
CONTENTS

PART I THE ANALYSIS OF ARGUMENT 1

CHAPTER 1

THE WEB OF LANGUAGE 1

- Language and Argument* 1
- Language and Convention* 2
- Levels of Language* 3
- Linguistic Acts* 3
- Speech Acts* 4
- Conversational Acts* 14
 - Conversational Rules 17
 - Conversational Implication 19
 - The Pervasiveness of
Conversational Implication 20
 - Violating Conversational Rules 21
 - Conversational Implication and
Rhetorical Devices 23
 - Deception 27
- An Overview* 29

CHAPTER 2

THE LANGUAGE OF ARGUMENT 31

- The Basic Structure of Arguments* 31
- If . . . Then . . .* 33
- Arguments in Standard Form* 35
- Validity, Truth, and Soundness* 36
 - Validity 36
 - Truth 37
 - Soundness 38
 - Two Tricky Cases 38

<i>A Problem and Some Solutions</i>	41
Assuring	42
Guarding	43
Discounting	44
<i>Argumentative Performatives</i>	46
<i>Evaluative Language</i>	48
Persuasive Definitions	52
Euphemism and Spin Doctoring	53
<i>Figurative Language</i>	56

CHAPTER 3

USES OF ARGUMENTS 59

<i>Justifications</i>	59
<i>Refutations</i>	61
That's Just Like Arguing . . .	62
Counterexamples	69
Reductio Ad Absurdum	74
Attacking Straw Men	78
<i>System and Simplicity</i>	80
<i>Explanations</i>	81
<i>Excuses</i>	84

CHAPTER 4

THE ART OF CLOSE ANALYSIS 89

<i>An Extended Example</i>	89
<i>Global Analysis</i>	101

CHAPTER 5

DEEP ANALYSIS 121

<i>Getting Down to Basics</i>	121
<i>Clarifying Crucial Terms</i>	123
<i>Dissecting the Argument</i>	124
<i>Arranging Subarguments</i>	126
<i>Suppressed Premises</i>	127
Shared Facts	127
Linguistic Principles	130
Other Kinds of Suppressed Premises	131

The Use of Suppressed Premises	131
<i>The Method of Reconstruction</i>	133
<i>Digging Deeper</i>	134
<i>Advanced Section: Capital Punishment</i>	136
<i>Conclusion</i>	142

CHAPTER 6
THE FORMAL ANALYSIS OF ARGUMENTS:
PROPOSITIONAL LOGIC 145

<i>Validity and the Formal</i> <i>Analysis of Arguments</i>	145
<i>Propositional Logic</i>	146
Conjunction	146
Validity for Conjunction	150
Disjunction	152
Negation	154
Disjunctive Syllogism	155
How Truth-Functional Connectives Work	157
Testing for Validity	158
Some Further Connectives	162
Summary	164
<i>Conditionals</i>	165
Truth Tables for Conditionals	166
Logical Language and Everyday Language	171
Other Conditionals in Ordinary Language	174

CHAPTER 7
THE FORMAL ANALYSIS OF ARGUMENTS:
CATEGORICAL LOGIC 181

<i>Beyond Propositional Logic</i>	181
<i>Categorical Propositions</i>	182
<i>The Four Basic Categorical Forms</i>	184
Translation into the Basic Categorical Forms	187
Contradictories	189
Existential Commitment	190
<i>Validity for Arguments Containing Categorical Propositions</i>	192
<i>Immediate Inferences</i>	194
<i>The Theory of the Syllogism</i>	197
Venn Diagrams for Syllogisms	199

The Validity of Syllogisms	199
Problems in Applying the Theory of the Syllogism	204
<i>Appendix A: The Classical Theory</i>	205
The Classical Square of Opposition	208
The Classical Theory of Immediate Inference	212
The Classical Theory of Syllogisms	213
<i>Appendix B: Immediate Inferences with Complementary Classes</i>	215
Obversion	216
Contraposition	218
<i>Appendix C: A System of Rules for Evaluating Syllogisms</i>	221
Quality	221
Quantity	221
Distribution	222
The Rules	223

CHAPTER 8

THE FORMAL ANALYSIS OF ARGUMENTS: QUANTIFICATIONAL LOGIC 227

<i>Combining Two Branches of Logic</i>	227
The Introduction of Quantifiers	228
Limited Domains	231
Elaborate A, E, I, and O Propositions	231
Relations and Multiple Quantifiers	233
Scope Fallacies	236
<i>Validity for Arguments with Quantifiers</i>	237
Rudimentary Quantificational Logic	238
Instantiations of Quantified Propositions	239
Universal Instantiation	240
Existential Generalization	242
Universal Generalization	244
Existential Instantiation	247
Application to Immediate Inferences and Syllogisms	249
Application to Noncategorical Arguments	250
Arguments Containing Individual Constants	253
<i>A General Rule for RQL</i>	256
<i>The Limits of RQL</i>	258

CHAPTER 9**INDUCTIVE REASONING 259**

- Induction versus Deduction* 259
- Inferences to the Best Explanation* 265
- Arguments from Analogy* 272
- Reasoning about Causes* 281
 - Sufficient Conditions and Necessary Conditions 283
 - The Sufficient Condition Test 286
 - The Necessary Condition Test 287
 - The Joint Test 288
 - Rigorous Testing 289
 - Reaching Positive Conclusions 291
 - Applying These Methods to Find Causes 292
- Concomitant Variation* 300
- Inductive Generalization* 304
 - Should We Accept the Premises? 305
 - Is the Sample Large Enough? 305
 - Is the Sample Biased? 307
 - Is the Result Biased in Some Other Way? 308
 - Summary 309
- Statistical Syllogisms* 310

CHAPTER 10**TAKING CHANCES 315**

- Heuristics* 315
 - The Representative Heuristic 316
 - The Availability Heuristic 317
- The Language of Probability* 318
- A Priori Probability* 319
- Some Laws of Probability* 321
- Bayes's Theorem* 326
- Expected Monetary Value* 329
- Expected Overall Value* 332
- Decisions Under Ignorance* 334
- The Gambler's Fallacy* 339
- Regression to the Mean* 340
- Strange Things Happen* 342

CHAPTER 11
FALLACIES OF CLARITY 345

- What is a Fallacy?* 345
Fallacies of Clarity 346
Vagueness 346
Heaps 349
Slippery Slopes 352
 Conceptual Slippery-Slope Arguments 353
 Fairness Slippery-Slope Arguments 355
 Causal Slippery-Slope Arguments 357
Ambiguity 363
Equivocation 367
Definitions 374

CHAPTER 12
FALLACIES OF RELEVANCE AND VACUITY 387

- Fallacies of Relevance* 387
 Arguments Ad Hominem 388
 Appeals to Authority 395
 More Fallacies of Relevance 400
 A Common Form for Fallacies of Relevance 403
Fallacies of Vacuity 405
 Circular Reasoning 405
 Begging the Question 406
 Self-Sealers 411

PART II AREAS OF ARGUMENTATION 417

CHAPTER 13
LEGAL ARGUMENTS 419

- Components of Legal Reasoning* 420
 Questions of Fact 420
 Questions of Law 421
The Law of Discrimination 431
 Plessy v. Ferguson 433
 From *Plessy* to *Brown* 436
 Brown v. Board of Education 437

From <i>Brown</i> to <i>Bakke</i>	440
<i>Regents of the University of California v. Bakke</i>	443
Summary	453
Burden of Proof	453

CHAPTER 14**MORAL ARGUMENTS 459**

<i>The Problem of Abortion</i>	460
What is the Problem?	460
The Conservative Argument	461
Liberal Responses	463
<i>Analogical Reasoning in Ethics</i>	467
<i>Weighing Factors</i>	470
“A Defense of Abortion,” by Judith Jarvis Thomson	470
“Why Abortion is Immoral,” by Don Marquis	485

CHAPTER 15**SCIENTIFIC REASONING 501**

<i>Standard Science</i>	501
<i>Conflicting Scientific Interpretations</i>	503
“Dialogue Concerning the Two World Systems,” by Galileo Galilei	504
<i>What Killed the Dinosaurs?</i>	512
“An Extraterrestrial Impact,” by Walter Alvarez and Frank Asaro	512
“A Volcanic Eruption,” by Vincent E. Courtillot	521

CHAPTER 16**PHILOSOPHICAL ARGUMENTS 533**

“Computing Machinery and Intelligence,” by Alan Turing	534
“Minds, Brains, and Programs,” by John Searle	545

COPYRIGHTS AND ACKNOWLEDGMENTS 562**INDEX 563**