CONTENTS

	t of Figures and Tables tes on Contributors		rii	C
	enowledgements		xii	i
	Introduction: What Is Embodied Music Inter Marc Leman, Micheline Lesaffre, and Pieter-Jan I	action?	ibuomid mi vanaga nanoki iddik	
3				
PAI		13011	11	
Dy	namical Music Interaction Theories and Con		The Communicati	
1	The Interactive Dialectics of Musical Meanin			
	Marc Leman			
2	Metrically Structured Time and Entrainment Guy Madison, Fredrik Ullén, and Björn Merker		22	2
3	Participatory Sense-Making in Joint Musical Andrea Schiavio and Hanne De Jaegher	Practice	31	1
	Marinal Manement and Dance of Indiana	ari riomarquiate la aru	Engainment and M	
4	Playing with the Beat: A Process-Oriented A	pproach to Studying	A together T televisor	1
	Synchronization in Early Childhood		40)
	Ana Almeida, Katie Overy, and Dorothy Miell			
5	The Merging of Musician and Musical Instru		in Ninstead Hasterrio	
	Presence, and Levels of Embodiment	interior interior	49)
	Luc Nijs			
			ISBARRA BRIOL	^
6	Music Knowledge Construction: Enactive, Ecol Mark Reybrouck	ogical, and Biosemiot	ic Claims 58	3

Exp	pressive Gestural Interaction	67
7	Cognitive and Sensorimotor Resources for the Encoding of Expressiveness During Music Playing Muzaffer Çorlu, Pieter-Jan Maes, and Marc Leman	69
8	Beyond Emotion: Multi-Sensory Responses to Musical Expression Giovanni De Poli, Maddalena Murari, Sergio Canazza, Antonio Rodà, and Emery Schubert	78
9	Conveying Expressivity and Individuality in Keyboard Performance Bruno Gingras	87
	The Resilience Approach to Studying Group Interaction in Music Ensemble Donald Glowinski, Fabrizio Bracco, Carlo Chiorri, and Didier Grandjean	96
11	Agency in Embodied Music Interaction Nikki Moran	105
12	Postures and Motion Shaping Musical Experience Rolf Inge Godøy	113
13	The Communication of Emotions in Dance Edith Van Dyck, Birgitta Burger, and Konstantina Orlandatou	122
PAR		
Soc	cial Music Interaction	131
14	Group Flow Tom Cochrane	133
15	Entrainment and Mutual Adaptation in Musical Movement and Dance Tommi Himberg	
16	Embodied Expression Through Entrainment and Co-Representation in Musical Ensemble Performance Jennifer MacRitchie, Manuel Varlet, and Peter E. Keller	150
17	Music Performance as Joint Action John Michael	160

Contents

18	Do Jazz Improvisers Really Interact? The Score Effect in	
	Collective Jazz Improvisation	167
	François Pachet, Pierre Roy, and Raphaël Foulon	
10	Gestural Interactions in Ensemble Performance	
19	Gestural Interactions in Ensemble Performance Davi Mota, Mauricio Loureiro, and Rafael Laboissière	
20	Interpersonal Coordination in Dyadic Performance	186
20	Interpersonal Coordination in Dyadic Performance Marc R. Thompson, Georgios Diapoulis, Tommi Himberg, and Petri Toiviainen	
	The Musical Porential of Museum Euphorn	
21	Embodied Social Synchronization in Children's Musical Development	195
	Leon van Noorden, Leen De Bruyn, Raven van Noorden,	
	and Marc Leman	
PAR	T4	
Soc	ciological and Anthropological Approaches	205
22	Embodied Interaction with "Sonic Agents": An Anthropological	
22	Perspective	207
	Filippo Bonini Baraldi	
23	The Ethnography of Embodied Music Interaction	215
	Martin Clayton	
24	Combat-Dancing, Cultural Transmission, and Choreomusicology:	46 46 46
	The Globalization of Embodied Repertoires of Sound and Movement	223
	Paul Mason	
25	The Hiplife Zone: Cultural Transformation Processes in African	
23		232
	Dominik Physferoen, Koenraad Stroeken, and Marc Leman	
21	C C' 1 D1 ' D 1 T C C'IT 1' ''	
26	Crafting the Playing Body as an Infrastructure of "Immediate"	
	and "Mediate" Embodied Music Cognition in an Academic Jazz Program	
	an Academic Jazz Program Eitan Wilf	241
27	Brain-to-Brain Coupling and Culture as Prerequisites	
	for Musical Interaction	249
	Elvira Brattico and Peter Vuust	

Contents

PAI	RT 5	
Em	npowering Health and Well-Being	
28	Coupling Music and Motion: From Special Education to Rehabilitation	261
	Danilo Spada and Emmanuel Bigand	
	Embodied Music Listening Lars Ole Bonde	269
30	Jymmin—The Medical Potential of Musical Euphoria Thomas Hans Fritz	278
31	Music in the Exercise and Sport Domain: Conceptual Approaches and Underlying Mechanisms	284
	Costas I. Karageorghis, Panteleimon Ekkekakis, Jonathan M. Bird, and Marcelo Bigliassi	
32	Monitoring Music and Movement Interaction in People with Dementia Micheline Lesaffre, Bart Moens, and Frank Desmet	294
33	Synchronization to Music as a Tool for Enhancing Non-Verbal Communication in People with Neurological Diseases Nia Cason, Loris Schiaratura, and Séverine Samson	304
34	Modifying Movement Optimization Processes with Music Rebecca S. Schaefer and Scott T. Grafton	313
DAT		
PAR Mo	deling Music Interaction	321
35	Modeling Music Interaction Denis Amelynck	323
36	Analyzing Complex Datasets Based on the Variability Framework, Distribution Analysis, and Generalized Linear Modeling Frank Desmet	332
37	Removing Obstacles to the Analysis of Movement in Musical Performance: Recurrence, Mixed Models, and Surrogates Alexander P. Demos and Roger Chaffin	
38	Dynamic Bayesian Networks for Musical Interaction Baptiste Caramiaux, Jules Françoise, and Frédéric Bevilacqua	350

Contents

39	Temporal Dependencies in the Expressive Timing of Classical Piano Performances Maarten Grachten and Carlos Eduardo Cancino Chacón	360
40	Interactions in Ensemble Music Performance: Empirical and Mathematical Accounts Caroline Palmer and Anna Zamm	370
41	Linking Movement Recurrence to Expressive Patterns in Music Performance Euler C. F. Teixeira, Mauricio A. Loureiro, and Hani C. Yehia	380
PAR Mu	T 7 sic-Based Interaction Technologies and Applications	389
42	Designing Action–Sound Metaphors Using Motion Sensing and Descriptor–Based Synthesis of Recorded Sound Materials Frédéric Bevilacqua, Norbert Schnell, Jules Françoise, Éric O. Boyer, Diemo Schwarz, and Baptiste Caramiaux	391
43	Designing for the Subtle: A Systematic Approach Toward Expressivity in New Musical Interfaces Nicolas d'Alessandro	402
44	Gestural Agency in Human–Machine Musical Interaction Juan Ignacio Mendoza and Marc R. Thompson	412
45	Gestural Musical Performance with Physiological Sensors, Focusing on the Electromyogram Atau Tanaka and Miguel Ortiz	420
46	Sonic Microinteraction in "the Air" Alexander Refsum Jensenius	429
47	Embodied Cognition and Digital Musical Instruments: Design and Performance Joseph Malloch and Marcelo M. Wanderley	438
Ind	Row 1, 2, and 2 present day or appears from a present day of a present day	