

Logical Forms

An Introduction to Philosophical Logic

SECOND EDITION

Mark Sainsbury

 **BLACKWELL**
P u b l i s h e r s

Contents

Preface to the First Edition	vi
Preface to the Second Edition	vii
Introduction	1
Organization	3
1 Validity	5
1 What is logic about?	5
2 Inductive versus deductive logic	9
3 Possibility: logical and physical	14
4 Validity, inconsistency and negation	19
5 Arguments and argument-claims	23
6 Some important properties of validity	26
7 Validity and usefulness: “sound”, “relevant”, “persuasive”	30
8 Sentences and propositions	32
9 Validity and truth conditions	36
10 Formal validity	37
11 The logical constants	41
12 The project of formalization	43
2 Truth functionality	54
1 The classical propositional language	54
2 Truth functional sentence connectives	59
3 Formalizing English in \mathbf{P}	62
4 Comparison of \mathbf{P} -connectives and English	73
5 The case against the material implication account of “if”	87
6 Implicature	94

7	“If”: implicature in defence of the truth functional interpretation	99
8	“If”: direct arguments for the truth functional interpretation	106
9	Non-truth functionality in English	111
10	From P -validity to validity	116
	Bibliographical notes	121
3	Conditionals and probabilities	122
1	Degrees of confidence	122
2	Conditional probability	124
3	Probabilistic logic	129
4	Lewis’s proof	143
5	Conditionals without truth conditions?	149
	Bibliographical notes	152
4	Quantification	153
1	The classical quantificational language	153
2	Interpretations and validity	157
3	Universal quantification	161
4	Existential quantification	167
5	Adjectives	170
6	Adverbs	175
7	Names	178
8	Identity	182
9	Numeral adjectives	183
10	Descriptions	188
11	Existence	195
12	Are names “really” descriptions?	201
13	Structural ambiguity in English	206
14	Q -validity and decision	212
15	Formalizing arguments	216
16	Attitudes	222
17	Binary quantifiers	225
18	Substitutional quantifiers	231
19	Predicate quantifiers and second order logic	234
20	Free logics	239
21	Depth	249

22	From Q-validity to validity	252
	Bibliographical notes	254
5	Necessity	257
1	Adding " \square " to P	258
2	Non-indicative and counterfactual conditionals	267
3	Adding " \square " to Q	281
4	Necessity de re and de dicto	287
5	The number of the planets	288
6	"Frege's argument"	291
7	Trans-world identity	299
8	" \forall " for " \square "	304
9	Counterpart theory	318
10	Necessity and vagueness	324
11	Metaphysics	329
	Bibliographical notes	337
6	The project of formalization	339
1	Logical versus grammatical form	339
2	Analysis and the Tractarian vision	348
3	Proof	355
4	Formal and structural validity	359
5	Logical constancy	364
6	Language, form and structure	380
7	Conclusion	389
	Bibliographical notes	391
	Glossary	392
	List of symbols	403
	Bibliography	406
	Index	419