Contents

1 Theories of Meaning **1**

1.1 The Object of Study 2

1.2 Sense and Reference 3

1.3 Assertion, Denial, and Positions 7

1.4 The Senses of the Sentential Connectives 9

1.4.1 Structural Rules 10

1.5 Constraints on a Theory of Sense 16

1.6 Models 22

1.7 Cut Elimination 29

2 A Hypersequent Approach to Modal Logic **36**

2.1 Introduction 37

2.2 Modal Logic 38

2.2.1 Model Theory 38

2.2.2 Sequents 40

2.3 Hypersequent Modal Logics 45

2.3.1 System K . . . 46
2.3.2 System D . . . 52
2.3.3 System T . . . 54
2.3.4 System S4 . . . 56
2.3.5 System B . . . 58
2.3.6 System S5 . . . 60
2.4 Technical Results . . . 64
2.4.1 Interdefinability of ▫ and ◊ . . . 64
2.4.2 Uniqueness . . . 65
2.4.3 Cut Elimination . . . 67
2.5 Discussion . . . 73

3 Hypersequent System D **75**
3.1 Inferentialism and Meaning . . . 76
3.2 Sequent System D . . . 80
3.3 Hypersequent System D . . . 82
3.4 Preliminaries . . . 85
3.5 Important Lemmas . . . 86
3.5.1 Reduction Lemmas . . . 86
3.5.2 Modal Lemmas . . . 94
3.6 Cut Elimination . . . 102
3.6.1 Important Lemmas for Cut Elimination . . . 102
3.6.2 Cut Elimination . . . 106
3.7 Uniqueness . . . 118

3.8 Equivalence To Sequent System D 119

4 Sellars, Second-Order Quantification, and Ontological Commitment 127

4.1 A Quinean Argument 130

4.2 Not All Quantifiers Supposit 135

4.2.1 The First Argument 135

4.2.2 The Second Argument 143

4.3 An Alternative Account of Quantification 146

4.4 A Grammatical Interpretation of '$\exists f f a$' 156

4.5 Proof of Claims 158

5 Atomic Ontology 160

5.1 Introduction 161

5.2 Model-Theory and Quine's Dictum 165

5.2.1 Ontological Commitment 166

5.3 Proof Theory and Ontological Commitment 168

5.3.1 Proof-Theory and Ontological Commitment 173

5.4 Discussion 179

5.4.1 Second-Order Quantification 179

5.4.2 Expanding Substitutional Quantification 183

5.4.3 Atomic Ontology 190

6 Theories of Meaning and Existence 198

6.1 An Argument 198

6.2 A Theory of Meaning 200

6.2.1 An Example Theory of Meaning . . . 202
6.2.2 Criteria for a Theory of Meaning . . . 206
6.3 Adding Names . . . 210
6.4 Formal Theory . . . 213
6.5 Fully Positive, Negative, and Non-Denoting Terms . . . 217
6.6 Conclusions . . . 223
6.7 Cut Admissibility for Negative Free Logic . . . 225
6.7.1 Models . . . 225
6.7.2 Soundness . . . 227
6.7.3 Completeness . . . 234
6.7.4 Constructing a Tree . . . 236
6.7.5 Building a Model . . . 241
6.8 Failure of Cut Admissibility for a logic with AR and AL . . . 244
6.8.1 Model Theory . . . 244

7 PHIL: A Logic for Contingentism 249

7.1 Contingentism . . . 250
7.2 Motivation for PHIL . . . 252
7.3 Challenges to Contingentism . . . 260
7.3.1 Prior's Arguments . . . 260
7.3.2 Williamson's Challenge . . . 262
7.4 Important Results . . . 263
7.4.1 Interdefinabiliy of Necessity and Possibility . . . 263
7.4.2 Uniqueness . . . 265

7.5 Models 269
7.6 Soundness 272
7.7 Completeness 286
7.7.1 Building a Tree 287
7.7.2 Building A Model 291
7.8 Discussion 304
7.8.1 Existence 304
7.8.2 Truth and Being 304