
CONTENTS

Editor's Preface	vii
Preface	xiii
Editor's Introduction	xvii

I. THE SUBJECT MATTER OF LOGIC

1. Logic and the Weight of Evidence	3
2. Conclusive Evidence or Proof	5
3. The Nature of Logical Implication	8
4. Partial Evidence or Probable Inference	13
5. Is Logic about Words, Thoughts, or Objects?	16
6. The Use and Application of Logic	21

II. THE ANALYSIS OF PROPOSITIONS

1. What Is a Proposition?	27
2. The Traditional Analysis of Propositions	30
3. Compound, Simple, and General Propositions	44

III. THE RELATIONS BETWEEN PROPOSITIONS

1. The Possible Logical Relations between Propositions	52
2. Independent Propositions	56
3. Equivalent Propositions	57
4. The Traditional Square of Opposition	65
5. The Opposition of Propositions in General	68

IV. THE CATEGORICAL SYLLOGISM

1. The Definition of Categorical Syllogisms	76
2. The Enthymeme	78

3. The Rules or Axioms of Validity	78
4. The General Theorems of the Syllogism	80
5. The Figures and Moods of the Syllogism	81
6. The Special Theorems and Valid Moods of the First Figure	84
7. The Special Theorems and Valid Moods of the Second Figure	85
8. The Special Theorems and Valid Moods of the Third Figure	85
9. The Special Theorems and Valid Moods of the Fourth Figure	86
10. The Reduction of Syllogisms	87
11. The Antilogism or Inconsistent Triad	91
12. The Sorites	94

V. HYPOTHETICAL, ALTERNATIVE, AND DISJUNCTIVE SYLLOGISMS

1. The Hypothetical Syllogism	96
2. The Alternative Syllogism	100
3. The Disjunctive Syllogism	101
4. The Reduction of Mixed Syllogisms	103
5. Pure Hypothetical and Alternative Syllogisms	103
6. The Dilemma	105

VI. GENERALIZED OR MATHEMATICAL LOGIC

1. Logic as the Science of Types of Order	110
2. The Formal Properties of Relations	113
3. The Logical Properties of Relations in Some Familiar Inferences	115
4. Symbols: Their Function and Value	117
5. The Calculus of Classes	121
6. The Calculus of Propositions	126

VII. THE NATURE OF A LOGICAL OR MATHEMATICAL
SYSTEM

1. The Function of Axioms	129
2. Pure Mathematics—an Illustration	133
3. Structural Identity or Isomorphism	137
4. The Equivalence of Axiom Sets	141
5. The Independence and Consistency of Axioms	143
6. Mathematical Induction	147
7. What Generalization Means in Mathematics	148

VIII. PROBABLE INFERENCE

1. The Nature of Probable Inference	151
2. The Mathematics or Calculus of Probability	158
3. Interpretations of Probability	164

IX. SOME PROBLEMS OF LOGIC

1. The Paradox of Inference	173
2. Is the Syllogism a <i>Petitio Principii</i> ?	177
3. The Laws of Thought	181
4. The Basis of Logical Principles in the Nature of Things	185

Appendix—Examples of Demonstration

1. What Does a Demonstration Establish?	189
2. Some Fallacious Demonstrations	195
Exercises	200
Bibliography of Works Cited	221
Index of Names	223
Index of Subjects	225