‘Music-Dance offers an incredibly wide array of different perspectives on the encounter between sound and bodily motion. A very distinguished international group of scholars investigates the theoretical foundations of this encounter as well as some of its most exciting results, shedding revealing light on the productive tensions generated by the creative engagement of music and dance. This volume will be read with profit and pleasure not only by dance scholars, musicologists and cultural historians, but also by dancers, choreographers, composers, performers, and anybody interested in how bodies move to sounds.’

Emanuele Senici, University of Rome La Sapienza, Italy

‘Far from merely emphasizing the inseparability of sound and motion, Music-Dance demonstrates how such dichotomies might be abolished altogether, thereby firmly establishing its object of inquiry as a rich area of research. Innovative in its approach and cogently argued throughout, this volume is as groundbreaking as it is essential. Written in a fluent, resonant and stimulating manner (analogous to the topic under discussion), this ensemble of essays by distinguished authors quite intentionally displays a specific mode of complex thinking. Suffused with scholarly curiosity and pleasure in fathoming multimodal phenomena, this volume brings together different aspects and perspectives (both historical and theoretical, fundamental and exemplary) on the important relationships between the arts and their reception, and does so in a versatile, dialogic manner. A crucial achievement in these our times!’

Christina Thurner, Universität Bern, Switzerland
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Music-Dance

Music-Dance explores the identity of choreomusical work, its complex authorship and its modes of reception as well as the cognitive processes involved in the reception of dance performance. Scholars of dance and music analyse the ways in which a musical score changes its prescriptive status when it becomes part of a choreographic project, the encounter between sound and motion on stage, and the intersection of listening and seeing. As well as being of interest to musicologists and choreologists considering issues such as notation, multimedia and the analysis of performance, this volume will appeal to scholars interested in applied research in the fields of cognition and neuroscience. The line-up of authors comprises representative figures of today’s choreomusicology, dance historians, scholars of twentieth-century composition and specialists in cognitive science and performance studies. Among the topics covered are multimedia and the analysis of performance; the notational practice of choreographers and the parallel attempts of composers to find a graphic representation for musical gestures; and the experience of dance as a paradigm for a multimodal perception, which is investigated in terms of how the association of sound and movement triggers emotions and specific forms of cognition.

Patrizia Veroli is an independent dance scholar. She has been awarded a number of fellowships and grants and was a fellow of the Italian Academy for Advanced Studies at Columbia in 1998. She is the author of Milloss. Un maestro della coreografia tra espressionismo e classicità (1996) and other volumes about XX century dance. She curated a few exhibitions and co-edited several volumes, among which are Omaggio a Djagilev (with D. Rizzi, 2011), and I Ballets Russes di Diaghilev tra storia e mito (with G. Vinay, 2013, 2 tomes). She is a member of the advisory board of Dance Chronicle and of the international board of Recherches en danse.

Gianfranco Vinay has been Professor of History of Music at the Conservatory of Turin (1974–1992) and later Maître de conférences in the Music Department of the University of Paris 8. He is the author of Stravinsky neoclassico. L’invenzione della memoria nel ’900 musicale (1987) and the editor of Stravinsky and Gershwin (both in 1992). His recent books include Charles Ives et l’utopie sonore américaine (2001), Quaderno di strada di Salvatore Sciarrino (2007) and Immagini gesti parole suoni silenzi. Drammaturgia delle opere vocali e teatrali di Salvatore Sciarrino (2010). He is the co-editor of I Ballets Russes di Diaghilev tra storia e mito (with P. Veroli, 2013, 2 tomes). He is a member of the advisory board of the journal Il Saggiatore musicale.
The music of the twentieth century is a composite and variegated entity. Recent works of historiography have revealed the difficulty of arriving at a coherent representation of the multiplicity of conceptions, artefacts, events and communities which characterised musical life in this century. This plurality, which is manifested at all levels (linguistic, stylistic, geographical, institutional, socio-cultural), requires adequate research strategies. The series Musical Cultures of the Twentieth Century tackles some crucial questions by setting up research groups, whose members collaborate closely over a time span determined by the complexity of each topic.

The principal site of the projects is the Institute of Music of the Giorgio Cini Foundation, Venice, which, from its very beginnings, was conceived as a forum for musicological discourse. After the initial phases of preparation and research, a conference is held for each project that aims to present findings and act as a platform for an exchange of views. Individual research, therefore, has the opportunity to interact with many authors, leading to volumes that are intended to play a positive role in international debates, update research criteria and open up new perspectives. In designing these projects, we pay special attention to methodological pluralism: complex phenomena can only be adequately dealt with through a combination of various currents of contemporary thought and an intense dialogue between scholars of different nationalities, ages and theoretical backgrounds.

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Preface

The research group from which this book originated was created in 2015, a year which marked the thirtieth anniversary of the Music Institute of the Giorgio Cini Foundation; for the occasion, its scientific activities were ordered around a thematic centre defined as *Music among the Performing Arts*. This cluster of research areas was inspired by the history of the Institute, which took its first steps in a field characterised by the intersection of different forms of art, stemming from a branch of the Institute for Literature, Theatre and Opera, founded in 1955. Dance is represented extensively at the Foundation, which, in addition to many sources belonging to the personal collections of several composers, also preserves the archives and the library of Aurel M. Milloss (1906–1988), whose activity as a choreographer and dance theorist can be considered as emblematic for the twentieth century.

This project was triggered by the relevant changes in the investigation of choreographic works and their relationships to a larger topic in today’s musicology: the intersection of sound and motion. The twentieth century, the long span of time on which this book is focused, is rich with significant collaborations between composers and choreographers. Many artists have paid special attention to the kind of expression that can be produced by the association of bodies in movement and organised sound. In recent years, scholars have increasingly considered dance as a site for multiple encounters between the arts of sound and corporeal movement, contributing to an intensification of interdisciplinary collaborations and methodological cross-fertilisation. On the one hand, dance scholars have shown a far greater awareness of the significance of listening in the reception of a dance show as compared to past decades. On the other, historical musicology is not only rethinking dance’s place in its research field but is also reflecting on the fruitful repercussions of advanced investigations on choreography for its own methodological machine. The coincidence of these trends sets the most favourable premises for a reciprocal integration of knowledge. The network of scholars authoring the present book is the mirror of the current state of the art.
I should like to express my warmest thanks to all those who have contributed to this book in one way or another. First, to Patrizia Veroli and Gianfranco Vinay, who brought refreshing ideas and stimulated the interactions within the research group. They worked with me in coordinating the first phase of research activity, the conference held in Venice from 8–11 July 2015, and then supervised all of the following stages of the project. The conference left a lasting impression on all participants, thanks also to the mesmerising keynote lectures given by Dominique Brun and Alvin Curran. The critical commentaries provided by Jonathan Owen Clark, Nikša Gligo, Julie Perrin, Stephanie Schroedter and Emanuele Senici after each conference session were the source for the intense discussion that has had tangible repercussions in this book. Special thanks are also due to the authors of the chapters for their generosity in making their patrimony of knowledge available, for their input to the interdisciplinary exchange and for their openness towards new perspectives. Finally, the completion of the volume has been made possible through the involvement of Sally Davies, who has given precious advice and helped to keep the terminology uniform and Marco Cosci, who has thoroughly checked the editing and generously contributed to make the index.

Gianmario Borio
Contributors

Susan Broadhurst is a writer and performance practitioner. She is also Professor of Performance and Technology and Director of Research in the Department of Arts and Humanities, Brunel University, London. Susan’s research entails an interrogation of technologies and the notion of the embodied performer expressed in her publications, performance practice and interdisciplinary collaborations. Her publications include Digital Practices: Aesthetic and Neuroaesthetic Approaches to Performance and Technology (2007), Sensualities/Textualities and Technologies: Writings of the Body in 21st Century Performance (2010) and Identity, Performance and Technology: Practices of Empowerment, Embodiment and Technicity (2012). As well as being the co-editor of the online journal Body, Space & Technology now in its fifteenth year of publication, she is also co-series editor for Palgrave’s ‘Studies in Performance and Technology’.

Antonio Camurri has a PhD in Computer Engineering and is a professor at University of Genoa where he teaches ‘Human Computer Interaction’ and ‘Multimodal Systems’. His research interests include multimodal interfaces and interactive systems; kansei information processing; computational models of non-verbal expressive gesture, emotion, and social signals; interactive multimodal systems for theatre, music, dance, museums; and interactive multimodal systems for therapy, rehabilitation, independent living. He is also founder and scientific director of InfoMus Lab and of Casa Paganini-InfoMus Intl Research Centre (www.infomus.org), member of the Executive Committee of the IEEE CS Tech. Committee on Computer Generated Music, founding member of the Italian Association for Artificial Intelligence, Associate Editor of Journal of New Music Research (Taylor & Francis) and author of more than 150 publications in international scientific journals and conferences. He is coordinator and principal investigator in EU projects (IST FP5 and FP6, ICT FP7, H2020, Culture, Erasmus Intensive programs, Cost Action, CRAFT) and co-owner of patents on software systems and is responsible for University of Genoa of industry contracts. He is currently Coordinator of the EU Horizon 2020 ICT Project DANCE (dance.dibris.unige.it).
Contributors

Eric F. Clarke is Heather Professor of Music at the University of Oxford and a Professorial Fellow of Wadham College. He is the author of Ways of Listening (2005), co-author of Music and Mind in Everyday Life (2010) and co-editor of Music and Consciousness (2011). He was Associate Director of the AHRC Research Centre for Musical Performance as Creative Practice (2009–14) and is a Fellow of the British Academy.

Inger Damsholt is Associate Professor of Dance Studies in the Musicology Section of the Department of Arts and Cultural Studies, University of Copenhagen. The main focus of her research is directed at Choreomusical Relations and, more recently, social dance in Denmark and Scandinavia after 1950. Recent publications include ‘Rock around the North’ in Nordic Dance Spaces: Imagining and Practicing a Region (2014) and ‘Troublesome Relationships: Gendered Metaphors in Modern Dance and its Music’ in Discourses in Dance (2012). From 2002 to 2006, she was Chair of Nordic Forum for Dance Research.

Nicolas Donin is head of the Analysis of Musical Practices team, a joint research group of Institut de Recherche et de Coordination Acoustique/Musique, Université Pierre et Marie Curie and Centre National de la Recherche Scientifique in Paris. His work focuses on contemporary musical practices, particularly composition and performance, using both a musicological and a cognitive approach.

Susanne Franco is lecturer at Ca’ Foscari University in Venice. Her principal publications concern modern and contemporary dance as well as methodological problems of dance research. She has been the editor of the book series ‘Dance for Word/Dance Forward. Interviste sulla coreografia contemporanea’ (L’Epos). She has participated to the international research group founded by the Ministerio de Ciencia e Innovación, Spain (2009–2011), and she has been the recipient of a grant of the Italian National Research Centre (1997) and of the Canadian Studies Faculty Research Award Program (2002). She is a member of the CTEL (Centre Transdisciplinaire d’Epistémologie de la Littérature et des Arts vivants: Littérature, Musique, Théâtre, Danse) at the University of Nice. She is a member of the board of the Italian dance journal Danza e Ricerca (University of Bologna), of the Advisory Board of the journal Dance Research Journal (Congress on Research in Dance, CORD) and of the international board of the French journal Recherches en Danse. As a curator, she has worked for the Fondazione Querini Stampalia of Venice and has been responsible for the dance program at the Hangar Bicocca (Milan).

Rolf Inge Godøy is Professor of Music Theory at the Department of Musicology, University of Oslo. His main interests concern phenomenological approaches to music theory, meaning taking our subjective experiences of music as the point of departure for music theory. This work has been expanded to include research on music-related body motion in
performance and listening, using various conceptual and technological tools to explore the relationships between sound and body motion in the experience of music.

Claudia Jeschke is a professor of dance studies and a historian, reconstructor, choreographer and curator. Along with her studies of Theaterwissenschaft at Munich University and a doctoral dissertation on the history of dance notation systems, she was professionally trained in various dance forms. Her academic and respectively practical expertise allows her to approach dance heritages 'in actu' on stage as a curator of exhibitions and as an author of television programs on dance – and in academic writing. As a guest professor, she has taught in Europe, USA, Canada and Asia, and she introduced dance studies as an academic discipline in German theatre and dance departments such as Munich, Leipzig (where she has finished her habilitation) and Cologne. In 2004, she joined the faculty of the Department for Studies in the Arts, Music, and Dance at Salzburg University and became Director of the Derra de Moroda Dance Archives. Her body of publications focuses on historical and theoretical issues in dance as well as on movement analysis and notation – and the discursive transfers between these fields of research.

Stephanie Jordan is Research Professor in Dance at Roehampton University, London. She is the author of Striding Out: Aspects of Contemporary and New Dance in Britain (1992), Moving Music: Dialogues with Music in Twentieth-Century Ballet (2000), Stravinsky Dances: Re-Visions across a Century (2007) and analytical DVDs with the New York City Ballet and Royal Ballet. In 2012, Jordan received the award for Outstanding Scholarly Research in Dance from the Congress on Research in Dance. Currently supported by a Leverhulme Fellowship and British Academy grant, she has published a book on Mark Morris and music (2015).

Massimiliano Locanto is Associate Professor in History of Music at the University of Salerno. He earned a PhD in Musical Philology with a dissertation on the creative process in Igor Stravinsky’s serial compositions. His research interests and publications are in two main areas: the history of medieval monody – Gregorian chant, liturgical tropes – and twentieth-century music with a particular focus on the music of Igor Stravinsky and on the relationship between music theories, compositional techniques and scientific thought. He edited the volume Igor Stravinsky: Sounds and Gestures of Modernism (2014).

Ulrich Mosch studied Music and German Literature in Hannover and Musicology at the Technische Universität in Berlin (with Carl Dahlhaus). In 1991, he graduated in Berlin with a thesis about the aural perception of total serialism. In 2004, he was appointed as University Lecturer (Habilitation) at the Paris Lodron Universität in Salzburg, Austria. From 1990 to 2013, he was musicologist and curator of music manuscripts at
the Paul Sacher Foundation in Basel, Switzerland, responsible for 25 collections of manuscripts and other documents, including those related to Igor Stravinsky, Luciano Berio, Hans Werner Henze, Brian Ferneyhough and György Kurtág. Since fall 2013, he has been Full Professor in Musicology at the University of Geneva. Curator of several exhibits, he has published widely on music, music history and music aesthetics, mostly of the nineteenth, twentieth and twenty-first centuries.

Marina Nordera, after an international career as a dancer (mainly with the companies Il Ballarino and Ris et Danceries), completed a PhD research project in History and Civilisation on Dance and Gender in Early Modern Europe at European University Institute in Florence, Italy. Since 2002, she has been Full Professor in Dance Studies in Nice Sophia Antipolis University, France, where she coordinates the Master and PhD programs in Dance Studies and teaches Dance history, Dance analysis, History of the body, Methodologies for research in the performing arts and Early dance. She has published several articles and chapters on cultural history of dance in Early Modern Europe. She has edited with H. Marquié, ‘Perspectives genrées sur les femmes dans l’histoire de la danse’, Recherches en danse (2015); with L. Guilbert, P. Guisgand, N. Topin, J. Vellet, ‘Être chercheur en danse’, Recherches en danse (2014); with R. Martin, Les arts de la scène à l’épreuve de l’histoire (2011); and with S. Franco, Ricordanze. Memoria in movimento e coreografie della storia (2010) and Dance Discourses. Keywords for Methodologies in Dance Research (2007).

Dee Reynolds is Professor of French at the University of Manchester. Her research background is in French poetry, abstract painting and comparative aesthetics, and her current topic of research is modern and contemporary dance, especially dance audiences and kinaesthetic empathy. She is the author of Rhythmic Subjects: Uses of Energy in the Dances of Mary Wigman, Martha Graham and Merce Cunningham (2007) and Symbolist Aesthetics and Early Abstract Art: Sites of Imaginary Space (1995). She also co-edited, with Matthew Reason, Kinesthetic Empathy in Creative and Cultural Practices (2012) and with Penny Florence, Feminist Methodologies: Multi-Media (1995). In addition, she has edited several special issues of journals, including Dance Research Electronic on Dance and Neuroscience (2012). Her work has appeared in numerous edited collections and journals, including Body and Society, Body, Space and Technology Journal, Dance Research and Dance Research Journal. From 2008 to 2011, she directed the AHRC-funded project (Arts and Humanities Research Council), Watching Dance: Kinaesthetic Empathy (www.watchingdance.org), and she is currently the lead partner in the Leverhulme International Network, Evaluating Methods of Aesthetic Enquiry across Disciplines, 2015–2018 (www.aestheticnetwork.manchester.ac.uk/).

Lawrence M. Zbikowski is Associate Professor in the Department of Music at the University of Chicago, where he has served as chair of the Department and as Deputy Provost for the Arts. He is the author of Conceptualizing Music: Cognitive Structure, Theory, and Analysis (2002) and Toward a Cognitive Grammar of Music (forthcoming). He recently contributed chapters to Music, Analysis, Experience, The Oxford Handbook of Topic Theory, Speaking of Music, Bewegungen zwischen Hören und Sehen, New Perspectives on Music and Gesture and Music and Consciousness. He has also published articles and reviews in Music Analysis, Music Humana, Musicæ Scientiæ, Music Theory Spectrum, Ethnomusicology, the Journal of Musicological Research and the Dutch Journal of Music Theory. During the 2010–2011 academic year, he held a fellowship from the American Council of Learned Societies and was also Fulbright Visiting Research Chair at McGill University.
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Introduction

Choreomusicology between interdisciplinarity and ‘complexity’

Patrizia Veroli and Gianfranco Vinay

‘In the memory of Marianne Lyon’

[...] complexity is a fabric [...] made out of heterogeneous parts that are inescapably tied together: it involves the paradox of including unity and multiplicity at the same time.

Edgar Morin

The interweaving of sound and motion

The title of this volume, Music-Dance (which could well have been Dance-Music), stems from the intention to claim the inseparability of sound and motion in dance performance and its reception. According to a once commonplace attitude, one or the other of the two main components of a dance performance is generally attributed a priority. Our basic assumption is that it is only as a whole, and not separately as music and dance, that these two arts enter into a close relationship both with the individuals before whom the performance actually takes place and with those who can watch it thanks to technological mediation. It is only as a whole that the performance ignites the spectator’s kinaesthetic imagination (Reynolds 2007: 185–211) and produces effects (and affects) in his/her experience. The complex nature of music-dance as a construct implies that its interpretation must inevitably involve a ‘complex’ thinking, which is able to move in an open area of research and as flexible and changeable as the contemporary artistic landscape.

In speaking of music-dance, we are making use of two terms that, only to some extent, convey our intentions. Indeed, ‘sound’ and ‘motion’ are certainly more in tune with our vision of the problems. In turn, however, the perspective they offer needs further clarification. In fact, on the one hand, especially since the Second World War, sound has opened up to a pan-auditory dimension, and on the other, the concept of motion has come to include the slight and almost imperceptible movements aiming at balance that a living body makes when apparently still (Zimmer 1997 [1977]: 23). The auditory dimension does not include only hearing, just as the visual domain embraces more than just vision. In fact, reception of the environmentally
situatated body, be it of a live performance or of a mediated one, is multimodal, and implies tactility, materiality and physicality. The recipient is also historically determined, both as an individual and as a member of the society to which he/she belongs and whose culture he/she shares, which also affects the way in which he/she constructs the meanings of the performance. Recalling Roland Barthes’s seminal essay on literary works (1984), one could say that the choreomusical event is also created by those who watch and listen to it. The viewer actually processes it, in his/her own way, on the basis of his/her own experience, but he/she is also conditioned by a society that, at the same time, may be affected by his/her knowledge. Dance and music, when woven into a performance, cannot be considered as just arts and disciplines. They are also practices and events and as such can never be interpreted as works closed in themselves because they are open to a plurality of meanings and act on the viewer’s subjectivity.

The theoretical achievements of the last decades in the field of mind and brain sciences and the theoretical and practical attainments that contemporary choreographers have made are forcing us to come to terms with an integrated, complex and quickly changing dimension of dance performance in traditional spaces. In her proposal to reconsider music as intermaterial vibration, Nina Sun Eidsheim has recently theorised the construction of musical meaning as belonging to the relational sphere. Sound is transmitted and transformed in the body of the listener, who perceives it as energy to a degree depending on the part of his/her body but also on various subjective and objective factors (Eidsheim 2015: 154–84). This perspective comes to the same conclusions as research in neuroscience but via another route. Two different paths demonstrate the involvement of the listener’s body in musical experience and in the construction of the meaning of music. Eidsheim’s theoretical standing can be put to profit in choreomusical studies, which might also explore light (and vision) as material phenomena applied to performance.

Just as for Clifford Geertz, the anthropological set requires a ‘thick description’ able to account for the categories at work in the person watching and the person being watched (Eidsheim 2015: 1–4); in the same way, music-dance demands a hermeneutic and theoretical approach based on the theory of ‘complexity’.

The birth of the choreomusicological approach

The birth and spread of a research field is itself a complex phenomenon, and this holds all the more true in the case of the humanities and arts. As compared to the physical and natural sciences where the studied phenomena are subjected to experimental tests, humanistic objects expose researchers to the fickleness of judgement. Any verbal expression that at a given stage of the heuristic process summarises and labels the phenomena under investigation is the result of the accumulation and interference of different disciplines and fields of knowledge.
This is the case of the term 'choreomusicology', introduced by Paul Hodgins (1992). However, the perspective that governed dance studies of that time was far from allowing the possibility even to imagine that the relationship between dance and music could become a proper area of research. From the 1980s–1990s onwards, when the body stood out as a veritable 'paradigm' in the Kuhnian sense (Kuhn 1996 [1962]: 10), the practice of dancing has begun to be explored as the result of social inscriptions, that is, of political values, and it has been associated with the identity (ethnicity, class, gender, nation) of both the dance performer and viewer. In such a theoretical context, music played a seemingly minor role (Lansdale 2010: 161–62).

A number of reasons can explain the delay with which musicologists have become conscious of the need to analyse music and dance together. The greater solidity of musical works compared to choreographic ones has definitely contributed to the fact that compositions written for dance have been considered in terms of their musical language, the style of composers and their impact on music history. Since the Second World War, the scores of choreomusical works, such as Jeux, The Rite of Spring and Les Noces, have been conceptually separated from their original destination (the stage) and used instead as models for a renewal of musical language.

The recognition of the body paradigm by musicologists has led to the identification and application of analytical and hermeneutical categories designed to investigate the connections between music and dance. Robert Hatten’s studies played a crucial role. By merging linguistic principles (such as ‘markedness’, drawn from Michael Shapiro’s theory of the asymmetric evaluation of opposing structures) with Leonard G. Ratner’s ‘topics’, Hatten developed a new approach for analysing musical expression. His method was founded on the assumption that human gesture is a modulation of temporal energy, bearing as such a definite meaning (Hatten 1994; Ratner 1980; Shapiro 1976; Shapiro and Shapiro 1976). Ever since the identification of such a category, the analogical relationship between musical and dance gesture has spurred researchers working in the field of musicology to interpret and analyse musical works written for dance. It was in such a context and cultural background that the choreomusicological paradigm started to establish itself during the 1990s. It is no accident that Paul Hodgins, a musician, worked in a university dance department. In the genetic process leading to choreographical works, and especially ballets, based on piano accompaniment, the musicians’ and dancers’ bodies are all involved and interrelated in a dimension concerning both perception and communication.

At the turn of the twenty-first century, two important studies further developed the disciplinary field opened by Hodgins: Inger Damsholt retraced the history of musicological discourse from the Renaissance to the 1970s (Damsholt 1999), while Stephanie Jordan laid the first foundations for her methodology for choreomusical analysis (Jordan 2000). The distinction between ‘intrinsic’ (formal and structural) and ‘extrinsic’ (cultural) relationships, introduced by Hodgins in his analysis of the relationship between
Western dance and concert music (Hodgins 1992: 25), was criticised (Damsholt 1999: 127–30; Jordan 1994: 217–21). A new mapping of points of similarity between music and dance, based on Rudolf Laban’s *Movement Analysis*, Hodgins’s framework and Susan Foster’s stylistic analysis of a number of modern dance pieces (Foster 1986), has been proposed even quite recently (McMains and Thomas 2013: 196–217). It focuses on two particular choreomusical relationships, amplification (one of the two arts amplifies an idea expressed by the other, although neither takes a dominant role) and emergence (dance and music together create a meaning that does not exist separately in either medium), derived from the categories conceived by Nicholas Cook in his study on multimedia (1998). The landscape of contemporary creation in dance indeed offers such a varied typology that the concepts of motion, sound, authorship and choreography are constantly being redefined within a network of affective states that involve dancers, musicians and audience (both in a live performance and in front of an audiovisual text). This implies the need to identify appropriate models of interpretation for each type of performance, be it live or mediated.

**Score and notation in music and dance**

The fact that dance is lacking in works liable to a classification using parameters applied to the other arts has played a part in the tardiness in analysing the music-dance construct as a unit. The ancient practice of music and dance notation for preservation and mnemonic purposes is bound to reduce the constitutive sensory dimension of these two arts. The late Italian musicologist Giovanni Morelli noted that the musical score is ‘the presentation of a lame *translation (eine blasse Wächerin)* of the empirical musical event in a sign-image system, or in anything else as long as it is non auditory, preferably silent, and mostly distant from the real musical event’ (Morelli 2003: 69). And the transferral of dance onto paper fares no better as the multisensory pulsation of the body gets extinguished in the sign. ‘Choreography, as the writing of and about movement […] always includes something of a requiem’ (Brandstetter 2000: 104). Unlike what has happened in music from the ninth century onwards, ‘choreo-graphics’, that is, documents in which choreography is recorded in some form of notation, are few and far between. The cover of this volume shows one of the latest ‘formal’ scores drawn by Yvonne Rainer, one of the greatest postmodern choreographers. Inspired by *Fontana Mix*, one of Cage’s indeterminate compositions, and by his proposed treatment of Satie’s music, Rainer marks the bar numbers in the French musician’s work when a certain type of movement should be performed, either indicated in words and/or with a schematic drawing of the body. A circle around the bar number stands for stillness.

Since choreography is still handed down mainly through artistic practice, the choreographic work does not fit properly into the categorisation of the arts proposed by Nelson Goodman (1968). It is not autographic because it
can be repeated, and its identity does not depend on a verifiable history. And it is not really even allographic because notation is not one of its constitutive elements. As such, it is characterised by an inherent fragility that Frédéric Pouillaude has called ‘Choreographic unworking’ (Pouillaude 2017). Its ontological status oscillates between transience and a certain extent of permanency, so much so that performance scholar Diana Taylor identified it as ‘repertoire’ of gestures and movements whose memory is embodied (Taylor 2003: 20). If the choreographic work is permeable and in a constant state of flux, a ‘repertoire’ is not bound to assemble the works, considered as stable and self-contained objects – which a company keeps to be restaged – but rather the dancers’ kinaesthetic memory and the changes it undergoes over time. The dancers recreate the dance with each new performance, and this destabilises the choreographer’s authorship (Young Reed 2016: 181). Nowadays, choreographers produce all kinds of scores but entrust them with nothing more than a subsidiary function. In a recent reconfiguration by William Forsythe and thanks to digitalisation, the ‘score’ is defined as a ‘choreographic object’ and is none other than ‘choreographic thought’, considered not as

a substitute for the body, but rather as an alternative site for the understanding of potential instigation and organization of action to reside. [...] It is a model of potential transition from one state to another in any space imaginable.

(Forsythe 2011: 91, 92)

Despite the existence of a margin of freedom between the graphical image and the realisation of sound, the musical score, as it was conceptualised and used before the aleatory turn, remains prescriptive. However, when it becomes part of a choreomusical project, it changes its status, becoming, to a certain extent, a flexible structure that can give origin to a number of symbolic interweavings and associations. In some contemporary choreographic practices, the dance unfolds together with the formation of an ‘auditory architecture’ that comes about through the electronic processing in real time of sounds and noises, almost as if choreographic thought could come close to revealing what the Polish philosopher and mathematician Joseph Hoëne-Wronsky described as ‘the corporealization of the intelligence which is in sound’ (quoted in Cox and Warner 2004: 19–20). This visionary definition so fascinated Edgard Varèse that he adopted it as one of the basic principles of his musical poetics.

Generally speaking, the choreography and performance of dance are considered today as inseparable from the body and do not require a text. Moreover, advances in digital technology have entailed a broadening of the current concept of literacy. A discursive space is available that provides contemporary choreographers with the chance to not only record those dance components that have to do with the sensory dimension but also to
share their creative thinking and to use intertextuality to spur the transformation of the act of reading and of viewing the notation into a true and proper performance. The experience of dancing today involves ‘communities of practice’ (one of which was Forsythe’s Motion Bank) where dancers, composers, musicians, sound engineers, philosophers, cognitive scientists and scholars work alongside the choreographer, and a ‘dance literature’ is being produced that is based on non-linguistic forms and more in general on contents that are not associated with logic and rational thought (deLahunta 2014: 19–20).

The presence of philosophers and cognitive psychologists within research networks focussing on the creation of dance, and the increasing interest that scientists are demonstrating in the choreomusical performance, confirm the current relevance of mind and brain sciences for choreographers and indicate the precious kind of knowledge scientists can conversely acquire in sharing the challenges experienced by those who practice ‘thinking in movement’ (Manning and Massumi 2014: 13). ‘Choreography’, as Alva Noë wrote, ‘makes manifest something about ourselves that is hidden from view because it is the spontaneous structure of our engaged activity. This is a paradigmatically philosophical activity’ (2016: 16).

Our everyday perception is intermodal, and music and dance can act as catalysts and even be constitutive of the expression and circulation of affective states. In a work like Forsythe’s Three Atmospheric Studies, Part Three, You Made me a Monster (2006), the complex soundscape includes breath and gestural sounds produced by the dancers’ bodies. They are synchronised, connected and performed in counterpoint as indicated in specific scores. As to vocalisations produced by the dancers, they are all altered, augmented and fed back in real time into the performance space by composer-programmers, while the choreographer monitors the overall timbre of the performance and hence audience reception. The performance space is extended from the stage to the sound booth; dancers are creators just like musicians and sound engineers, and it is a matter of opinion as to where they stand in the creative hierarchy as compared to the choreographer (Vass-Rhee 2011: 87). In cases like these, in which the multimodality is emphasised, an audiovisual text of the performance is bound to produce significant alterations of the live version.

This book and its discourses

‘What is “choreomusical research”?’ is the question that Inger Damsholt repeats at the beginning of each part of Chapter 1, which opens the section of the book titled The Choreomusical Work: Towards a Theoretical Foundation. She goes on to analyse the state of choreomusicology today, clearly showing how it is still difficult to delineate this disciplinary field after twenty-five years of increasingly in-depth and interwoven research. This difficulty is voiced at the beginning of each of the three main sections of her article by
three alternative answers that, as such, refer to three alternative questions: “academic research” or “artistic practice”?”; “the art studies tradition” or “the ethnographic tradition”?”; “core discipline” or “interdisciplinary area”?”). The reader is referred to Damsholt’s essay for a precise and articulated investigation of these alternatives, but let us just point out that the choice to give more weight and value to one or the other of these options has crucial implications for choreomusicology, which comes to assume different and even opposing characteristics. Damsholt herself summarises such options as the alternation/opposition between an essentialist-formalist tendency, based on the investigation of the inherent relationships between elements of the two arts in question, and a constructivist-culturalist attitude, based on the analysis of the extrinsic relationships linking these elements to the cultural and social context. As regards methodology, on the contrary, Damsholt describes the alternation/opposition between what she calls a ‘core discipline’, which focuses on fundamental issues of a purely choreomusicological nature, and an ‘interdisciplinary area’, based on constant exchangelings and intertwinnings between choreomusicology in the strict sense and the related neighbouring disciplines.

In Chapter 2, Massimiliano Locanto underlines the analytical limits of Hodgins’s essay (1992) and advocates the adoption of an intermodal and synthetic principle, such as Hatten’s ‘musical gesture’. Such a principle is synthetic because linguistic elements that scholars have often considered separately within a certain type of analytical tradition are blended into a meaningful unit and a perceptible gestalt. It is intermodal because gestures refer to both a real and a virtual body, and it creates analogical relationships between the kinetic and energetic features of bodily and musical gestures. If analysed from this perspective, the musical score is not a network of formal and structural relationships that needs a content to become significant because form and content, structure and meaning are already blended therein. The abolition of such a dichotomy has obvious implications for the perceptive and receptive dimension because hierarchical levels of the more or less ‘structural’ kinds of listening no longer exist. This is extremely important for the analysis and interpretation of the analogical interaction with music that choreographers with a different musical competence can establish. Thus, what is at stake is not an analytical skill honed by musical competence but the ability to grasp synthetic, interacting aspects of the music and react creatively to them.

Beginning with an analysis of a couple of filmed sequences in the second tableau of Les Noces by Bronislava Nijinska, in Chapter 3, Lawrence M. Zbikowski considers dance movements and the music’s kinetic energy perceived as a bodily resonance and the ways these can correspond with and have an effect on each other. Zbikowski’s article focuses more on the process that generates these analogical correlations and its anthropological nature than on such relationships themselves. The core principle of this process is thus the analogy that creates these correlations in a direct and profound
way, through bodily resonances, and without the mediation of verbal language. This emphasis on the analogical process as an alternative to, and a substitute for, cognitive processes based on linguistic principles brings to light the crucial role such a turn has played in the structuring of the choreomusicological framework. Zbikowski’s discourse uses anthropological principles and is also oriented in a sociological direction. It draws the concept of *habitus* from Pierre Bourdieu.

In the introductory part of Chapter 4, Stephanie Jordan lists the various disciplinary fields that inspire her research. In her analysis of a number of Mark Morris’s ballets, she focuses on the choreographer’s creative reception of pre-existing choreographies to a certain piece of music, i.e. the way in which the use of existing music in a new and different environment changes how it is perceived and listened to. She also investigates how the assimilation of approaches to music used by choreographers of the past fosters Morris’s creative process and style. The basic principle that guides Jordan’s work is the comparison of and the search for various kinds of analogical relationships between music and dance. Her interest is also in the way creative processes can regenerate historical models.

The section titled *Musical Notation and Choreography* deals with recent changes in the status of texts created to notate choreography and music. In Chapter 5, Claudia Jeschke analyses their transformation from (relatively) fixed objects, once used to transmit dance, into ‘multifunctional tools’ that mediate choreography, the viewer’s perception of it and his/her ability to collect information about it in a way similar to the one characterising medias. The most important change in recent decades has been the direct involvement of choreographers, dancers and scholars in the practice and interpretation of notation. The digitalisation of this kind of writing – consisting also in annotations and drawings – makes it intertextual, fluid and in a state of constant regeneration. In Chapter 6, Marina Nordera reflects on the epistemological status of historically established notations. They have been linked in various ways, not only to the anthropological and sociological status of contemporary dance but also more generally to the paradigms at work as regards the perception of time and space inherent to the acts of seeing and reading. With the passing of time, the correlation between movement and music has weakened and choreo-graphers have rather emphasised bodily experience (and perceptive multimodality). This process also involves the reconfiguration of the observer as a field where different discursive, technological, social and political systems interact. In Chapter 7, Nicolas Donin deals with some composers, belonging to a Cageian and post-Cageian area, who have invented a new kind of notation, which has either partly or completely abandoned traditional music writing. One notation, for instance, has fixed points of physical contact between the instrument and the instrumentalist and has indicated the actions to be taken by the latter. Another has identified the musical instrument in the very performer’s body. According to Donin, attention to the changing status of
musical notation can be explained through sociocultural transformations and new redefinitions of subjectivity. Such is the context where the few composers he deals with altered traditional notation, opening it to a wider, albeit undetermined, perceptual dimension.

The section titled Blending Music and Dance: Challenges and Negotiations deals with some of the possible ways in which sound and movement can interact and the resulting effects on both the authorship of the performance and its reception. In Chapter 8, Julia H. Schröder explores Merce Cunningham’s and John Cage’s epoch-making transformations as regards the conventions of choreomusical relationships. She carries out a comparative study of gesture in music and choreography. The role of music and choreography may appear as reversed in contemporary dance pieces. In some performances, musicians perform a score freely and in silence and can be perceived as dancers, whilst in certain choreographies, performers dance to a music that is different from the one the audience listens to. Referring to categories elaborated within media studies, Schröder identifies cases of transmediality, medial transposition and intermedial reference. The focus of Chapter 9 by Ulrich Mosch is Raramente (1971), a ballet which emphasises multimediality. Aurel M. Milloss composed the dance, while Sylvano Bussotti was the author of the music, the libretto, a text (which he himself declaimed), the lighting and set and costume design. Adopting a historical approach, Mosch analyses the problems implied by the internal imbalance in terms of authorship and their role in the public’s reception. The audience was indeed more inclined to appreciate the dance than the composer’s multimedia discourse. Susanne Franco carries out an analysis of Christian Rizzo’s dance piece D’après une histoire vraie in Chapter 10. She reflects upon the way Rizzo and a few musicians (the latter improvising on stage) have re-enacted a folkloric piece of music and dance and the contamination at work on the levels of dance, music and scenic elements. The result, according to Franco, is that Rizzo has indeed undermined from within the very ‘authentic’ folkloric performance he overtly wished to create. On the basis of Postcolonial Studies, Franco denounces the ideological misunderstandings that the piece conveys at the level of representation.

Eric F. Clarke (Chapter 11) opens the Sentient Bodies section by introducing several issues that are addressed more specifically in the following essays. In order to describe the physical nature of human knowledge and perception, the scholar identifies their embodied, extended, embedded and enacted attributes to which he adds the phenomenon of empathy. Inspired by the performances by two popular artists (Michael Jackson and Marquese Scott), Clarke analyses the relationship between body movement and movement induced by music, defining the latter ‘musimovement’. The kinetic relationships between sound and motion are the focal point of his text, which also draws from research on mirror neurons. Finally, Clarke deals with other aspects of perception and embodied knowledge such as multimodality.
A major impetus to a redefinition of the relationships between sound and movement and the categories and principles used to analyse them stems from the study of the analogical relationship between music, sound and body movement. For Rolf Inge Godøy (Chapter 12), one of the major difficulties lies in defining the very nature of these connections and the extent to which they may be based on the ontological character of sound and music and/or linked to mental images. Another problem related to research in this area concerns the nature of the perceptual and cognitive process that leads to the identification of what Godøy calls ‘sound-motion objects’, and ‘geometric forms independent of any particular sense modality’. Starting from her analysis of Susan Sentler’s multimedia installation, See, Sea in Chapter 13, Dee Reynolds explores the synaesthetic relationship between vision, hearing, touch and, in particular, ‘hearing touch’, that is, tactile sensations suggested by sound images of a liquid nature. As her theoretical discourse unfolds, particularly interesting references are made to Rudolf Laban’s concept of ‘effort qualities’ and to some of Gilles Deleuze’s texts. Since she is dealing with an audiovisual text, Reynolds makes use of studies that propose the concept of ‘haptic visuality’ in films.

In Chapter 14, Susan Broadhurst adopts a phenomenological perspective to examine the complex issue of the relationship between contemporary performance and technology. She explores the new field of inquiry of ‘neuroaesthetics’, which lies at the intersection between scientific knowledge (neuroscience and computer science) and the oldest aesthetic discipline. Because the awareness and visual perception of an embodied experience are linked to the neurological sphere, ‘neuroaesthetics’ may be an aid to interpreting the performer’s creative acts and their reception, be these live or technologically mediated.

From the perspective of exploiting several fields of scientific knowledge to carry out the quantitative analysis bound to support and demonstrate the achievements of neuroscience, in Chapter 15, Antonio Camurri illustrates some of the research methods that are aimed at cross-fertilising art and science. In particular, he focuses on the way in which computer engineering modifies and enhances its tools to accommodate this goal. As interactive and social activities, dance and music indeed offer an ideal testbed for phenomena such as expressiveness, the emotional interaction of the performers and their communication with the audience. Camurri’s text shows the link between scientific hypotheses and artistic phenomena as regards both production and reception.

**Dealing with complexity**

The articles assembled in this volume show that rather than being a specific discipline, choreomusicology, at the current stage of its development, is a multi- and transdisciplinary research field. The identification of some of the main theoretical issues faced by contemporary choreomusical research has
revealed a general need for its configuration as an ‘interdisciplinary area’ rather than as a ‘core discipline’. Indeed, it has become clear that when analysing the analogical relationship between music and dance, which is a crucial issue of choreusicology as a ‘core discipline’, authors have also had to resort – at least, to a certain extent – to principles belonging to other disciplinary areas. This shows that the analysis of the intrinsic relationship between music and dance cannot be carried out but in light of the related historical-cultural context (ideological, political, aesthetic, etc.) and that in carrying out this relationship, the barriers between essentialism and culturalism disappear due to the interference between internal and external linguistic elements. Furthermore, although the analysis of these relationships may attribute more importance to some elements than to others, these factors are only the salient features, that is to say, the emergences that are part of a whole.

The following is a list of the disciplines that may be involved in the hermeneutical discourse that focuses on choreomusical works: historical-dramaturgical studies; practical-analytical-essentialist research; anthropological, ethnological and sociological constructivism and culturalism; as well as various other scientific fields (neuroscience, cognitive science, audio-vision theories). Thus, the choreomusicological paradigm is not merely based on the awareness of the two-way relationship between music and dance and the elements on which this correlation is based, but rather, it relies on a set of principles, ideas and perceptual models that belong to the cultural and anthropological context in which the choreomusicological framework originated and developed.

According to the French epistemologist Edgar Morin, a systemic ‘complex’, that is, a global unit composed of interrelated elements, calls for an analysis imbued with a systemic awareness, hence open-minded and endowed with a sensitivity similar to that of art and music:

The systemic sensibility will be like that of the musician’s ear which perceives the competitions, symbioses, interferences, overlappings of themes in the same symphonic flow, where the brutish mind will recognize only one theme surrounded by noise. The systemist ideal cannot be the isolation of system, the hierarchization of systems. It is in the art, aleatory and uncertain but rich and complex like all art, of conceiving the polysystemic interactions, interferences, and dovetailing. The notions of art and science, which oppose each other in the dominant techno-bureaucratic ideology, must be associated here as wherever there is true science.

(Morin 1992: 139)

From this open, systemic and polysystemic perspective, the choreomusicological paradigm is not bound to exclude and oppose elements but rather to associate them. What may seem antinomic and contradictory if considered from a disciplinary or interdisciplinary perspective can become more or
even completely consistent if analysed in the transdisciplinary perspective implied by the ‘complexity theory’. Apparent contradictions and inconsistencies are included in larger and more global paradigms:

Method here is opposed to the conception called ‘methodological’ where method is reduced to technical recipes. Like the Cartesian method, it must be inspired by a fundamental principle or paradigm. But the difference here is precisely one of paradigm. It is no longer a matter of obeying a principle of order (excluding disorder), of clarity (excluding obscurity), of distinction (excluding adherences, participations and communications), of disjunction (excluding subject, antinomy, complexity), that is to say a principle which ties science to logical simplification. On the contrary, starting from a principle of complexity, it is a matter of linking what was disjointed.

(Morin 1992: 18)

By adopting such an approach, rather than simply adding to each other, the findings of researchers working in different fields (historians, musicologists, choreologists, ethnologists, analysts, scientists) fit together much like a honeycomb. Of course, researchers are not expected to give up their specific skills in their subject areas or indeed their own individualities and sensitivities when investigating the choreomusicological paradigm in its broad and ‘complex’ sense. In its interaction with several fields of research, the choreomusicological framework can favour fruitful exchanges and has indeed produced them so far while activating principles that in fact underlie ‘complex thought’, namely: (1) the dialogic principle, (2) emergences, (3) the recursive principle and (4) the hologramatic principle (Morin 1986: 98–111).

1 The dialogic principle is the ‘complex’ (complementary, competitive or antagonistic) association of components that are necessary to the existence, the operation and development of an organised phenomenon. Unlike the Hegelian dialectic principle, contradictions and antagonisms do not find their resolution here in a superior synthetic unit but are intertwined with each other in a non-hierarchical manner. Thus, the culturalist and essentialist tendencies of the choreomusicological paradigm are part of a system in which the psychophysical and biological sides of the observed phenomena can coexist with the anthropological and sociological ones. Their integration is bound to produce meaningful interferences.

2 Emergences are properties or qualities that are certain to arise only from the organisation of the various constituents of a whole. They can neither be inferred from the quality or properties of isolated elements nor reduced to constituent elements. They are neither epiphenomena nor superstructures but rather are salient features of a complex organisation. To give an example from the choreomusicological field,
connections and interactions between music and dance, and sound and motion, may emerge thanks to synthetic categories (‘gesture’, for example), which are different from those traditionally used to analyse the components of the languages of both arts.

3 The recursive principle is one of several types of interaction between phenomena. It consists in a feedback loop where the effects become causes themselves. For example, in the choreomusicological field considered as a ‘complex’ area, the discovery of mirror neurons and the exploration of audiovisual perceptions have offered scientific grounds and hypotheses for causes that have produced (and are producing) effects which hitherto were unknowingly experienced and therefore never the objects of rational investigation. In a broader sense, as scholars, we are all subjected to causes that produce effects on our research and of which we only become aware at a later time: *ex post facto*.

4 The hologramatic principle is the one according to which the whole is included in a certain way (as a hologram) in one of its parts. The aforementioned honeycomb structure is another possible way of envisaging such a principle. This holds true both for the ‘complex’ system of interacting phenomena and for the one of interacting disciplines.

These four principles make it easier to comprehend the extent to which the adoption of ‘complex thought’ for choreomusicological research may prove a fruitful method for interweaving skills and disciplines into an organic whole that takes into due consideration the heuristic potential of the paradigm.

These considerations may be useful in understanding the structure of this volume because not only does the volume provide a meeting ground for musicological and choreological studies but it also sets up multiple intra-chapter relationships, a process that goes beyond the methodology adopted by each author and the selection of examples on which they base their hypotheses. The analytical-critical act must therefore be applied to a synthesis. To a certain extent, we need to learn how to become visionaries.

**Notes**

1 ‘[…] la complexité est un tissu […] de constituants hétérogènes inséparablement associés: elle pose le paradoxe de l’un et du multiple’ (Morin 1990: 21).
2 ‘Affect’ as a core concept in the reception of the new media identifies ‘an ability to affect and be affected in a felt passage to a varied power of existence’. It is a way of understanding micro-perception that is not consciously recorded but is an ‘affective rebeginning of the world’ (Massumi 2015: 50, 54).
3 See also Paxton (2008).
4 See Locanto (2011) and Vinay (2011; 2013a; 2013b; 2014; 2015).
5 In 2015 and 2016, Rome’s Accademia Nazionale di Danza held two international conferences titled *Il corpo nel suono*, organised by Cristiano Grifone.
6 These would be followed by other important studies on dance music by Igor Stravinsky (Jordan 2007) and the American choreographer Mark Morris.
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(Jordan 2015) as well as by several essays, including Jordan’s particularly important contribution of 2011.

7 As regards the problems of remediation, all the more crucial because the analysis of the choreomusical performance is mainly carried out on audiovisual texts, see Vinay (2013b; 2015).

8 This is also one of the reasons why dance has been kept out of the large systems through which Western aesthetics were established (Pouillaude 2017: 3–12).

9 Morelli’s text is a refined disquisition on the ontological status of notation as a visual text.

10 See Rainer (1974): 5, 7. Thanks to Ramsay Burt for the explanation of Rainer’s score.

11 In numerous contemporary pieces, improvised dance together with structured dance does indeed create a type of work that is partially autographic.

12 This is a concept that Pouillaude elaborated on the basis of Bataille’s, Blanchot’s and Foucault’s thoughts, and which he qualifies as follows: ‘Choreographic unworking [Le désœuvrement chorégraphique] ultimately only manifests the power of the powerlessness itself – the paradoxical efficacy of the void that we are, inevitably permeated by what has been so aptly described [by Bataille] as “negativity without employ”’ (Pouillaude 2017: 311).

13 In recent years, memory has become an extremely important topic (see Franco and Nordera 2008).

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