Philosophers have always welcomed dialogue if one is to credit the interest they profess in the interplay of arguments; and treatises on philosophy would be shorter, and probably less intelligible, if all references to other positions were deleted from them. This happy expectation that the restatement of distinctions and arguments will lead to agreement on principles and conclusions, and contribute to the advancement of knowledge, has, none the less, been thwarted whenever two voices have entered the dialogue. Controversy takes the place of dialogue when the philosopher whose position is reported and adjusted bursts into the conversation to restate what has been attributed to him and to rescue it from distortion. The recriminations, which form as large a part of the history of philosophy as the open-minded professions of willingness to consider other assumptions and approaches, suggest that it is not less difficult—if indeed it is even possible—for one philosopher to restate the position of another when he appropriates it to his own use as a truth which he expresses somewhat differently, or even when he defends it as the doctrine of a beloved master who has been misinterpreted, than when he sets it forth starkly in all its weakness as the construction of an opponent to be refuted out of hand.

Many plausible reasons can be alleged to account for this failure of dialogue. Most of them have no direct bearing on the truth or falsity of the philosophical conclusions they account for. They are for the most part themselves intrusions into the dialogue which brusquely turn it into a jurisdictional controversy concerning the ultimate authority in treating philosophic questions: whether relations among the sciences

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should be explored on philosophic assumptions concerning logical or dialectical proof, forms of experience or reason, or characteristics of phenomena or being, or whether, on the contrary, philosophic problems should be explained away on assumptions drawn from psychology, sociology, economics, history, the conditioning of man, or the claims of society. The nature of the failure of dialogue, even in its large reductive and pseudoscientific forms, is clarified, on the other hand, if the task which the philosopher undertakes is considered in general before failures in communication are accounted for as failures in proof. Like inquirers in other fields, the philosopher not only seeks truths; he also constructs arguments to relate the truths he finds to warrantable or defensible grounds, and he addresses his arguments to minds not yet enlightened or convinced. Unlike other disciplines, however, philosophy is synoptic and inclusive by design, not by occasional extension, and philosophic differences tend to focus on basic considerations about objects, arguments, and other minds.

Most of the extreme controversies in which philosophers abandon all pretense of dialogue and turn their backs on arguments can be traced to differences concerning the structure of arguments and their relations to objects and to minds. There have been, and there still are, philosophers who argue that these three tasks are inseparable, and that the discovery of truth, the construction of arguments, and the clarification of minds proceed pace by pace; methods which separate them fall into the error of constructing formal or subjective arguments unrelated to reality or into the error of constructing mechanical or partial conceptions unrelated to real processes or scientific principles. There have been philosophers, no less numerous and no less confident of their scientific pretensions and venerable antecedents, who argue that man is the measure of all things, that truth is discovered only in the free clash of opinions, and that plausible arguments can be found to support the contradictory of any proposition or doctrine; dialogue explores the plurality of positions, and it is transformed into controversy by dogmatisms which must therefore be refuted. At the other extreme throughout the long history of the opposition of dialecticians and skeptics, other philosophers have sought a method to construct arguments based on the nature of things without intrusion of imagination, emotion, or opinion; methods which fail to make this separation must be shown to be unsound and unscientific, since they do not penetrate to the nature of things, but weave verbal arguments to support meaningless statements pertinent only to unreal problems—although, it should be added, the verbal statements do express emotions, and the groundless arguments are often persuasive, and the unreal problems are consequences of artificial tensions, unexamined complexes, or persistent traditions. There remains a fourth possibility, which was developed by philosophers in antiquity and was further extended and applied at later stages of history, that each of these tasks presents a separate problem of method, that a logic should be elaborated for formal arguments, a method of inquiry for the discovery of truth, and a rhetoric and dialectic for communication among men, and that the use of these methods requires a metaphysics to explore the principles and organization of knowledge, a psychology or epistemology to explore the functions and powers of man, and a socio-political theory to explore the diversity of communities and circumstances; confusions among these methods must then be sought out and corrected.

1. As Plato conceived dialectic, it is the unique method of philosophy and science, precisely because it is suited to carry out all three tasks of philosophy simultaneously—the discovery of truth, the construction of arguments, and the clarification of minds. All other arts and methods are incomplete and dangerous unless transformed by dialectic. The dialectician is the true poet and interpreter of poetry, the best rhetorician and linguist, and the only sure mathematician, moral guide, and political ruler. Dialectic is a method of definition and argument, of division and collection, but far from being satisfied with verbal formulations, Plato is suspicious of the written word, which is dead and cannot answer back when questioned, and he seeks instead living words, which are planted and grow in living minds. The influence of dialectic on the mind, moreover, is due to the fact that it divides and collects real classes; dialectic divides at the joints of reality and to accomplish that purpose it assembles an intellectual alphabet for argument which, like the letters of ordinary alphabets, cannot be combined arbitrarily but only as they form syllables and words. Even in the Cratylus, where the subject of discussion is the nature of language, the proponents of the opposed theories of natural and conventional language come to agree in dialogue that they must give up seeking in words a knowledge of things, and instead turn their attention not to names but to things themselves, acknowledging the dialectician to be superior to the maker of language.
In order to form arguments and to treat things, dialectic must prepare minds. Socrates compares his art to that of a midwife, since it merely assists in bringing knowledge to birth, and he compares its effect to that of a torpedo-fish, since it shocks the mind free from unexamined attractions or polarities. The development of knowledge is a detachment, a reminiscence, an initiation which may have a divine or apparently accidental origin, but it may also be occasioned by method in discussion. The determining factor is not the concatenation of phenomena, the nature of mind, or the structure of argument, but the common source from which they all derive and to which they owe their interrelations. Education consists in turning the attention of the mind and enlarging the scope of its contemplation to a synoptic vision. Dialectic is the method of achieving this threefold purpose—it is a dialogue by which men come to agreement by means of argument concerning the nature and divisions of things.

The method of dialectic is dialogue in the sense that two or more speakers or two or more positions are brought into relations in which it becomes apparent that each position is incomplete and inconclusive unless assimilated to a higher truth. Phenomena may become the stages of History, and minds may become Spirit, without the character of the argument as it operates in development of the dialogue. The processes of development of things, the levels of formation of knowledge, and the steps of hypothesis of proof are fundamentally the same. Dialecticians, for the most part, do not refute, but rather assimilate other philosophers. Plato apparently found no need to differentiate his method from the method of Socrates or from the methods of the Eleatics, the Pythagoreans, the Heracleiteans, or even at times the Sophists, who appear in his dialogues. Historians and scholars have not always been happy with the consequences of this assimilation of methods in dialectic and they have constructed the Socratic Question and the Platonic Question to recover distinctions Plato failed to make from the indications which he does give. For no one speaker expresses the truth, and all methods, even that of Socrates, show their weakness and incompleteness in some regions and on some questions.

Plotinus, using a similar dialectic, later adjusted the categories of Aristotle and of the Stoics to the Platonic categories, discovering that both have some basis in truth but that Aristotle's errors arose from seeking the categories of being in sensible rather than intelligible things and the Stoic errors from materialism. Porphyry transformed Aristotle's logic into a dialectic by writing an Introduction, an *Isagoge*, to the *Categories*, borrowing the "predicables" from Aristotle's *Topics*, in which the commonplace of dialectic are treated, to loosen up the literal distinctions and univocal definitions of the Aristotelian logic, and the long line of Greek Commentators labored further to make Aristotle an acceptable, though imperfect, Neoplatonic dialectician. Saint Bonaventura found the formula of synthesis in the discovery that Aristotle spoke the language of science, Plato the language of wisdom, while Saint Augustine, illuminated by the Holy Ghost, used both languages. Hegel could trace the whole sequence of the history of philosophy evolving to its assimilation in his own philosophy; and Erdmann, who argued that Hegel's assertion that his system has assimilated all earlier systems is confirmed even by his opponents, is constrained by the passage of time and the continuation of the inevitable dialectic of history to add a final volume on the dissolution of the Hegelian system as appendix to his *History of Philosophy*.

This complex process of synthesizing is interrupted—and dialogue becomes controversy—whenever dialectic degenerates into sophistic or skepticism by neglecting content or into subjectivism and mechanism by neglecting argument. Socrates frequently notes the transition from dialectic to sophistic or eristic.

"What a grand thing, Glaucon," said I, "is the power of the art of contradiction (αντιλογισμός)." "Why so?" "Because," said I, "many appear to fall into it even against their wills, and to suppose that they are not wrangling (παραμελείν) but arguing (διαλέγονται), owing to their inability to apply the proper divisions and distinctions to the subject under consideration. They pursue merely verbal oppositions, practising eristic, not dialectic on one another."

The other form of controversy, due to neglect rather than misuse of argument and leading to partial conceptions of subject matter may take two forms. One is exemplified in the battle of the giants in which the aggressors break bodies and what they call truth into small fragments and talk about a kind of generation by motion rather than being, while the defenders proceed very cautiously with weapons derived from the invisible world above, maintaining that true being consists of certain ideas which are only conceived by the mind and have no body. The other is the pragmatic empiricism which neglects scientific analysis to

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1. Plato *Republic* v. 453E–454A.
2. Plato *Sophist* 246B–C.
concentrate on sensible effects and practical applications—as calculation or logistic (λογιστικής) is adapted to commercial purposes but not, like arithmetic, to knowledge.³

Dialectic became the method of Christian theology and philosophy until the translation of Aristotle in the thirteenth century suggested the possibility of two methods and two ways; dialectic was also opposed during the middle ages because it is a purely verbal art and because it applies reason to matters that transcend reason. During the Renaissance the choice of methods lay between dialectic and rhetoric, and mediaeval logic was dropped out of the dialogue as verbal and as concerned with non-existent entities, like universals and transcendentals. The grounds of controversy are the same during the nineteenth century after the revival of dialectic attributed to Kant. According to Hegel three attitudes toward objectivity are found in logic and the formal doctrine of logic has three sides. The first attitude toward objectivity leads to metaphysics; the second is expressed in empiricism and the critical philosophy; the third is immediate or intuitive knowledge.³ The second of these attitudes was adopted by Hume and Kant. Thought is subjective and its most effective operation depends on abstract universality according to this attitude, but the logical development of empiricism is materialism (matter being an abstraction), whereas the critical philosophy of Kant separates the world of sensible appearances from the world of self-apprehending thought. The second of the three forms of logical doctrine is dialectic, which must be separated carefully from sophistry and skepticism. Modern skepticism partly precedes the Critical philosophy, partly springs out of it; it consists solely in denying the truth and certitude of the supersensible, and in pointing to the facts of sense and of immediate sensations as ultimate.⁴ Engels is able to fit Hegel into this classification when he borrows and transforms the Hegelian dialectic. Philosophers are split into two great camps, idealists and materialists, on the paramount question of the relation of thinking to being, of spirit to nature. But the question of the relation of thinking to being has another side which separates Hegel, who asserts the identity of thinking and being, from Hume and Kant, who question the possibility of any cognition of the world.⁵ These distinctions form the foundation of Lenin's philosophical argument,⁶ but he traces the beginnings of immaterialism to Berkeley's arguments against matter and he encounters at every turn a variegated progeny descended from the “Human agnosticism,” not only Kant, but also Mill, Mach, Huxley, Cohen, Renouvier, Poincaré, Duhem, James.

11. The dogmatism of dialectical history tend to overshadow the equally plausible—and, in the context of twentieth century dogmatisms, more attractive—version of the relations among philosophies set forth by the defenders of the antilogism and contradiction, the adherents of skepticism and sophistry, who find the method of philosophy in the interplay of doctrines and opinions, and who expose the consequences of dogmatism concerning the ultimate principles of knowledge and reality. Discrimination, not assimilation or reduction, is the method of philosophy; and dialogue proceeds by exploring the varieties of arguments and doctrines and testing assertions by their contradiction, not by adjusting all doctrines to a preferred position and refuting those which will not fit. In the course of controversy with dialectical and logistic philosophers all the names assumed by philosophers of this

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3. Plato Gorgias 451B–C; Republic vii. 525D.
tradition have been given a pejorative sense: they are sophists who were concerned with wisdom, skeptics who developed reflective thought and inquiry, rhetoricians who were skilled in the arts of communication, and academics who employed the method of Socrates and Plato.

Sophistic and rhetoric provided the counterpart, and a phase of the context, for the development of Plato's dialectic. They had themselves developed as practical instrumentalities in the democratic Greek city-states, and they provided arts by which opposed opinions might be brought into relation and confrontation. Plato gives Protagoras' aphorism, Man is the measure of all things, a relativist and sensualist interpretation which accords with the criticism attributed to Democritus as well as Plato in opposition to the doctrine ascribed to Protagoras, that all sensations are equally true for all sentient subjects. Isocrates criticized speculative philosophers, who are in total disagreement concerning the nature of things and even more confusing disagreement when they profess to attain scientific knowledge of moral questions. Philosophy is concerned to impart all the forms of discourse in which the mind expresses itself—not in abstract but in particular statements—and it should therefore bring the student into contact with the variety of opinions rather than inculcate a pretended or useless science.

Skepticism grew out of the exigences of dialogue at the very center of dialectic. Skeptics were prominent among the "Socratics" who set forth their philosophic positions in "Socratic dialogues." The Academy defended the position of Plato against the dogmatism and materialism of the Stoics by means of the skepticism elaborated by Arcesilaus and the probabilism evolved by Carneades. Cicero, as a follower of the New Academy, interprets all the great philosophers as exponents of an identical truth to which they give only verbally variant expression, and he reserves controversy for the refutation of the materialism of the Epicureans and the dogmatism of philosophers who conceive truth to be susceptible only of a unique expression. Sextus Empiricus marshals an encyclopaedic refutation of all dogmatisms, idealistic and materialistic, empirical and rationalistic. John of Salisbury in the twelfth century labels himself an Academic, and John Duns Scotus at the end of the thirteenth century elaborates subtle arguments to refute the Academics. The revived dialectic of the Renaissance is a battle ground between Neoplatonists and Skeptics. Hume acknowledges the attraction which the academic philosophy had for him, and when Kant returned to dialectic he called it an art of semblance and disputation, an *ars sophistica disputatatoria*, and derives the method he practices from the skeptic. The modern exponents of the skeptical position tend, as Hegel pointed out, to be less thorough than the ancients and to favor one of the forms of dogmatism—empiricism—in their search for the useful and the practical among opinions.

Sophistic or the skeptical dialectic is an operational method. As expounded by Cicero it consists of two parts, a method of discovery and a method of judgment or proof, as contrasted to the dialectic of the Stoics which wholly neglects the method of discovery. This method is also called rhetoric, the art of discovering arguments and of organizing them in exposition. Properly employed it results in wisdom, and it should be employed only in conjunction with wisdom. In the history of philosophy, as Cicero recounts it, early philosophers combined eloquence and wisdom. Socrates unfortunately separated them and thereafter rhetoric and philosophy followed independent courses until the New Academy again undertook to join them. If men will equip themselves with the art of discovering and stating arguments, a dialogue is possible, since philosophers will come to recognize that truth is not acquired by a private and mysterious insight into reality, but by understanding the arguments by which truth may be distinguished from error in a given situation and application or an identical truth may be discovered by different means and be stated in different terms. Controversy results from inability to follow an argument and from dogmatic attachment to positions that are thought to be unique.

This conception of the relation between method and knowledge, between rhetoric and wisdom, has served as the basis for histories of philosophy. Philostratus wrote of philosophy in this sense in his *Lives of the Sophists*.

We must regard the ancient sophistic art as philosophical rhetoric. For it discusses the themes that philosophers treat of, but whereas they [the philosophers], by their method of questioning, set snares for knowledge and advance step by step as they confirm the minor points of their investigations, the sophist of the old school assumes a knowledge of that whereof he speaks.

A few philosophers who were renowned for eloquence, like Carneades, Dio Chrysostom, and Favorinus, figure in Philostratus’ history along with the older sophists from Gorgias to Isocrates; but the New Sophistic applied rhetoric to a wisdom that had little in common with the subjects treated by the philosophers, in spite of the interest which the philosopher-Emperor Marcus Aurelius, took in it. Eunapius’ Lives of the Philosophers, on the other hand, begins with Porphyry, who is presented as skilled in rhetoric and in all branches of knowledge, and moves from the Neoplatonists to the sophists, pagan and Christian, to culminate in the iatrosophists, the healing sophists. Zeno of Cyprus was expert in both oratory and medicine, and his disciples were trained in one or both. The latter included Magnus, who was so able in rhetoric that he “used to demonstrate that those whom other doctors cured were still ill.”

Eunapius’ master. The two traits which the sophist should cultivate—ability to discover and present arguments and willingness to listen to arguments—are found in a marked degree in the portrait Eunapius draws of his master, who possessed this disposition, according to Eunapius, either because the Platonic Socrates had come to life again in him or because his effort to imitate Socrates had led him to form himself from boyhood on the model of Socrates.

But it was not easy to rouse him to philosophical discussions (διαλέξες) or competitions (σφιλονομία), because he perceived that it is especially in those contests that men become embittered. Nor would anyone readily have heard him showing off his own erudition or inflated because of it, or insolent and arrogant toward others; rather he used to admire whatever they said, even though their remarks were worthless, and would applaud even incorrect conclusions, just as though he had not even heard the premises, but was naturally inclined to assent, lest he should inflict pain on any one. And if in an assembly of those most distinguished for learning any dissension arose, and he thought fit to take part in the discussion, the place became hushed in silence as though no one were there. So unwilling were they to face his questions and definitions of those most distinguished for learning any dissension arose, and he thought fit to take part in the discussion, the place became hushed in silence as though no one were there. So unwilling were they to face his questions and definitions that he used to demonstrate that those whom other doctors cured were still ill.”

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The revival of the study of the history of philosophy in the Renaissance followed rhetorical rather than dialectical lines: exemplary uses of doctrines, aphorisms, and arguments rather than epochal successions of systems are emphasized in the lives of philosophers and the compendia of arts which followed the model of Hellenistic histories and Roman treatises and which showed a rhetorical tendency to refute dogmatisms and to seek the causes for the decline of the arts.

The importance of dialogue to the modern “skeptics,” who are derived from Hume’s agnosticism by their dialectical critics, is precisely in its encouragement and development of arguments. The advancement of science, the cultivation of values, and the resolution of practical problems all depend on the confrontation of arguments, the test of opinion by opinion, and the open possibility of innovation moderated by the stabilizing influence of tradition. Like the ancient skeptics and academics, John Stuart Mill bases the practical use of the free interplay of opposed arguments on the example of the theoretic use of the methods of rhetoric to advance toward truth in the natural sciences.

The peculiarity of the evidence of mathematical truths is that all the argument is on one side. There are no objections and no answers to objections. But in every subject on which difference of opinion is possible, the truth depends on a balance to be struck between two sets of conflicting reasons. Even in natural philosophy, there is always some other explanation possible of the same facts. But when we turn to subjects infinitely more complicated, to morals, religion, politics, social relations, and the business of life, three fourths of the arguments for every disputed opinion consist in dispelling the appearance which favors some opinion different from it. The greatest orator, save one, of antiquity, has left it on record that he always studied his adversary’s case with as great, if not greater, intensity than even his own. What Cicero practised as the means of forensic success requires to be imitated by all who study any subject in order to arrive at the truth. He who knows only his own side of the case, knows little of that. His reasons may be good, and no one may have been able to refute them. But he is equally unable to refute the reasons on the opposite side; if he does not so much as know what they are, he has no ground for preferring either opinion. The rational position for him would be suspension of judgment, and unless he contents himself with that, he is either led by authority or adopts like the generality of the world, the side to which he feels most inclination.

There are more proponents of this view than can be tabulated under any of the shining names—sophistic, skepticism, academicism, rhetoric, utilitarianism, liberalism—that have been attached to it and that have been tarnished by the contempt for “opinion,” “sense experience,” and “utility” expressed by its opponents. It underlies Justice Oliver

11. Ibid., 502.
Wendell Holmes' vision of the free competition of ideas, James' pluralism, Bridgman's operationalism. Dialogue is statement and counter-statement, based on ordinary ways of life and ordinary uses of language, with no possible appeal to a reality beyond opposed opinions except through opinions about reality. Truth is perceived in perspective, and perspectives can be compared, but there is no overarching inclusive perspective. Meanings are defined in action and measurement, and there is no theory apart from practice. Method is the art of seizing and interpreting the opinions of others and of constructing and defending one's own. Virtue is method translated into intelligent self-interest and respect for others.

The Sophists used a method so similar to dialectic that Socrates could complain in the *Apology* that his critics mistook him for a sophist, and yet they denied dialectical absolutes beyond the relativities of perception and reduced dialectical certainties to opinions in the interchange of rhetorical argument. The ancient physicists and atomists, on the other hand, appealed to a truth based on reality so similar to the Ideas of Socrates that Socrates thought his position had been confused with that of Anaxagoras, although the physicists made no use of dialectic. Democritus' objection to Protagoras' sensationism is so like Plato's that the two were lumped together in antiquity. True born knowledge, as opposed to the bastard knowledge of sensation, is scientific knowledge of the atoms, and Democritus uses the same word as Plato—"ideas"—to designate these ultimate non-sensible realities. Aristotle judges the methods of Plato and Democritus to be balanced evenly in achievement and failure: Plato developed a theory of method in his dialectic but failed to apply it successfully to account for phenomena; Democritus developed a method which was faithful to phenomena, but he failed to formulate his method and overgeneralized it as a result of his misconception of definition and cause. The method of scientific knowledge is distinct from verbal logic or dialectic, and knowledge of atoms and their motions is distinct from the relativities of secondary qualities. Dialectic, in its transcendental no less than in its skeptical form, seemed to later atomists to be verbal and inapplicable to this scientific task, while the calculation of motions and combinations of elements was of so little interest to dialecticians, that Plato's silence concerning Democritus was a scandal in antiquity. Dialecticians who came after him found modest historical places for mechanistic materialists.

As later skeptics found it desirable to temper their doubts with some confidence in empirical aspects of experience and in the tautologies of thought and expression, so too later atomists provided a place in their rational methods for sensations and feelings. According to Epicurus there are three criteria of truth: sensations, anticipations, and feelings. The external world is known by perception. Sextus Empiricus reports the equivalence of truth and reality in sensation: "Epicurus said that all objects of perception are true and real: for it was the same thing to call a thing true and to call it existing. True then means that which is as it is said to be, and false that which is not as it is said to be." But the method which Epicurus expounds in the *Canonic* has no place for dialectic or verbal arguments, and his critics are distressed by the contempt he expresses for logic which he criticizes as misleading. Cicero is shocked because "he abolishes definitions, he has no teaching about division and distribution, he does not tell how reasoning is conducted or brought to conclusions, he does not show by what means sophisms may be exposed, and ambiguities resolved." The central problem of developing a method to construct truths from simple elements and their relations was however to receive impressive and suggestive embodiment in a field ignored by Epicurus. The long chains of proof which Euclid organized in his *Elements* were to provide inspiration for philosophers and scientists attracted by the hope to derive all truths from combinations and constructions, whether they begin with simple bodies, simple ideas, or even simple terms.

The geometric method has no necessary philosophic implications when it is employed to construct figures from their "elements" or even when it is used to make a transition from geometrical solids to physical bodies and motions. It is made into a philosophical method when it is generalized to cover all conceivable phenomena and all reality and when it is made to provide the test for truth and reality. When philosophers adopt the geometric or deductive method as the method of philosophy and construct deductive demonstrations (with or without recourse to the forms of geometric proof), they face a choice of starting point and subject: they may find their elements in things and make the world

14. Cicero *De Finibus* i. 7.22.
geometric, if primary qualities are distinguished from secondary; or they may begin with common notions or simple ideas and distinguish the combinations which yield knowledge of reality from fantasy and error; or they may start with symbols and their relations to atomic facts and separate the non-cognitive from the cognitive uses of symbols. They find themselves opposed in this effort to free philosophy of meaningless questions by philosophers (like Plato, Nicholas of Cusa, and Whitehead), who give mathematics a dialectical development, by philosophers (like Poincaré and Russell), who make the method of mathematics arbitrary and its subject matter indeterminate, and by philosophers (like Aristotle, Mill, and Dewey), who distinguish the methods of mathematics from the methods appropriate to other fields.

The geometric method has had many imitators in philosophy. Alan of Lille and Nicholas of Amiens used a mathematical deduction from “common notions” and “maxims” to rid theology of controversy in the twelfth century. Bishop Bradwardine used a geometric method to organize the sequence of proof from common notions in his De Causa Dei in the fourteenth century, while Richard Swineshead laid the foundations of a logistic philosophy in his Calculor by an exploration of variables homogeneous with the verbal logic on which his contemporaries engaged. But the great efflorescence of the geometric method came in the seventeenth century when treatises on mechanics, optics, and astronomy and all sciences that pretended to precision were thrown into the form of deductions from axiom sets, and the hope that psychology, ethics, and politics might also be made scientific was attached to the endeavor to deduce them from a few simple definitions and principles. Descartes’ confidence in the long chains of mathematical reasoning contributed to this tendency by providing an analysis to justify it, for simple ideas cannot be erroneous since error arises in the combination of ideas and if one could proceed from indivisible ideas by indivisible connections, one could encompass the whole of human knowledge and achieve certainty in all sciences by avoiding the intrusions of imagination, emotion, and opinion which impede the development of science and philosophy. Spinoza used the geometric order in his Ethics to provide scientific demonstration of propositions which established morality and freedom on adequate ideas and on the minimization of the effects of the passions. Although his learning in Greek philosophy was slight he confessed an attraction to Democritus, Epicurus, and Lucretius as opposed to Socrates, Plato, and Aristotle. In the nineteenth and twentieth centuries the philosophic use of the geometric method moved slowly and indecisively from Laws of Thought to constructions built from simple sentences and atomic facts or from the elements of language and what they designate, for the vestiges of epistemology were attached to the symbolism borrowed from mathematics—science is the “cognitive” use of language as contrasted to a host of opposed uses, “emotive,” “persuasive,” “ejaculatory,” “hortatory,” “evocative,” and new commitments to the theses of empiricism and physicalism seemed necessary if the cognitive was to be preserved from its old epistemological rivals.

The logistic or geometric method is better suited to controversy than to dialogue. What other philosophers conclude on other grounds can rarely pass as “cognitive.” When it does, appropriate restatement is needed to make it precise. Much of traditional philosophy is found, therefore, to be devoted to the consideration of unreal problems, and the history of philosophy is a cumulative sequence in which sciences were separated one by one from the disorderly mass of conjecture, superstition, and insight until only logic and the theory of values stand in need of like reformulation for philosophy to be assimilated wholly to the sciences. The larger region of philosophic discussion is best treated by considering not the content of propositions but the state of mind of those who enunciate them. As dialogue it is non-cognitive. It may be brought to a conclusion by the discovery of truth, and the contribution of science to questions which involve only emotions is to remove superstition and fear, as the Epicureans put it, or to cure tensions and complexes and promote mental health, as the program is formulated in more modern terms. Discussion contributes to the discovery of truth and is cognitive when it takes the form of interchanges between men of different backgrounds and technical skill assembled in research teams. Controversy is a symptom of confusion, mental disorder, and drives to power.

iv. In the historical contexts in which dialogue concerning basic philosophic issues takes many forms—such as, (1) the synthesis of contraries and the assimilation of divergent views, (2) the development of differences and the examination of unresolved oppositions, (3) the reduction of all views to a basic thesis about the nature of physical reality and sense experience and the abandonment, as meaningless and non-cognitive, of statements which resist reduction—the desirability of
making a series of literal distinctions among methods and meanings has appealed to philosophers repeatedly. It has seemed plausible that a method of formal proof common to all inference might be discovered and formulated, that this method might be distinguished from the method of examining the hypotheses and principles from which inference proceeds, that a dialectical method might be devised to treat opinions concerning particular matters and problems when agreement in statement is desirable and that it might be supplemented by a rhetorical method of constructing arguments to influence audiences when agreement is sought in attitude and action, that a method of solving sophistic arguments might be a useful adjunct to detect apparent inferences or apparent principles employed to reach demonstrably false conclusions, that a method of analyzing objects of art might be employed to separate esthetic characteristics from moral and political influences and doctrines adumbrated, and that, finally, methods of inquiry might be developed to treat the problems and matters particular to different fields.

The most obvious mark by which this effort to distinguish a plurality of methods may be recognized in its many employments and manifestations is a concern to apply a scientific method to all fields and yet to differentiate the use of science in three large areas—the theoretic, the practical, and the poetic or productive. Aristotle first made this differentiation recognizing the need, if methods are to be developed appropriate to the various tasks to which they are applied, of three master or architectonic sciences—metaphysics to treat the first principles of the sciences and to provide the grounds for a theoretical organization of knowledge, including not only natural sciences but also sciences of action and production; politics to treat the first principles of human actions and associations and to provide the grounds for a practical organization of common activities, including those which affect the advance of science and the cultivation of art as well as morals and politics; and poetics to treat the first principles of human production and to provide the grounds for an aesthetic organization of the products of arts, including those which set forth knowledge or affect action as well as the fine arts. Thomas Aquinas employed the same distinctions to rectify the controversies and confusions of mediaeval dialecticians and to separate philosophy and natural theology from the dialectic of the Augustinian formulation of revealed theology. John Dewey sought to extend the use of scientific method or the method of reflective thinking to the resolution of all problems, but he saw danger in the application of the method of the physical sciences to practical problems, and he treated philosophy itself as an art concerned with meanings rather than with truth and falsity.

The principles employed by philosophers in the development of other methods often lead them to differentiations similar to those based on the method of inquiry into problems and into problematic situations. Spinoza employed the geometric method in his Ethics, but since the principles from which his deduction flowed led to the conclusion that even the wise man does not live always according to the dictates of reason and that most men rarely do, an ethics based on adequate ideas must be separated sharply from a politics based on power and a religion based on piety. Kant was awakened from his dogmatic slumber by a skeptical dialectic and separated the realms of pure reason, practical reason, and judgment with the aid of distinctions between general logic, transcendental logic and the uses of logic as organon and as canon. Aristotle's rejection of Plato's reduction of different forms of human association by the analogy between state and family finds echo in Locke's refutation of Filmer's use of a like analogy and in Montesquieu's study of the circumstances that determine the variety of systems of positive law.

Dialogue has a place in this distinction of methods according to the problems to which they are addressed. The problematic method, like the dialectical method, provides a place for each of the tasks of philosophy, but the methods proper to inquiry, proof, and persuasion are found to be different, when their respective problems are distinguished; like the logistic method, the problematic method requires univocal definitions and indemonstrable first principles, but there are many sets of such basic propositions, and they are not used to organize all knowledge in a single body of deductively derived propositions; rhetoric has an important independent place in the development of the problematic method, but is not, as in the skeptical or operational method, the whole method of science. Dialogue is preliminary and propaedeutic to the treatment of theoretic questions; other philosophic theories are studied in order to avoid errors already tried and exposed and to adapt truths already discovered and established. The treatment of practical questions does not permit like precision and their resolution depends on attitudes and communication bearing on what is best in various circumstances. The production of artificial objects must relate their proper perfections
to the natural objects they imitate and the proper pleasures they occasion. Politics and poetics, like metaphysics, employ a dialectical method in inquiry concerning principles which are applied demonstratively in deduction and induction. But it is a limited dialectic, concerned with specific questions, like the nature of cause or sensation, earthquakes or the origin of the Nile, property or slavery, rather than with large questions of philosophic systematization. On most questions numerous imperfect anticipations of the correct solution can be brought together. Neglect of method or the improper use or extension of methods, however, leads to outright error: Democritus is betrayed into innumerable inconsistencies and absurdities by his failure to examine the method which he used successfully; the Sophists practise verbal trickery when they ignore the requirements of substantive fact and formal argument to extend methods derived from rhetoric; Plato attributes being to separated objects constructed to provide grounds for dialectical analogies among things and dialectical extensions of reason and understanding. Controversy results no less from restatements of doctrine with partial approval than from refutations.

The methods elaborated by philosophers to treat materials and meanings fall into patterns which determine the forms of dialogue and controversy. The large forms of these opposed methods are easily recognized, and philosophers express their attitudes towards dialogue and betray their proneness to turn dialogue into controversy in ways that can be explained by those methods.

In significant senses dialogue is an inseparable part of dialectical or operational methods. Both methods use opposed opinions or hypotheses directly as means of resolving substantive problems, but despite occasional overlaps and some consequent confusion of the two methods by philosophers committed to other methods, the two uses of dialogue and their characteristic excursions into controversy are different. In the large forms assumed by philosophies which employ the dialectical method, oppositions are found in fact as well as in opinion; and the processes of nature, history, and thought are identical or strictly comparable since they all assimilate contraries to higher unities and syntheses; for the dialectician any doctrine is both true (in one sense and at one stage) and false (in many senses and at many stages). The dialogue may have either positive or negative results without falling into controversy; it is interrupted in controversy by the intrusion of a verbal or skeptical method which separates thought from its object or by a partial conception of thought or its object which makes thinking subjective or nature mechanical. In the large forms assumed by philosophies which employ the operational method, on the other hand, the oppositions are found only in opinion, hypothesis, perspective, or measurements, and their basic irreducibility is itself an important trait to be observed in the methodological acquisition of theoretic knowledge and in the resolution of practical problems. Two possibilities are open to the operationalist—one of the opposed hypotheses may be inapplicable and the decision may be in favor of one of the opposed parties, or both hypotheses may account for or measure the same facts but in different ways, and different reasons based on opposed policies may be adduced for the same course of action. Dialogue is interrupted in controversy only by dogmatisms which refuse to submit opinions about ultimate reality or the compelling evidence of experience or thought to the test of other opinions and hypotheses.

Dialogue is not an essential part of logistic or problematic methods. Both methods use opposed opinions or hypotheses only indirectly in the solution of substantive problems, since both separate questions of opinion formation and communication from questions of inquiry and proof. In the use of the problematic method, dialogue is relevant to proof, and there is even place for a restricted form of dialectic to resolve differences of opinion and belief. Dialectic is a stage in the search for truth, but its methods are sharply separated from those of inquiry and proof. The examination of other theories and doctrines has a heuristic value in the treatment of any problem, for the assemblage of what has been said previously makes available existing knowledge at the start of investigations, but the balance of opinions does not contribute directly to the examination of data or the construction of suitable hypotheses concerning them. On the other hand, dialectic is the only method applicable to fundamental metaphysical questions. Controversy is directed against dialecticians (who invent fictive entities to make their propositions true), against sophists (who advance propositions which are indifferently true or false), and against methodless thinkers (who have no proof for their propositions even when they happen to be true). In the use of the logistic method, dialogue is avoided, since the truth is one, and the effort of science and philosophy is to achieve knowledge of truth. Dialogue enters into that effort when truth is not available and knowledge ceases in the balance of probabilities, prefer-
Chapter Five

Controversy has so far outrun dialogue in contemporary philosophic discussions that dialogue has all but disappeared except among the sects which have formed within particular philosophical traditions. This is no new phenomenon in the history of philosophy, and in a fundamental sense it is a natural consequence of the oppositions of philosophic methods. It has, however, taken on unusual importance today—as it did in the Roman Empire and again during the Renaissance—since the failure of communication and understanding in philosophy is a symptom of what is happening in larger communications in cultural relations and political negotiations. It might be argued equally plausibly that philosophy has come into new responsibilities and uses since the practical problems of our times may be traced back to an ideological conflict which is fundamentally philosophic, or that the integrity and effectiveness of the search for truth is destroyed by differences of philosophic tradition which simply reflect differences of culture and interest. In much the same fashion historians of Roman and Renaissance philosophy have argued equally plausibly that philosophy was freed from dogmas and superstitions in those periods and philosophers differed only verbally, and that philosophy disappeared wholly into the barren verbalism of rhetoric and the discouraged ineffectiveness of skepticism.

It is improbable that invitations to dialogue will lead to philosophic agreement or cultural uniformity, and it is doubtful whether such agreement or uniformity would be desirable if they were possible. But if controversy arises from the radical differences among the methods by which philosophers have sought truth, the possibility of dialogue is to be found in the similarities among the methods by which they have sought intelligibility and consensus. It is impossible to avoid controversy concerning what is true or probably true, or controversy might be avoided without abandoning problems of the relation of arguments to the exploration of reality by turning attention to problems of the relation of arguments to elucidation of minds. Problems of communication are not wholly independent of problems of proof, but there are large regions of coincidence in the methods by which philosophers take into account the audiences to which their arguments are addressed. The controversies which grow out of differences of method are crucial precisely because they concern issues in which it is difficult to separate substantive differences concerning the nature and relations of things from verbal differences due to shifts of meanings of terms defined according to opposed methods and principles. Formal analysis of what is
accepted as inference and what is accepted as principle should not only clarify meanings by separating fact from form of statement but it should also have material implications by giving objective grounds to the study of attitudes and audiences which has taken a skeptical and relativistic turn in comparative psychology, the sociology of knowledge, and the variety of studies in which the relations of cultures are treated. This large region is the field of what has often in the history of thought been called rhetoric, and since the four methods enumerated above have been described by considering four possible positions concerning the relation of proof to persuasion, the possibility of cooperative study and mutual understanding of arguments of the second kind may be judged by considering the place of rhetoric in each of the methods.

The methods of rhetoric constitute the whole of philosophic method in the operational or skeptical method. Many of the efforts to reduce controversy and advance truth in the history of modern philosophy from Francis Bacon and Vico to Mill and some contemporary analytical philosophers have made more or less conscious appeal to the commonplaces of rhetoric. Ch. Perelman has urged a return to rhetorical considerations for a theory of philosophical argumentation. The preceding analysis of dialogue and controversy was made from the point of view of the rhetorical or skeptical tradition in which the fundamental assumptions are that knowledge is advanced best by the free opposition of arguments, that a common truth may be given a variety of statements from different perspectives, and that there is an element of truth in all philosophic positions. In problematic inquiry, rhetoric or its counterpart, dialectic, is a methodological stage antecedent to the resolution of philosophic problems; it is not the method of philosophy, but any philosophic argument may be examined rhetorically or dialectically to disclose its assumptions and form. In the context of a dialectical philosophy, rhetoric is imperfect dialectic limited to subjective distinctions, but such distinctions and principles are susceptible of dialectical expansion and examination such as they receive in the “inconclusive” dialogues of Plato. In a logistic philosophy, rhetoric has no place as a cognitive method, but rhetorical arguments possess a structure which can be analyzed in logistic semantics and which can be compared in structure to cognitive arguments.

Analyses of arguments for communication, separated from analyses of arguments for demonstration, may provide not merely the method by which to advance dialogue in philosophy but also materials by which to lessen tensions and oppositions between cultures. It is not to be anticipated that there will be agreement in the treatment of this common region of philosophy, since the approaches to it are affected by differences of method as much as the substantive problems of truth which are the center of philosophic controversy. But the different treatments will be comparable approaches to problems of communication—rhetorical enumerations of modes of expression adapting opinions or positions to audiences, problematic enumerations of methods adapting concepts to circumstances, logistic enumerations of constructions in which terms are defined and combined, dialectical enumerations of systems adapting principles to arguments—and they should make it possible to focus attention on the different structures of argument and the different presuppositions employed in different traditions and forms of philosophy. The basic problems of dialogue are, first, to find ways to make certain that there is agreement concerning what is in question and, second, to understand what is conceived to constitute a satisfactory answer to the question. Only when these problems have been resolved is it possible to decide whether proposed solutions are in agreement or opposed. Mutual understanding in the sense of agreement concerning what the question is and what is required in a satisfactory solution is necessary if philosophers are to resume their dialogue, or even continue their efforts to convince each other of the truth of their respective positions, and it is essential also to the solution of social and political problems—to make possible agreement on common courses of action for different reasons, appreciation of alien values, and confidence based on understanding.