vogue. The astronomer who notices for the first time a small speck on the photographic plate, who notices it on successive nights at different places, can calculate its orbit, can interpret it in terms of the system of which it is a part, whereupon it becomes an embodied theory, possessing all the richness the system itself possesses; and is no longer a bare fact. In such a case as this example three possible results may happen:

First, the speck may be merely "psychological", an event in the history of the individual; second, the result might be as in the case above—the fact interpreted in terms of the theory; third, the fact might set on foot an investigation or series of investigations which in a long time will lead to a reinterpretation of the whole system in terms of newer hypotheses. It is in this latter case that genuine scientific progress takes place, and not by a classification of individuals which are already an embodied theory, or by assigning a predicate to a substance which predicate has been derived from an analysis of the concrete situations in which the so-called substance functioned.

That the practical precedes the theoretical will be granted by all. The demands of the environment led to counting and to surveying, at first very crudely attempted, but later developed into our arithmetical and geometrical systems. The early attempts at curing diseases by magic and witchcraft led to the theory of the four humors. The trial and error methods in weapons led to the study of projectiles. So it is with all the lines of interest—beginning as a need and with a trial and error method, the methods have been refined, theories have been projected, hypotheses advanced, the better to act in the premises. It is also generally admitted that in so far as the theory fulfills the function for which it was projected, it is true. When, however, a new condition arises, at first in the experience of an individual, which is not explicable on the prevailing theory, either the theory is modified or the experience of the individual is regarded as merely "psychological". It is peculiar that what is applicable to methods in science is not considered applicable in the systems of philosophy. This is probably accounted for from the fact that there is rarely if ever an experience, either individual or social, that will give a philosophical theory an *experimentum crucis*, such as was possible, for example, in the two rival theories of light. The only experiment applicable to such a theory is that which nature performs in her on-goings and multitudinous changes. She shows by the shift of interest that what was once a problem is no longer one, tho not showing thereby that what was once a problem was not one at the time, but showing the while that systems are in time, that they serve their need, and pass as a matter of history. Problems in this field are not solved but lived over, forgotten in the on-rush of events which call for present adjustment.

It is but natural to expect that these sober theories of things would be the least readily changed. We naturally expect

to find more conservatism in religion than in science, for once postulating infallibility, it is with great difficulty that religion can modify itself in any respect to account for matters not originally contemplated in the premises. But the fact remains that both philosophical and religious systems undergo drastic modifications from time to time. An idealism that grew up on a pre-evolutionary basis must necessarily undergo radical revision or drive from itself the respect of men of science.

A religious system founded on an Aristotelian space and a Ptolemaic astronomy must undergo modification in the light of a different conception of space or face the possibilities of finding itself without believers. But these changes in religious and philosophical systems come about with greatest difficulty. Long after the occasion which gives a system its standing has past away, are the traces of it found in later thought. The Cartesian dualism shows its connection with the dualism of this and the other world of medieval thought; the dualism of Locke and the English empiricists shows the tenacity of the idea of authority; the Kantian Thing-in-itself and the phenomenon is evidence of the feeling of incompleteness, of lack of control, of inferiority—a heritage not only from the church but from the custom of primitive tribes. It is to be emphasized that such systems possess a more or less permanent value, but it is further urged that the type of problem against which a theory is set, and the conditions giving rise to that problem or set of problems, ought to be considered in forming an estimate of the place and value of the system in question. It is urged that such a study will render evident the temporal nature of systems, with the result that Absolute systems of whatever type—whether of the realistic with the emphasis on the priority of logical and mathematical entities or of space; or the idealistic, emphasizing the priority of consciousness, individual or super-individual, will take their places along with the others of the past, as attempts to meet certain critical and vital issues which arose from the on-goings of life.

In the two great periods of origin from the standpoint of science and philosophy, namely, the Greek extending approximately from 600 to 300 B. C., and the period of discovery in the renaissance, we find many suggestions of kinship between the various problems of interest. The Greek sought to unify the manifold of life and experience about certain common principles such as air, fire, earth, and water. Most generally the historian of philosophy tells us that the Greek mind possessed a pecul-

lar bias towards unity, that he mourned for harmony in the manifold of fleeting and temporal experiences, and because he possessed this instinct or bias for unity and harmony he is rightly called the founder of the philosophic attitude. But it is interesting to note that this attitude is forced on him by the peculiar problems he had to meet. If it were merely the bias for unity and harmony, an instinct that craved satisfaction, it is difficult to see wherein this instinct was not satisfied—why one principle of unity might not as well be employed as another. One must question this original bias, however, and state that their explanations broke down at the point of novel experiences which could not be accounted for on the prevailing principles of explanation. When such problems as choice, purpose, desire, need, et cetera, arose, that is to say, the problems sometimes designated as "subjective," the principles used in the world of physical nature appeared inadequate to the needs of the situation. When, too, science had taught the harmony and rhythm of the spheres and since harmony is an indication of intelligence, it was discovered that the principles of Empedocles failed to account for the phenomenon, intelligence. The fact that it was thought that change involved change in quality as well as of quantity, told against the Empedoclean elements, with the result that an indefinite number of elements was postulated, together with an intelligence to get things started.

It is a commonplace that the Greek had no method by which to test his speculations, his hypotheses. The atomism of Democritus and Leucippus, suggesting as it does, the attitude of modern chemistry, was unfruitful for two thousand years. The Democritan theory of perception held until the time of Locke and Berkeley—the theory of effluxes which accounted for the difference between sensation and thought on the basis of the coarser images in the case of the former, causing a confusion on the part of the subject, while in the case of the latter, the finer images give rise to a gentle movement of the soul. To one whose interest is in the temporal nature of systems, however, the question, *Why* test the hypothesis? is vital. From the bare standpoint of harmony and beauty and completeness, why is not the theory of effluxes as good as any other? *Why* test the atomic hypothesis? Why is a technique necessary for the satisfaction of a purely intellectual interest or instinct? These questions, it seems, are vital for they indicate the practical nature of theory; they indicate the road that thought has always traveled when thought is genuinely itself.

The growing individualism of Greek life, due in part to the political conditions—the sturdy and active tyrant who made his will the law of the land with the result that little concern from the standpoint of reverence, could be had for law—led to a criticism, first, of the foundations of legal authority and, second, of the foundations of religion and morality. The growing democracy, the breakdown of tribal conceptions of guilt and retribution, the attitude of the popular assembly in constant revision of laws, and various other movements emphasizing the individual, has expression on the philosophical side in the work of the Sophists. The time called for the man who cared for victory more than the means by which it was secured, and as such was the demand so was the system. The assumption on which earlier reflection of a moral nature lay was that morality should be sought as a matter of prudence. It was evident that the principle was not a working one, for the unjust apparently met with the same success and often with greater success than the man of moral inclinations. The result is a principle of morality which emphasizes the satisfaction of the natural inclinations of men,—the desire for power, the principle of might.

It is not insignificant that the movement beginning with Socrates was chiefly ethical. Had the movement been primarily logical, it would until within recent years have been rather difficult to render evident the practical nature of Greek thinking. It has, in fact, taken the world twenty five hundred years to recognize this fact—the fact of the practical nature of logic—but since the prime interest lay then in a type of behavior which would make for stability in the rapidly decaying Greek society, the problems of ethics would first be attacked. Indeed in Socrates and especially in his successor, ethics is a propaedeutic to metaphysics. Knowledge is for action, "Virtue is knowledge." The "virtue" of the shoemaker is that he makes good shoes, of the soldier that he meets the enemy as a Greek should, of the physician that he gives rules for health and that he cures diseases. "Virtue", in other words, consists in doing that for which the person or thing is intended, and knowledge is the discovery of the "form" of the object, the better to understand its "virtue"—what is expected of it in the way of actual practice.

Had Plato belonged to a different class of society, his answer to the Heracleitean tendencies in the Sophists might have taken a different turn. Had Greek society been founded on another basis than slavery we should have expected in turn a dif-

ferent answer. But since these are the facts, we find that the difference between "knowledge" and "opinion", the difference between the fleeting experience of the masses and the reality which is abiding and unchanging, is a difference of insight on the part of the man in whose social condition Plato was. The man who toiled for his livelihood occupied from the psychological standpoint, the humble position of the baser feelings below the midriff; the soldier who fought for the advantage of the ruler, occupied a higher position in the "spirited" portion, or the heart; the ruler, however, in whose class was Plato, occupied the region of the head, to whose keeping was intrusted the peculiar insight into the fixity and permanency of the supersensuous realm, the lack of knowledge of which created the problems of confusion on the part of the Sophists. It is in keeping with the general spirit of the age that Plato should find the essence of justice in *order*—that is, the spirit of the age as represented by the social class of Plato. What was essential for the wellbeing of the ruling and aristocratic classes was that those in the lower strata of society should stay tenaciously by their places and leave to those above them to do the thinking for the nation. One of the winged horses of the charioteer is of noble origin, the other of ignoble. The former is ever striving to mount to the eternal where it may behold the Idea in its purity, while the other strives as diligently to keep a footing on the earth amid the pleasures of the sensual. Just so it is with the philosopher-aristocrat and with those who work with their hands. It seems clear that Plato has answered the questions of the Sophists, the questions, first, of individualism, and second, the skeptical attitude towards morality. The individual exists only in and for the state; there is a permanent element in morality which the philosopher can discern.

With the decadence of Greek life, philosophy becomes more and more a way of living. Men turn from the investigations of nature for the purpose of control to the more primitive method of magic and witchcraft. The philosopher is more and more a preacher whose business it is not to inquire but to convince, and the "Thus saith the Lord" is the authority for their messages. The schools which flourished during the medieval period were founded to meet a moral and religious need: the Epicurean to teach men how to live in a world in which he has nothing to fear either before or after death; the Stoic, to believe in God and to follow his laws, the former going to Democritus for his reality, the latter to Heracleitus.

Christian philosophy, which came to the front in the latter part of the period, was preeminently a philosophy of life, and the concepts underlying it gave the limits to further progress in the realms of science. Whatever of speculation was present in any of the systems of thought during the middle ages, was there for the fuller life. The Stoic life according to nature carried with it an explanation of nature; the Epicurean life of pleasure, an account of pleasure; the Christian and Neo Platonic philosophy, technical as they may be, were after all, but an account of the way that man must travel to reach the abode in the world beyond. Metaphysics here, as with Plato, depends upon ethics and religion.

Enough has been said to indicate in part the method to be pursued in the treatment of the systems selected for examination. They will be treated as parts of a larger social movement from which they are derived, being as they are, the reflective aspect of what is an attitude of society. With the more recent systems, this will be difficult to accomplish, especially the portion of the work which attempts to show that the system in question breaks down at the point of social advance. It has been briefly indicated that philosophy has been and must be if true to her mission a method of creation of values, a method of control of that which thwarts the growing purposes of the individual or group.

There are certain assumptions, hypotheses, standpoints, which serve as a working basis of every system. These assumptions might be called the postulates of the system. They are not arbitrarily chosen but are selected after a survey of the field, as the best method of interpretation of the data at hand. They are meanings, ideas, suggested by things, and when verified, they become the facts or rather the facts become them—they are the facts. These standpoints or assumptions have a history in the problems of the age, and are temporal in their nature. The assumptions become more general as the problems of life grow in complexity. The early Greek thinker did not find it essential to effect a working relation between mind and things not mind, but with the growth of problems, especially when the problem of perception and its errors arose, a more general assumption which took account of the newer data, became necessary. At length, the problem of the relation of mind and matter became acute in the time of Descartes, and the same has been a leading problem of philosophy from his time to our own. Just what meanings a set of data will suggest, it is impossible to say, but one thing is sure, the meanings or viewpoints will always be such as fall

within the interests of the time in which they are projected. They will, to a large extent, be determined by the individual bias of the thinker who employs them, to the race and people to which he belongs, and to other considerations of a personal, social, racial and local nature.

For the purposes of this paper, the principle of classification and criticism of systems, is the relation, as stated by the systems, that obtains between consciousness and its object. Of the two entities or things, consciousness and object, there are certain relations which may obtain, which make the chief assumption or hypothesis of the system. One of these possibilities is that each is independent as far as priority is concerned (temporally) and that a relation such as obtains in parallel lines is present; that is, there is a dualism, mind *and* matter. This is the characteristic assumption or postulate of empiricism. Another possibility in reference to the two entities is that consciousness is prior and that "things" are merely consciousness. This is the view of the various forms of idealism and constitutes their most important postulate or assumption. Another is the priority of things, which gives the leading postulate of realism of the modern variety. The last of the possibilities for our purpose is that both consciousness and things are functions in a larger experience or situation which has reached the point of reflection. The chief assumption of this last type of theory is, then, that experience is prior and that consciousness and object both function therein, and that apart from this experience neither consciousness nor object has any significance. This is the postulate or standpoint of pragmatism. To state these possibilities in another form, we should say that idealism of whatever variety works on the assumption that things do not have an existence except for some consciousness, either individual, or absolute; new realism asserts that things have an independent existence and that things are prior to consciousness since the latter is a development; empiricism asserts that ideas are copies of things and that the two are simultaneous; pragmatism works on the assumption that consciousness and object are functions which *become* at certain crucial points in experience, and that the two are simultaneous—that the thing is only a thing, an objective, when it is a factor in a tensional situation, and that both thing and consciousness disappear when the objective is met by an act which satisfies the organism so that it may enter more direct experience—that is experience on the non-problematic, non-reflective, social, or aesthetic level.

EMPIRICISM

Science is supposed to take its origin in the attempt to explain in terms of natural causes and principles. When natural phenomena are interpreted in terms of human activities; when for example, the earth is "mother", the sun "father", the explanation of these phenomena is in other than "natural" terms. But when the air, or earth, or fire, or water, or a combination of these is taken as a principle about which to correlate the data of experience, a different outlook on the world is born. It then becomes the business of science to predicate as a meaning the hypothesis at its command, as ample in meeting a difficulty into which its data have fallen. When these hypotheses are inadequate, they are modified by an extension in generality so as to account for that which was not originally contemplated. This is done as in case of Democritus whose unlimited number of "simple entities" differing only in quantity, took the place of the meager number of the earlier Greek thinkers. Up to this point in Greek thinking the question of the "subjective" had played but a small part. "Mind" was explained in the natural manner as a combination of smoother and more god-like atoms. But by the time of Protagoras, the question of knowledge became acute. His travels had made him acquainted with the laws and customs of various countries, and he noticed that while each differed from the rest, each seemed to prosper under the codes of its own formation; and this, coupled with his knowledge of perception, led him to his famous statement that "man is the measure of everything"—an early statement of a principle which later was to play a prominent part in shaping the course of the history of thought. The answer to the Protagorean difficulties remained practically unchanged until the struggle between realism and nominalism, the former of which in its future development became the philosophy of the "static universe", while the latter became the attitude of the practical mind, of natural science and democracy.

Modern philosophy originates in the shift of interest from the supernatural to the natural; and in emphasizing this change, the interest lies more in the direction of differentiating science from theology rather than in questions as to the difference between science and philosophy. The method of science and the

construction of systems held the first place in the early stages of modern science and philosophy, and not until the time of Locke is the problem of the origin, extent, and validity of knowledge, raised. Prior to this time and to all intents and purposes, since the time of Locke, the scientist has gone on without serious consideration of the problem of knowledge.

Although the empiricist attempts to begin anew, as in the case of Bacon, he is not able wholly to sever his connection with an attitude which had found a firm lodgment in the mind of man. In spite of Bacon's polemic against scholasticism, he believed in a fixed number of "forms", and to find it the business of science to discover these "forms". Although Descartes asserts it as his purpose to build anew, he can not free himself from a dualism of mind and matter, a heritage of the dualism of the middle ages expressed by this and the other world. Dualism is one form of the doctrine of authority. It takes its origin in primitive nature worship where beneficent and harmful natural forces are in striking contrast with each other. Each must be appealed to—the one in order that its acts of grace may continue, the other so that it may at least remain neutral. The idea of "matter" is of something to which our thoughts must conform. It is the "given", and strive as we will, we can not escape its compulsion. It is not the compulsion of an Absolute, however, but is the hard and fast fact of immediate experience. Matter may occupy a lowly place, as the prison house of the soul, as that which drags down the upward striving mind in its attempts to contemplate the eternal plan of things, as that waiting for the application of the "form"; but with the growth of science and with the increase of knowledge of the methods of controlling nature for our own purposes, matter became the object of study, but matter still in the sense of the "given". When epistemology became thoroughly launched after Locke, the problem of the relation between mind and matter became more acute. Realism of the common sense kind served the purposes of science up to this time, but the difficulties involved in the relation between perception and the object, difficulties formulated by the Greeks, led to the view held by the empiricists, namely, of representative perception. Instead of a direct experience of the object, we have on the representative theory, an image of the object which answers for its reality. The "given" is not perceived directly but only through the idea—a conception not unlike the means of salvation in the religious world of the period, and comparable in many ways with the idea of absolute authority developed in the polit-

ical philosophy of Hobbes. Thus it was that religion, the state, and science, each had its "given", its principle of authority, which determined the problems against which the methods in the respective spheres could be set.

The early beginning of English philosophy is indicative of the general trend of their later thinking. While it is true that science is more universal in its appeal, it is less true with philosophy where national characteristics and interests of a temporal nature are influential in determining the point of view. During the period of church supremacy there was community of interests throughout Europe, due in part to a common language as a vehicle for thought; but with the publication of the "Advancement of Learning" in the English tongue, the way was opened for a more characteristic English philosophy. While the empirical attitude is seen in the church philosophy as represented by the British Erigina in the ninth century, and by Alexander of Hales and Roger Bacon in the thirteenth and of William of Occam in the fourteenth, it is not until the break with scholasticism on the part of F. Bacon that the empirical type of thinking gets a firm foothold. Occam had gone far to develop the doctrine of the "two-fold" truth which was fatal to the scholastic assumption of the identity of faith and knowledge. With the growth of science and mathematics the difference between the worlds became so pronounced that no effort was made to treat one in the terms of the other. The "idols" of the two Bacons emphasize the need of a consideration of problems in freedom from the restraint of authority, for they realized what is now a commonplace that the limits of science are fixed by the metaphysical conception of the day.

Empiricism, then, is the outcome of a practical type of mind engaged in the business of this world—in the solution of scientific, social, and political problems. While its exponents believe a complete break had been effected between themselves and the older type of thinking, it requires only to be pointed out that the chief difference is a shift in the locus of the Absolute, the Idea, the Goal. Men had been taught obedience too long to regard reality as an achievement. For the former period of thinking, reality is the fixed world beyond, and matter, while following Aristotle, is never without form, it occupies a subordinate place in the scale of things. It approaches the Good in organization, until in man the limits of its possibility are reached. But when Matter is taken as the reality itself, and when the former reality has been relegated to the world of faith—when *this*

world is the world of reality to which thought must conform, we have the attitude of the "plain" man engaged in the problems of science and politics. The case is not unlike that in which, after the regular physicians have given up hope for the recovery of the patient, the older women come forward, each with her remedy. The difficulty might be one of diagnosis, in which case if recovery happened, it would be a case of accident, or of such a mild nature of treatment that in any case it effected nothing. It seems safe to say that the diagnosis of the patient in the hands of the scholastics was faulty and that the empiricists inherited the same faults. They inherited the habit of thinking in terms of completion, and regardless of the locus of authority similar difficulties must arise. They misinterpreted the method of science—that is they took as an example a bit of scientific achievement, analyzed the product in the completed form, and from this dictated what must be the method in the actual performance of the original discovery.

After an experiment has been made, certain elements in the performance of it may be selected and grouped as "data"; certain elements may "answer the conclusion"; but before the experiment has been performed we can not speak of data and conclusion in the case in particular. The fallacy of empiricism is that of regarding the world of matter as data for science—the world in general, "given", so to speak, which stands not in need of construction, but to be "represented" in consciousness.

It might be said that the standpoint of empiricism is dualism. On the one hand there is the world as given; on the other, there is a mind the business of which is to represent this world, a mind, moreover, which is passive, which is a "white piece of paper" which receives the impressions from the outer world and which records them wax-like. Under the leadership of a different idea of authority and of a changed conception of consciousness we should expect to find a different type of philosophical thinking. With the shift of authority from the church to the state over which was a ruler who held by divine right, we have a transformation which is notable in its consequences, but we still have a form of authority, something given, which is a limit beyond which nothing need be attempted. All endeavor is circumscribed by the circle of authority. This method of social and political living is reflected in the scientific and philosophical thinking where a norm is present in the form of matter, of nature, on the one hand which dictates to a passive subject, mind, on the other. As the sin-sick and penitent soul received

blessings from the representative of the church or the unworthy subject receives grace from the hands of the sovereign, so too the mind receives its commands from its sovereign, matter. An absolute matter and a subject mind will answer as a principle of explanation as long as the social conditions are such that that explanation is a reflection of them; but with the dawn of a different attitude of a political, social, and religious nature, due, in part, to the exceptional individual who pioneer-like reaches a little beyond his fellows to "things unattempted yet in prose or rhyme", we have a changed conception of the nature of reality and of the function of intelligence in experience. With the growth of democracy in England through the efforts of some of the very leaders of the empirical school, we note a corresponding change in the conception of matter by these same thinkers—we pass from an undisguised empiricism to a disguised type, from matter as eternally "there" to matter as a "permanent possibility of sensation". The dualistic hypothesis is embedded in the very fabric of the life of the age in which it flourished, but like idealism, it is the child of the age and has fallen with newer conceptions of the nature of scientific methods, of political and religious authority, and with a newer conception of the nature and function of consciousness.

An examination of the logic of the system will reveal the contradictions which history has already made evident. We have in the case of empiricism two "givens", namely, things and mind. With these the problem is to get valid knowledge—a working relation between mind and things of such a nature as will explain what is admitted to exist, namely, knowledge. Knowledge comes about in the judgment and an examination into the judgment should reveal the difficulties.

Locke's statements are well known and have often been criticised, but they contain the essential elements of modern epistemology. "Since mind, in all its thoughts and reasonings, hath no other immediate object but its own ideas, which it alone doth or can contemplate, it is evident that our knowledge is only conversant about them. ****Knowledge then seems to me to be nothing but the perception of the connection of and agreement, or disagreement and repugnancy, of any of our ideas. In this alone it consists".* From this standpoint the act of judgment consists in referring one idea to another, and when true, the ideas agree. When the judgment is not true the ideas (the

*Essay, Bk. IV, Ch. I, Secs. 1 and 2.

subject and predicate being both ideas) do not agree. Ideas are built up in two ways: first from "sensation", and secondly, from the perception of the operations of our own minds within ourselves. "Our senses*** do convey into the mind several distinct perceptions of things, according to the various ways wherewith those objects do affect them; and thus we come by what ideas we have of yellow, white, heat, cold, soft, hard, bitter, sweet, and all those we call sensible qualities; which when I say the senses convey into the mind, I mean, they from external objects convey into the mind what produces there those perceptions.**** These two, I say, viz., external material things as the objects of sensation, and the operation of our own minds within as the objects of reflection, are, to me, the only originals from whence all our ideas take their beginnings."* An idea is not the "thing", therefore, but is representative of the thing. Judgments accordingly have nothing to do with so called "reality", but is only the perception of the agreement or disagreement of representatives of reality. Locke, however, attempts to make the matter clear by an explanation of "wherein this agreement or disagreement consists"; and in doing this he has recourse to the four-fold nature of agreement, one of which is Real existence. The essence of this type of agreement as stated by Locke is "that of actual real existence agreeing to any idea."† The first type of judgment, as Locke soon recognizes, makes no place for the objective world; the result is that he must, in case the judgment is to render knowledge objective, modify the former statement of the nature of knowledge, by an assertion to the effect that it is the perception of the agreement of the idea with an object.

We shall ask the following question of the Lockian theory of knowledge: (a) What determines which of the ideas gained in the manner stated shall be applied either to another idea as in the first statement of the nature of judgment or to real existence as stated in the second definition? (b) What determines agreement or repugnancy? (c) What is actually accomplished by an act of judgment?

In answer to (a) it may be said that there is no method in the madness of the coming together of ideas or of objects and ideas. Thinking on the principle of "givens" is an idle pastime of putting together blocks which have been made to order, or rather given to fit. There is no difficulty as to the final outcome, only try long enough, but trying itself is a mystery on the

*Op. C. Bk. II, Ch. I, Secs. 3 and 4.

†Op. C. Sec. 7.

assumptions. It is as if in making a judgment we started with an idea or a reality in the nature of an object, pinned down, so to speak, and fitted to them or it, the various supply of ideas which we have in our heads, until at length we come to one which "agrees", whereupon we, Archimedes like, piously exclaim, Eureka, Eureka. In short, there is no method in any particular case to tell which of the stock of ideas we shall employ as a predicate. The same is true of the subject, only in this case any idea or object may be chosen arbitrarily. In either case it is a matter of assortment, for both idea and object, or the two ideas were given in the original experience as identical and in agreement.

As to (b) the question concerns the truth or falsity of an idea. In the case of the agreement of one idea with another in the first statement of the nature of knowledge or judgment, it is evident that if the idea agrees with itself we have made no progress but have asserted a mere identity. It is evident, also, that this is all that can be done, for if the ideas do not agree, that is, if there is any difference, we can not have knowledge, for there is disagreement. Every judgment is either the assertion of identity, such as A is A, or is false. In the second statement of the agreement of an idea with an object, we have the same difficulty when it comes to accounting for truth and falsity. The idea being a copy or a symbol of the object ought certainly to "agree" with it for there is nothing else for it to agree with; but in asserting agreement we have done nothing more than to assert identity. If we assert *another* idea it will not agree with the object, and consequently there will not be truth but falsity. In both cases the following strange paradoxes confront us: that all judgments are true, but do not extend our knowledge; second, that all judgments are false but that our knowledge is extended by them. In a world of meanings on the one hand and a world of things on the other, it appears that truth and falsity have no significance. Truth is reduced to identity which is given in the original experience, identity, that is, between the idea and the thing, or between the idea as subject and the idea as predicate; and consists merely in the perception of agreement.

In answer to (c) it may be said that there is nothing accomplished by the act of judgment. If the idea is in the fact, it is difficult to see how it ever got away from it; if it is not in the fact but in a world of divorced meanings, the mystery is present none the less in accounting for a principle of reference. In

the first case a judgment is a mere reiteration; in the second case it must be false.

In the second chapter of the fourth book of the *Essay*, Locke considers mediate knowledge. The first kind of knowledge is immediate or intuitive and it is on "this intuition that depends all the certainty and evidence of all our knowledge." Demonstrative or mediate knowledge is that type or degree "where the mind perceives the agreement or disagreement of any ideas, but not immediately". Now the mind can not always perceive presently the agreement or disagreement of two ideas, a fact which renders necessary, if agreement is to be perceived finally, the introduction of a few or many intermediate steps in each of which "there is an intuitive knowledge of that agreement or disagreement it seeks with the next intermediate idea, which is used as a proof." By a perception of agreement or disagreement throughout the series of steps, the final conclusion is reached.

The classic attempt in logical theory from the empirical standpoint is Mill's *Logic*. His efforts in this direction are better understood as the logical aspects of the doctrine of the philosophical radicals who were social and political reformers first and logicians and moralists second. Philosophy as conceived by them is but a means to social and political reforms; the reforms of the law, of the methods of punishment and of the English constitution. The different philosophical aspects of intuitionism and empiricism, in the view of Mill, are of great significance from a practical standpoint; and it is the practical aspect of the controversy between the two contending views that led him to write the *Logic*. He says, "The *System of Logic* supplies what was much wanted, a text book of the opposite doctrine (to the apriori view of knowledge)—that which derives all knowledge from experience, all moral and intellectual qualities principally from the direction to the associations.**** The notion that truths external to the mind may be known by intuition or consciousness independently of observation and experience, is, I am persuaded, in these times, the great intellectual support of false doctrines and bad institutions. By the aid of this theory every inveterate belief, and every intense feeling, of which the origin is not remembered, is able to dispose of the obligation of justifying itself by reason, and is erected into its own all-sufficient voucher and justification. There was never such an instrument devised for consecrating all deep-seated prejudices."*

*Autobiography, p. 225.

Mill is quite right in his contention, as no one will deny, but the question is as to the method for overcoming the difficulty. Instead of the 'mind' of the idealist, Mill substitutes another just as fixed and given as the mind itself, namely, nature. Instead of the mind's dictating to nature as Kant would have it, we have in Mill the common shift in the locus of authority, with the result that nature dictates to the mind.

Philosophical speculation rests on psychology, and his aim in the *Logic* is to develop the implications of the association psychology of Hume and Hartley, as modified by his father in the *Analysis*. Of the relation between psychology and logic, Mill says: "A right understanding of the mental process itself, of the conditions it depends on, and the steps of which it consists, is the only basis on which a system of rules fitted for the direction of the process, can possibly be founded*****Logic then, comprises the science of reasoning, as well as the art, founded on that science".* It is the relation between the art aspect and the science aspect—which in turn is another statement of the initial postulate or standpoint of the system—which is the source of all the woes of the empirical logic. These difficulties crop out in almost every chapter, for when "things" become complicated he has recourse to "mind", and when "mind" fails to function in the premises, he switches to "things".

One of the early examples is his statement of the province of logic, whose business it is neither to observe, to invent, nor to discover, but to judge. "It is no part of the business of logic to inform the surgeon what appearances are found to accompany a violent death. This he must learn from his own experience and observation, or from that of others, his predecessors in his peculiar pursuit. But logic sits in judgment on the sufficiency of that observation and experience to justify his rules, and on the sufficiency of his rules to justify his conduct. It does not give him proofs, but teaches him what makes them proofs, and how he is to judge them."† Logic does not attempt to find evidence, but merely to determine whether or not evidence has been found. The above statements were written when the "mind" side of the dualism had possession. But when he comes to treat induction which is inference, he discovers that a formal logic of proof is insufficient. When, in other words, he discovers that the "mind" aspect renders the job of the logician somewhat as that of the

*Logic, Introduction, Sec. 2.

†Logic, Introduction, Sec. 5.

coroner, and realizing that the method of science had been different, he introduces another statement of the business of logic. "We have found that all Inference, consequently all Proof, and all discovery of truths not self-evident, consists of inductions."* Thereupon he gives as a statement of induction "the operation of *discovering*† and proving general propositions."‡—a process, however, which is made very complex, when it is remembered that the individual facts upon which the general proposition is based are themselves, or at least may be, the results of the inductive process. On the one hand logic does not observe, on the other, this is the essence of scientific discovery; on the one hand logic does not discover, but merely proves, discovery being the result of "sagacity"; on the other, the object of logic is to discover the "invariable antecedents".

An examination of the treatment of the "categories" will show the same*shift in position in the face of the difficulties which confront one who works from the dualistic standpoint. We have as a general division the two classes of categories, the subjective and the objective, the former being states of consciousness, the latter being something different from states of consciousness, or substances and attributes. The difficulties come about in getting a working affiliation between the two classes. The first class is made up of feelings or states of consciousness, under which sensation, motion, and thought are subordinate species. Thought includes "whatever we are internally conscious of when we are said to think; from the consciousness we have when we think of a red color without having it before our eyes, to the most recondite thoughts of the philosopher or poet".* In this connection Mill takes great care to distinguish sensation from the object which causes the sensation, but in so doing he is committed to the agnostic position of the believer in the-thing-in-itself. He is introducing the concept of cause as applying to a world or in a world from which he is forever excluded by the nature of his assumptions.

The next division of "nameable things" is substances which are the external causes to which we ascribe our sensations. The sensations are all of which one is conscious, but these considered as produced by something external to the body and the mind, which external something is called body. "*All we know*

*Op. cit. Bk. 3, Ch. 1, Sec. 1.

†Italics mine.

‡L. C. Sec. 2.

*O. C. Ch. 3, Sec. 3.

of objects, is the sensations which they give us and the order of occurrence of those sensations."† But the question as to how sensations have objective reference must be answered and it is answered strangely for an empiricist for Mill says it is by intuition. "The answer is***that the belief is intuitive; that mankind in all ages have felt themselves compelled, *by a necessity of their nature* to refer their sensations to an external cause." In contrasting the two kinds of substances, mind and matter, Mill makes use of the following: "a body is that of an unknown recipient or percipient of them; and not of them alone, but of all our other feelings. As body is understood to be the mysterious something which excites the mind to feel, so the mind is the mysterious something which feels and thinks."* Dualism, consequently, leads to complete agnosticism. Logic, scientific method, in short, all attempts at thinking must be doomed to failure when all are founded on "unknowns" and "mysteries".

Attributes are the means by which Mill attempts to "get outside himself"; they are the subject matter of judgments; but at bottom they are powers in that mysterious category, substance, to excite sensations. Attributes may be those of quantity, of quality, or of relation. From the standpoint of logic, quality and sensation are synonyms. The same may be said of quantity, but certain relations occupy a peculiar place. The relations of succession, simultaneity, and resemblance, do not have objective reference as do the other attributes but they are innate. As Mill puts it, "Our consciousness of the succession of these sensations is not a third sensation or feeling added to them; we have not first the two feelings, and then a feeling of their succession. To have two feelings at all, implies either having them successively or else simultaneously. Sensations or other feelings, being given, succession or simultaneousness are the two conditions, to the alternative of which they are subjected by *the nature of our faculties*."† "Resemblance is nothing but our feeling of resemblance; succession is nothing but our feeling of succession".‡ Mill is forced here to the apriori view which he so violently criticises as the source of prejudice, because he has no other method of reaching objectivity, on his premises,

†O. C. Ch. 3, Sec. 7.

‡Italics mine.

*L. C. Sec. 8.

†Italics mine. Ch. 3, Sec. 10.

‡Opus Cit. Sec. 3.

except by the "high apriori road". If the question be asked, What is the business of thought?, on the foundation laid by Mill, the only answer that can be given is that it is merely a registration of impressions, a reception of what is in the object. Attributes are in the objects, they are powers which the objects have to excite sensibility. If attributes are already objective (all attributes, that is, except certain relations which are innate), how can any mistake ever occur in the registration of attributes by the mind? In other words, the problem of error is impossible on Mill's theory of the categories.

By an appeal to the "universal belief of mankind", an 'act of "intuition" Mill at last gets on the outside to objectivity. He is strong in his criticism of the view of the philosophers of the Lockian type that propositions are expression of the relation between ideas; and insists on the other hand that the relation is one between phenomena themselves. He characterizes the opposite view as one of the most fatal errors ever introduced into the philosophy of logic; and the principal cause why the theory of the science has made such slow progress during the last two centuries. His own statement of the nature of a proposition is, "The object of belief in a proposition is generally, either the co-existence or the sequence of two phenomena".* But when he discussed these relations among the categories, these same ones were such as did not refer to objectivity but were of the original nature of the mind—the mind's contribution in the formation of objects.

His discussion of the categories leads to the following alternatives: (a) All is mental: in which case he is in the same position as the subjective idealists; or (b) All is objective: in which case there is no place for error, or in fact, for thought at all, except as a matter of registering impressions; or (c) Part is mental and part is objective; in which case there is no way to find how they are connected or related; or (d) All is appearance: in which case we know nothing of either mind or matter, subjectivity or objectivity, but live in a world of Kantian phenomena.

Mill's treatment of inference affords the best example of the difficulties of the dualistic postulate or assumption. In the treatment of the categories he makes it clear that attributes are subjective, but that they are caused by powers in an unknown substance and refer to objects. These attributes are the subject

*Ch. 5, Sec. 5.

matter of propositions which are matters to which proof or logic is applicable. It is true that in other connections Mill has a different statement of the nature of objectivity as the "permanent possibilities of sensation".* But the paradox involved in such a statement is evident: it is by means of sensation that we build up a world of possibilities of sensation. The question of chief importance, however, at this time, is the possibility of making any inference whatever. If we view the matter from the standpoint of consciousness there is nothing in the way of discovery possible for all is already in the mind. Now the mind is merely receiver, a recipient from the absolute of the system, nature; it possesses no creative ability, not even the ability to recall. In case the mind actually could perform any sort of operation on its materials, it is forever bound down to a fixed "given" from which it can never escape. No truth or error could ever come to pass for sensations are neither true nor false. If the mind was dynamic, the only possibility of error would lie in false recall of the "given". But reproduction of what is "there" is not inference. When the attempt is made, as Mill does, to shift to phenomena, to the world of objectivity, the difficulty is not obviated; but it appears again only under a different "given". If objects are given, why inference? If inference is a movement from the known to the unknown, what is the result of such a process; how can such a process take place? If we already have the known, why disturb it? Let the known be either states of consciousness or objects, what is gained by making any kind of sally from what is already fixed?

But Mill treats inference as an objective matter, and the ground of all inference, of all induction, is the universal law of causation. Now Mill tells us that this ground is a case of induction itself but he meets the paradox by a reference to his treatment of the major premise of the syllogism—that the major premise is nothing more than the sum of the cases of particular instances, and consequently that "no reasoning from generals to particulars can prove anything, since from a general principle we cannot infer any particulars, but those which the principle itself assumes as known."* With this in mind it is difficult to see just what is accomplished by making as a major premise of every induction a generalization of the uniformity of nature. If the ground of every induction is the uniformity of nature,

*Ex. of Hamilton's *Philos. Ch. 11.*

*Bk. 2, Ch. 3, Sec. 2.

and if the ground has no other proof than is expressed in the cases which have gone into its composition, it certainly seems a useless process to labor so diligently for some ground which renders legitimate the inductive process. But later in speaking of the uniformities of nature of which the law of causation stands at the head in point of universality, he says, "we shall find ourselves warranted in considering this fundamental law, though itself obtained by induction from particular laws of causation, as not less certain, but, on the contrary, more so, than any of those from which it was drawn."[†] Now if the universal law is founded on particular laws, and if these particular laws are sometimes modified, what is the result? If the general is the sum of the particulars and if the particulars change, then what of the general? Mill asks this question and attacks it as follows: "For there is probably no one even of the best established laws of causation which is not sometimes counteracted, and to which, therefore, apparent exceptions do not present themselves, which would have necessarily and justly shaken the confidence of mankind in the universality of these laws, if the inductive process founded on the universal law had not enabled us to refer these exceptions to the agency of counteracting causes, and thereby reconcile them with the law with which they apparently conflict".[‡] In other words the universal law is founded on lesser laws which may be counteracted, but the universal law, the sum of the particulars, remains as a check against the very particulars of which it is composed.

We are confronted here with these difficulties:

(a) The major premise proves nothing; yet that nature is uniform is the major premise which serves as the ground of all inductions.

(b) The major premise is the ground of all induction; yet it is itself a case of induction.

(c) The ground of induction (the major premise that nature is uniform) is nothing more than the particular cases; yet these particular cases may be counteracted without any effect on the universal law which in fact is used as a check on the particulars of which the universal is made up.

The difficulties of the dualistic standpoint is again seen in the treatment of the hypothesis. The hypothesis as Mill views it is not a case of inference but it is an auxiliary thereto. It

[†]Bk. 3, Ch. 21, Sec. 3.

[‡]L. C.

is a skilful guess. It is a guess which gives mental unity and wholeness to a chaos of facts, of scattered particulars. It is a guess which is made, moreover, only by minds which abound in knowledge and which are disciplined in intellectual combinations. On the other hand, the hypothesis is absolutely indispensable in science. Without them science could never have attained its present state. "They are necessary steps in the progress to something more certain; and nearly everything which is now theory was once hypothesis."* It is strange that an instrument so valuable occupies the position of an auxiliary to inference. Mill tells us that hypotheses are employed in order that the deductive method may be applied earlier. When we remember that no inference is possible by the deductive method, but only in the formation of the major premise in place of which in this case stands the hypothesis, the mystery concerning the function of the hypothesis grows deeper. Then again, we have a mass of scattered facts, a chaos of particulars, given, and the business of the hypothesis is to "colligate" these facts by means of conceptions in the mind of him who abounds in knowledge and who is disciplined in intellectual combinations. But on the other hand, the conception is *in* the facts and the mind sees it there. "If the facts are rightly classed under the conception, it is because there is in the facts themselves something of which the conception is itself a copy; and which if we cannot directly perceive, it is because of the limited power of our organs, and not because the thing itself is not there. The conception itself is often obtained by abstraction from the very facts which it is afterwards called in to connect."* If the conception is in the facts, given, there is no guess, lucky or otherwise; and the discoverer would be merely the man whose sense of perception happened to be a little keener. If the conception is not in the facts, the mystery as to where it came from and how it happens to fit the facts is still there. In fact the whole treatment of the hypothesis is based on "luck" and "mystery."

*Bk. 3, Ch. 15, Sec. 5.

*Bk. 3, Ch. 2, Sec. 4.

IDEALISM

The standpoint of idealism is the priority of consciousness. The different aspects of this postulate have received the greatest amount of consideration all the way from Plato and especially from Berkeley to our own time. When Plato gave the Greek world the answer to the questions propounded by the sophists,* he answered as the aristocratic Greek would, namely, that knowledge is above the world of the fleeting experiences of the democrat, the artisan, the toiler; that it can be discovered only by the keen eye of the philosopher who removed himself from the vagaries of the world of the common lot who occupied the same position in the social world that matter occupied in the physical world of Aristotle.† While it is true that the idealism of Plato is not the idealism of the modern, his emphasis on the intellectual aspect of experience has had a profound influence in shaping modern systems.‡ The atmosphere in which his intellectualism was formulated has always been a favorite one for the idealistic philosophy. While the Platonic intellectualism is meant to be primarily practical, the method of reaching the practical was thru the intellect,§ with the result that it could be found only by those who had the time and the opportunity to permit the Orphic soul again to visit that realm whence it fell and there to view reality as it was in itself and not the manifestations in the fleeting order of temporality.

In the latter part of the middle ages we find Platonic idealism confronted with a type of mind more pronounced in democratic and individualistic tendencies than was the case when the system was formulated.* We have the outright denial of the existence of Platonic ideas, a renewal of the spirit of individualism which in later centuries resulted in the great industrial up-

*Such questions as the relation between the particular and the universal, the relation between 'knowledge' and 'opinion'.

†See Windelband: *History of Philosophy*, (Tufts' Translation, p. 140).

‡See Russell, *The Problems of Philosophy*, Ch. IX. On the view that Plato's doctrine of ideas was methodological rather than metaphysical, see Mackintosh, *The Problem of Knowledge*, pp. 81-2, and references there cited.

§Windelband, *op. cit.*, p. 107.

*The development of Nominalism was connected especially with Porphyry's Introduction to the logical writings of Aristotle as concerned with the "Five Predicables". See Ueberweg, *History of Philos.* pp. 365-9.

heaven, the newer democracy, and the freedom of intellectual pursuits from religious supervision. In this struggle it is to be noticed that the church maintained the Platonic position—one of the first manifestations of what would be the position of the church and of idealism in the future struggles between religion and science.

In the Cartesian philosophy, emphasizing as it does the dualism of mind and matter, we have the culture germs of the various idealistic types of thinking of the more modern variety. This dualism, a heritage of the period of church supremacy, needs only to be emphasized on the subjective side to render idealism dominant. Reality is that which is clear and distinct—the test of the reality of the object is the clearness of the idea.† We find, also, in his statements bearing on the existence of God, and the necessity of the God idea for the system as a whole, the more modern conception of the Absolute, a second postulate of the more recent development of idealism.* In fact, the Absolute is essential to the philosophy of Descartes. "Je pense, donc Je suis"† alone is not knowledge, and if any advance is made beyond the confines of the individual, something else is necessary. By the use of the axiom of cause, he proves the existence of God who in turn vouches for the truth of our ideas and who serves as an ideal by which to measure and correct human thinking. Thus the philosophy of Descartes furnishes the chief stock in trade of the idealist, namely, the primacy of consciousness, an Ideal, and last, the religious surroundings in which alone idealism can flourish. But with the rapid growth of science which tended towards mechanism, thus alienating the world from the spiritual realm, came the pressing need, in case the world was to be interpreted in terms of religious philosophy, to render the world of science spiritual. The emphasis on scientific method by Bacon,‡ the mechanical philosophy of Hobbes,

† "The first rule was, never to receive anything as truth which I did not clearly know to be such; that is, to avoid haste and prejudice, and not to comprehend anything more in my judgments than that which should present itself so clearly and so distinctly to my mind that I should have no occasion to entertain a doubt about it." Discourse on Method, Part II, Torrey's Translation, p. 46.

* Meditations, I.

† Cf. Augustine's principle of the immediate certainty of consciousness. Windelband, op. cit pp. 276-7.

‡ "The former, (empirics), like ants, only heap up and use their store; the latter, (Scholastics), like spiders, spin out their own web. The bee, (induction), a mean between both, extracts matter from the flowers of the garden and the field, but works and fashions it by its own efforts." *Novum Organum*, Sec. 95. See also, Sec 68. On induction from empirical particulars, see *Advancement of Learning*, Vol. VI. p. 265.

and the achievements of men engaged in the pursuit of the various sciences, were not conducive to a spiritual interpretation of the world.§ But when the idealist, asserting the priority of consciousness, formulates the doctrine latent in Cartesian dualism, namely, that reality is idea, the problem of the scientist, his solution, and his data, become matter for the idealistic postulate. Since knowing was regarded as spiritual, a notion inherited from the Greeks, reinforced, moreover, by the neo-Platonic philosophy as represented by Plotinus, and the Christian philosophy as well, and further since perception was regarded as a case of knowing or knowledge; the way was open for a thoroughly religio-idealistic interpretation of nature.*

With Berkeley who was first a man of the church and a philosopher next, we have a definite formulation of the standpoint of idealism. His doctrine grew up as a defense of Christianity against the free-thinkers and in the effort to interpret science from the religious standpoint. The concepts of space and matter, the foundation of the mathematico-physical science of the day, were first attacked by Berkeley after the Lockian manner of discovering the origin of our ideas. Newton who had just produced his work on mathematical physics, found it necessary to postulate an absolute space and time, not objects of the senses, as a basis for distinguishing real from apparent motion; and in addition, matter.† The result, in short, of the Newtonian science was a mechanical view of nature which Berkeley sought to avoid. He attacked the view at the very basis, namely, on its postulates, showing that distance and magnitude are not apprehended from the beginning, but that the idea of them arises from a combination of sensations of sight with sen-

§Windelband, op. cit., pp. 388-9.

*The Platonic soul occupied an intermediate position between the world of Becoming and the world of Being, *Phaedo*, 76 ff. It is that which moves of itself and moves other things. It is also that which perceives and knows. Cf. Aristotle Conception of the "active" reason; cf. Cicero's view of the spirituality of knowledge, Windelband, op. cit. 223. The Stoic logos doctrine—that the rational part of the soul is an emanation from the divine World Reason—is another expression of the spirituality of knowledge or knowing. See Ueberweg, op. cit., p. 194.

"When Greek philosophy deified the speculative intellect, it made the supreme effort to work clear of all that was vague and mythical in religion, only to find that the intellect had become a deity and followed the older Gods of emotional faith to the seventh heaven." Cornford, *From Religion to Philosophy*, p. 261.

†"Before there could be real motion there must be an absolute space and an absolute time which are not determined by their relation to anything external.**The true space and the true time are mathematical space and mathematical time, but these are not objects of the senses". Höffding, *History of Modern Philosophy*, Vol. 1, pp. 410-11.

sations of strain.* This combination depends upon practice, and what Newton calls *space* is only a subjective association of ideas furnished by the two senses. Thus Berkeley has accomplished his aim, by abolishing the "matter", side of the Cartesian dualism, rendering the Lockian primary qualities dependent upon sensation, and reducing the foundations of science to subjectivity; the aim, namely, to render possible a religious or idealistic interpretation of nature.

The idealism of Berkeley, however, suffered from another type of dualism, as Hume soon saw, that of the thing that thinks and the ideas. Hume reduced the thing that thinks to a series of impressions,* with the net result that speculation which began with Descartes and ended with Hume was disastrous to spirit and science alike. It is at this point in the breakdown of psychological idealism that the Kantian movement was inaugurated; and it is to Kant rather than to Berkeley that most idealists prefer to trace their lineage. Kant attempts to mark off the field of the conflicting interests of his day, the chief of which was the conflict between materialism on the one hand and spiritualism on the other. As early as 1200 men had questioned the ability of reason to deal with religion,† urging the latter to be a matter of faith rather than of dialectic; and from that time to the Kantian period the attitude towards religion was always a prominent part of the system of the thinker. The leading currents of thought at the time of Kant were: skepticism, the thought of the Enlightenment, empiricism, and mysticism. These currents, creating the problem of Kant, determined the nature and scope of his system; each is catalogued and placed. He is skeptical as far as knowing a world apart from our ideas—in this he agrees with Hume. He meets the problem of the Enlightenment by assigning to reason its proper bounds. He is empirical in respect to the origin of our ideas. He answers mysticism and religion by asserting the practical necessity of God, Freedom, and Immortality. It would possibly not be admitted that Kant's primary

*"It is certain by experience, that when we look at a near object with both eyes as it approaches or recedes from us, we alter the position of our eyes, by lessening or widening the interval between the pupils. This disposition or turn of the eye is attended with a sensation, which seems to me to be that which in this case brings the idea of greater or lesser distance into the mind." Fraser, *Selections from Berkeley*, p. 182. Cf. also pp. 184, 191. See Lotze, *Microcosmos*, Sec. 4, pp. 306-10.

*"Since nothing is ever present to mind but perceptions, and since all ideas are derived from something antecedently present to the mind; it follows that 'tis impossible for us so much as to conceive or form an idea of anything specifically different from ideas and impressions." Hume, *Treatise on Human Nature*, p. 67. Also see pp. 252-3.

†See Lange, *History of Materialism*, Vol. 1, pp. 218 ff.

interest was religious, his own statement to the contrary notwithstanding, but it will be admitted that the religious problem was one of the matters of chief interest—he paves the way for a reconciliation between science and religion by assigning to each its field of activity.

From the time of Kant to the present, idealism has taken various forms as the individual thinker has seen proper to develop one aspect or another of the Kantian philosophy; but in each case the initial postulate is present—the priority of consciousness. With Fichte, it is the will; with Hegel, the intellect; with the followers of Hegel, the additional postulate is made—the absolute. All the systems, however, struggle with the difficulty of Berkeley which Hume criticized so forcefully—dualism. In the Critical idealism, it is the thing-in-itself and the phenomenon; in the absolutistic type, the dualism of the psychological knower and the absolute knower. Berkeleyan subjectivity is present in all as well, but with the difference that the subject is merely extended; instead of an individual mind which received impressions at the will of God, we have an absolute mind endowed with the categories of logic, to whom the universe is present in one immediate experience.

Assuming that it will be granted that idealism works on two postulates mentioned above, and that it arose in response to a religious problem and that it has been intimately the ally of religion in the conflict between the latter and science, it remains to consider the following questions: Have the problems of religion in support of which idealism is formulated so shifted that both the problem and the solution are no longer of interest? Is there any evidence for the postulates themselves? In regard to the former question, a different conception of religion will carry a different type of thinking; and a difference in the method of solution will vary accordingly. To render the world of science subject to a religious interpretation, it was only necessary to regard thinking spiritual in its nature, a notion rich in traditions, based upon a primitive soul concept which was definitely formulated in the doctrine of Plato;* and to regard the subject matter of thinking as the product of the same spiritual principle. Thus both the process and the material are spiritual.

The religion with which the idealistic philosophy is sympathetic is primarily the "other world" religion. It was under the

*Dessoir, *Outline of a History of Psychology*, Introduction.
Also Ch. 1, Sec. 3, pp. 11-13.

dominance of such an idea that this type of thinking got its definite formulation, and in present day types the emphasis on the absolute is a metaphysical reflection of the same religious conception. It is just within recent years that a different conception of the nature of religion has been formulated. From the time of the Romantic Movement and in fact earlier, it has been the custom to treat problems historically, and especially is this true since the rise of the doctrine evolution. But the religious field has been sighted until the present time. The hypothesis "that religion is the consciousness of the highest social values That these highest social values appear to embody more or less idealized expressions of the most elemental and urgent life impulses,"* will render unnecessary the type of thought used for a different conception of religious experience. To quote further, "In all stages, the demand is for daily bread and for companionship and achievement in family and community relationships."† Religion, that is to say, is a *human* institution. It is to be interpreted as an attempt to meet certain fundamental needs of the people, whose it is, to be an expression of the interests of that people, and to vary as the needs of the group vary. Idealism has lost in the conflict with science in this respect, for the very interest the former attempted to guard has been preempted by the latter and has been given an interpretation in its terms. Religion is to be interpreted naturalistically and in the spirit of science. "Food and sex are the great interests of the individual and of society. These may work out in various forms, but the 'ground pattern' of every man's life are determined by these two elemental forces."‡

It has been shown that the type of occupation determines "the scheme or pattern of the structural organization of the mental traits."* In the evolution of the God idea, polytheism yields to monotheism, not unlike the "categories" in their gradual decrease to "Unity",† or "Unalterable System of Relations" in the philosophy of idealism. The inexplicable, not only in primitive life but in modern as well is explained or rather thrown on to the generous shoulders of the absolute where no explanation is

*Ames, *Psychology of Religious Experience*, p. 7.

†Loc. cit.

‡Op. cit. p. 33.

It is not essential to the argument—that religion is a human institution—that food and sex are the only bases upon which religion is founded. It may be that there are many other factors which enter. See McDougall, *Social Psychology*.

*Dewey, *Psych. Rev.*, May 1902, p. 217.

†Grant Allen, *The Evolution of the Idea of God*.

necessary. As the thunder bolt of the all-compelling Jove is rendered intelligible from the standpoint of science, that attribute of divinity is removed to another world, the world of knowledge; when Ceres became explicable on the basis of soil fertility, one god less inhabited Olympus. And finally when science explained religion on the basis of human needs, human desires, as a human institution, the chief support of idealism was taken from under it. Historically the system refutes itself, for that which gave it its *raison d'être* has been accounted for by its rival.

Consciousness can be regarded as spiritual, i. e. as otherworldly in the religious sense, only with a denial of an evolutionary method of approach. When consciousness was regarded as a divine element which rendered man a little lower than the angels, and which separated him from the animal kingdom—which, in short, is the differentia of man, and when the postulate is that consciousness is prior and that things exist for it alone, it renders the task of the idealist an easy one to give to nature a spiritual interpretation. But when a newer conception of consciousness is advanced, when it is shown that it is not a static bit of divine spiritual nature, but a dynamic factor in meeting the needs of an organism in the struggle to develop specific values, when it is viewed as a function which has a natural history which can be stated in terms of cause and effect, of the give and take of experience, and when causes are actually assigned, causes moreover, which are not “final” but natural; then it is that we hold to our idealism on other grounds than as believers in the results of modern research. With the newer conceptions of animal mind,* the place and function of the instincts in the behavior of humans and animals,† the interpretation of the emotions in terms of physiology,‡ and the view of the cognitive processes as means of gaining control over conditions for action.§ of the very categories which found their lodgment in the absolute mind as having a history, as growing out of and up from the conditions of adequate responses;§ it seems that the conditions giving idealism its place in the growth of systems have so changed, its problems met in a more satisfactory manner on other hypotheses, that the system itself thru lack of contact with present problems and methods, has an historical interest only.

*Washburn, *The Animal Mind*.

†McDougal, *Social Psychology*.

‡James, *Mind*, O. S. ix., 1884.

§Dewey, *How We Think*, Part II; Miller, *The Psychology of Thinking*; Pillsbury, *The Psychology of Reasoning*; Dewey, et al, *Studies in Logical Theory*; Creative Intelligence, Professor Bode's paper.

With regard to the postulates themselves, it is difficult to find a greater bit of anthropomorphism in all the history of thinking. It is, however, impossible to escape a certain type of anthropomorphism if that term is used to mean an interpretation of facts in connection with the problems of man, but to assign to nature a purpose in itself apart from human problems, or to consider it the product of an intelligence wholly external to human intelligence, or to consider the function of knowing as bringing to explicit consciousness a pervading extra human universal to which all differences belong, though it may be in implicit form, or to hold that a perfect experience is one in which the "that" and the "what" are undifferentiated in an immediacy of an absolute intelligence—all of this is merely a refined and more poetic interpretation of the primitive manner of interpreting the facts of experience. The stars are the children of the sun and the moon; man may gain control over the "powers" by sacrificing, giving food, for this renders *man* docile; the winds are held in a great cave guarded by a deity, a large man who occasionally turns them out. The earliest form of theory is perhaps animism,* and the great myths, stories invented by those ancient idealists, interpret the phenomena of nature in terms of the activities and interests of man. Childhood is notably anthropomorphic and mythopoeic trees are stuck in the ground by God; thunder is God speaking loudly; lightning is God striking many matches at one time. Thus it is that primitive man and childhood are idealistic from both the postulates of the system—from the priority of mind in which things are *my* things; from the absolute in that *my* powers are magnified to infinity and are used as a lever to move *my* world.

By a survey of the achievements of science, by a comparative study of present with past customs, by setting aside as conquered a portion of the field of experience, by a consideration of what is called "progress", it has appeared to some that there is a "goal" towards which all progress is reaching, a purpose in things, which lends significance to the world of chaos as it is thrown down before the individual. It is difficult at times to keep a steady eye on the universal purpose amid the evil and appearance of the world, but by a careful inquiry one can cull the wheat from the chaff, by an inquiry, that is to say, into the *general* character of Reality; and by a method, the criterion of which is that "what is real is not self contradictory, and what

*Marvin, History of European Philosophy, p. 41.

is self contradictory is not real."* There is an instinctive demand on the part of the intellect for coherence and consistency and as a gratification of this instinct, such an attempt into the characteristics of Reality is to be commended. The problem that interests us here, however, is the value of the hypothesis as a means of relating the facts it attempts to relate, for it is asserted that such an inquiry into the general nature of things is science or a science,* and since every science works on the assumption that its principles will be or can be verified, and that knowledge to the effect that verification has been made can be the possession of any one who takes the time and spends the energy necessary to think through the solution. With this in view, the chief objection to this assumption—of an absolute, a goal, an end—is the impossibility of verifying the hypothesis for the following reasons: (a) there is no method for doing it; (b) even if it could be verified or if it approached verification, we should never be any the wiser in this respect; (c) since the investigation is directed towards Reality in general, there is no point for beginning, that is to say, no hypothesis is possible, since this, too, is part of the Reality to be investigated.

The first of these difficulties, the lack of a method, presents itself as a serious one. Metaphysics claims to be a science, yet the metaphysician is the first to deny the ability of scientific method to handle his data. "Unlike religion and imaginative literature, Metaphysics deals with the ultimate problems of existence in a purely scientific spirit; its object is *intellectual* satisfaction, and its method is not one of appeal to immediate intuition or unanalyzed feeling, but to the critical and systematic analysis of our conceptions. Thus it clearly belongs, in virtue of its spirit and method, to the realm of science.* But that the method of science is not applicable is evident when we note that "In *all* (italics mine) our science we are constantly compelled to use hypothetical constructions, which often are, and for all we know always may be, merely 'symbolic' in the sense that, though useful in the coordination of experienced data, they could never become objects of direct experience."† If a "systematic analysis of our conceptions" is undertaken, it is difficult to see how we shall ever get anything in addition to or beyond the elements which that analysis reveals; but this method is advanced as a means of

*Taylor, *Elements of Metaphysics*, p. 19.

*Taylor, *op. cit.*, p. 5.

*Taylor, *op. cit.*, p. 5.

†Taylor, *op. cit.*, p. 36.

reaching something in no respect comparable with the original data, namely, *our* concepts. Just how an analysis of *our* concepts reveals an absolute—something not in the original, is difficult to see. But that Metaphysics, though a science, is not amenable to scientific method, is seen from the latter quotation above. The hypothetical constructions of the scientist may be merely 'symbolic'—useful but never the objects of a direct experience. Waiving the difficulties involved even in attempting to state the hypothesis, how is it to be verified? In scientific method, when prediction, based on the hypothesis or in terms of it, are fulfilled, it is said to be verified. When action carried on in the light of the hypothesis leads to results which were calculable before action began, is a statement of the same thing. But in such an hypothesis as the one in question, there is never one type of behavior or set of conditions for action which can be devised which will give the hypothesis a test. Since the tests are *our* tests, these may share the lot of all scientific hypotheses—that is, they may be merely 'symbolic'. Since truth and error, appearance and reality, are both admitted and present as elements to be considered in these concepts of ours, it is always possible that the tests devised shall have as much at least of error as of truth. It then becomes necessary to appeal to another principle outside of the facts in the case, outside of the data at hand, such as non-contradiction, as a guarantee of the original experience.

In the second place, by what signs shall we recognize that which goes to show a partial verification? Admittedly things are not labeled as more real and less real. "A completely adequate apprehension of reality would be one that contained all reality and nothing but reality, and thus involved no element whatever of deceptive appearance."* Such an experience is possible only for the absolute, but the following marks indicate the presence of the absolute in the chaos of appearance: (a) the comprehensiveness of the system; (b) internal systematization. Concerning the latter, it may be said that it is possible to build a system on any chosen set of axioms or principles, which possesses all the 'internal systematization' the biased intellect might crave, but this fact would argue, not for the existence of an absolute, but for the accuracy of the deductive method on well defined and assumed generals. Grant the axioms of the Euclidian geometry, and the proofs that follow do not argue for any principle other than the ability to deduce from assumptions which are unquestioned, conclusions possibly less patent than the as-

*Taylor, *op. cit.* p. 34.

sumptions. Comprehensiveness of the system has been urged just as strongly to show the opposite doctrine. Matter, Force, Energy, are postulates which have been employed to account for the facts of experience, with the usual result that the absolute is either found unessential to the system, or is reduced to the "unknowables."* The ancient atomic hypothesis of Democritus and Leucippus is as comprehensive as an intellect craving harmony and consistency could desire. It accounts for everything from alcoholic intoxication to the construction of the heavens, yet one would not urge the fact of its comprehensive character as evidence in support of an absolute intellect. In short, whatever postulate one might select will result in a system as comprehensive as one based on another assumption. The same field is there to work over, the same problems are present, and the comprehensiveness of the system is measured only by the industry and ability of the author of it. The criteria of the absolute apply equally to any system—even to those which deny its existence.

But since human thought is always connected with specific problems, even the problem of the absolute being specific, how are we to place any achievement of it in the scale of absolute values? In the present difficulty, and even in its solution, by what marks shall we behold the absolute as it pervades the particular? Human experience is linear, so to speak, a one-dimensional affair; while systems are other-dimensional. Because this is so, we can never experience totals, systems, but present problems here and now. An accumulation of particulars may become correlated with a nervous system, resulting in a habit, either a habit of thought or of thinking, or a habit of direct action; but it does not argue for an absolute intelligence.

The very nature of the undertaking precludes the possibility of solution; not only of reaching a conclusion, but of stating the problem, granting that a problem exists. Once launch out on the problem of reality in general, for "Metaphysics deals with everything"* and there is no place to begin or to end, but there is a constant shifting of particulars, now here, now there, to this principle, to that, a justification of this by that and that by this, until by sheer exhaustion the whole chaos is thrown on the shoulders of the absolute, as offering a safe refuge for the dis-

*Cf. Buchner, *Force and Matter*. Also Herbert Spencer, *First Principles*, Ch. III.

*Taylor, *op. cit.* p. 7.

cordant elements, for *there* no problems are attacked, but the Whole is present in Immediate Experience.

In an attack upon a discordant situation, one in which there is a genuine problem present, certain factors *in* the situation, not *out* of it, are taken as fixed, for granted, and are used as a basis of operations. Certain meanings have been fixed by past solutions, and these meanings furnish the lever for the removal of the present difficulty. These very meanings, however, may themselves become the object of inquiry at a later period in the resolution of other difficulties, but in such a case other meanings are taken as fixed and are held so until they fail to function in the tensional situation. It is in this manner that hypotheses are verified, that meanings are clarified, that candidates for objectivity become elected to their positions.

In speaking of the priority of consciousness, we shall have in mind the cognitive aspect of consciousness. Other aspects have been emphasized, but even in the expression of the active aspect, the cognitive side is the agent. The problem of the idealist is to show that everything that exists is mental. We should note that consciousness viewed in its cognitive aspect includes perception as a case of knowledge, with the result that all conduct is logicized and consequently the ubiquity of logic. One of the chief arguments that has been urged recently against the priority of consciousness is one which has been called the argument from "ego-centric predicament".* This was pointed out by Green when he said that "no object can be *conceived as existing* except in relation to a thinking subject" should not be confused with the proposition "that it cannot exist except in the relation."** The idealist argues, that is to say, from the proposition that every thing that is known to exist (perception being a case of knowledge) is idea, to the conclusion that nothing can exist independently of being known. What the idealist really shows, it seems, is that what is *known* is an idea, but he has not proved that everything is idea. It seems that this difficulty is a genuine one for idealism, from the standpoint of the finite knower only, and that his conclusion is based on an enumeration of cases in individual experience, due to a faulty view of perception. From the point of view of the absolute knower, the idealist can escape the argument from the egocentric predicament, but this is simply dogmatism. In this connection it might be mentioned that the

*Perry, Journal Philos. VII, 1910. pp. 5-14.

**Quoted from Mackintosh, Problem of Knowledge, p. 96.

argument does not prove that there are things independently of being known, when *knowing* is employed in the same sense. The realist who employs the argument, therefore, to show his own doctrine can no more conclude from the same premises that there are things independently of being known than the idealist can conclude that there are not—the argument applies with equal force against both theories, and not only against these, but against all theories which render ubiquitous the knowledge relation.

Certain facts seem to tell against the priority of consciousness. These facts are those connected with the biological view of consciousness. Certain types of behavior, such as automatic and reflex, not to mention instinctive behavior, appear to be more elemental in the life of the organism and of the species. In the lower forms of animal life we find the reflex and automatic behavior such as will meet the peculiar needs of the organism. In the higher forms of life other types of behavior occur, until in man the ability is present to form “free” ideas—until consciousness appears. In the child the lower and more elemental types appear first and not until a later period does consciousness develop. The laws of forgetting, and the law of dissolution* indicate negatively the same fact of the late arrival of cognition.

From the above discussion of idealism from the standpoints (a) of its history in which the attempt has been made to show that the interests out of which it grew have ceased to exist in their former manner, and (b) that it cannot account for its postulates—that they have been outgrown; it remains to consider briefly the logic of the system. In a general way the remark will pass that a *true* logic of idealism is the logic of the absolute—of a mind endowed with the categories of logic. All cognitive attempts of the human variety separate the “that” from the “what”, even in sensation, but in the true judgment or inference, no separation is made but there is an immediate experience of differences within a universal. Processes, either deductive or inductive, are not essential to a *true* logic; but since we actually do something called *thinking*, it is a task of interest to arrange these processes in a system which approximates the pure experience of the absolute; but a true logic is no logic at all. It is because we see through a glass darkly and not face to face

*Baldwin, *Mental Development, Methods and Processes*, pp. 387-404.

that we must place our values in a scale for comparison with the eternal ones.

The problems of idealistic logic grow out of the conception of reality as a fixed system, a non-contradictory and self-sufficient totality. This totality is "there," "given", in the same way that the data of the empiricist are given, but for the idealist it is an already organized and abiding totality. It is logical in the sense of being the product of the logical absolute mind. The problem is, recognizing that true logic is no logic at all, to show a connection between the temporal human intellect and the absolute mind, or again, to show the method by which a knowledge of the true reality, the static universe, is achieved—truth and degrees of reality being for this type of logic identical.*

Summarily stated, these are the "givens": Reality, Ideas, Images, and Individual Thinker. These "givens" stand in a position represented spatially with Reality on one side, the Individual with his image in the middle, and Ideas on the other side. The problem to solve is, to apply to Reality an Idea. The method is the judgment; the agent, the individual with his image. The human-image must come into contact with Reality which is outside, there, to be known, and he comes into contact with Reality in perception. A connected world must be established from these perceptions, perception being a case of knowledge—the point of immediate contact with reality. We may ask the following questions to bring out the connection between the "givens" in the knowing activity: (a) Is Reality inside the judgment or outside? (b) Are Ideas *in* the Reality or do they exist in themselves or in another world when not being referred to Reality? (c) How are Ideas formed? (d) What is the relation between the Image and the Idea? Does the Image exist—is it a part of Reality?

If (a) is answered such that reality is inside the judgment, there is no occasion for judgment because of the coincidence of Ideas and Reality. If, however, a judgment is made, it is made in the Lockian sense on the basis of the agreement of our ideas, with the result that we can never know whether or not the ideas are the same as the reality. Since the idealist regards perception as knowledge, he is compelled to answer (a) such that reality is inside the judgment as Bosanquet does. "If the object-matter of reality lay genuinely outside the system of thought, not only our analysis, but thought itself, would be unable to lay hold of

*Bradley, *Appearance and Reality*, Ch. 15.

reality.”* It seems evident that thought does somehow “lay hold of reality”.

Now “the real world for every individual is emphatically *his* world.”† That is to say, the world for every individual is an extension of his present perception, “which perception is to him not indeed reality as such, but his point of contact with reality as such.” In perception, therefore, the individual does not get reality as such, but his content or idea of it. In this case, when he applies an idea, he is applying an idea to another, and not to reality. If it is answered that reality is outside the thought process, we can never get at it by thought and can consequently make no judgments about it. Stating this again, we may say that if perception is a case of knowing, we never can know the object, but only the idea, and our judgments are merely the reference of one idea to another.

As to (b) if it is answered that ideas are *in* reality, then why make any judgments, for what is to be referred to reality is already there? If it is not in reality, how does it ever get there, and if it does get there how do we know that it is a correct reference? That is, what determines just which one of the ideas in the world of ideas shall be applied to the “this” of immediate experience? If ideas *are* without being referred to reality, if they are in a world of existence, what idea (since an idea is in essence a meaning) can be referred to them in a judgment which can in any way characterize them? Regarding the world of ideas, Bosanquet says: “It is not easy to deny that there is a world of ideas or of meanings which simply consists in that identical reference of symbols by which mutual understanding between rational beings is made possible. A *mere* suggestion, a *mere* question, a *mere* negation, seem all of them to imply that we sometimes *entertain* ideas without affirming them of reality.” “I only adduce these considerations in order to explain that transitional conception of an objective world, distinct from the real world, or world of facts, with which it is impossible wholly to dispense in an account of thought starting from the individual subject.”*

But the “world of objective reference and the world of reality are the same world.”† Bosanquet has assumed a metaphysical reality as a fixed totality of subject-matter which is

*Bosanquet, *Logic*, Vol. 1, pp. 2-3.

†*Op. cit.*, p. 3.

**Logic*, Vol. 1, pp. 4, 5.

†*Loc. cit.*

logicised by an absolute consciousness, there to be known by the individual knower. On this assumption, meaning and reality must coincide, but in this case no judgment can be made. In order that judgment may be possible, and therefore knowledge (individual), meanings must be "floating" to be seized and referred as occasion demands. We then have on our hands a reality which means nothing, in which case we deny the original assumption, and if we affirm the original assumption we deny the function of judgment. In answer to (c) ideas are formed by a selection of elements which are common in a large number of particular cases. "The name stands for those elements in the idea which correspond in all our separate worlds, and in our own world of yesterday and of today, considered as so standing."‡ How is this selection made? Reality is presented in perception. Selection takes place. This is continued until a meaning is formed. But the reply is made that it was reality (which just is meaning) which is presented. How form a meaning when it is the meaning which is directly presented? If this objection will not be granted, the only other aspect of the question is that since meaning was not presented (or reality) immediately, it must have been presented mediately, through an idea, resulting in the fact that our meanings are meanings of ideas and not of reality. Again, the meanings formed in this manner are twice removed from reality, even in the case of perceptual knowledge and they can never get back to reality except by some mysterious act by which they telescope the second hand copy and the subject of the first presentation. Bosanquet answers (c) by saying that ideas are not mere particular mental images which pass through consciousness, but they are employed solely for the sake of their general signification.*

The image is the fleeting, the idea, that which remains constant in its reference throughout the differences of imagery. The imagery has no logical value, but is purely personal, purely psychological. The idea, however, freed from the subjectivity of the individual, and, by its universal reference, gives objectivity—objectivity, that is to say, from the standpoint of the individual knower. Now, taken from the standpoint of the individual, the idea is as much a product of his as is the image personal to him, a fact which becomes patent the moment one considers the method by which an idea is formed. If it is formed

‡Op. cit. p. 46.

*Logic, p. 73.

by the elimination of incongruities in particular instances, or is the combination of elements common to all our worlds, it is as particular as any image which serves as an element in the whole, and in fact is composed of just the factors which are asserted to possess no logical value. By a process of elimination and addition, a meaning is formed from particulars, any one of which is infected with subjectivity, but which, when combined, lose their subjectivity, and become attributes of reality, now in the facts, now referred to the facts as a means of interpretation, securing in the process of combination universality and objectivity such as was possessed by none of the constituents. If the idea is *my* idea, and if the image has no logical value, then neither has the idea. It is in perception that immediate contact with reality (that is, reality from the standpoint of the individual) takes place. The idea, being the common elements of many perceptions, becoming the more general as the process is continued, would, it seems, be a most unsatisfactory method of interpreting reality, for the very reason that the farther the process is carried the farther the idea recedes from reality. The above remarks, however, apply only to the conception of reality as "there". When it is regarded itself as *constructed* by the individual as an extension of his present perceptions, the situation begins to grow in complexity. If reality as such is not presented in perception but only the individual's contact with reality as such, then the idea which the individual forms is not formed by contact with reality as such but only of reality from the standpoint of the individual. The puzzle is as to how such an idea could be adequate to reality as such, having at no time in its genesis been in connection with that which it is to qualify or to which it is to refer. It seems that the difficulties of the situation might best be stated in an answer to the question, What is given in perception? If reality is given, why refer to it an idea which it is? If the subject of the judgment is not given in perception, that is, if the subject is a construct of the individual by an extension of his perceptions, where does he get the predicate by which to construct the subject? On the one hand he is constructing the subject of the judgment by predicates of the judgment which he has constructed by a combination of elements which he has gained in his contact with the subject of the judgment in his perceptual experiences. On the other hand he is constructing the predicates of his judgments from the combination of elements gained in his perceptual experiences of the subject of the judgment, and is using these predicates as valid in their reference

to their source, and is thereby building up a larger world. All this process of construction takes place through the image which has no logical standing. The image, while it has, on this theory, no logical standing as meaning, possesses in addition to meaning, existence as a psychological fact—that it is a part of reality. As such it is either a construct itself, or the “given” in immediate experience. If it is a construct, it is constituted in the same manner that any other subject or predicate is constructed, and if it is a “given” it is amenable to treatment as the subject, and thus of the fiber of reality, to which can be referred a predicate gained by the elements which correspond in all our common worlds.

It would be unnecessary to carry over the difficulties involved in the judgment as treated by Bosanquet to his treatment of inference. The close connection between the two processes, the one a direct and the other an indirect or mediate reference to reality of an ideal content, renders it impossible to eliminate the difficulties in inference which are present in judgment. The relation between the two processes is made clear in the words of Bosanquet: “Mediate judgment or inference is the indirect reference to reality of differences within a universal by means of the exhibition of this universal in differences directly referred to reality.”* Immediate reference is the foundation of mediate reference, and if the foundation of mediate reference is faulty, it is certain that the structure cannot escape the strain.

Summarizing the criticisms against idealism we may say that a criticism of the system is a criticism from the standpoint of logic because of the ubiquity of the knowledge relation. Even “The unconscious extension of a sensation by reproduction fulfills some of the functions of inference.”† In early soul life where the reproduction is unconscious, the reproduction of a universal, that is, we have the problem of logic. With this in mind, the attempt has been made to show that idealism, being a philosophy of religion, fails because the data of religion have been interpreted in terms of science—that the data against which idealism was formulated have been reinterpreted. The attempt has been made to show that idealism, struggling with science in the early days of the scientific movement, sought to interpret nature in terms of mind, from the standpoint of the priority of mind, believing that by showing the subject matter of science to be mental, and by working on the principle of the

*Logic, Vol. 2, p. 4.

†Op. cit. Vol. 2, p. 16.

spirituality of mind, that the problems of the scientist were a part of the problem of the metaphysician and religious philosopher. This doctrine was shown to be faulty from the standpoint of the biological conception of mind and from the inherent difficulties in the postulate itself. With the breakdown of the subjectivist view of mind, an additional postulate, the absolute, was used to render objective the world of nature—objective, that is, from the point of the individual knower. It was shown that such an hypothesis is a poetic form of anthropomorphism, and that it can never be verified. In the last place, an examination of the purely logical treatment based on such a metaphysical theory, shows that the logical processes of judgment and inference cannot take place.

THE NEW REALISM

The New Realism is the latest addition to the philosophical household. A few tendencies in modern life might be cited as furnishing a social background for the system. It is not so easy, however, to account for a movement which is recent as it is for one whose rising and setting are both marked by great epochs in history. Croce* says, in speaking of the origin of Logistic which he considers the logical and mathematical background of what we call New Realism, that barrenness of the period of any thing worthy of the name philosophy is a leading element in its development. "We must not forget the circumstances which attended its blossoming time, or, to speak more correctly, the time at which it spread out its thorns towards the sun. Philosophical controversy had then become so external and empty, had descended to such pedantic and tiresome quibbling, that soon afterwards an insurrection arose among the spirits it had held captive." About this time objective idealism had suffered at the hands of Bradley, and a spirit of philosophical unrest was present. The ancient moorings had been severed—idealism "refuted", empiricism with its duality of thing and mind in bad repute, pragmatism not as yet with a footing—so that those who were free from the pressure of life might develop in their own seclusion any system which might "satisfy."

The definite results of the positive scientists have contrasted strongly with the chaos of conflicting opinions in the field of philosophy. Psychology on the one hand and mathematics on the other have shared in the genesis of this type of thinking. The "content of consciousness", the supposed field of the psychologist covered the same material as that of the other sciences. Attempts to state the relation between psychology and the other sciences bring into relief some of the characteristic doctrines of the new realism. The application of mathematics to physics and astronomy, and later by Herbart and Fechner to the material of psychology, had its influence in bringing mathematics to bear on the subject matter of logic.

There have always been those to whom the exactness and nicety of mathematics appealed. At certain times in the history

*Encyclopedia of the Philosophical Sciences, Vol. 1, pp. 199-200.

of philosophy this attitude has taken possession of a people, but in all times a few, shut out from the affairs of active living, take comfort in the construction of worlds far superior to that in which it is the lot of the ordinary man to achieve values. Such theorists say in effect, "If I can't control the affairs of the world of action, I can control a much better one—the world of construction". Not satisfied with the world of action, shut out by circumstances which control them or by their own individual choice, they build a world in keeping with their desires of perfection and completeness. Indeed it might not be far amiss to suggest that one *motif* for the polemical attitude towards idealism is the very fact that the latter builds so perfectly a universe with so few "loose ends". So eager a desire for such a universe might lead one to revolt when one found by chance a "loose end", leading on to the building of "more stately mansions." Surely the interest is not in the problems of this world, as such statements as the following indicate:*

"The world of being is unchangeable, rigid, exact, delightful to the mathematician, the logician, the builder of metaphysical systems, and all who love perfection more than life. The world of existence is fleeting, vague, without sharp boundaries, without any clear plan or arrangement, but it contains all thoughts and feelings, all data of sense, and all physical objects, everything that can do either good or harm, everything that makes any difference to the value of life and the world. According to our temperaments, we shall prefer the contemplation of the one or the other."

As in the days of Plato when the ground became sinking sand, he could look for the static in the idea; or as could the mystic charmed with the vision of eternal completeness in contrast with the fleeting things of time; so can the philosopher-mathematician escape the chaos of conflicting systems and find a haven of rest in the "entities that merely are." The boldness of the hold of the romanticists is theirs, for they create if the present order of things fails to satisfy—they create, moreover, in the name of discovery, a world from which they sought freedom, a world of struggle, of successes and of failures.

But it is proper that the realist himself should tell us what it is he expects to accomplish. We can then be assured that his mission is not undervalued. "The old logic put thought in fetters, while the new logic gives it wings. It has, in my opinion, introduced the same kind of advance into philosophy as Galileo

*Russell, *The Problems of Philosophy*, p. 156.

introduced into physics, making it possible at least to see what kinds of problems may be capable of solution, and what kind must be abandoned as beyond human powers. And where the solution appears possible, the new logic provides a method which enables us to obtain results that do not merely embody personal idiosyncrasies, but must command the assent of all who are competent to form an opinion."* In fact the realistic movement might be characterized as a general philosophical house cleaning. Its program of reform sweeps wide. "There is good ground for asserting that there has never been before so great an opportunity of reform"—all the way from the "scrupulous use of words" to the assigning of epistemology to a subordinate place. It clarifies psychology and biology; it offers an infallible method of scientific procedure; and in short, is the second "Copernican Revolution" in the history of philosophy.

A general survey of the system (if it may be so called) will reveal a dialectic as follows: (a) Wholes are taken, and (b) by a process of analysis these wholes are reduced to simples and (c) from these simples is deduced "the world of Commonsense." By an analysis, which is the *method* of the new realism, complex wholes are resolved, and from the elements thus reached, the world of physics, the world of psychology, the world of religion, in short the world as we all experience it in the ordinary activities of life—the world of science, and the world of values—all this is generated by the self activity of propositions whose terms are free from content of whatever kind.

Realism arose as a polemic against objective idealism, and in view of this fact it is important to note some of the points of apparent agreement in the two systems. One of the essential points is the place occupied by the finite knower. In both systems the individual knower is outside of the logical process. He is ostensibly an outsider, but he constantly hobs up in the most inopportune situations to act as the gall of bitterness to completeness and unity. The individual knower may at times peep thru the knot hole at the great show which goes on within, but the performance goes on just the same whether the peeping takes place or not. Sometimes, of course, the idealistic logician gives the individual a part in the cosmic game, at least enough to make error possible,* but the theory in its purity separates sharply the logical from the psychological. New Realism, however, in general, having divested the mind of its functions and

*Russell, *Scientific Method in Philosophy*, p. 59.

*See Bosanquet, *Logic*, Vol. 1, p. 5.

having placed them in the world at large, to relate promiscuously whatever terms they perchance may stagger on, has no further need of it and consequently drops it from its vocabulary.

The second point of agreement consists in the adoption by both of what the realists term the "fallacy of exclusive particularity." This point of contact is, indeed, a result of the exclusion of the knower as an individual from logical processes *per se*. If the knower is on the outside, some means must be taken to account for knowledge which is admitted present. The idealist as was seen† attempts to make a connection by means of imagery which is "psychological"; while the realist defines the individual as a *knower*. That is to say, the making of the individual a *knower* is definitive—that is all that can be said about him. He cannot enter into other relations with objects which are objects of knowledge only.‡

Sensations and perceptions are cases of knowing. There is numerical duplicity which leads to a discussion of the relation of a thing to its appearances—a problem peculiarly idealistic, but which the realist must face in view of his conception of knowledge. "The problem of knowledge" says Perry,* "reduces in the last analysis to the problem of the relation between a mind and that which is related to a mind as its object. The constant feature of this relationship is mind." Mind, that is, being a uniform relation may be dropped out. The idealist, however, insists just as strongly that the other aspect of the duplicity can be dropped; showing that both idealism and realism are arguing from a common assumption—that of "exclusive particularity." Professor Dewey in speaking of this common point in the two doctrines says: "Otherwise (i. e. unless knowing is considered as a differentiation in a biological process) we are raising the quite foolish question as to what is the relation of a relation to itself, or the equally foolish question of whether being a thing modifies the thing as it is. And moreover, epistemological realism and idealism say the same thing: realism that a thing does not modify itself, idealism that, since the thing is what it is, it stands in the relation that it does stand in."†

Another suggestion that may not be unfruitful in linking the new realism with the two systems treated in former chapters is the emphasis by the former on discrete ultimates as the data of

†Ch. 1.

‡In this connection, see Dewey, *Essays in Experimental Logic*, pp. 268 ff.

*Perry, *Present Philosophical Tendencies*, p. 272.

†Op. cit. p. 276.

knowledge. Relations, terms, sense data, etc., function in realism as do sensations in the empirical logic and in the logic of objective idealism from the standpoint of the individual knower.

In the empirical logic it was found that certain relations are in the mind, but others are in things; that is, there are both internal and external relations. In idealism, however, they are all internal. In realism all relations are external.* For associationism analysis reveals certain elementary sensations which are the real; for realism the analytic determinations are the real and for both, objects are complexes composed or made up of these ultimates. The problems are merely transferred to a different locus but they remain the same. For the subjective idealist the problem of how these sensations hang together was a serious one and Berkeley answered that they find unity in the soul. Hume showed that the soul was a poor 'unifier', and John Mill, following his father, had recourse to a "thread of consciousness." The Kantian finds relations in the mind and all is systematized by means of the Transcendental Unity of Apperception. The realist comes along and throws out the whole to shift for themselves, "no where and no when". There is merely a transfer. The realist scoops elements in the nature of sense impressions and relations from the warm and hospitable mind of the psychological knower and dumps them into the cool regions of externality; he seizes the logical categories of the mind of an all-compelling Jove, and banishing the possessor to the regions of an outsider, sets up for business in another world with a new absolute in the person of terms, relations, and propositions-absolutes that are just "there", but which are powerful withal for they generate a universe.

If these points of contact are granted, it follows that all the arguments made against the other systems in respect to these particular matters can be urged with equal force against the new realism; the relation between the content of knowledge and its cause; the place of the individual knower, and the problem of constructing a world in terms of ultimates.

Coming now to a more direct treatment of the new realism, we are confronted at the outset with a diversity of opinion on many of the essentials. What is the nature of consciousness? Here we find but little unanimity of doctrine. On the one ex-

*This statement indicates the *logical* position for an epistemological monism of the realistic type, but not all realists hold this view. They may be divided into the "tough minded" and the "tender minded"—the former going the whole length, the latter refusing to externalize everything. These types will be considered later.

treme we see it as a somewhat to which something is presented. On the other extreme it is itself one of the entities in a "neutral mosaic". What are "primary" and what are "secondary" qualities, and are some of the latter subjective? Here the "tender minded" hesitate but the "tough minded" are sure they are all objective. How account for error? Here again is discord; here it depends upon a subject, there it is purely objective.

The logic of the new realism is confronted with an initial *petitio principii*.^{*} It strikes one as strange, too, that this should be the case. In order to get the discussion under way it is essential that we begin with a *petitio*. It is significant, however, for the initial error is never removed, as we shall attempt to show in connection with the determination of the data of science. It is also significant that this admission is made by a member of the school. It makes it the more noteworthy of consideration, for if it came from an outsider, such outsider would be accused of not having ability to "form an intelligent opinion". If it came from a scientist, he might be accused of being ignorant of the fundamentals of philosophy; if it came from a philosopher, ignorance of mathematics could be imputed to him; and if it came from a *psychologist*, general ignorance of everything relevant to logic is his predicament.

"We shall not attempt here to give a rigorously *logical* exposition of the principles of Logic. Such an exposition is very difficult in any science, but it would possibly be impossible in Logic, for when we are dealing with the primary concepts of thought in general it is impossible to find others by which these can be defined. What would be the good, for instance, of accepting the notion of *implication* as indefinable, and then going on to define the proposition as 'everything which implies itself'? Paradoxical as it may appear, it is impossible to have a *logical* exposition of the principles of logic: we are condemned in advance to a *petitio principii* or to a *vicious circle*."[†] The author, however, is frank to state that it is useless to attempt to disguise the fact, but insists that it is better to admit it in the beginning, "without any idle logical vanity".

In the face of these difficulties it seems best to treat first the type of realism which we shall call the "tender minded." The principle employed in distinguishing the two types hinges on the locus and function of the psychical in the system. It is

^{*}I am using the "analytic" logic or mathematical logic here as the logic of the new realism.

[†]Couturat—Encyclopedia of the Philosophical Sciences, Vol. 1, p. 138.

to be kept in mind that the fundamental principle of new realism is the independence or priority of things, things being either existents or subsistents, and both falling under the general category of *being*. Idealism had made *being known*, or *being willed*, the fundamental category, and it is from this standpoint that realism takes its departure. Its aim, in short, is to exclude the *act* of knowing from logic, to divorce metaphysics and epistemology; and to do this, remembering the while that there is something properly known as psychical involves the task of assigning to the logical and to the psychological each its proper place in the system. It is, therefore, upon this matter that the division hinges. On the one hand there are those who have not broken with the idealistic tradition, and who consequently treat the mind as a *knower* or *awarer*. There are others who *objectify* mind, who place it in an objective atmosphere as one of the simple or complex entities which go to make up the universe at large. Corresponding to the two types are the two theories of truth and error—the one subjective, i. e. the one treating error as dependent upon the psychical or a function of the mind; the other treating error as objective. It is, indeed, in the interests of this very problem of truth and error that the types divide. So we may say, instead of making the principle of division hinge on the place and function of mind in experience, that it hinges on the problem of truth and error—that those who recall the Alcibiadean mind to make room for error belong to the half hearted realists; while those who are consistent with the fundamentals of the system and make error objective, are the thorough-going and whole-hearted realists.

The two types are clearly seen in the treatment of such problems as secondary qualities. The realist believes that if there are no ideas, images or mental constructs of any kind between us and reality, the knowledge problem disappears, because we are in immediate cognitive relation with an independent reality. A *consistent* realism will find it impossible to do otherwise than to affirm the independent reality of all sense qualities; but here we find division—those who waver in order to account for error, and those who boldly assert the objectivity of sense qualities and treat error as objective. The reaction against idealism is complete in many cases in assertions to the effect that in perception the percept is the independently real physical thing perceived, and not only percepts, but also images and judgments are fully physical. Illusions and errors are introduced by mind but the

errors so introduced are always objective.* Error arises from misdescription, yet when an object is seen differently, it is different and looks different, but its full reality is the continuous totality of its partial appearances, each of which is also independently real.† The sensation of blue is an awareness of blue and the awareness of blue is not itself blue. The idealist asserts that to say blue exists is the same in meaning as to say blue plus consciousness exists, but this, says the realist, is a self-contradiction, and results from a confusion of the psychical act with its content.* It is asserted that both primary and secondary qualities of bodies exist in them, regardless of an "awarer", and that the difference is one of ease on the part of the primary qualities in submitting to measurement.† It is to be remembered, however, that the author holds the view of the activity of mind. Such a view leads him to conclude that "Why error is 'permitted' is a problem no philosophy has ever solved."‡

Before going to a more detailed discussion of the first type of realism, we shall get together different views of consciousness, although what has been said of secondary qualities applies here, for the problem of consciousness in one aspect is the problems of secondary qualities. It is worth remarking that the cognitive relation is ubiquitous—sensation, perception, imagination, etc., are all cases of knowing. Sensation, for example, is "a case of knowing, or being aware of, or experiencing something,"§ but to be aware of a sensation is not to be aware of its content, but to be aware of the awareness of a sense content.|| But in trying to introspect the sensation of blue, about all we get is blue, the awareness of the awareness being somewhat diaphanous. The criteria of the mental are (1) it must be an act of Consciousness, (2) it must belong to some mind, (3) it must, perhaps, be known to one person only.* In fact it is characteristic of the English new realists to consider the mind as the subject of experience. The mental act is all that belongs to consciousness, the Content being objects.†

The American realists generally are more radical in their

*Alexander, *Mind*, N. S. XXI. 1912, p. 2.

†*Ibid.* *Proc. Arist. Soc.* 1909-10, pp. 25, 33, 34.

*Moore, *Refutation of Idealism*, *Mind*, N. S. XII pp. 445-9.

†Nunn, *Are Secondary Qualities independent of Perception?*

Proc. Arist. Soc. 1909-10 pp. 191-217.

‡*Ibid.* pp. 210-11.

§Moore, *Proc. Arist. Soc.* 1902-3, p. 82.

||*Ibid.* *Mind*, N. S. XII, p. 449.

*Moore, *Mind*, N. S. XII, p. 449.

†Russell, *Problems of Philos.* p. 65.

Alexander, *Proc. Arist. Soc.* 1909-10, p. 202, *Mind*, N. S. XX, p. 2.

conceptions of consciousness. They find fault with the idea of 'mental activity' common among the English realists. It is among the American realists that we find the second type—the thorough-going realist, those who are consistent with their assumptions. The former, in general, regard consciousness as a relation, but it is a relation between a subject of experience and an object; the latter make of consciousness an external relation—there is no subject, but only objects in relation.

The above remarks have been made to show the general doctrine concerning qualities and consciousness, with a view to urging what has been mentioned in the early pages, that the epistemological problem is still with the realist. As long as he considers mind as a knower only, he has precisely the problem which the idealist has. As long as he considers the act of knowing as psychical, his logic is a hybrid science; for *acts* do not occur on "general principles" but involve specific means, definite vehicles for their accomplishment. If the act is psychical, some at least of the means for its accomplishment are psychical, with the result that the old problems from which escape was sought crop out again.

A more detailed study of two systems of realistic doctrine of the first type will be made for the purpose of coming into closer touch with the following problems: (a) The realistic theory of mind; (b) The realistic theory of reality; (c) The realistic interpretation of the relation between mind and reality.

The first to be considered is the theory of mind. There are two methods, it is asserted,* of studying mind: one the method of introspection, the other observation. Introspection discovers the *content* of mind, better than does the other method, but it does not define its nature. It yields an inventory only. It shows contents that coincide with other manifolds; that is, with nature, history, etc. It finds the quality 'blue' but it is ascribed to a book or a coat. This indicates that the elements in the introspective manifold are neither *peculiarly* mental nor *peculiarly* mine. The only peculiarity present in the content is that of grouping—mental content when compared with physical nature is fragmentary. The abstract of nature which I have in my mind does not coincide with the abstract in my neighbor's mind; but my fragments of nature acquire a peculiar pattern. Again, natural objects do not enter *wholly* into my mind,

*Perry, *Present Philosophical Tendencies*. The account given here is based on his treatment in this volume, Ch. XII.

but I gather into my mind a *characteristic* assemblage of fragments of nature. When things are in the mind, one may *mean* or *represent* another.

When we attempt to study the *action* of mind for "every type of Consciousness exhibits the duality, 'thinking' and 'thought', 'perceiving' and 'percept', 'remembering' and 'memory'";* by the method of introspection, we are disappointed, for the nature of mental activity is not discovered by an introspective analysis of mental contents. We must, consequently, have recourse to another method, namely, the method of observation which makes it possible to view in another light both mental activity and mental content. "Elements become mental content when they are reacted to in the specific manner characteristic of the central nervous system."* The nervous system, that is, is selective, and the part of the environment it selects is the content of perception. Another way of stating the same thing is to say that "Mental Content is that part of the surrounding environment 'illuminated' by the action of the organism". A complete definition of content is given as "that portion of the surrounding environment which is taken account of by the organism in serving its interests". When action (which is selection) is integrated with content we have the natural mind as an organism possessing these aspects: interest, nervous system, contents.

It was indicated that a movement from a given whole, carried on by a process of analysis which is the realistic "method", and terminating in simples from which can be deduced or from which generate a universe, constitutes the new realistic dialectic. In the considerations now undertaken—that of determining *what* is the *world* of the realist—we shall see the *method* at work. Rather than give an abstract account of the nature of analysis in general, an actual example of it as it works in the solution of a problem will be more enlightening. Should the method prove disappointing in the question of finding a world, and turn out to be a much advertised article which we have always used in the solution of concrete problems, we may feel warranted in generalizing our finding, pronouncing it a "new name for old ways of doing things". It is admitted that the philosopher has no superfine brand of knowledge and that all he can do is "to examine and purify our common knowledge by an *internal scrutiny*,"* assuming the canons by which it was obtained, and

*Op. cit. pp. 274, 299, 300.

*Italics mine.

applying them with more care and precision."[†]

Consequently a careful and precise internal scrutiny reveals the fact that when *a* is known, *a* itself enters into a relation which constitutes it an idea or mental content; and also that although *a* may so enter into the relation, it is not dependent upon this status for its being or nature.[‡] When these facts are established it is asserted that the ghosts which have haunted philosophy from the time of Descartes to the present immediately vanish. It eliminates the dualistic problem, for analysis reveals mind and body as composed of more primitive terms which are interchangeable. An object may be body by one relation and content of perception by another. "When I perceive Mars, the sun's satellite (body) is my percept (mind)."^{*} Likewise is the dualism of knowledge and thing escaped—a fact made possible by the discovery by analysis of what is known as "immanence". The old view is that knowledge is about things other than itself, a notion which has given rise to the doctrine of the-thing-in-itself which is other than the content of knowledge. Immanence heals these defects by asserting that the difference between knowledge and thing is a functional and relational difference. But in this connection arises the problem of immediate and mediate knowledge. In the former case we have the thing—that is the idea is just the thing *known*. In mediate knowledge, however, there is "more of a difference" between the object and the content, or between the thing and the thing known. There are cases, indeed, where there is little or no identical content. This strange state of affairs (strange, that is for a realist) is explained by asserting that the thing thought about and the thought are both experienced.[‡] Independence, however, is needed to make the case for realism. This theory asserts that things are "directly experienced without owing their being or their nature to that circumstance."[‡] The elements, those common to mind and body, *are* not anywhere, but are what they are. They find a place when in relationship and bring with them a characteristic which they possess. Reality, therefore, or *the* Real are elements—logical and mathematical entities.

A far more careful and exhaustive statement of the nature of *the* Real, is to be found in Mr. Russell's book, "Scientific

[†]Russell, *Scientific Method in Philosophy*, pp. 66-7.

[‡]Perry, *Philosophical Tendencies*, Ch. XIII.

^{*}Op. cit. p. 311.

[‡]Op. cit. p. 312.

[‡]Op. cit. p. 315.

Method in Philosophy.”* The Chapter, “Our Knowledge of the External World”, not only informs us as to what the real is, but also it is an application of the logico-analytic method. He applies the method, taking as data the common sense knowledge of the world—furniture, houses, nature, history, geography, and physical science. Data are to be *scrutinized* in the light of other data, because data have different degrees of certainty—a fact which internal scrutiny reveals. The most certain are sense data—and degrees of certainty are also data. Analysis reveals first, our common knowledge, second, degrees of certainty of data, and third, primitive and derivative knowledge. Primitive knowledge is sense knowledge, but just what is *given* in sense is a question because of unconscious inferences.† The next step in the logico-analytic method is to discover how the derivative parts of our knowledge arise. This involves difficulties because of entangling alliances between logic and psychology. A psychological derivative may be a logical primitive which is a part of our knowledge not arrived at by logical inference. It is to be kept in mind that a separation of these types is fundamental, (p. 69), for logical beliefs, that is logical primitives, must be deduced from psychological primitives, (p. 70).

Such an analysis, i. e. critical and internal scrutiny, leads to what are known as “hard” data and “soft” data, the difference being one of the degree and, moreover, a datum itself. The former are those which resist the “solvent influence of critical reflection”.* Analysis, then, is a name for critical reflection. It reveals two kinds of hard data: (1) the facts of sense, (2) the laws of logic. Most if not all psychological derivative beliefs, but logically primitive, belong to soft data, but we must use our hard data to construct a world for we must be certain about our world at least. The hard data, moreover, are *our own* sense data, for the belief in other minds is a derivative psychologically tho logically a primitive. Scrutiny, however, allows *some* addition to the slender stock of *our own* sense data, namely, memory, and some facts of introspection. Facts of sense also include space and time relations, and facts of comparison such as likeness. But these are all subjective so if there are other minds their supply of hard data might be different, for belief in other minds is not one of the hard data.

This then appears to be the terminus of the analytic pro-

*Open Court Pub. Co. 1914.

†Op. cit. p. 68.

*Op. cit. p. 70.

cess, and we may now ask this question: "Can the existence of any other than our own hard data be inferred from the existence of those data?"† So now we begin on the *constructive* portion of the process—we begin, that is, to build a world out of the supply of data which analysis has furnished us. Let us start with that stock in trade of philosophers, a table, and see what the result will be. "A table viewed from one place presents a different appearance from that which it presents from another place. This is the language of common sense, but this language already assumes that there is a real table of which we see the appearances."* But since this admittedly begs the whole issue, we must state the facts in terms of what we know only—namely, sense data. Therefore we must say that while we have muscular sensations which make us say we are walking, our visual sensations change in a continuous way. "What is really known is a correlation of muscular and other bodily sensations with changes in visual sensations."‡ We must remember also that a sensation is the *awareness* of an object and not the object.§ The experience called seeing a color, that is, is found by analysis to be a complex of at least two elements—the color or the sensible object and the awareness or the sensation. Thus in the above quotation, all we know in the case are the sensations. This distinction between the object of sense and the awareness is an important one and a confusion, it is claimed, leads to serious results for philosophy.§ The problem is one of reconstruction, and the first things to account for are illusions—that there are none.

It appears that with *our own* sense data, we are not able to build a very stately universe, so an hypothesis is projected (*mirabile dictu*) and instead of inquiring what is the minimum assumption by which we can explain the world of sense, we project a model as an aid to the imagination—a construction as a possible explanation of the facts. By the aid of our model hypo-

†Op. cit. p. 73.

*Op. cit. p. 77.

‡Op. cit. p. 77.

§Op. cit. p. 76.

§In an earlier work, *The Problem of Philosophy*, Home University Library Series, Mr. Russell came to an agnostic conclusion with reference to the thing-in-itself. All we know are our sense data—and they are subjective and "caused" by something outside which possibly resembles them. It is my belief that he has not escaped the agnostic predicament, even with his conception of the thing-in-itself as a logical construct. Sensation is a case of knowing in a situation in which an object known is differentiated from an act of knowing. The legitimacy of the whole procedure is questionable, but it is not germane to our point here. Granted that the object and the thing sensed are identical, our problem is to *find what kind of an object it is* as a factor in a logical process.

thesis we proceed as follows: Suppose that each mind looks out on a world from a point of view peculiar to itself. (Of course, we do not know anything about other minds, whether in fact there are such). Then suppose that each of these perceived worlds exists precisely as it is perceived. (This assumption aims to get away from the thing-in-itself). Suppose an infinite number of worlds unperceived. Then the system of worlds, perceived and unperceived, we call the systems of "perspectives". By a correlation of similars between things in one perspective and those of another, we reach a system of points in space, not "private" but "public" space—which (public space) can not be perceived, but if it is known it is only our inference. Space can thus be rendered continuous as a relation between perspectives—space, that is not *in* the private worlds but outside them, is a continuity by virtue of the relations between points of view. The momentary common sense thing can be defined. "Given any object in one perspective, from the System of all the objects correlated with it in all the perspectives; that system may be identified with the momentary common sense thing. Thus the aspect of a "thing" is a member of a system of aspects which *is* the "thing" at the moment. All the aspects of a thing are real, whereas the thing is a mere logical construction.,*"

In this manner Russell has established the world of "matter". There are yet two other points to be made clear before the world of physics is rendered complete, namely, time and space; but for our purpose we may omit the method of reaching them, for it is along the same line as that employed in finding a world. We find when the two are accounted for, the three "elements" of physics, namely: space, time, point; taking the place of the former constants, centimeter, gram, second.

We have discovered Reality as this type of realist views it and it is next in place to discover where knowledge comes in and what it does when it does enter. We want to discover the place and function of judgment and other logical processes in a world such as analysis has delivered to us. But before the task is attempted a few words should be said about the method of reaching this technical view of the things of common sense or of the reality of which the things of common sense are aspects in a system of points of view.

Following the order of development we have adopted, the first question is that of mind. For this type of realism the mind

*Ibid, p. 89.

actually plays a part in the universe for it is the source of error. The idealist makes it the source of both truth and error, believing if it is good (or bad) enough for one it is good (or bad) enough for both. The half hearted realist must account for error, so he accepts half of the idealistic doctrine, giving error over to the mind, or making the mind the source of error, while truth is a function of objectivity or *is* objectivity.

It seems that the only difference between mind and what is not mind is a matter of grouping. A comparison of one with the other shows that the mental content is fragmentary, and moreover the abstract in my neighbor's mind does not coincide with the abstract in my own mind. There is considerable mystery in all this, for we are told that mind just *is* things in a certain relation, and it puzzles one to determine a method of comparing an abstract (which *is* just mind or nature whichever one chooses to use) with nature. That is, the performance consists in comparing nature with itself for the contents of mind coincide with nature, history, etc. It is not to be disputed that the comparison of A with A would be a highly interesting piece of labor but one wonders what is going to be done about it after the job is over. Then *my* pattern or abstract does not coincide with *my* neighbor's. Just how my abstract could be compared with my neighbor's I cannot see, especially when both my abstract and his *are* nature, for nature is our common abstract. In fact the very idea of *abstract* or *peculiar grouping* is another statement of the idealistic predicament of the correspondence of the world of the individual mind with that of the absolute consciousness. Yet the realist is compelled to resort to "abstracts" to account for error. We are told that an individual mind gathers into itself a *characteristic* assemblage of fragments of nature, yet these characteristics *are* nature or coincide with it; and just what *are* the characteristics or the differentia of nature or of abstracts we are left to imagine. Of course, it is asserted that the content is determined by a reaction "characteristic of the central nervous system", but this throws no light on the matter; but states a problem. When things are in the mind, one may *mean* or represent another, leaving it to one to infer that when things are not in the mind this could not occur; but we are told that *a* may enter consciousness without dependency upon the fact for its *being* or *nature*. Elements are mental when they are reacted to in the specific manner characteristic of the central nervous system. How does such a statement of the case differ from the old conception of soul or consciousness or mind? The

fact is the same problems are present with the difference that instead of a faculty of attention which is selective, we have substituted the more modern conception, a nervous system. The close connection of the realistic conception of mind with the faculty psychology of the past has been pointed out before. "The realist works on the platform of a faculty psychology, retaining intelligence knit into certain indefinables such as implication, relation, class, and term, and has transported the faculty from the human soul to a mysterious realm of subsistence."* The "illuminated" part of the environment is the content of consciousness, yet the "illuminator" is on the outside and is in the same position as the early "mind" or "soul".

We are able readily to see why the theory of *immanence* does away with the dualism of mind and matter and of knowing and the thing known. If knowing and the thing known are identical of course there is no dualism; but what about the *abstract*? Dualism is escaped only at the point of surrendering an explanation of error, and is taken up gladly when the need arises for it.

Let us examine how mediate knowledge is possible on this view of the nature of mind. In immediate knowledge we have the thing—that is the idea is just the thing known or a thing in relation to a mind; but in mediate knowledge there is a difference. In cases of memory and imagination the outcome is sorry enough and in perception, I think no objection would be offered if (and the if is important) perception were treated as a natural event such as walking, and not made a case of presentation to a nervous system (knower). But in mediate knowledge the case seems hopeless. Keeping in view what mind is, portions of the surrounding environment illuminated, or things in relation to a nervous system are mind, we fail to see a place for inference. The explanation is that the thing thought about and the thought are both experienced. Let us see what this means. The thing thought about is the illuminated environment; the thought is the illuminated environment (for the thought and the thing are identical). Now both of these illuminated environments are experienced, that is, both illuminated environments become another illuminated environment by virtue of being present to a nervous system. Certainly we are in possession of sufficient illumination for almost any process to take place, but just how one casts any light on the other or how they all make for a process

*Creative Intelligence, p. 119. The quotation holds only of the thorough-going realist.

of inference, I am unable to see. Possibly another way of stating the case will clear up the difficulty. The thing thought about, i. e., the object (for the thing thought about and the object are identical), and the thought or the content or the thing thought (for content is just the thing in relation to a mind), are both in relation to a mind, i. e., are both the thing thought about and the thought, both are mind and object or content.

The above is the dialectic when strict adherence is given to the definition of mind, when the implications of that definition are made explicit. But we must remember that there is another side—the side of meanings. When things are in the mind one may represent or mean another. But as has been pointed out, this conception involves all the difficulties of idealism on the ground of the ubiquity of the knowledge relation. It seems that the realist is committed either to idealism from which he desired to escape or to the embarrassing situation of using a great many words which mean nothing or all of which mean the same thing, and consequently give no information.

It has possibly become apparent that realism is involved in a circle. In their statement of the relation between knower and known, it was pointed out early in this chapter that they were guilty of the same fallacy attributed by them to the idealists, namely, "exclusive particularity." The examination of the method of finding "simples" will fortify the contention that new realism might be characterized as *philosophia circularum*.

By what right can the realist assert that *we* undertake an operation called "logical analysis"? What are *we* that we are able to make such an analysis? *We* are those who have been shut out from the logical process altogether. Our means of activity, our *modi operandorum* have been transferred to objectivity. There is nothing *logical* left in the dispossessed mind, and it must take satisfaction in turning its "eye" in the general direction of the logical process to behold it as it throws forth or ejects a universe by virtue of the activity of its "elements". It can not analyze for it has nothing to analyze with. It can only *see* or behold. The analysis has already taken place—it is already finished, and the job of the mind is that of a mere beholder of the ejected universe. To be able to speak of *our* having a part to play in logical analysis, we must endow ourselves with the equipment necessary to make this possible—but this is to deny the fundamentals of the system. It is miraculous that the dispossessed mind could even *see* the logical process—i. e. *understand* it. It has nothing to understand with. It is a sensitive

plate which receives the activity of propositions, but which contributes nothing for it has nothing to contribute. The plate understands nothing of what it has received, nor does the light understand what it has illuminated. Neither can the mind understand what it has done, for like the plate or the light, the means for understanding are transferred to other realms. So when the realist asserts that *we* analyze a whole into elements, he is asserting what he denies in other connections—that intelligence *shares* in the affairs of reality. Let us *analyze*, but we have nothing to analyze with; let us *behold*, but we have nothing to behold with. Have we not eyes and ears? Yes, but eyes and ears are like the sensitive plate, they receive, but they do not contribute. They have no part to play in the logical drama. In short it is urged that the very fact that the mind *can* behold the logical drama is evidence that the 'mind' and 'things' have grown together, one to 'fit' the other out of chaotic processes, on a common level, co-partners in a biological process. Just as the invention 'fits' the conditions out of which it arose, so does the 'mind' fit the conditions out of which it arose.

Analysis, the Shibboleth of the realist, is impossible on his theory of mind. But granted that he can do it, we want to know how it is done. We shall take our common knowledge—that of furniture, nature, history, physical science, as data, and we shall find by analysis what is in it. We assume the canons by which this common knowledge was obtained, and apply them with more care and precision. We must remember now that these common data are called in question—on the wholesale. They are not reality. Then again we are assuming the canons by which this common knowledge was obtained, and this common knowledge is not knowledge of 'true' reality or 'real' reality or no question would have arisen about it. That is, we are calling in question our common knowledge but we are assuming the canons by which it was established, *in order to call it in question and criticise it*. Of course we must begin somewhere. No one questions that but the question here is the legitimacy of calling the whole body of our common knowledge in question, leaving nothing to work from, but assuming as a valid principle of criticism the very canons by which this erroneous knowledge was established. It is a wholesale problem and the method of meeting it is that by means of which the faulty knowledge was originally established. The procedure is this: after we have a good deal of knowledge, we can show that the whole thing is questionable. After we have learned a great deal about the external world, about science and

mathematics, we can then show that this knowledge is not of the real but belongs to that class which is possible as the result of the activity of propositions connected with 'soft' data.

The world of common knowledge in general is on trial. Our data are questionable and we scrutinize this with a mind whose scrutinizing equipment has been relegated to the realm of ontological entities. Scrutiny reveals the facts of sense and the laws of logic as the 'hard' data. *How* the mind beholds the laws of logic it is impossible to say, or rather how it *finds* them. It involves the same type of question as to determine how the nose would account for the Purkinje phenomenon, or the eye explain the mysteries of the odor of sauerkraut. The realist here is struggling with the Kantian problem of the categories. How is experience possible? The realist answers that it is possible because the laws of logic are in nature, as Kant explained it by making nature conform to the principles of the mind. A more hopeful answer is found in the fact that 'mind' is 'nature' performing the act of reflection. No one has ever been seriously agitated over the question as to whether the laws of digestion belong to the objective world of nature or to the subjective order of the digestion tract *per se*. It is generally recognized that the only fruitful discussion in that field is centered about the conditions which make for the successful performance of the process. Neither is the question as to how food 'fits' the tract nor the tract the food, one which anyone would consider serious, until there is a misfit.

Scrutiny reveals as hard data, the facts of sense alone. Omitting the difficulties involved in determining what are facts of sense, and when we know we have them, let us see how we get them and what we do with them when we do get them. We get them from the world of common sense which is not the real world. We have fled from this world, i. e., the world of common sense, to the real world where we find facts of sense. But the problem now is to construct a world out of these elements. We have left the world of common sense, have found data; and now we are to make *another* world, not that of common sense for we had that to begin with, but *just* what kind, it is impossible to say. Why leave the world of common sense in the first place? It is already *constructed* so why destroy it and build another *out of the data that the torn down world had in it?* Is it not probable that the *constructed* world will be precisely the world of common sense with which we started? If this is the case our labor has been in vain; and if not, the data out of

which we hope to construct the new heaven and the new earth, are not the *real data*, for they have been obtained from an unreal world of common sense. In the first case we are committed to a lengthy and interesting bit of labor to get what we already have, and in the second to the getting of something that we can't recognize when we do get it for it is constructed from unreal elements.

"Can the existence of any thing other than our own hard data be inferred from the existence of those data?" In view of the method employed in arriving at hard data, it seems foolish to raise this question. But it is raised as the serious problem of the construction of a world. We have but to remember that the whole world of common sense was taken for granted to get the problem started. We found the hard data only by an examination of nature, history, etc., and now to ask the question as to whether any thing can be inferred to exist from the existence of those elements which were made possible only on the ground of the existence of the former world is, as Professor Bode says, "An unwarranted abuse of our good nature". All we know now is *our own hard data*. We cannot speak of a table and its appearances, for this begs the question, but we can speak of muscular sensations and visual sensations and walking, and correlations. "By *experiment of correlation of touch and sight* sensations, we become able to associate a certain *place in touch-space* with a *corresponding place in sight-space*" (Op. cit. p. 80). Does the quotation involve the existence of anything other than our own hard data? If it does, it assumes precisely what it attempts to prove. Each italicised word in the above quotation involves the existence of something beyond our own hard data, and each is not one of the hard data. Mr. Russell speaks of regularity and conformity to law on the part of sense data; of verification as the occurrence of an expected sense datum. All throughout he is going beyond the given, the hard data of ours, in order to make the discussion possible—he is constantly taking the world for granted in the very statements of the case.

It seems to me that the breakdown of the attempt to construct a world from my own sense data occurs at the point of the construction of the "model hypothesis".* We construct the

*The value of hypotheses as Mr. Russell conceives them is illustrated in the following: "Regarded merely as hypotheses and as aids to the imagination, the great systems of the past serve a useful purpose and are abundantly worthy of study. But something different is required if philosophy is to become a science, and to aim at results independent of the tastes and temperaments of the philosopher who advocates them". Op. cit. Preface, V.

world only by assuming what was originally taken as soft data, for it is clear that we can not get anywhere from our own hard data. The model hypothesis brings in other minds, rooms, men in rooms, men between men, points of view,—in short, the old common sense world which he attempts to get away from. That is, by assuming that the world exists he attempts to prove that this is the case, and the basis of the proof is found in the fact that the world does exist. Then on the supposition that my private world corresponds with your private world (though if they are private, it is hard to find just how any one is to know they correspond), he, by a correlation of similars, constructs both the thing and points in public space, or public space. But he is never able to get outside of his own private space to correlate the private spaces of different perspectives; and on the assumption of an observing mind he is unable to speak of correlations by a mind, of perspectives, or of thing as a construct, for there is no agent in construction since the laws of the construction of objects are in the object.

Our model hypothesis leads to the conclusion that 'things' are a series of aspects. If our analysis is correct the process of arriving at this conclusion involves a circle. But when a thing is defined as a series of aspects, one can not but be inquisitive. Aspects do not just grow, they do not come out uncalled for of their own accord, but there is a basis, something permanent or relatively so, to give the question any significance whatever. What is the fundamental which dictates a correlation of aspects? Mr. Russell answers that the correlation is founded on similarity, but similar to what? One aspect is similar to another, but what is the first aspect similar to? Now the aspects are different and they are related; yet what are they different from and what are they related to? In all of his discussions of this question, he takes a permanent thing, a penny for example, to show that this same penny is a series of aspects. But this surely begs the question. We have the penny to begin with, and to define it as a series of aspects is one way to treat a given object, not the way to construct an object if no objects were ever given. To attempt this again: His statement is the definition of an object, and presupposes knowledge of the object or the definition could not have been given.

It seems that the method of analysis which has been advanced as the panacea for all philosophic ills is: in the hands of the realist in his search for "ultimates", a circular process. It also appears evident that when these elements are found, sense

data and the laws of logic, he is unable to construct on the basis of his *hard* data, a world that differs in any characteristic way from the world of Berkeley. He must have recourse, that is, to matters *not* ultimate (to *soft* data) to get the world of physics. If this is the method and result of analysis, it appears that it states more difficulties than it resolves; and would lead to an interpretation of analysis in terms which avoid an initial petitio.

Before undertaking a second *katabasis* into the shadowy world of simple entities and a complementary *anabasis* into the world of common sense, it is essential that the rod and staff which guides the realist thru these realms and which frees him from the fear of evil, be more carefully examined. That rod and staff is analysis. Should it appear to be a feeble support, should it turn out to be watered stock in an apparently great enterprise, it is probable that the enterprise itself is misconstrued and will go bankrupt. If analysis is found to be a false god, an idol worshipped because it functions in certain enterprises, the structure erected on its foundations will be correspondingly false. That it does function in many enterprises no one doubts, but to take it from its locus of successful functioning and make it a lever to lift the universe is to commit that error so repeatedly charged against others, namely, the error of "pseudo-simplicity". It is my contention that there is no occasion, no point, to a discussion of the logical implications of a system which refutes itself—of a system built upon an initial fallacy. To discuss the logical implications of such a system is to admit that the system has established a world in which logical operations are possible. It is true that we may 'suppose' that the case has been made, that there is, for example, such a 'thing' as the 'neutral mosaic', that analysis has actually revealed certain logical laws and mathematical principles in objective nature; and on that *supposition*, work out the place in the supposed system of logical processes, such as judgment, inference, error, et cetera. But the point here is the original question—that the process called analysis, as that process behaves in the hands of those who employ it, is an illegitimate process, in that it (1) questions what it assumes, namely, the *real* reality of its data, and (2) that it cannot occur because there are no means at the disposal of the individual for carrying it on. The conclusion of the former process has been indicated in the statement that if the world of common sense is not the real world, then the data derived from an examination of that world are not the real data, so that a world constructed on the data found in the questioned world will be a doubtful world in so

far as the data themselves are doubtful; or, that if the data are the *real* data, then the world from which the data are obtained is the real world, and the reconstructed world will be precisely the world we had to begin with. The first process has possibly been made clear in the example of the circular efforts of Mr. Russell. *The second difficulty—the lack of means for carrying on the process of analysis—will engage us from the point of view of Holt's idea of consciousness.

A legitimate process of analysis takes place under conditions such as the following: The continuity in the experience of the individual is interrupted. His non-reflectional processes, his desiring, his hoping, his perceiving, experience is interrupted by the intrusion of something which challenges the type of experience such as has been indicated. In other words, a difficulty, a problem has arisen, which, if continuity is to be re-established, must be met. Just why problems arise is not in question, but the admitted fact that they *do* arise is all we care for in this connection. In such a situation, there is something which is given, a datum. But it is just because all the data are *not* given, that the difficulty is present; and it is just here that the fallacy of the old empirical logic is found—in the assumption that the facts are all *there* to be generalized on. Let it be noticed that the whole universe is not questioned, but that the difficulty is a particular one. Now the question comes to be that of discovery of the data, and this will depend entirely upon the occasion which gave origin to the question. We are not looking for data *in general*, but for such as will resolve the difficulties into which experience has fallen. If the question is whether or not this tree will burn—fire being the occasion of the problem—an analysis of the tree will yield such data as 'the tree is dead', 'the tree is poplar', et cetera, each of which *means* something, suggests something. Whether the tree consists of such neutral entities as 'Contour', 'Cross-sections', and 'above or to the right of', is not pertinent to the question at issue—will it burn? The discovery of data in general influences particular problems in the same way as such a principle that "every effect has a cause" influences problems in this field; namely, not at all, for the general law tells us nothing about the case in hand. Analysis functions in a situation which is reflectional, as a method of finding what is given, 'there', for the purpose of effecting on the foundation of the given, such a synthesis as will make possible an entrance upon direct experience. It implies (1) something to be analyzed, tho not the whole universe, (2) means of doing it, which in turn implies judgment

and inference.

With this statement of the nature of analysis as it actually is employed in experience—ordinary experience as well as in science—we shall examine especially the possibility of analysis from the second standpoint—means for its accomplishment—from Holt's conception of the nature of consciousness. It is customary to treat a phenomenon from the standpoint of its genesis. We shall, accordingly, attempt to determine how consciousness arises in the hope that its genesis will throw some light on its nature. "Our starting point is a world of pure being."* "Taking consciousness as a theme of discourse it will be possible to frame a deductive system consisting of terms and propositions as premises, and themselves not 'conscious', nor made of 'ideal' stuff, such that all the essential features of consciousness will follow as logical consequences."† Again, he says the object is: "the interpretation of the universe as a purely neutral universe, or in other words, the deductive showing of how a neutral universe can contain both 'physical' and 'mental' objects.***This point of departure involves no theory of reality, nor knowledge, no sensationalism or other veiled form of dualism.***We shall derive the 'knowledge' relation without assuming it in our premises."* It seems clear that the purpose is to derive consciousness or mind from something that is not mind, from a neutral somewhat. But it is clear that we must account for what is familiarly known as mind. As Holt says: "This means (a deductive account of consciousness) the framing of a set of terms and propositions from which a system is deducible that contains such an entity, or class of entities, as *we familiarly know under the name of consciousness or mind*."†

At the outset it is to be noticed that we *start* with what is 'familiarly' known as mind. We do not want to press this aspect of the difficulty further, but it is an excellent example of the circular dialectic of the whole of new realism. The question is: to form a set of terms from which mind is deducible. The oddity of the situation hinges about the fact that we have before we begin, all the information about mind that we can ever get even after the deduction is complete. We don't begin, that is, with the simples, but with mind and objects themselves which are already known. The inductive or empirical aspect is either for-

*Holt, the Concept of Consciousness, p. 86.

†Ib. p. 87.

*Holt, the Concept of Consciousness, p. 136.

†Ib. p. 166.

Italics mine.

gotten or omitted, and instead of starting with a world of pure being, we begin with the affairs of the common sense world.

Coming directly to the genesis of consciousness we find that systems of being arise from certain 'Givens' consisting of terms and propositions, which "*generate of their own motion* all further terms and propositions that are in the system."* These fundamental terms are undefined, and the activity involved in generation does not involve time or space. That is "Logical activity is neither spatial nor temporal."† The idealist expresses the same thought when he says nothing real can move. Thus we have a timeless and spaceless generation of a universe that is in time and space, as all the subsequent portion of the exposition shows. If it is objected that logic furnishes no principle of unity since the terms and propositions are discrete, it is replied that an explicit variety of terms is implicit in one proposition. The question of the applicability of the logical system to concrete objects—a peculiar question indeed for a realist—is answered by saying that logic believes that systems can correspond by a one-to-one relation. The difference between the two systems—that of logic and that of actual things—is like that between two pictures which are identical save that one is colored while the other is in white and black. The main point in the doctrine of correspondence is that there is no difference, or rather that there are no two things as knowledge and the object of knowledge, or of thought and the thing thought of; the point being that nothing can represent a thing but the thing itself. This position is maintained on the basis of a difficulty involved in introspection of distinguishing between consciousness and the object of consciousness, or, it could be said, the foundation of this type of realism—the whole hearted type—is that of the objectivity of secondary qualities. On the basis of the identity of consciousness and the object of consciousness, one wonders why the problem of correspondence should ever become a problem, but this will be considered later.

Having now discovered (or in fact assumed) that logical and mathematical concepts are objective, i. e. not *in* consciousness, and that primary and secondary qualities are also in the same status (which is termed "neutral"), the way is made clear for the deduction of consciousness, for finding among the neutral entities the knowledge relation. The most simple of the en-

*Italics mine.

Holt, *The Concept of Consciousness*, p. 16.

†Ib. p. 18.

tities of the 'mosaic' are certain ones which we seem to have vaguely made out such as identity, differences, numbers, and the negative. Thence follow in perfect Comtian order, the algebras, secondary qualities, Euclidian geometry, mass, physics, chemistry, objects forming the subject matter of geography, geology, astronomy, etc., and here the chasm between the organic and inorganic is bridged on the assumption that "Life is some sort of chemical process, and nothing further", whereupon we enter botany, biology, etc. Here then appears, in the simple to complex series, a complex entity called consciousness or mind.

Without stopping to examine the many difficulties involved in such a phantastical "genesis", such, for example, as the chasm between the inorganic and the organic, or the introduction of qualities; or the fact of a backward reading of the world of common sense as a basis for the genesis; we shall keep our eye on the position of consciousness or mind. And here it is fundamental to note that *it is one of the complex entities in the "neutral mosaic"*, occupying a position about midway in the series of simple to complex entities. Thus, in answer to the question as to what light genesis throws on the nature of mind, we find that it shows it *to be* one of the complex entities. Whether it has come to be as a result of the activity of propositions which *mean* nothing, is not essential to our present purpose. Whether formal implication is not a false god, is not so much our aim to determine. But to undertake a "genesis" of concrete reality on the fundamental of formal propositions from which every vestige of meaning has been squeezed, creates in the mind of a reader the suspicion that the idea in the mind of the author is to reduce the whole position to absurdity. One of the favorite ways of killing a thing is to let it kill itself. And in this case it seems that the following out of the logical implications of the system leads to such difficulties that no serious thinker could be deluded. *Implication is in order only in the presence of meanings.* One thing may mean, imply, indicate, point to, another thing; but seriously to assert that the universe is implied in "A-right-of-B", "A-A", "A not A", when A and the rest mean nothing, is a bit of sheer nonsense.

We have found consciousness in the "neutral mosaic". But we must further consider its nature, with the idea in mind of determining the possibility of analysis, analysis being the key which unlocks the mysteries of the universe. For a further determination of the characteristics of mind, we may consider the case of a "navigator exploring his course at night with the help

of a searchlight." "It illuminates a considerable expanse of wave and cloud, and objects that lie above the horizon. The sum total of all surfaces thus illuminated in the course of a night is a cross-section of the region thru which the vessel passes. The manifold so defined is neither ship nor searchlight, nor any part of them but is a portion of the region thru which the ship is passing."* This cross-section resembles those that are found in any manifold in which there is organic life. The mechanism of organic response is the nervous system or mechanisms analogous to nervous systems in the lower forms of organic life. Now a cross-section defined by the response of a nervous system is consciousness. To determine what entities belong to the cross-section, it is only necessary to determine what entities are responded to with a specific reaction. "This neutral cross-section as defined by the specific reaction of reflex-arcs is the psychic realm:—it is the manifold of our sensations, perceptions and ideas:—it is consciousness."† In this manner has the knowing process been reached deductively.

Such a statement of the nature of consciousness must account for the empirical properties of it. The wonder is that it should fail to do so since the fact is that it is on the basis of empirical nature that the 'deduction' has been made possible. But at this point the interest is in the problem of analysis from the standpoint of the nature of mind. I think it can be shown that analysis cannot take place, and if so the *vade mecum* of realism being nil, the structure built on that foundation falls, or rather no structure is possible.

In the first place we must note that the means of analysis have been transferred to objectivity. The mind has nothing to analyze with. Its logical implements, its tools of judging and inferring, are simple entities in the neutral mosaic. The job of the mind is to *follow* the unrolling of the universal scroll as this takes place from the self-activity of propositions whose content is zero. "The act by which the thinking mind explores those parts of the system that ensue from the Given is called deduction".* Judgment and inference, two prime necessities of any analytical process are not functions of the process but are ontological entities. The mind, like the searchlight, casts the pale light of its exploited faculties on the universe and *defines itself*. The data of judgment and inference are *there*; the business of

*Op. cit. p. 171.

†Ibid. p. 182.

*Ib. p. 16.

mind is to behold them as the concrete universe shapes itself about them as iron filings arrange about the magnet. It can not judge, nor infer, nor hypothecate. Meanings, too, are there, and they whip themselves into unity about the rallying-point of an empty, timeless and spaceless, tho active proposition, as the charmed worshipper falls at the feet of the medicine-man. Where is memory? It is 'there'. Where is imagination? It is 'there'. When the roll is called out yonder, all are there—all, that is, but the searchlight. How it shines is a mystery. Its means of shining are taken away and they render possible the definition of an object.

One should note this difference between the searchlight and the responding nervous system. The former does not select, but shines on what is in the way; the latter is selective, and is capable of regulating itself in view of what it defines. This is an empirical fact, but the means of regulation are also in the cross-section. The knower is deprived of all his possessions yet he is commanded to analyze. Why analyze? What results from it? Even if it were possible to do it, why should it be done? Surely not the better to act, for action is reserved for the proposition. Is it to know? If so, it is like asking the butterfly to demonstrate the binomial theorem, or commanding the earthworm to show an aesthetic appreciation of Parsifal. As well command the ape to gaze into the heavens and plot the orbit of Jupiter or to behold the satellites of Saturn, as to cry "analysis, analysis," when the only means, and the only purpose, for the accomplishment of it are moved to that to which the method is applicable.

But there is another strange side to this story of consciousness. We have just been talking as if it were outside of the procession. It is outside when it must be to account for certain facts, empirical facts, but we find it *in* the "mosaic". Consciousness is now the objects—the illuminated part of the environment. There is no difference between thought and the object; "no content of knowledge that is other than its object".* Behold now an object analyzing itself. Consciousness is trees and rivers, propositions and axioms, love and astronomy. We must analyze, or analysis must take place, but consciousness is the object, and the tree must perform that delicate feat upon its own personality, reducing itself to elements in violent motion, which it further reduces to "private perspectives" from which it deduces "public space". When astronomy analyzes itself it finds itself

*Ib. p. 150.

able to overcome the paradoxes of Zeno by certain mathematical theories of infinity based on an elimination of spatiality from the Euclidean point. Thus the story goes throughout the whole of objectivity—each object must be capable thru analysis of discovering neutral entities, simple logical and mathematical laws which are its *real* reality.

It appears that analysis is impossible on the realistic interpretation of consciousness. When consciousness is outside the procession, it has no means of doing anything; when it is inside or rather when it is the object the foolish question of an object analysing itself arises. But lest it would seem that consciousness has not been handled as the realist intends it, a few more statements of its nature and function might be offered. What is the significance of the one-to-one correspondence so much spoken of? *Correspondence between *what*, pray? There are at least two types, and perhaps an infinite number depending upon the nature of the propositions assumed as fundamental. But these are two kinds that can be (or *are*) spoken of: (1) The correspondence between the logical-mathematical propositions and concrete real things; (2) the correspondence of the content of the conscious cross-section with 'reality'. In the first type the two realms are described as identical, except that the concrete has additional matter laid on its fundamental structure. We begin ostensibly with a number of simple logical and mathematical entities which generate a world; then after the world is generated, the thought occurs that this is a formal world, void of bone and blood; and to get content, denied in the original, we must resort to a makeshift of a theory of correspondence which is supposed to be 'acknowledged' by a mind which turns out to be the things which correspond. The proposition which generates the particulars which are those of a universal which is the proposition itself—the old problems of the idealistic logic of the concrete universal—turns out to be not reality but that to which reality must correspond. If the activity of propositions generates a real system, the question of correspondence is senseless; if it does not generate a real system it is useless or meaningless. The "Repetition of Identicals" will not solve the problem if the identicals are not reality, and if they are reality there is no correspondence because there is identity.

The representative theory of knowledge is laughed out of court because it "asks us to believe that they (secondary qual-

*Ibid pp. 31 ff. Also Ch. 3. and many other places.

ities) are 'known' by means of entities which have neither extension, shape, size, motion, color, sound, odor, taste or touch."* We are not defending the representative theory of knowledge, but we assert that the realist is making the same statements. The realist, however, is a little more subtle. He asks us to believe that *real* reality is a group of propositions without content, non spatial, non temporal. *His* colors are not qualitative if *he is consistent with his premise*, but they define, in *their ultimate reality*, a series of points. Sounds, odors, tastes—all are reducible to points in space. But behold the idea of a mile a mile long, of a thousand years just that long in time. Ideas of space are spatial, the *real* reality is non spatial; ideas of time are temporal, tho *real* reality is timeless—and so on with all the rest. The difficulty has been all along that of squeezing the content from the proposition, making it meaningless, and then later having to beg what was thrown away, to account for qualities by means of a subtle doctrine of correspondence.

Let us behold the genesis of this second type of correspondence—that between the content of consciousness and reality. "Now since the process of cognition assuredly involves both a knower and a known, a subject and an object, it is implied that an individual mind, witnessing acts of cognition in order to describe the process, can include both subject and object, and can watch the changes in both."* Yet we are told repeatedly that consciousness and objects are identical. The known are objects which are consciousness. Knower and known, on the premises of whole hearted realism are identical and to introduce the two to make a place for correspondence is to commit the idealist's fallacy.

"Nothing can represent a thing but the thing itself".† This is true realistic doctrine, but we are haunted by the whys of the painful discussion of representation or correspondence. Then we hear of symbolic ideas in such cases as that of a blind man's idea of color. Let us recall what consciousness is—the illuminated environment i. e. the *objects*. Then compare such statements as this: "Our ideas are never completely identical with the objects,"* So we are faced with this difficulty of explaining how objects which are consciousness agree with themselves. We have on hands the old idealistic problem of degrees of reality and

*Ib. p. 141.

*Ib. p. 87.

†Ib. p. 142.

*Ib. p. 149.

knowledge. To define consciousness as an object or as objects and then to ask how it happens that objects disagree with themselves, and to assert that knowledge is never complete when knowledge is the object, is, I submit, a bit of polite quibbling. How a tree disagrees with itself, or how it is incomplete, I am unable to say. Then again, thought follows after the activity of neutral entities. Of course it is already in the neutral mosaic—one of the entities, and is a group of objects. It would be a spectacle long to be remembered to behold the process of a neutral entity which is itself active, being chased in non-temporal time and non-spatial space, by another neutral entity under similar disabilities; when both neutral entities are the same thing. The snake swallowing itself would be in comparison a mere side show. To see an object eternally after itself in such a timeless and spaceless universe is a vision that rarely comes to a mortal man.

It would be useless to enumerate further paradoxes of representation. The above are difficulties in *perception* only. If perception presents such anomalies what are the revelations of memory and reflective processes? These difficulties were touched upon in another connection—with the half-hearted realistic conception of mediate knowledge—and the same difficulties are here plus many others; but all hinge on the fatal doctrine of representation on the principle of consciousness as set forth in this type of realism.

A word may be said about reflection since this is a strictly logical category. Reflection is distinct from sensation and perception. It is asserted that the fallacy of confusing immediate with reflective consciousness has borne serious fruits for philosophy—a statement to which we gladly assent, for it has been the contention here that this fallacy committed alike by realist and idealist leads to the pseudo-problems of epistemology. But to speak of introspection and reflection—to introduce such categories on the theory of consciousness earlier described is certainly not to make for clearness. What *introspects*, and what *reflects*? Do objects reflect themselves, do they perform introspective operations on themselves to determine their content (which is themselves) at an earlier time of their activity? We are told that the “original content of consciousness and later introspective judgments about that content are to be distinguished”.* I believe it has been shown in the criticism of analysis that processes of judg-

*Ib. p. 216.

ment are impossible. For an original content to be at any future time different from itself is senseless. If it could be possible just how the difference could be stated can never be made out, for there is nothing *to* which they are differences, since that *to* which they are differences are the things themselves. Reflection turns out to be an affair of representing the thing as a map represents a country. How different from the cross-section! How different from the doctrine that consciousness and objects are identical! The old doctrine of representative knowledge, derided and scoffed at comes to the rescue in accounting for the "empirical properties of consciousness."

The questions of judgment and inference need not be considered for there appears to be no place in the system for them. Likewise truth and error—considered by the authors of the system, of course—can be discussed only on the assumption that the system makes a place for them. The half-hearted realist whose purpose is the same as that of his more sturdy comrade, namely, to banish the act of knowing from logic, recalls the empty mind to make room for error.* The other, with characteristic boldness, follows his premises to their logical conclusion, and makes error objective.†

The findings with reference to consciousness lead to thoughts of its relation to the fundamentum of new realism, namely, the priority of things. Idealism against which realism arose is, as we have attempted to show, founded on the principle of the priority of mind, and it is to the other extreme that realism swings. But we are to notice that animals react to definite cross-sections and thereby define a conscious area; plants, too, have organs of reaction analogous to nervous systems and react thus, forming a conscious cross section. They react to light, to intensity, to gravity, and thus these factors are the environment, the cross-section of the plant. The chasm between the inorganic and the organic has been bridged—so it is asserted—and inorganic matter reacts to definite stimuli, as mercury to heat, hydrogen to oxygen and stones to gravity. In short everything reacts in some definite way to every thing else, resulting in the ubiquity of consciousness. We began, Launfal-like (or was it Quixote-like?) in search for the grail of consciousness and we have found it at our door-every-where. Can we marvel at such statements of critics of realism when they ask "what remains of the supposed gulf be-

*See Perry, *The Truth Problem*, Jn'l. Philos., etc. XIII, 19-20, and Russell, *The Problems of Philosophy*, Chs. XII-XIII.

†See Holt, *Concept of Consciousness*, Ch. XIII.

tween absolute idealism and analytic realism?"* or, "Thus when the realist conceives the perceptual occurrence as an intrinsic case of knowledge or of presentation to a mind or knower, he lets the nose of the idealist's camel into the tent. He has then no great cause for surprise when the camel comes in and devours the tent."†

It seems that there is no gulf between the two, and that the position maintained in the early part of the chapter to the effect that idealism and realism are talking about the same thing, on the principle of the fallacy attributed by the realist to the idealist, that of "exclusive particularity," has been justified. That which the realist attempts to discard as the source of our metaphysical woes is the whole universe—a knower, a *reactor*, to which things are presented and which are consciousness. If the logic of Green or Bosanquet can offer a more complete universal consciousness that generates differences which are differences of this universal, I am unable to see it, for they speak the same language as the realist. If we have shown that true logical processes are impossible on idealistic premises, and if we have shown that idealism and realism are complementary undertakings, does it not follow that logical processes are impossible on the premises of realism? And does it not seem evident that if knowing "makes no difference to the objects", that it is senseless to limit consciousness to a "cross-section"—that it is universal just as idealism teaches, and that this is a realistic statement of the idealistic problem of the relation between a finite mind and the universal consciousness? Does it not appear evident that both these types of theory are beginning with the *results* of knowing, with *formed* material, and are attempting to deduce the nature of the material from its form? They have both accepted the results of approval science-knowledge—and have analyzed this product, and thereupon have attempted to show that the processes by which the original *res* of experience is fashioned into instruments for adequate responses, are the ontological predicates which define and exhaust a world of pure being or of an absolute experience.

Summarizing briefly, we may say that the attempt in this chapter has been made to show that idealism and realism are speaking the same language; and that if this is true, the logical difficulties of the one are those of the other. In connection with

*Creative Intelligence, p. 107, Professor Moore's paper.

†Dewey, *Essays in Experimental Logic*, p. 255.

difficulties of the system itself, it has been maintained that the method of the system can not be employed without a petitio. Further, that on the account given of mind or consciousness, the latter can not function in such a process, even in a genuine process of analysis, an example of which was offered; because there are neither means nor data. We have suggested that in order to account for the empirical properties of consciousness, that the very fundamentals of the system have been denied. All of which has led to the conclusion that in a neo realistic world of neutral entities, among which either consciousness *is*, or, all of which *are* consciousness; that there is no place for logical processes.



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