Contents

Prologue by Eugenio Bulygin *page* ix
Preface xix

PART I INTRODUCTION TO DEONTIC LOGIC

1 **The Language of Logic and the Possibility of Deontic Logic** 3
1.1 Validity, Truth, and Logical Form 3
1.2 The Language of Logic 8
1.3 Modal Logic and Deontic Logic 18
1.4 Main Systems of Deontic Logic 24
1.5 The Possibility of Deontic Logic 34

2 **Paradoxes and Shortcomings of Deontic Logic** 39
2.1 Paradoxes of Deontic Logic 39
2.2 More Serious Challenges 44
2.3 Facing Jørgensen's Dilemma 50
2.4 Deontic Logic with or without Truth 61
2.5 Conceptions of Norms: Two Alternatives for Deontic Logic 66

3 **Norm-propositions, Conditional Norms, and Defeasibility** 78
3.1 Logic of Norms and Logic of Norm-propositions 78
3.2 An Apparent Dilemma for a Logic of Norm-propositions 85
3.3 Conditional Norms 91
3.4 Factual and Deontic Detachment 97
3.5 Defeasibility and Deontic Logic 105

PART II LOGIC AND LEGAL SYSTEMS

4 **Legal Systems and Legal Validity** 117
- 4.1 Normative Systems and the Existence of Norms 117
- 4.2 Scope and Force of Legal Norms 125
- 4.3 Applicability and Validity 132
- 4.4 Applicable Systems and Hierarchical Orderings 136
- 4.5 Two Concepts of Legal Systems 143

5 **Legal Indeterminacy: Normative Gaps and Conflicts of Norms** 150
- 5.1 Formal Properties of Applicable Systems 150
- 5.2 The Problem of Legal Gaps 158
- 5.3 Normative Relevance and Axiological Gaps 166
- 5.4 Legal Conflicts and Coherence 175
- 5.5 Relevance, Conflicts, and Defeasibility of Legal Norms 185

6 **Legal Dynamics** 196
- 6.1 Momentary and Non-momentary Legal Systems 196
- 6.2 Promulgation and Derogation of Legal Norms 205
- 6.3 Two Approaches for Legal Dynamics 214
- 6.4 Logical Consequences and Legal Dynamics 223
- 6.5 Logical Consequences and Social Sources 232

Epilogue 241

Bibliography 245

Index 257