

CONTENTS	IX
PREFACE	XI
ACKNOWLEDGEMENTS	XIV
1 INTRODUCTION	1
1.1 Rules and Patterns	3
1.2 Dance as a Performing Art	7
1.3 Explanation and Causation	9
1.4 Aesthetics, Neuroaesthetics and the Psychology of Art	16
1.5 There Is More to Art Than Meets the Brain	21
1.6 The Brain, the Mind and the Person	24
1.7 The Limits of Cognitive Neuroscience	28
1.8 Beyond the Limits	34
1.9 Outline	36
PART 1. PERCEPTION	
2 INTRODUCTION	41
3 THE DANCER OR THE DANCE?	46
3.1 Face Perception	46
3.2 Body Perception	51
3.3 Human Motion Perception	53
3.4 Conclusion	56
3.5 Corollary: The Dancer or the Dance Photo?	59
4 MIRROR NEURONS AND KINAESTHETIC EMPATHY	61
4.1 Kinaesthetic Empathy	62
4.2 Motor Simulation 1. The Theory	65
4.3 Motor Simulation 2. The Evidence	70
4.4 Mirror Neurons	74
4.5 Conclusion	78
5 PERCEPTUAL ORGANIZATION	83
6 THE PERCEPTION OF ANIMACY AND CAUSALITY	89
7 HYPERSTIMULI	95
PART 2. ATTENTION	
8 INTRODUCTION	103
9 ATTENTION	105
9.1 Mechanisms of Attention	105
9.2 Neural Mechanisms of Attention	111

9.3	Inattentional Blindness	113
9.4	Conclusion	115
9.5	Corollary: The Power of the Centre	117
10	INTEREST	119
10.1	Information Gaps	120
10.2	Factors of Interest	122
10.3	Conclusion	124
11	BOREDOM AND THE WANDERING MIND	129
11.1	Mind Wandering and the Default Network	130
11.2	Conclusion	132
PART 3. PREDICTION		
12	INTRODUCTION	137
13	THE PREDICTIVE BRAIN	139
13.1	Memories for the Future	139
13.2	Predicting the Present	142
13.3	Priming	145
13.4	Conclusion	147
14	KEEPING TRACK OF THE DANCE	149
14.1	Saccades and Smooth Pursuit	149
14.2	Learning Patterns and the Premotor Cortex	151
14.3	Learnt Patterns and the Basal Ganglia	153
14.4	Conclusion	159
15	INCONGRUITY AND RESOLUTION	163
15.1	The Dopamine Connection	163
15.2	Step to the Beat	166
15.3	Humour	169
15.4	Closure	173
15.5	Conclusion	178
PART 4. EMOTION		
16	INTRODUCTION	185
17	A CONCEPTUAL FRAMEWORK	188
17.1	What Are Emotions?	188
17.2	Dance and Emotion	195
17.3	Conclusion	202
18	PSYCHOLOGICAL THEORIES OF EMOTION	205
18.1	Invariant Relationships	205

18.2	Basic Emotions	209
18.3	The Appraisal Theory of Emotion	216
18.4	Core Affect	220
18.5	Conclusion	223
19	NEUROPHYSIOLOGICAL THEORIES OF EMOTION	226
19.1	The Autonomic Nervous System and the Hypothalamus	226
19.2	The James-Lange Theory and the Somatic Marker Hypothesis	228
19.3	The Limbic System	234
19.4	The Amygdala	235
19.5	The Orbitofrontal Cortex	239
19.6	Conclusion	241
19.7	Corollary 1: The Paradox of Fiction	244
19.8	Corollary 2: Can Dance Be Disgusting?	246
20	THE EXPRESSION OF EMOTION	252
20.1	A Brief History	253
20.2	Facial Expressions	256
20.3	Body Expressions	260
20.4	Expressive Behaviour	265
20.5	Conclusion	268
21	EMPATHY	273
22	THE PLEASURES OF DANCE	280
22.1	Kinds of Pleasure	280
22.2	The Neurophysiology of Pleasure	284
22.3	Conclusion	287
23	IT WILL END IN TEARS	293
23.1	The Behavioural Neuroscience of Crying	293
23.2	Conclusion	296
23.3	Postscript	299
PART 5. UNDERSTANDING		
24	INTRODUCTION	305
25	DANCE AND LANGUAGE	308
25.1	Dance and the Language Metaphor	308
25.2	Vocabulary, Phrases and Syntax	310
25.3	Reference, Truth and Function	312
25.4	Conclusion	314
25.5	Corollary: Tools of Analysis as Tools of Creation	315
26	DANCE AND THE LANGUAGE FACULTY	318

26.1	From Animal Play to Human Dance	318
26.2	The Gestural Origins of Language	322
26.3	The Evolution of Dance from Prehistory to Yesterday	329
26.4	Conclusion	334
27	THE MEANING OF IT ALL	337
27.1	Understanding Gestures and Actions	337
27.2	Understanding Scenes (1)	341
27.3	Understanding Scenes (2)	344
27.4	Understanding Metaphors	346
27.5	Conclusion	354
PART 6. AESTHETIC EXPERIENCE		
28	INTRODUCTION	361
29	AESTHETIC EXPERIENCE	364
30	AESTHETIC PROPERTIES	378
30.1	Realist vs. Anti-realists	379
30.2	Neuroaesthetic Properties	382
30.3	Conclusion	384
31	BEAUTY AND THE SUBLIME	387
31.1	Beauty and Perfection	389
31.2	Awe and the Sublime	395
31.3	And Yet I (Don't) Like It	400
32	CONCLUSION	404
APPENDIX A	AN ULTRA SHORT INTRODUCTION TO THE BRAIN	410
APPENDIX B	THE METHODS OF COGNITIVE NEUROSCIENCE	414
REFERENCES		422
INDEX		448