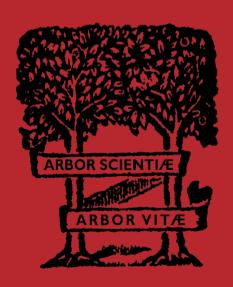
# **DIALECTIC**



Founded by C. K. Ogden

## DIALECTIC

MORTIMER J ADLER



### First published in 1927 by Routledge, Trench, Trubner & Co Ltd

Reprinted in 2000, 2001 by Routledge 2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Transferred to Digital Printing 2007

Routledge is an imprint of the Taylor & Francis Group

© 1927 Mortimer J. Adler

All rights reserved. No part of this book may be reprinted or reproduced or utilized in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

The publishers have made every effort to contact authors/copyright holders of the works reprinted in the *International Library of Philosophy*.

This has not been possible in every case, however, and we would welcome correspondence from those individuals/companies we have been unable to trace.

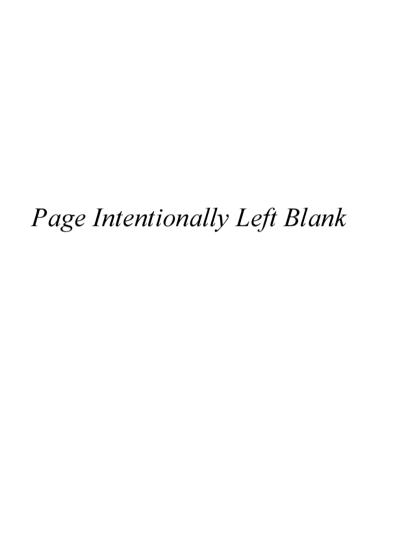
These reprints are taken from original copies of each book. In many cases the condition of these originals is not perfect. The publisher has gone to great lengths to ensure the quality of these reprints, but wishes to point out that certain characteristics of the original copies will, of necessity, be apparent in reprints thereof.

British Library Cataloguing in Publication Data A CIP catalogue record for this book is available from the British Library

Dialectic
ISBN 0-415-22550-7
Philosophy of Mind and Language: 8 Volumes
ISBN 0-415-22576-0
The International Library of Philosophy: 56 Volumes
ISBN 0-415-21803-9

## **CONTENTS**

|    |                              |       |    | PAGE |
|----|------------------------------|-------|----|------|
|    | Preface                      | •     | •  | v    |
|    | PART I. DISCOVE              | RY    |    |      |
| ı. | Introductory                 |       |    | I    |
| 2. | Traits of Controversy .      |       |    | 26   |
| 3. | SPECIMENS OF HUMAN DISCOURSE | Ξ     |    | 34   |
|    | PART II. DESCRIPT            | NOI   |    |      |
| ı. | Empirical                    |       |    | 81   |
| 2. | LOGICAL                      |       |    | 142  |
| 3. | METAPHYSICAL                 |       |    | 200  |
|    | PART III. INTERPRET          | TATIO | NC |      |
| ı. | PHILOSOPHY AND SCIENCE .     |       |    | 222  |
| 2. | A Summa Dialectica           |       |    | 238  |
| 3. | THE DIALECTICAL ATTITUDE     |       |    | 243  |
|    | Appendices                   |       |    | 249  |
|    | INDEX OF PERSONS AND TITLES  |       |    | 261  |
|    | INDEX TO THE ARGUMENT .      |       |    | 262  |



## DIALECTIC

T

#### THE DISCOVERY OF DIALECTIC

#### Introductory

The characteristic activity of God, according to Aristotle, is a thinking on thinking. Since God, in this view, is the perfect philosopher, it is not wholly inappropriate that among men the philosophers should most frequently have become engaged in this activity. But being men as well as somewhat divine, they have not ever been wholly successful. This may be seen in that fact that preoccupation with the considerations of methodology has occurred at every stage in the history of western European thought. The specific problems, and the terms in which they may have been temporarily solved, have changed, of course, from time to time. But in each epoch there has been some attempt to state the ideal of human thinking, and to describe the process best adapted to achieve that end.

By and large, the methodology of a period, either explicitly stated as a logic or a psychology, or perhaps merely exemplified in its intellectual products, is a sensitive index of the typical intellectuality of the period. This if said very generally of the classic, mediaeval, and modern periods, would hardly be questionable. It is relevant to our purpose to make this statement only in so far as this book claims to be a departure from the traditional conceptions of thinking prevalent in this, and perhaps, other epochs. And to make this claim significant it is necessary to define the novelty of the present attempt, as well as to indicate its sources in the tradition. It may be demonstrable that we are

here engaged in focalizing and crystallizing a number of tendencies that have always existed, have at times been prominent, and have recently come into new emphasis.

The traditional literature of methodology—and no distinction is here made between normative logic and the various psychological accounts of thinking—may be summarized in the statement of the few fundamental theses which have recurred repeatedly and have, therefore, acquired a certain obviousness and conventionality. (I) Thinking is a matter of having and dealing with ideas. (2) Thinking is a process which an individual mind carries on by itself when it has ideas and deals with them. (3) Thinking is an activity of reason, and is essentially independent of irrational purpose and desire. (4) Thinking seeks to end in knowing; that is, thinking rests in the truth.

These theses form a highly conventional doctrine, but a doctrine which has nevertheless been denied unanimity of assent by the assertion at one time or another of contrary opinions regarding them. In examining each of these statements more carefully this will be kept in mind, and the divergent opinions will be stated in each case. These divergent tendencies have suggested, and perhaps even partially formulated, the doctrine of this book.

(r) Thinking is a matter of having and dealing with ideas. Ideas may be defined either as images in the mind, or as propositions, or as judgments, or even as imageless thoughts. There is a sense, perhaps, in which an idea either is, or has something to do with, one or another of these entities. And thinking certainly does not go on independently of ideas in one or another of these senses. Common logic and the traditional psychology have not committed an egregious error in making this assertion. The difficulty rests with what has been omitted, and in some cases, excluded from the description of thinking. It is only recently that the insufficiency

of this description has been suggested by two unrelated tendencies in contemporary thought, behaviorism, on the one hand, and a renewed interest in linguistics, on the other.

No espousal of behaviorism is herein intended. That is not necessarily implied in the reference to the behavioristic psychologist's insistence upon the relation of thinking and talking. Even the dilemma, whether thinking can go on apart from language, or whether thinking is to be identified with language activity, need not concern us at present. Our interest is chiefly in the assertion of the importance of language as an agency in thinking. This assertion does not deny the thesis being considered. It merely suggests another aspect of the process of having and dealing with ideas, which earlier definitions of the idea as an image or a judgment or a notion, omitted. It would make the thesis read as follows: thinking is a matter of having and dealing with ideas, (largely or entirely) through the medium of language.

Behaviorism arose at a time when psychologists and logicians interested in the problem of thinking were concerned with the theory of meaning. But behaviorism, although it had special theory of thought, contributed little to the more abstruse, and perhaps too philosophical, consideration of the nature of meaning. Curiously enough, however, what seems to be the upshot of a prolonged discussion of meaning, is quite congenial to behaviorism. The pure and mathematical logicians were interested in meaning only in the sense of implication; the introspective and, perhaps, pure psychologists were interested in meaning only as the attribute of an image or as a conscious entity or gegenstand itself. remained for those who approached the problem as the central theme of linguistics to give the most adequate and detailed statement of all the issues involved.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> See C. K. Ogden and I. A. Richards, *The Meaning of Meaning* in the International Library of Psychology, chap. ix, passim.

it must be clearly understood that no one definition or theory of meaning is herein accepted. The important point is rather that by investigating meaning in terms of language, in terms of the functioning of symbols in whatever notation, a thorough phenomenology of the processes by which words, or other symbols, come to have the various meanings that they do have, was obtained. This phenomenology may have solved no problems, but it at least clarified them by enumerating the many meanings of the word "meaning" itself.

Thinking as a matter of ideas thus becomes not only generally an affair of language, in terms of behaviorism, but more specifically, an affair of meanings which can be expressed clearly, if not ultimately, in terms of verbal relationships and the characteristics of the symbolic process. That thinking is such and such is not to be asserted; it is our purpose merely to observe the modifications of the original thesis introduced by behavioristic psychology and the linguistic theory of meaning, two tendencies divergent from the main tradition.

It is interesting and important to remember that the theory of language is a radical and perhaps subversive element only in the specifically modern tradition from Descartes and Locke to the present. It was otherwise in both classical and mediaeval times. Without scholarly documentation this statement can be supported by calling attention to the intimate relation between grammar and logic in Aristotle's Organon, and to the order of studies in the mediaeval trivium, grammar. rhetoric, dialectic. It is hardly implied that there is a concord between these two instances of a relation observed between the structure of language and the procedure of thought, and the contemporary observation of a similar relationship. As a matter of fact, mediaeval literature furnishes us with several disagreeing doctrines of language, and in Aristotle the relations between grammar and logic are to be found by the inquirer who has an eve for such matters. They are not explicitly

expounded by Aristotle himself. But, at least, these references lead us to the conclusion that it has only been since the seventeenth century that the description and theory of thinking have ignored or under-estimated the relevancy and significance of language, of grammar, and of rhetoric. It is, therefore, against the background of the last three centuries that the revived interest in and emphasis of language is important.

(2) Thinking is a process which an individual mind carries on by itself when it has ideas and deals with them. The emphasis in this statement is upon the fact of individuality. According to the conventional opinion here being expounded, thinking may take any form whatsoever; i.e. reverie, ratiocination, pragmatic reflection, experimental procedure, or thinking may be either by analogy, induction or deduction,—but it will always be described as a process in which a single mind engages. It is difficult to unravel the historical grounds for the commonplaceness which this thesis has attained, but it is not unlikely that this emphasis upon the individual in thinking has been connected historically with the equally conventional opinion that all thinking can be exhaustively described in terms of deduction and induction or some form thereof.

The objection which might be raised to this thesis, and the historical divergences from it which lead to this objection, assails both of its two clauses at the same time. Thinking may be a process carried on by two minds and depending for its life upon the interplay of these two minds; and if thinking is ever so conditioned, it may have a formal structure which is not really reducible to the canonical forms of induction or deduction.

Anyone who meditates for a moment upon the experience of human conversation,—conversation intended to establish or dispose of opinions and perhaps, therefore, called argumentative or polemical,—will agree that such conversation is a kind of thinking in which an individual mind can indulge only through the mutual participation

of one or more other minds. And if it is not denied that conversation or argument is a kind of thinking, it will be admitted that here is a kind of thinking which differs from the patterns of the laboratory and the library, and which could not be properly analysed or described by reference to ordinary logical terms.

The fact of human conversation and argument is so omnipresent among persons who might be concerned in the least about the nature of thought, that it seems odd the tradition should have ignored this very relevant phenomenon. As a matter of fact, it is again the specifically modern tradition since the Renaissance which has been content with its common formulæ of induction and deduction. There are major exceptions in both classical and mediaeval thought.

The dialogues of Plato, whatever be the final satisfactory interpretation of them, exemplify perfectly the cogitative qualities of human discourse. That Plato employed the dialogue as a literary form may be due to the influence upon the poetic tendencies in his nature of the *mimes* of Sophron; but there is also considerable ground for feeling that Plato wrote dialogues because he appreciated the origins of thought in conversation. That Plato should have had this insight is not startling when one remembers that his intellectual career was begun and nourished among the sophists. And, furthermore, Plato is responsible for the term "dialectic", a term which most generally designates the processes of discursive (or conversational) thinking.

The contrast and opposition of the classical and modern traditions with regard to this point is made sharply clear by an inuendo of verbal usage. Plato would not have resented the identification of sophistry and dialectic, if we were allowed to distinguish between good and bad sophistry, between the sophistry of Socrates and Thrasymachus—although we might smile at the distinction. At least, he would have perceived their formal similarity. But in the last three centuries

sophistry has become a word of opprobrium and derogation par excellence, and without any recognition of formal structure, it has been employed as a synonym for dialectic and for "scholasticism"—another item which the modern tradition has thrown into the discard or held up to ridicule and abuse.

That scholasticism be so designated and so classified is not at all inappropriate, for the schoolmen were masters of the art which the dialogues of Plato both exemplified and praised, and which they conventionally called dialectic. We cannot here enter upon an adequate report of the nature of dialectic and the rôle it played in mediaeval thought; but we can observe certain of its intellectual affiliations that will define it against the background of the tradition.

Dialectic was understood to be neither a method of investigation nor one of demonstration. It was a method of argument, of controversy, and disputation. Probably in so far as argument occupied so large a part of the intellectual life of the Middle Ages, dialectic was valued; and probably in so far as investigation, experiment, and demonstration have been the dominant intellectual concerns of the era introduced by Galileo and Newton, dialectic has been ignored, its value under-estimated or condemned, its form misunderstood. This fact of change of interest and occupation, along with a certain interpretation of the Organon of Aristotle made popular by the Novum Organum of Bacon, probably accounts for the conception that thinking is a matter of induction and deduction, a business of inference generally, if not exclusively, carried on by the single mind.

The importance of dialectic as an educational device is also significant. One remembers that in *The Republic* the training of the philosopher-king was to be concluded with dialectic, "the coping-stone that lies on top of all the sciences"; that in the education of the Roman gentleman, as reflected and outlined in the writings of Cicero, rhetoric was one of the foundations; and that

in the organization of the mediaeval school, the trivium comprised grammar, rhetoric, and dialectic. What was at one time considered indispensable in the training of either a gentleman or a philosopher has now become an element quite carefully to be excluded from the curriculum, as subversive of the scientific discipline. Instead logic, inductive and deductive, became the required course of study, and it is worth noting that it has completely failed to achieve the importance in the modern scheme that dialectic occupied in the ancient and mediaeval. It has passed from being a discipline thought necessary in the training of the scientific mind to being either an accessory to such training, or merely a consideration of the discipline itself in the abstract, a set of formal rules and practices On the contrary, dialectic retained its vitality, and flourished in the soil in which it was indigenous. Certainly in Montaigne, and even so late as Dr. Johnson, rhetoric and the ability to converse well were recognized as distinguishing adjuncts of the educated man.

The reiterated relation of dialectic to rhetoric and to grammar suggests that our earlier discussion of the part that language plays in thinking again becomes relevant On the one hand, the importance of language is conceded both in the classical and mediaeval interest in dialectic. The dialogues of Plato seem to be in part concerned with the definition of terms, and with making distinctions clear in words. The schoolman was made fit to study and practise dialectic by the preliminary discipline of grammar and rhetoric. On the other hand, the very recent study of language contributes from a totally different angle another confirmation of the significant and intimate interdependence, not only of language and thought in general, but specifically, of language and the kind of thinking which we have called conversational or dialectical.

This contribution is made jointly by anthropology and psychology. The latter's study of the origin of

language habits in the child <sup>1</sup> leads to the theory that after the period of verbal egocentrism, the basic value in word-acquisition is the use of language to communicate. It is only after the child has acquired a vocabulary in order to communicate its wishes or its feelings to its social environment that it is able to, or tends to, use this vocabulary for the purposes of a-social, or intelligent but non-communicative, expression. In other words, talking to oneself is a much later, and perhaps higher, development than talking to others. The kind of thinking which goes on in what is technically called sub-vocal talking is derivative from the earlier vocalized speech of direct communication.

The anthropologist reports a similar finding in the linguistic habits of primitive peoples. Their language forms are primarily adapted to the needs of communication, of asking and answering questions, of giving orders or making statements having social import, rather than to the purposes of recording observations or distinctions in discourse. We have become so accustomed to regarding language as a device extraordinarily well adapted for registering the observations and distinctions we are capable of making, we do not realize that among less developed peoples, less "sophisticated" perhaps, language serves the much simpler function of direct communication.

Socialized thinking may be, if these evidences are worthy, more primitive than thinking which is done apart from the social environment and is at the same time intelligent rather than autistic. Thinking, if it is related to language at all, may be primitively a matter of talking in the sense of social speech, a matter of conversing. Dialectic, or the refinement of conversation, is certainly a later development, a sophistication of speech as it were; and similarly, the use of language in intellectual processes which are not social or conversa-

<sup>&</sup>lt;sup>1</sup> See Jean Piaget, *The Language and Thought of the Child*, in the International Library of Psychology, etc.

tional, is a derivative practice. In the light of these distinctions, it is odd that the thesis we are considering, i.e. thinking is a process which the individual mind carries on by itself, should have ever gained such conventional weight, and that methodology of the modern tradition should have been so exclusively concerned with induction and deduction and similar ways of inference, to the complete ignorance of dialectical thinking.

One prominent exception to the modern tradition must be acknowledged. Hegel, among the philosophers, not only recognized but emphasized the distinction between the ordinary normative logic and the method of dialectic, so much so, in fact, that the phrase "Hegelian dialectic" has become a catch-word of disapproval or praise. Hegel generalized the method beyond the confines of human discourse and beyond its employment in controversy and dispute, thus going beyond Plato or Abelard. It becomes with Hegel the underlying pattern of all intellectual activity, and, of course, of all change in the universe, since whatever is real is rational. At this point we cannot pause to evaluate the Hegelian position, or even to contrast it thoroughly with the historically earlier uses of dialectic. It contributes to our present discussion in one respect: it suggests that dialectic is a form which can be analysed and contemplated apart from its occurence in actual discourse or dispute. To put this in other words, dialectic is a kind of thinking to be distinguished from the inductive or deductive thinking engaged in by the "single mind", and what seems to be implied thereby is that dialectic involves a duality of minds. It does actually in ordinary conversation and dispute; but what Hegel leads us to see is that the mind can converse or dispute with itself, and in doing so partakes of dialectical rather than other kinds of thinking. What is required formally for dialectic is not two actually diverse minds, but rather an actual diversity or duality, an opposition or conflict, and this

may occur within the borders of a single mind. When it does, that mind is likely to carry on dialectical thinking, and it is this which has been ignored by the second thesis of the traditional methodology of modern thought.

(3) Thinking is an activity of reason and is essentially independent of irrational purpose or desire. This is an old and in many ways a noble way of regarding thought, but it is not unambiguous. It has been variously interpreted at different times. It has meant that reason is self-sufficient and self-dependent; that reason is uninfluenced by the forces of unreason; that reason is independent of faith; that thinking is uninfluenced by desire or emotion, by wish or purpose; that thinking is a purely intellectual affair, constituted and regulated by reason alone, and unaffected by the limitations of human nature or human materials, specifically, language. The intention is not to submit these statements to evidence or proof, but simply to understand what it is they assert and what it is they deny. And, perhaps, the discussion can be clarified by reducing the variety of special meanings which the thesis may have to their most general form. This is the thesis of intellectualism—what James would have called a "vicious intellectualism"—and may be stated as follows: Thinking is an activity of reason which employs no non-rational elements, or no elements not submitted to reason. To this thesis several objections might be, and have been, raised, and the consideration of them will explain the real force of the thesis itself.

The most obvious antithesis is, of course, presented by recent psychology and psychoanalysis.<sup>1</sup> According to the now familiar psychological analysis, thinking is more frequently rationalization than reasoning. Often

<sup>&</sup>lt;sup>1</sup> The present discussion is confined to the traits of what psychoanalysis calls intelligent, as contrasted with autistic thinking. For the relation between these two kinds of thinking and language habits, see Piaget, op. cit., pp. 43–9. For my own discussion of the relation between autistic and intelligent thinking, when they conflict, see below.

the statement is made that thinking is always rationalization and never reasoning. The distinction between rationalization and reasoning must definitely not be interpreted in logical terms. It is a distinction in terms of the psychological act. Rationalization is a case of thinking in which reasons are adduced to support a conclusion, or a belief, or an opinion accepted or held on grounds other than the reasons thereto adduced. Such grounds may either be called prejudices, emotional complexes, conscious or unconscious wishes. Reasoning, on the other hand, is a case of thinking in which the conclusion or belief or opinion is reached and held only by way of the reasons which are discovered and considered in the processes of thinking. The point at issue translated into the terms of the thesis we are discussing becomes a question of whether reason is ancillary to pre-rational conviction or prejudice, serving merely the office of rationalization or justification, or whether reason functions independently of such forces, the thinking process actually leading to the conclusions that are then, and only then, accepted as convincing.

Without going into the evidences for the psychological theory of the priority of non-rational elements in thinking, it would be well to state some of the further bearings of the theory upon the matters at issue. Thinking, this theory holds, serves a purpose which is itself not to be submitted to thought, or reasoned about. The term purpose here stands for any one of a number of items, such as prejudices, complexes, or opinions which we already believe or which we will to believe. It does not matter what form thinking takes, it always, according to this theory, is purposeful, and in this sense is not independent of non-rational elements. But it is clear that in the particular kind of thinking which we have already called controversial or conversational, these non-rational elements would seem to have greater force and influence. By the very fact that dialectic is a sort of argument or disputation, the play of emotions and purposes is given opportunity to become more subtly intertwined with the opposition of reasons, and more difficult to unrayel.

There are three sources of non-rationality in dialectical thinking, three foci of intrusion of the irrational. In the first place, an argument usually is motivated by the desire to convince one's opponents, or at least, to annihilate the opposition raised. Polemic thus involves partisanship, and partisanship, to some degree, stems from prejudice. In the second place, certain propositions are sometimes invoked in argument as having a supracogitative source, whether this source be specifically designated as authority of one sort or another, faith, intuition, or other form of special insight. Since they derive from supra-rational considerations, such propositions will not be submitted to reason. In the third place, certain propositions are denied because of lack of insight: that is, the intelligibility and therefore the intellectual pertinence, of a proposition is denied. Such denial the psychologist would explain in terms of an emotional block or hindrance. In short, thinking is influenced by special pleading and special insights and misunderstandings, these anomalies in the rational procedure arising from the emotional and wilful attitudes in human nature.

Each of these difficulties that thinking must meet, and others closely affiliated, will receive detailed analysis later. Suffice it for the present if it be suggested that in so far as thinking tends to be demonstrative or argumentative, and to be occupied with propositions to be asserted or denied, it may be susceptible to enumerated non-rational influences both in its origin and in the course of its development toward a conclusion. This, of course, is directly contrary to the conventional thesis of the tradition.

The psychology of recent years is not the only source of objection to the view that thinking is purely rational. Comparatively recent logical theory, especially in the field of mathematical logic and in the branches of pure mathematics dealing with the theory of postulates and the non-Euclidean geometries, has formulated the demonstrative procedure in a way that makes clear the rôle of non-demonstrable factors. This is the logical parallel of the psychological analysis which reveals the agency of emotion and purpose in thinking.

Plato certainly seems to have been aware at times that the argument was going on within the limitations of certain hypotheses and definitions, which were themselves not submitted to argument. Euclid and Spinoza, it cannot be doubted, must have had insight into their common methodological device of geometrical demonstration, the proving of a certain body of propositions in terms of certain definitions arbitrarily established, certain axioms taken to be self-evident, and certain postulates taken for granted. And in one sense certainly, the method of theology is analogous to that of geometry, the articles of faith, the credal dogmas, functioning as definitions and postulates do in the limitation and demarcation of the field of rational procedure, Scripture and Canon furnishing axiomatic grounds.

But it was not until mathematical thinkers elaborated the theory of postulates and analysed the sources and properties of doctrinal demonstration, that the methodological principles implicit in these earlier instances, acquired their full significance. The chief points of postulate theory are that no demonstration can be made except in terms of some propositions which are not demonstrated, though not necessarily not demonstrable; that such undemonstrated propositions, usually called postulates, are taken as true without proof; that the process of definition requires the acceptation of certain terms as undefinable in any given set of definitions; that such indefinables are taken as having precise meaning though undefined; that, in short, any logical demonstration, whether called a doctrine or a system, depends in logical origin upon a set of primitives.—

postulates, definitions, and indefinables,—and that within any given system or doctrine, these primitives are themselves not submitted to the processes of demonstration.

These primitives, then, are non-rational elements in the process of thinking, and this is equally so whether that thinking be inductive or deductive, demonstrative or argumentative. They are usually not considered to be absolute; that is, there is no one set of primitives obligatory upon all thinking, and necessary to every system. Postulates and definitions are the logical equivalents of what the psychologist calls prejudices and wilful thinking. They are chosen or selected, rather than intellectually obligatory and rationally unavoidable. The most general name for such elements is "intuitive propositions", when intuition is taken to mean not the manner in which we know a true proposition but the manner in which we know a proposition The former of these two definitions of taken as true. intuition makes the proposition axiomatic or obligatory: the latter makes it a postulate, which is selected or not selected according to the intellectual purposes governing the specific instance of thinking. In either case, however, intuition represents a supra-cogitative phase of thought, and one indispensable to the processes of demonstration and argument.

The work of Hans Vaihinger, and perhaps the pragmatic movement in philosophy, are also partly responsible for the opposition to a purely intellectualistic methodology. The former's theory of logical fictions, and the latter's emphasis upon the will to believe, contribute from quite different angles to the same general point of view that thinking, on the one hand, is forced to employ elements that are themselves irrational or at least unreasoned, and on the other hand, that thinking is motivated activity, whether the purpose be that of practical adjustment to an environment, or a purely intellectual consideration, such as the development of a doctrine or the demonstration of a creed. Logic, in the light of these

points of view, is seen as an instrument which does not supply its own ends; its functioning is determined for it, not by it. Logic is, as all tools are, valueless unless there is furnished from other sources the materials upon which it can operate. It is an instrument to deal with opinions and obviously cannot be used to create opinions, nor can it be used in their absence. Unless one has something to prove or demonstrate, the methods of proof and demonstration lie idle. The conclusions to be proved must be reached by other faculties, insight or imagination; once given, logic functions dynamically in its proper rôle of establishing means to the determined end.

These matters will be discussed in greater detail later. Our present interest is merely to contrast the thesis that thinking is an activity of reason independent of all non-rational elements, with various forms of the antithesis that thinking is both in origin and in its progressive determination somewhat arbitrary and in certain ways non-rational. The argument may be couched in either logical or psychological terms.

(4) Thinking seeks to end in knowing, that is, thinking rests in truth. This is probably the most fundamental of the four theses being stated. It is given wide assent, despite the variety of meanings assigned in the interpretation of knowledge and of truth. And the issue taken, when objection is raised against the truth ideal, is probably the most crucial to be faced in the development of the argument of this book.

Little explication is needed for the proposition. It implies obviously that thinking is an agency in the accomplishment of knowledge. This might be stated in any one of a number of ways, each, however, giving a slightly different implication. Thinking is dealing with ideas in order to arrive at a set of ideas which can be asserted as true. Thinking is a manner of responding to environmental stimuli in order to obtain a final, consummatory, and satisfactory adjustment. Thinking

at all or whether its knowledge is highly relative to its circumstances, nevertheless, thinking in any case is good in so far as it is true. There is one meaning common to all these uses of the truth ideal, and that is that thinking is to be judged in terms of something extrinsic to itself an absolute of some kind, it makes no difference whether it be the familiar Absolute of objective idealism or the disguised absolutes which are called facts by empiricism and pragmatism. It makes no difference whether conformity to the absolute is a temporary or a final relationship, the absolute itself does not change, and the truth is either good once for all, or becomes better and better as it becomes more and more approximate. The central point to be stressed is that the truth quality in all of these cases, despite the differences stated, is essentially the same in one respect, that it is an extrinsic relationship obtaining between thinking and something which is itself not thought.

It is in another direction entirely that a really serious deviation from the conventional methodology occurs. Just as mathematical logic, and affiliated studies, offered previously a profound contrast to the traditional conception of thinking, so here they present a usage of truth-value equally divergent. Truth is a quality intrinsic to a system of propositions. A brief consideration of the structure of systems will make this clear. A doctrine consists of its postulate set and its propositions. The postulates are taken as true. They are not true in relation to anything other than themselves. They are true in themselves, because they are taken for systematic purposes in that way. The definitions are similarly taken as true, or are neither true nor false if they are merely arbitrary notational references. The propositions are true if they stand in a certain, specific logical relation to the postulates and definitions, and false if they stand otherwise. The truth and falsity of the propositions is their quality in a systematic relationship, entirely intrinsic, and in no relation to any facts or propositions

## INDEX OF PERSONS AND TITLES

| Abelard, 10, 64-73, 176 Adams, Henry, 65 n. Aphasia and Kindred Disorders of Speech, 93 Aristotle, 1, 4, 5, 7, 92, 148, 215, 232  Beyond the Pleasure Principle, 129 n. Buchanan Scott, 98 n., 132 n., 240-1 | Mill, J. S., Appendix F  Mont St. Michel and Chartres, 65 n.  Montaigne, 8  Newton, 7  Novum Organum, 7  Ogden, C. K., 3 n. Organon, 4, 7, 92                               |
|--|---|
| Cicero, 7<br>Crookshank, F. G., 91 n.  Dante, 99 n. Descartes, 4, 231-2 Dewey, John, 126   | Piaget, Jean, 9 n., 11 n. Plato, 6, 7, 8, 10, 14, 22, 96, 106, 122, 126, 131, 133, 134, 139, 233-5  Possibility, 98 n., 132 n., 148 n., 162 n., 211 n., 215 n., 235 n., 240 |
| Dichotomy of Nature, The, 158 n. Divine Comedy, The, 99 n. Ellis, Havelock, 96   | Porphyry, 65, 66 Protagoras, 59-62 Pythagoras, 126  |
| Euclid, <u>14</u> Freud, 95, 129 <u>n.</u>   | Republic, The, 7 Richards, I. A., 3 n.  |
| Galileo, 7 Head, Henry, 93 n.  | Santayana, George, 95, 96, 129-31, 139, 231 n. Science and the Modern World, 103 n.   |
| Hegel, 10, 22, 125, 233-5  Isagoge, 65   | Shaw, G. B., 139 n.<br>Sheldon, W. H., 158 n.<br>Socrates, 59–62, 106<br>Spinger, 14, 98, 139, 133, 232   |
| James, William, 11, 107, 109, 125, 129–31, 139<br>Johnson, Samuel, 8   | Spinoza, 14, 98, 129, 133, 232<br>Spencer, Herbert, 112<br>Summa Dialectica, 235, 236, 237,<br>238-42   |
| Kant, 96, 232  Language and Thought of the Child,  | St. Thomas, 72, 73  Taylor, A. E., Appendix F   |
| 9  |   |
| Leibniz, 232<br>Lincoln, A., 35 ff., 91  | Vaihinger, Hans, <u>15</u> , 96 Whitehead, A. N., 103 <u>n.</u> , 148   |
| Leibniz, 232   |   |

### INDEX TO THE ARGUMENT

Actuality and discourse, 206 ff.; as a class of relationships, 214-15; as a realm of possibility, 207; relation of discourse to, 208; specifications of, 206

Actualization of logical relations through dialectic, 151

Amateur criticism and dialectic,

Anti-intellectualism, 15 Analysis, 142, 160 ff.

Analytic implication, Appendix E

"As-if," 15
Attitude, dialectical, 242 ff.; of impartiality, 127; of impracticality, 131

Autistic thinking, 11

Behaviorism, its place in history of psychology, 3 ff.

Casuistry, 31 n.; and facts, 244 n. Classes and class relations, 147, 158 Connotation and denotation, 85,

Contradiction, 158, Appendix C; and opposition, 188-9; impossibility of, among isolated propositions, 195; only apparent in discourse, 191-2; summary of theses with respect to, 192 ff.

Controversy, psychological origin of, 86 ff.; traits of, 26 ff.

Conversation, analysis of, 177 f.; etiquette of, 125-34; good conversation, its persistence to the eighteenth century, 8; as a form of thought, 6

Deduction and induction, the insufficiency of, 28

Definition, properties of, 152; arbitrary character of, 30

Definitive implication, Appendix E Description of dialectic, summary of theses of, 75 ff.

Dialectic and conversation, 137, 177 ff.; and fencing, 137: and Greek tragedy, 132-3 and impracticality, 104; and insanity, 111 ff.; and intelligence, 107; and leisure, 105; opposition, 157: psychoanalysis, 117; method, 32-3; as complete potentiality, 205; as a term of derogation, 7; and the Middle Ages, 72; concerned meanings, 144; definition of, 142; origin of, in Plato, 6; empirical description of, 81 ff.; examples of, 34 ff.; in practice, 27; interpretation of, 219 ff.; its proximity to philosophy, 77; its relation to language, 81 f.; human nature in relation to 102 ff.; logical description of, 142 ff.; metaphysical description of, 200 ff.; meta-physical doctrine of, 216-17; translation in, 109; pre-requisites for, 102; empirical doctrine of, 100-1; summary of theses concerning relation of language to, 100-1; temperaments unsuited for, 123 ff.; therapeutic devices in, 125 f.

242 ff.; Dialecticalattitude, method in relation to geometrical method, 24; process, ultimate frustration of, 171; thinking and "if-then" thinking, 23

Discourse and the empirical situation, 93; in relation to logical categories, 28; and the formula: "validly following from," 32; limited by actuality, 206 ff.; relation of actuality to, 208; cogitative qualities in, 6; as a realm of being, 28

Dogmatism, as an intellectual disorder, 121; possible therapy for, 121 f. Emotion, exhibition of, 125
Empirical description of dialectic,
81 ff.; doctrine of dialectic,
100-1
Empiricism, 20
Etiquette, intellectual, 125-34
Exclusion, 147, 207-8

Facts, in relation to argument, 23 Fencing, 137
Freemindedness as exemplified in Plato, 233

Genetic fallacy, 81
Geometric method, 14, 20; and dialectic, 24
Geometries, non-Euclidean, 14, 104, 122
Geometry, self-criticism in, 122
God, the characteristic activity of, 1
Greek tragedy, 133

Hierarchical ordering, 149 Human nature, dialectic in relation to, 102 ff.

Ideas, in relation to individual minds, 5; thinking defined as a matter of having and dealing with, 23

Identity conditions, 148
"If-then," 21, Appendix E
Impartiality and partisanship, 128; necessity for, 127

Implication, 142, 147, 152, 157; Appendix E; metaphysical status of, 211

Impracticality, 131; the virtue of, 104

Inclusion, 147

Indefinables, necessity of, 29

Individual minds in relation to

Indefinables, necessity of, 29
Individual minds, in relation to thinking and ideas, 5
Infinite regressus, 29
Insight and dialectic, 111 ff.; and

psychoanalysis, 118
Intellectual options in discursive

Intellectual options in discursive partisanship, 30 Intelligence, necessary for

dialectic, 102, 103, 107
Intervalance, 186; Appendix B
Intuition and insight, 13
Intuitive propositions, 15
Isolated propositions, 190, 195 ff.

Knowledge as an end of thinking, 16

Language, 81-101; and definition, 90; and symbols, 82; habits of the child, 9; infinite modes of metaphor in, 98; its æsthetic quality, 92; its historical relation to thinking, 4 ff.; in relation to logic, 84; summary of the theses concerning the relation of dialectic to, 100-1; the connotative and denotative function of, 85, 91 f.

Law and casuistry, 31 <u>n.</u> Leisure, 102-5

Logic, as a tool, 16; its relations to language, 84; from a pragmatist's standpoint, 16

Logical act, the function of the, 144; description, a regulative myth, 176; relations and dialectic, 147 ff.

Love, 46, 51 f.

Mathematical logic, 14; irrational bases of, 15

Meaning,  $\underline{3}$  ff., 88; and dialectic, 144; conception of,  $\underline{3}$ ; problem of, 4

Metaphysical description of dialectic, 201 ff.; doctrine of dialectic, 216-17

Metaphor, scientific and poetical, 95-6; the infinite modes of metaphor, 98

Method of translation, psychoanalysis as a, 117

Methodologies as indices of intellectuality,  $\frac{1}{2}$  f.

Methods, dialectical vs. geometric, 24; empirical vs. geometric, 19, 30

Modes of metaphor in the Divine Comedy, 99 n.

Multiple attribution, 87

Neuroses and dialectic, 111 ff. Non-Euclidean geometries, 14, 104, 122 Notation, 89-90 Ontological status, 202
Opposition, 157; and partial resolution, 198; in contradistinction to contradiction, 188-9

264

Ordering of propositions, 153; within the universe of discourse, 200

Parameters, 148
Partial universes of discourse, 224
Partial wholes, 164
Partisanship and impartiality,
128; in discourse, 30
Part-whole relationship, 148
Personality and dialectic, 123 ff.
Philosophy, aims of, 223; contrasted with science, 225; hampered by religion, 226; and dialectic, 77, 223 ff.; subject matter of, 222; theology contrasted with, 226

Platonism, vs. Plato, 47 ff.;
Appendix F

Pragmatism, in relation to logic, 16; and the definition of truth, 17

Possibility and actuality, 207; specifications of, 203

Postulation, explicit, 126; place of, in mathematical logic, 14
Potentiality, 204; as a class of relationships, 214-15; as non-ontological, 215

Propositions, 142-3; Appendix D; analytic, 153; exclusion of, by synthesis, 169; relation of, 150 ff.; systems of, in relation to truth, 18; truth-value of, 197

Psycho-analysis, 114–20 Psychotics, 111 ff.

Rationalization and reasoning, 12 Relations, 144, 147 f., 150 Religion, as it affects philosophy, 226

Resolution, 157; conditions of, 163; of oppositions, 160; partial, and opposition, 198; intuitive character of every, 167-70

Rhetoric, the historical importance of, in ancient and mediaeval times, 7-8

Science, aims of, contrasted with philosophy, 225; as a partial universe of discourse, 224; relation of philosophy to, 222; subject-matter of, 222; the metaphors of, 95, 96

Schizophrenics at a disadvantage in dialectic, 116

Scholasticism, 7, 39

Self-criticism, 113; in geometry, 122

Soliloquy, 53

Sophistication in language and thought, 89

Sophistry, 39, 244 f.; as a derogatory term, 7

Symbols, as the content of language, 82

Synthesis, description of, 166; the function of, 161

System, necessary conditions for, 155; relation of, 142, 150; and doctrine, Appendix A

Temperament, its place in dialectic, 103-4

Terms, 142; as relations, 150

Theology contrasted with philosophy, 225

Theorems, 153

Theory of classes, 147

Therapeutic devices in dialectic, 125 ff.

Thinking, and knowing, 16; and truth, 16; as a matter of having and dealing with ideas, 23; as an activity of reason devoid of irrational elements, 11; as a process carried on by individual minds, 5; and rationalizing, 12; a-social, 9 autistic, 11; dialectic as a refinement of, 10; historical relation of language to, 4; "if-then," 21; conversation as a form of, 6;

Traits of controversy, 26 ff.

Translation, 157; and intervalence, 186; Appendix B; and schizophrenia, 116; in dialectic 109; and the resolution of oppositions, 160; partial, as a function of analysis, 159