

CONTENTS

PREFACE	vii
INTRODUCTION	ix
I. META-REASONING AND MACHINE LEARNING	1
A Metalevel Manifesto <i>Paul Benjamin</i>	3
A Sketch of Autonomous Learning using Declarative Bias <i>Stuart Russell and Benjamin Grosz</i>	19
Shift of Bias as Non-Monotonic Reasoning <i>Benjamin Grosz and Stuart Russell</i>	55
Mutual Constraints on Representation and Inference <i>Stuart Russell and Devika Subramanian</i>	85
Meta-Reasoning: Transcription of Invited Lecture by Luigia Aiello	107
Discussion	113
II. REASONING ABOUT PROOFS AND EXPLANATIONS	119
Overgenerality in Explanation-Based Generalization <i>Haym Hirsh</i>	121
A Tool for the Management of Incomplete Theories: Reasoning about Explanations <i>Béatrice Duval and Yves Kodratoff</i>	135
A Comparison of Rule and Exemplar-Based Learning Systems <i>Peter Clark</i>	159
Discovery and Revision via Incremental Hill Climbing <i>Donald Rose</i>	187
Learning from Imperfect Data <i>Pavel Brazdil and Peter Clark</i>	207

III. FOUNDATIONS OF AI AND MACHINE LEARNING	233
Knowledge Revision and Multiple Extensions <i>Camilla Schwind</i>	235
Minimal Change—A Criterion for Choosing between Competing Models <i>Ken Satoh</i>	257
Hierarchic Autoepistemic Theories for Nonmonotonic Reasoning: Preliminary Report <i>Kurt Konolige</i>	277
Automated Quantified Modal Logic <i>Fariñas del Cerro and Andreas Herzig</i>	301
INDEX	319