

**THE APPLICATIONS OF
LOGIC: A TEXT-BOOK
FOR COLLEGE STUDENTS**

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The Applications of Logic: A Text-Book for College Students by A. T. Robinson

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BY

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PREFACE

THIS book is based on ten years of class-room experience at the Massachusetts Institute of Technology, first with courses in formal logic, and latterly with an attempt to adapt some of the more fundamental theories of logic to the practical aim of instruction in the expression and the criticism of thought. Such an attempt has seemed not out of place with any class of students, but particularly important in connection with the work of a technical school, the graduates of which are likely to find in their professional life more use for an orderly structure of ideas than for the niceties of expression. The purpose of the book is to treat the whole subject of logic in so far as it bears on the practical work of thinking and of expressing thought; it is intended as a text-book of applied logic, suitable for use as an introduction to the subject with college classes. To some extent, therefore, the exercises proposed take the form of work in composition; but at the same time many of them are intended rather to cultivate the critical faculty by a direct exercise of the judgment. These, too, have a bearing on expression, but their immediate effect is designed to be the ordering and control of ideas within the mind itself. The exercises in composition may be classed as elementary or advanced according to the knowledge and experience of the pupils who undertake them. They might follow a course in the elements of rhetoric; but also there is no reason why they should not precede it.

The study of logic has been from its earliest appearance connected with the practice of thinking and of expressing

ideas; and in this connection has offered a body of vastly important truth. Yet its teachings in this direction are not even now easily available for class-room use. The best of the modern books are highly technical and argumentative; in many of the simpler class-manuals, on the other hand, the exercises are somewhat remote and formal. In view of this situation it appears that there may be room for a simplified treatment of the fundamental ideas of logic, presented in the practical setting of a series of exercises. Experience has shown that, in being thus taught, the student loses no essential theory. Later, if time permits, he may be given a course in the nice distinctions of the syllogism, and he will come to it with that intelligent appreciation which so abstract and technical a subject demands.

For the epistemology of the book no excuses are offered. It is, like every theory with a philosophic basis, susceptible of attack. The changes also that could be made in the exposition of it are numberless. These, however, as far as they now occur to me, would lie along the direction of greater accuracy of statement, and might serve merely to confuse the beginner. Again, since the book is not a formal treatise on logic, but deals mainly with the applications of logical principles, no apology need be made for the substitution in some cases of simpler distinctions, such as suited the main lines of thought of the book, for certain familiar terms. The treatment of the syllogism, for instance, is here made to depend upon substance rather than upon form. It therefore loses in relative importance and falls back into its natural position in the whole perspective of the subject.

A list of my general obligations would be cumbersomely long. I owe special thanks to a short treatise by Mary Boole, to the writings of Bradley and Alfred Sidgwick,

and above all to such parts of Hegel's Logic as I have been able to render into terms of my own thinking. It would be surprising and disconcerting if this book were found to contain any original thought, but I am not aware that the ideas in it have been anywhere put to quite the same use before.

Simplicity of statement has not been the chief aim in writing. In doubtful cases I have asked myself, not what some "average" student of such and such attainments would understand, but what seemed from my point of view most vital and inspiring. The reason for this attitude lay partly in my desire that, if possible, the book might interest not only students but teachers, who are, after all, the only thorough readers of text-books. Again, I am by no means convinced that the average pupil is so slow of apprehension as in discouraged moments we incline to think him. Yet, if students were ten times more dull than has ever been asserted of them, I should still not wish to spread among them the impression that education may be had without work. Each day they must be asked to attempt a little more than they can accomplish; each day their enthusiasm must be stimulated by the presentation of ideas which, because of their large bearing on the problems of life, seem worth a sustained effort to master.

I am indebted to Professor Arlo Bates for having twice read my manuscript, and to Professor Henry L. Seaver for valuable suggestions toward the development of the chapter on classifications and divisions.

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