

COLLABORATIVE EMBODIED PERFORMANCE

Ecologies of Skill

Edited by Kath Bicknell and
John Sutton



Collaborative Embodied Performance

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CONTRIBUTORS

Kath Bicknell's research investigates the relations between thinking, doing, performance and training. She is endlessly curious about how people make sense of skilful experiences as they happen, especially in time-sensitive scenarios like racing bikes down rock gardens in the jungle or performing at height on the trapeze. With research and teaching experience in Performance Studies (University of Sydney and the National Institute of Dramatic Art, Australia), Cognitive Science (Macquarie University, Australia) and Anthropology (Macquarie University) her work bridges the humanities and the sciences. Kath has worked as a freelance media professional since 2008 and is internationally recognized for her multiplatform work on cycling.

Kristina Brümmer is a Research Assistant at the Institute of Sport Science at the Carl von Ossietzky University of Oldenburg, where she obtained her PhD in 2014, and currently acts as a Substitute Professor for the Social Sciences of Sport at the Goethe University of Frankfurt/Main. Drawing on sociological practice theories, theories of the body and concepts of tacit knowledge, her research studies processes of subjectivation and team coordination in high-performance youth sport by means of qualitative research methods, especially ethnography, videography and interviews.

Anthony Chemero is Distinguished Research Professor of Philosophy and Psychology at the University of Cincinnati, USA. He is the author of more than 100 articles and the books *Radical Embodied Cognitive Science* (2009) and, with Stephan Käufer, *Phenomenology: An Introduction* (2015; 2nd edition, 2021).

Amy Cook is an Associate Dean for Research and Innovation and Professor of English at Stony Brook University, USA. She specializes in the intersection of cognitive science and theories of performance

with particular attention to Shakespeare. She has published *Shakespearean Futures: Casting the Bodies of Tomorrow on Shakespeare's Stages Today* (2020), *Building Character: The Art and Science of Casting* (2018), *Shakespearean Neuroplay: Reinvigorating the Study of Dramatic Texts and Performance Through Cognitive Science* (2010) and co-edited *Theatre, Performance and Cognition: Languages, Bodies and Ecologies* (2016).

Emily S. Cross holds positions as a Professor of Human Neuroscience within the Department of Cognitive Science at Macquarie University, Australia, and as a Professor of Social Robotics within the Institute of Neuroscience and Psychology at the University of Glasgow, Scotland. Her background in performing arts has shaped her interest in action learning, neuroaesthetics and social robotics. Through her research, she uses a variety of methods (including brain-imaging techniques, action training paradigms and human-robot interaction) to explore how experience-dependent plasticity and expertise is manifest across brain and behaviour.

Greg Downey is Professor of Anthropology in the Macquarie School of Social Sciences at Macquarie University, Australia. He is author of *Learning Capoeira: Lessons in Cunning from an Afro-Brazilian Art* (2005) and editor with Daniel Lende of *The Encultured Brain: An Introduction to Neuroanthropology* (2012). Greg has done ethnographic research primarily in Brazil, Australia and the United States, and is currently the Executive Editor of *Ethos*, the journal of the Society for Psychological Anthropology.

Sara Kim Hjortborg is a PhD candidate in the Department of Cognitive Science, Macquarie University, Australia. She holds a Master's degree in Sports and Health from the Department of Sports Science and Clinical Biomechanics, University of Southern Denmark. Her research interests span martial arts, ethnography, skill and expertise, distributed cognition, enactivism, phenomenology and bodily self-awareness.

Rachel Kallen is an Associate Professor in the Department of Psychology at Macquarie University, Australia. Her research utilizes a framework of complex systems to investigate a range of social behaviours and systems. Bridging both basic and applied science, she has expertise in many areas of social psychology (i.e. stigma, intergroup relations, the science of diversity) as well as in cognitive

science (social interaction, multiagent coordination and dynamical modelling).

Michael Kimmel is a researcher at the University of Vienna, Austria, with a focus on embodied, enactive, embedded and extended cognitive science. His range of topics includes interaction and joint improvisation, co-creation, embodied decision-making, skill theory and movement expertise, as well as expertise for complexity regulation. In addition to some biomechanical work, he has developed micro-genetic interview tools for reconstructing tacit and embodied knowledge (empirical phenomenology, stimulated recall, experimental workshops). Application fields include various forms of improvisational partner dance, martial arts, somatic therapy and partner acrobatics. Until 2013 he also worked on metaphor, imagery, sociocultural embodiment and narrative within a cognitive linguistics context, the field in which he took his PhD in 2002.

Joel Krueger is a Senior Lecturer in Philosophy at the University of Exeter, UK. He is part of the *Mind, Body and Culture* research group. He works primarily in phenomenology, philosophy of mind and philosophy of cognitive science: specifically, issues in 4E (embodied, embedded, enacted, extended) cognition, including emotions, social cognition and psychopathology. Sometimes he also writes about comparative philosophy and philosophy of music. Recent publications explore emotions online, as well as autism and the politics of everyday spaces.

Margaret Catherine Macpherson is a second-year PhD student in the School of Psychological Science at the University of Western Australia, currently working under the supervision of Dr Lynden Miles. Her doctoral work focuses on exploring the mechanisms underlying the relationship between interpersonal coordination and mental health. Her other research interests include applying dynamical systems approaches to the study of social interaction and examining the influence of synchronous action on prosocial and functional outcomes such as group rapport and productivity.

Janno Martens studied philosophy and architectural history at the University of Amsterdam, Netherlands. He is currently a PhD candidate at KU Leuven, Belgium, with a grant from the Research Foundation Flanders (FWO), investigating how technological and psychological notions of environment shaped architecture and

urbanism in North America between 1965 and 1980. Before joining KU Leuven, Janno worked as research assistant for Erik Rietveld, partner at Rietveld Architecture-Art-Affordances (RAAAF), with whom he has co-authored several articles about the relation between architecture and ecological psychology. In 2018–19, he served as coordinator of the Jaap Bakema Study Centre in Rotterdam, which links the National Collection for Dutch Architecture and Urban Planning to the research agenda of the Architecture Department at TU Delft.

Ian Maxwell is currently Head of the School of Literature, Art, and Media in the Faculty of Arts and Social Sciences at the University of Sydney, Australia. His current research interests include the health implications of actors' lives, the history of romantic modernism in Australian theatre and phenomenologies of performance. His past work has included studies of youth cultures – particularly hip-hop practices in Australia – and the phenomenology of ritual practices. Prior to his academic career, Ian trained as a theatre director at the Victorian College of the Arts, Melbourne. His most recent theatre work was *Prince Bettliedend – A cabaret from Terezin*, which was based upon survivor testimony and various musical and textual traces from the ghetto city under Nazi occupation. The script created through that process, along with a series of essays by various collaborators in the project, is to be published in 2021, titled *Staging Trauma, Staging Pleasure*.

Lynden K. Miles is an experimental social psychologist in the School of Psychological Science at the University of Western Australia. He obtained his PhD from the University of Canterbury and has previously held academic positions in New Zealand and the UK. His research lies at the intersection of social psychology and complexity science, and spans both intra- and interpersonal aspects of social behaviour. An overarching theme of Lynden's research concerns the application of theory and methods consistent with an embodied-embedded approach to the study of social interaction, with a particular focus on interpersonal coordination.

Sarah Pini is Assistant Professor of Dance and Performance at the University of Southern Denmark, working across anthropology, phenomenology, performing arts, dance and cognition in skilled performance. Her research addresses notions of presence,

embodiment and agency in different performance practices and cultural contexts. Alongside her academic research, Sarah's artistic practice investigates interconnections of movement, emotion and environment and how their dynamical relationships shape embodied narratives and sense making. Sarah's work has received several acknowledgements and has been showcased internationally. Her research appears in *The Oxford Handbook of Contemporary Ballet*, *Performance Research*, *Frontiers in Psychology*, and *The Journal of Embodied Research*, among other publications.

Susanne Ravn is Professor and Head of the Research Unit, *Movement, Culture and Society* at the Department of Sports Science and Biomechanics, University of Southern Denmark. She has published widely on the integration of phenomenology and qualitative research methodologies. She has been the leading investigator on several funded research projects focusing on dance practices, skilled performance in sport and health issues. Her research spans contributions to contemporary philosophical phenomenological discussions and more direct impact on cultural and societal issues. *Philosophy of Improvisation*, which she co-edited with Simon Høffding and James McGuirk, was published in 2021.

Michael Richardson is Professor of Psychology at Macquarie University, Australia. He is an experimental psychologist and cognitive scientist, with expertise in embodied cognition, social and perception-action psychology, complex systems, nonlinear dynamics, interactive virtual reality, human-machine interaction and AI. His research is directed towards identifying and modelling the dynamical processes that underlie human and multiagent perception, action and cognition, and the degree to which human-inspired dynamical and computational models can be employed to develop robust human-machine and human-AI systems.

Erik Rietveld is a Socrates Professor in Philosophy at the University of Twente and the University of Amsterdam (Amsterdam UMC, Dept of Psychiatry/Philosophy), Netherlands. Earlier he was a Fellow in Philosophy at Harvard University. He works on the philosophy of skilled action, change-ability and ecological psychology. Rietveld has been awarded an ERC Starting Grant and VENI, VIDI and VICI grants by the Netherlands Organisation for Scientific Research (NWO). Together with his brother Ronald Rietveld he founded the

multidisciplinary collective for visual art, experimental architecture and philosophy RAAAF in 2006. They were responsible for *Vacant NL*, the successful Dutch contribution to the Venice Architecture Biennale 2010. He is a member of The Society of Arts of The Royal Netherlands Academy of Arts and Sciences (KNAW).

Ronald Rietveld graduated in 2004 *cum laude* at the Amsterdam Academy of Arts. His working period during Prix de Rome 2006 at the Rijksakademie of Visual Arts in Amsterdam was the early beginning of RAAAF. After winning the golden medal he founded this multidisciplinary and experimental studio together with his brother and Socrates Professor in Philosophy, Erik Rietveld. RAAAF works at the intersection of visual art, architecture and philosophy. RAAAF's work has been published worldwide and exhibited at leading contemporary art and architecture biennales such as those of São Paulo, Istanbul, Chicago and Venice. Ronald is a member of the Society of Arts of the Royal Netherlands Academy of Arts and Sciences (KNAW).

Tom Roberts is a lecturer in philosophy at the University of Exeter, UK, where he is a member of the *Mind, Body and Culture* research group. He works principally in the Philosophy of Mind and Psychology, on issues surrounding perception, emotion and their overlap. Recent topics on which he has published include how absences are encountered in emotions such as loneliness, how to understand the perceptual experience of awful noises and how aesthetic engagement with objects might be mediated by the sense of haptic touch.

Stefan Schneider is a cognitive scientist interested in embodied cognition, neuromotor pedagogy and movement practices. Currently, he is part of a research project on intercorporeal synergies (PI: Michael Kimmel). His PhD project at the University of Osnabrück, Germany, focuses on the role of body awareness for movement learning across somatic practices such as tai chi, Feldenkrais, gaga dance and ideokinesis. Stefan also holds a degree in fine arts and is a certified tai chi teacher.

Catherine (Kate) Stevens, a cognitive scientist, is Director of the MARCS Institute for Brain, Behaviour & Development at Western Sydney University, Australia. She holds BA (Hons) and PhD degrees from the University of Sydney. Kate conducts basic and applied

research into the learning, perception, creation and cognition of complex actions. She also applies methods from experimental psychology to investigate human-machine interaction (e.g. design of auditory warnings, human-avatar and human-robot interaction). Kate is author of more than 200 peer-reviewed papers. She is Editor-in-Chief, *Music Perception*, Professor in Psychology and Pro Vice-Chancellor STEM at Western Sydney University.

John Sutton's research addresses memory and skill, across the cognitive sciences and the humanities. He is the author of *Philosophy and Memory Traces: Descartes to Connectionism* (1998), and he has coedited three previous books – *Descartes' Natural Philosophy*, *Embodied Cognition in Shakespeare's Theatre* and *Collaborative Remembering*. He seeks to integrate conceptual, experimental and ethnographic methods, and has published on memory and skill not only in philosophy and cognitive science, but also in archaeology, film, history, linguistics, literature, music, psychology and sport science. He is a Fellow of the Australian Academy of Humanities, and past President of the Australasian Society for Philosophy and Psychology.

Evelyn Tribble is Professor of English and Associate Dean at the University of Connecticut, USA, where she has been employed since 2018. From 2003 to 2018 she was Professor of English at the University of Otago, Dunedin, New Zealand. Her books include *Cognition in the Globe: Attention and Memory in Shakespeare's Theatre* (2011) and *Early Modern Actors and Shakespeare's Theatre: Thinking with the Body* (2017). She is currently working on the Arden 4 edition of *Merry Wives of Windsor*.

PREFACE AND ACKNOWLEDGEMENTS

Kath Bicknell and John Sutton

This book is about joint intelligence in action. In performance and the arts – dance, theatre, music, architecture – small groups of expert practitioners work together in rich, dynamic settings. In sport and martial arts, skilled individuals with distinct capacities coordinate or compete, constantly meshing with or responding to each other's movements. In collaborative performance, people act together – sometimes, for a time – as if of one mind.

How does tightly knit collaboration, in challenging skill worlds, work? How do some skilled performers enact their craft under tight time pressures, while giving the impression they have all the time in the world? How do some people seem to know in advance what to do *together* – how to move or respond in just the right ways even in volatile, stressful or rapidly changing environments? If these questions interest you, or prompt you to ask related questions about your own areas of interest, this book is for you.

In bringing authors together to write ten chapters on collaborative embodied skills, we hope to attract readers who are performers and fans, teachers and coaches, practitioners and critics, students and researchers. The book assumes no specific background in any one academic discipline, but draws on and seeks to contribute to many. Studying complex ecologies of skilled practice across distinctive, culturally unique environments and tapping the experience of highly trained specialists, our contributors examine the nature and mechanisms of collaborative performance in context.

Research groups too form their own unique cognitive ecologies. Individuals work together on projects which unfold over time in unpredictable ways, in changing and often challenging circumstances.

Any thoroughly interdisciplinary group, like the one we've been part of over the years, develops in unexpected directions as institutional, intellectual and interpersonal constraints shift. The hard, on-the-ground work of boundary-spanning research requires persistence, tolerance and slow-brewing trust. It requires enormous luck in finding the right collaborators, people who can cope and flourish even when, as they say, outside their comfort zone. We have had much of that luck. Integrative, sustained interdisciplinary research is much more difficult – more time-consuming, more draining, more resource-intensive, more fragile – than is acknowledged in glib management or policy documents about dissolving silo mentalities. But when it does go well it brings pleasure and surprise on many fronts.

This book presents diverse but coherent new work on collaborative embodied performance from a thoroughly international and interdisciplinary cohort of fellow travellers, of many different backgrounds and career stages. We and our contributors – seventeen authors of ten chapters, plus five commentators – are participants in distinctive ongoing conversations about collaborative embodied skills. We very much hope that you, as readers, will feel welcome to join these conversations and be inspired to contest or expand on the case studies showcased here. Our authors' affiliations span anthropology, architecture, cognitive science, dance, literature, neuroscience, performance studies, philosophy, psychology, sociology and sport science, but they are driven by their topics rather than any one tradition. We took to referring to this book project as 'stuff we like by people we like', which reveals the fun we have had bringing it to fruition.

John began research on movement skills in individual expertise, with Doris McIlwain, in 2004. Our early and ongoing debates and collaborative projects with Wayne Christensen (about cognitive control and automaticity), Greg Downey (about neuroanthropology and culture), Andrew Geeves (about music, emotions and performers' experiences) and Lyn Tribble (about skills in history) helped hugely as our group developed a theoretical focus on the idea of meshed control in performance, and a set of mixed methods to fuel what we called 'experience-near' case studies on skill in sport, yoga, dance and music.

Kath Bicknell joined our group in 2013, adding further expertise in ethnography and performance studies to the interdisciplinary

mix. She forged her own pathway into this interdisciplinary world, strongly shaped by staff and students in the University of Sydney's Department of Theatre and Performance Studies where she studied and worked between 2003 and 2012. Paul Dwyer and Kate Rossmanith ignited a lifelong passion for ethnography. J. Lowell Lewis's provocative seminars on embodiment fuelled a thirst for exploring an often-felt disconnect between lived experiences and theoretical debates. Ian Maxwell's encouragement towards curiosity-driven research, and interdisciplinary approaches to doing it, continues in this volume's afterword. Working closely with John and what we now call the *Cognitive Ecologies Lab* at Macquarie University has provided fun and fertile ground from which to explore cognitive and performance theory through embodied practice, ongoing collaboration and the many joyful, excited discussions that come with being part of a deeply engaged, interdisciplinary team.

After many attempts and the usual bewildered frustration, as an evolving and growing group we were awarded funding for work on skilled performance from the Australian Research Council (ARC). We were lucky in that philosophy and the cognitive sciences alike had seen dramatic expansions in interest in expertise and skilled performance, with increasing integration of conceptual, experimental and ethnographic approaches. Our search for and exploration of rich middle ground between over-intellectualist and more 'mindless' approaches to individual skill was joined by more and more theorists. For more than fifteen years, Macquarie University provided solid support for our interdisciplinary research, both institutionally through the Department of Cognitive Science – Max Coltheart's glorious experiment – and CEPET, the University Research Centre for Elite Performance, Expertise, and Training, and collegially over many years of collaborations, joint activities and lively debates with our friends right across campus. Many students and visitors made vital contributions to challenge and to help sharpen our ideas. Our networks of allies, fellow travellers and critics continued to expand across disciplines and geographical locations. Despite other significant differences, we found many researchers sharing a fascinated commitment to thick, experience-near, immersive, practice-oriented, case-study-based approaches to performance.

It was becoming clear at this point that we needed to cast our net wider, to focus also on *collaborative* skills. The independent

development of 4E (embodied, embedded, enactive and extended) approaches to cognition had provided encouragement and tools for studying social and ecological dimensions of performance, but had been mainly applied to other cognitive domains like memory, decision-making, emotion, language, navigation or tool use. The essays in this book expand the ‘cognitive ecologies’ framework to address skilled performance, with this specific extra focus on collaboration and joint action.

A number of our contributors gave talks at a workshop on collaborative embodied skills which John organized at Senate House in London in 2017, during a fellowship at the Institute of Philosophy. We were lucky to win a further ARC grant on this topic for 2018–21. The concrete plan for this book took shape in enjoyable conversations we had at, and after, the 2019 Cognitive Futures in the Arts and Humanities conference in Mainz, Germany. It was delightfully quick and easy to sign up our contributors. Indeed we soon realized how naturally and directly a second volume might follow: we warmly invite readers to let us know of other directions and ideas that might fuel that next step.

It has been a pleasure throughout to work with Methuen Drama, and we are thrilled to publish this book in the *Performance and Science* series. In offering both enthusiastic encouragement and well-informed critical input, series editors John Lutterbie and Nicola Shaughnessy have helped us greatly from the start. Lara Bateman, Mark Dudgeon, Ella Wilson and all at Methuen Drama have made the publishing processes smooth throughout. Our thanks also to Dharanivel Baskar and the production team at Integra. We are very grateful for all this assistance. Many thanks too to Lux Eterna for the evocative cover photo (for more about the related film, *AURA NOX ANIMA* (2016), see Chapter 2, by Sarah Pini).

The initial chapter drafts were written as we all endured lockdown in 2020. We ran three online workshops in August 2020 at which contributors presented work in progress across distinct time zones, generating feedback and cross-fertilization. At the next stage, each chapter draft was reviewed by two peers, in many cases by one other contributor and one external expert. Our five commentators – well-established skill researchers in theatre, robotics, philosophy, performance studies and psychology – played significant roles in these phases of project development, helping to sharpen all the chapters before completing the commentaries on resulting themes

which you will read in the book. We have been pretty hands-on editors, engaging in iterative discussions with the contributors as each chapter went through multiple versions. It is our hope that despite the diversity of theories, concepts and approaches in the volume, this close interaction between editors, chapter authors and commentators has generated a genuine, and unusual, coherence of method and framework across diverse domains.

Our work on this book has been supported by ARC Discovery Project grants DP130100756 'Mindful Bodies in Action' and DP 180100107 'The Cognitive Ecologies of Collaborative Embodied Skills', for which we are very grateful. Such support for insistently interdisciplinary research is rare and precious. Doris McIlwain died in 2015, but her influence on this book is immense: we wish she could have participated. We are deeply appreciative of our entire team of authors and commentators, whose patience, commitment and sheer brio saw us through some challenging times and brought us the deep, long-term buzz and pleasure of real collaborative action. We want to single out Wayne Christensen, Andrew Geeves and McArthur Mingon for their help, their support and their vision at different stages of this research – thank you. Special thanks too to Greg Downey and Lyn Tribble for comments on our editors' introduction. We are also very grateful to the following other friends, colleagues, students, referees and reviewers, critics and collaborators who have directly encouraged and inspired, facilitated and contributed to our projects on skill along the way: Bruce Abernethy, Lucas Bietti, Max Cappuccio, Amanda Card, Andy Clark, J. M. Coetzee, Giovanna Colombetti, Ed Cooke, Rochelle Cox, Robin Dixon, Paul Dwyer, Matthew Elton, Regina Fabry, Damian Farrow, Ellen Fridland, Rasmus Gahrn-Andersen, Shaun Gallagher, Petra Gemeinboeck, Elle Geraghty, Celia Harris, Simon Høffding, Dan Hutto, Jesus Ilundain, Samuel Jones, David Kaplan, Nick Keene, Paul Keil, Carla Lever, J. Lowell Lewis, Julie-Anne Long, Ole Lund, Glen McGillivray, Jeremy McKenna, Clare MacMahon, Lambros Malafouris, David Mann, Lars Marstaller, Judith Martens, Paul Mason, Rich Masters, Richard Menary, Barbara Montero, Sean Müller, Rebecca Olive, Garth Paine, David Papineau, Carlotta Pavese, Karen Pearlman, Gert-Jan Pepping, Beth Preston, Ian Renshaw, Anina Rich, Dan Richardson, Kate Rossmanith, Justine Shih-Pearson, Tim Sinclair, Line Simonsen, Phil Slater, Barry Smith, Ben Smith, Kim Sterelny, Bill Thompson,

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Kath adds her personal thanks to Anne, Geoff, Brendan and Lauren Bicknell, Gaye Camm and her incredible extended family. And from John to Graeme Friedman, Christine Harris-Smyth and Nina McIlwain – thank you.

Introduction: The situated intelligence of collaborative skills

John Sutton and Kath Bicknell

The topic: Thinking with our feet

People move together, and do things together, all the time. We play and work and talk and suffer together, finding ease or joy, sharing pleasure or grief. We discover challenge, thrill and risk.

Joint actions may involve physical, manual or technical skill, and may rely on tools, technologies and ordinary old objects. Collaborative actions also involve *situated intelligence*, a dynamic, lively and social form of cognition. This book is a celebration and exploration of these things: the dizzying variety of remarkable ways that people move and think together, in unique places and settings, at a time and over time.

In initial orientation to the book's topics, we introduce in turn the five key concepts which animate it: performance, body, collaboration, cognition and ecology. We briefly describe the domains of **performance** in question here, its bodily or '**embodied**' nature, the forms of **collaboration** addressed, the role of intelligence or '**cognition**' in expert movement and the notion of '**ecologies of skill**'.

Performance

For practitioners and researchers in performance studies, we aim to do justice to the lived complexity of emotion, awareness and thought in skilled, coordinated action. What makes performance, sometimes, so precise, adaptable and marvellous? The collaborative activities we address span the full spectrum of performance, embodied practices and ecologies of skill: from aesthetic contexts such as theatre, architecture and music to sport and martial arts. Our primary focus is on specialist domains, in which skills must be laboriously acquired, and expertise is a gradual, fragile, wonderful outcome. We examine skilled tasks and activities operating at a range of nested and interacting timescales: from incredibly fast decision-making under severe pressure, to long-term shared histories of collaboration in rich cultures and subcultures.

Embodiment

Our contributors offer lively, animated accounts of the bodily and emotional nature of skilled performance, with many developing ethnographic or ‘experience-near’ case studies. Where theoretical work on ‘embodied cognition’ can be a little thin or abstract, here are vivid descriptions of striking bodily experiences as skills are honed and exercised. We find pain and visceral agony, and the screaming of muscles, as bodily capacities are stretched and remoulded in particular patterns of use. There is surprise and delight as experts and novices find new ways to move or coordinate. In concrete descriptions and analyses of diverse and specific bodily and emotional experiences, our contributors illuminate with precision the flexible intelligence that dancers, divers, fighters, composers, film directors and dedicated Front-of-House volunteers reveal in, and through, action.

Collaboration

In some cases, the forms of collaboration studied are dyadic, involving pairs of skilled actors – either cooperative or, as in martial arts, antagonistic. In other cases, collaboration is at the level of small groups or larger organizations. These are *social*