CONTENTS

List of Contributors	X1
PART I INTRODUCTION	
1. 4E Cognition: Historical Roots, Key Concepts, and Central Issues Albert Newen, Leon de Bruin, and Shaun Gallagher	3
PART II WHAT IS COGNITION?	
2. Extended Cognition Julian Kiverstein	19
3. Ecological-Enactive Cognition as Engaging with a Field of Relevant Affordances: The Skilled Intentionality Framework (SIF) ERIK RIETVELD, DAMIAAN DENYS, AND MAARTEN VAN WESTEN	41
4. The Enactive Conception of Life EZEQUIEL A. DI PAOLO	71
5. Going Radical Daniel D. Hutto and Erik Myin	95
6. Critical Note: So, What Again is 4E Cognition? Ken Aizawa	117
PART III MODELING AND EXPERIMENTATION	
7. The Predictive Processing Hypothesis JAKOB Нонwy	129
8. Interacting in the Open: Where Dynamical Systems Become Extended and Embodied Maurice Lamb and Anthony Chemero	147
MIRORIOL DIMID INTO INTERNATIONAL CARREST	

9.	Searching for the Conditions of Genuine Intersubjectivity: From Agent-Based Models to Perceptual Crossing Experiments Tom Froese	163
10.	Cognitive Integration: How Culture Transforms Us and Extends Our Cognitive Capabilities RICHARD MENARY	187
11.	Critical Note: Cognitive Systems and the Dynamics of Representing-in-the-World Tobias Schlicht	217
	PART IV COGNITION, ACTION, AND PERCEPTION	
12.	The Body in Action: Predictive Processing and the Embodiment Thesis Michael D. Kirchhoff	243
13.	Joint Action and 4E Cognition Deborah Tollefsen and Rick Dale	261
14.	Perception, Exploration, and the Primacy of Touch MATTHEW RATCLIFFE	281
15.	Direct Social Perception JOEL KRUEGER	301
16.	Critical Note: Cognition, Action, and Self-Control from the 4E Perspective Sven Walter	321
	PART V BRAIN-BODY-ENVIRONMENT COUPLING AND BASIC SENSORY EXPERIENCE	ES
17.	Disclosing the World: Intentionality and 4E Cognition Mark Rowlands	335
18.	Building a Stronger Concept of Embodiment Shaun Gallagher	353

CONTE	NTS vii
19. Motor Intentionality Elisabeth Pacherie	369
20. The Extended Body Hypothesis: Referred Sensations from Tools Peripersonal Space Frédérique de Vignemont	389
21. Critical Note: Brain–Body–Environment Couplings. What Do the Teach us about Cognition? ARNE M. WEBER AND GOTTFRIED VOSGERAU	hey 405
PART VI SOCIAL COGNITION	
22. Embodied Resonance VITTORIO GALLESE AND CORRADO SINIGAGLIA	417
23. Why Engagement? A Second-Person Take on Social Cognition VASUDEVI REDDY	433
24. The Intersubjective Turn Hanne De Jaegher	453
25. The Person Model Theory and the Question of Situatedness of Social Understanding Albert Newen	469
26. False-Belief Understanding, 4E Cognition, and Predictive Processing Leon de Bruin	493
27. Critical Note: How Revisionary are 4E Accounts of Social Cognition? MITCHELL HERSCHBACH	513
PART VII SITUATED AFFECTIVITY	
28. Embodiment of Emotion and its Situated Nature Evan W. Carr, Anne Kever, and Piotr Winkielman	529
29. Thinking and Feeling: A Social-Developmental Perspective R. Peter Hobson	553

30.	Enacting Affectivity GIOVANNA COLOMBETTI	571
31.	Beyond Mirroring: 4E Perspectives on Empathy Dan Zahavi and John Michael	589
32.	Critical Note: 3E's Are Sufficient, But Don't Forget the D Аснім Stephan	607
	PART VIII LANGUAGE AND LEARNING	
33.	The Embodiment of Language Mark Johnson	623
34.	The Embodiment of Concepts: Theoretical Perspectives and the Role of Predictive Processing Michiel van Elk and Harold Bekkering	641
35.	Origins and Complexities of Infant Communication and Social Cognition Ulf Liszkowski	661
36.	Developing an Understanding of Normativity MARCO F.H. SCHMIDT AND HANNES RAKOCZY	685
37.	Critical Note: Language and Learning from the 4E Perspective Hans-Johann Glock	707
	PART IX EVOLUTION AND CULTURE	
38.	The Evolution of Cognition: A 4E Perspective Louise Barrett	719
39.	Mindshaping Tadeusz Wiesław Zawidzki	735
40.	Bringing Things to Mind: 4Es and Material Engagement Lambros Malafouris	755
41.	Culture and the Extended Phenotype: Cognition and Material Culture in Deep Time Kim Sterelny	773

48. Embodied Aesthetics

Name Index

Subject Index

BARBARA GAIL MONTERO

891

911

919