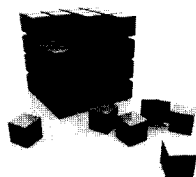


The Bounds of Cognition

Frederick Adams and
Kenneth Aizawa

 **WILEY-BLACKWELL**

A John Wiley & Sons, Ltd., Publication



Contents

Preface	vii
Acknowledgments	xii
1 Introduction	1
2 Refining the Issues	16
2.1 What are the Boundaries?	16
2.2 What is Cognition?	22
2.3 The Possibility of Extended Cognition	25
2.4 Conclusion	29
3 Original Content	31
3.1 Part of the Mark of the Cognitive: Non-Derived Content	32
3.2 The Basics on Derived and Underived Content	35
3.3 Dennett's Critique of Original Content	39
3.4 Clark's Critique of Original Content	46
3.5 Anti-Representationalism in Dynamical Systems and Mobile Robotics	51
3.6 Conclusion	55
4 Cognitive Processes	57
4.1 Individuating Process Types in Science	58
4.2 Individuating Processes in Cognitive Psychology	60
4.3 A Broader Category of Cognition	70
4.4 Conclusion	74

5	The Mark of the Cognitive, Extended Cognition Style	76
5.1	Cognition as Information Processing, as Computation, and as Abiding in the Meaningful	76
5.2	Operationalism	79
5.3	Is This Merely a Terminological Issue?	83
5.4	Conclusion	85
6	The Coupling-Constitution Fallacy	88
6.1	Some Examples of the Coupling-Constitution Fallacy	93
6.2	Replies to the Coupling-Constitution Fallacy	99
6.3	Conclusion	105
7	Extended Cognitive Systems and Extended Cognitive Processes	106
7.1	Dynamical Systems Theory and Coupling	107
7.2	Haugeland's Theory of Systems and the Coupling of Components	112
7.3	Clark's Theories of Systems and Coupling	119
7.4	Conclusion	130
8	Cognitive Equivalence, Complementarity, and Evolution	133
8.1	Cognitive Equivalence	133
8.2	The Complementarity Argument	143
8.3	Evolutionary Arguments	147
8.4	Conclusion: The Importance of the Mark of the Cognitive	150
9	Inference to the Best Explanation and Extended Cognition	152
9.1	What is the Theory of Enactive Perception?	153
9.2	Noë's Evidence for Enactive Perception	156
9.3	The Case against Enactive Perception: Paralysis	166
9.4	Conclusion	172
10	Future Directions	174
	Bibliography	180
	Index	187