



INSTITUTE FOR MUSIC IN  
HUMAN AND SOCIAL  
DEVELOPMENT  
[IMHSD]



Summer Workshop on

# Hearing, Seeing and Imagining: Music and the Visual Arts

28 – 31 August 2012  
Bader International Study Centre  
Herstmonceux Castle, East Sussex, UK



## Welcome

*Welcome to the Bader International Study Centre (BISC) at Herstmonceux Castle and to our interdisciplinary Summer Workshop on Hearing, Seeing and Imagining: Music and the Visual Arts. Thanks to the generosity of Drs Alfred and Isabel Bader, this is a collaborative venture between the Institute for Music in Human and Social Development (IMHSD), Edinburgh College of Art (ECA), University of Edinburgh, and the School of Music, Queen's University, Canada.*

*The workshop follows in the tradition of four preceding events: our inaugural IMHSD conference on Rhythm, Time and Temporal Organisation, held in Edinburgh in June 2006; our first collaboration with Queen's University, a summer workshop on Music, Language and Movement, held at Herstmonceux Castle in August 2007; our second collaboration with Queen's University, a conference on Dance, Timing and Musical Gesture, held in Edinburgh in June 2008; and our third collaboration, a Summer Workshop on Music, Pattern and Mathematics, held at Herstmonceux Castle in August 2010. What unites these meetings is a desire to bring together scientists, theorists and practitioners from a range of different disciplines in order to address questions central to our understanding of human music making.*

*The aim of our current workshop is to consider the imaginative, interactive worlds of music and the visual arts. We are delighted to have gathered together such a distinguished range of presenters from a diverse range of disciplines, and we are looking forward to the programme of presentations, workshops, performances and discussions.*

*We hope you enjoy the workshop.*

*Dr. Katie Overy*

## Organising Committee

Dr. Katie Overy (Chair), IMHSD, ECA, University of Edinburgh  
Dr. Karen M. Ludke (Secretary), IMHSD, ECA, University of Edinburgh  
Michael Butler, Physics, University of the West of Scotland  
Diana Gilchrist, BISC at Herstmonceux Castle, Queen's University, Canada  
Dr. Zack Moir, IMHSD, ECA, University of Edinburgh  
Dr. Margaret Walker, School of Music, Queen's University, Canada

## Scientific Committee

Dr. Katie Overy (Chair), IMHSD, ECA, University of Edinburgh  
Dr. Tom Tolley, History of Art, ECA, University of Edinburgh  
Dr. Margaret Walker, School of Music, Queen's University, Canada  
Prof. Nigel Osborne, IMHSD, ECA, University of Edinburgh  
Prof. Dorothy Miell, CHSS, University of Edinburgh  
Prof. Peter Nelson, Reid School of Music, ECA, University of Edinburgh  
Prof. Mark Steedman, Informatics, University of Edinburgh  
Prof. Colwyn Trevarthen, Psychology, PPLS, University of Edinburgh

## Support

We would like to thank Drs Alfred and Isabel Bader for their generous sponsorship of this event. We are also very grateful to Queen's University, Canada (School of Music) and to the University of Edinburgh (Edinburgh College of Art and the Reid School of Music) for their financial support.

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## Summary Schedule (Tuesday to Thursday)

TUESDAY	12.00 – 14.00	Arrivals and Registration
	13.15 – 13.45	Tour of Herstmonceux Castle
	14.00 – 14.15	Welcome
	14.20 – 15.45	Presentations
	15.50 – 16.15	Tea and Coffee
	16.20 – 17.30	Presentations
	18.00 – 19.00	Evening Meal
	19.30 – 20.30	Wine Reception and Posters
	20.30 – 23.00	Pub Open
WEDNESDAY	08.00 – 09.00	Breakfast
	09.00 – 11.05	Presentations
	11.05 – 11.35	Tea and Coffee
	11.40 – 12.40	Parallel Workshops
	12.45 – 13.55	Lunch
	14.00 – 15.30	Presentations
	15.30 – 15.55	Tea and Coffee
	16.00 – 17.45	Presentations and Discussion
	18.00 – 19.00	Evening Meal
	19.30 – 20.30	Evening Concert
	20.30 – 23.00	Pub Open
THURSDAY	08.00 – 09.00	Breakfast
	09.00 – 11.00	Presentations
	11.00 – 11.25	Tea and Coffee
	11.30 – 12.30	Parallel Workshops
	12.35 – 13.55	Lunch
	14.00 – 15.20	Presentations
	15.20 – 16.05	Tea and Coffee
	16.10 – 17.30	Presentations and Discussion
	18.00 – 19.00	Evening Meal
	19.30 – 21.00	Evening Concert
	21.30 – 23.00	Ceilidh – Scratch Performances and Dancing

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## Summary Schedule (Friday)

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FRIDAY	08.00 – 09.00	Breakfast
	09.00 – 10.55	Presentations
	10.55 – 11.25	Tea and Coffee
	11.30 – 13.00	Discussion
	13.00 – 13.15	Closing Remarks
	13.15 – 14.00	Lunch
	14.00	Departures



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## Full Timetable

### Summer Workshop on Hearing, Seeing and Imagining: Music and the Visual Arts

28<sup>th</sup> to 31<sup>st</sup> August 2012, Bader International Study Centre at Herstmonceux Castle, East Sussex, UK

TUESDAY 28 <sup>th</sup> August 2012				
12.00 – 14.00	Arrivals and Registration		Tour Guide	Lobby (Café Open)
13.15 – 13.45	Tour of Herstmonceux Castle		Dr. Katie Overy & Dr. Bruce Stanley	Meet in Lobby
14.00 – 14.15	Welcome		Prof. Simon Shaw-Miller	Conference Room
14.15 – 14.50	Keynote: Trompe l'oeil, Cubism & Violins: Representing Music		Prof. Carlo Fiore	
15.00 – 15.20	Twentieth-Century Opera Posters between Models and Imitations		Dr. Margaret Walker	
15.25 – 15.45	Memoirs and Miniatures: Dance Iconography from Nineteenth Century India			
15.50 – 16.15	Tea and Coffee			Breakout Room
16.20 – 16.40	Music, Sound and Light: Embodied Experiences of the Modernist and Post-Modernist Art-Work		Dr. Diane Silverthorne	Conference Room
16.45 – 17.05	Playing Cézanne		Dr. Charlotte de Mille	
17.10 – 17.25	'Divorce a la mode': The Schwellenberg Affair and Haydn's Engagement with English Caricature		Dr. Tom Tolley	
18.00 – 19.00	Evening meal			Dining Room
19.30 – 20.30	Wine Reception and Posters			Elizabethan Room
20.30 – 23.00	Castle Pub Open			Ground Floor Pub

# WEDNESDAY 29<sup>th</sup> August 2012

8.00 – 9.00	Breakfast			Dining Room
9.00 – 9.20	Iannis Xenakis: <i>Evryali</i> and its Graphic Representation	Stéphanos Thomopoulos		Ballroom
9.25 – 9.45	Olivier Messiaen's Synaesthesia and Colour Images in <i>Et exspecto resurrectionem mortuorum</i>	Dr. Martin Lee		Conference Room
9.50 – 10.10	Affinities Between Art and Music: The Sketch	Dr. Clara Marvin		
10.15 – 10.35	Listening to Picasso	Neil Harbisson		
10.40 – 11.00	Composition for Film	Prof. Nigel Osborne		
11.05 – 11.35	Tea and Coffee			Breakout Room
11.40 – 12.40	Parallel Workshops	(50 minutes + 10 minutes discussion)		
	A. Using Visual Imagery to Connect Movement and Musical Experiences	Ana Almeida		Seminar Room 4
	B. Empirical Approaches to the Relation of Music to Narrative: A Computational Perspective	Dr. Robin Laney		Seminar Room 6
	C. Negotiating Ensemble Improvisations	Prof. Raymond MacDonald		Film & Video Room
	D. Creative Approaches to Musical Imagination	Prof. Nigel Osborne		Conference Room
12.45 – 13.55	Lunch			Dining Room
14.00 – 14.30	Keynote: Music's Influence on Empathy in Film and Dance: Towards a Neural Basis	Dr. Steven Brown		Conference Room
14.40 – 15.00	The Influence of Internal Content on the Emotional Interpretation of Visual Information	Fernando Bravo		
15.05 – 15.25	Musical Illustration: An Examination of Compositional Technique	Prof. Brenda Ravenscroft		
15.30 – 15.55	Tea and Coffee			
16.00 – 16.25	The Ignored Camera: A Close Reading of Gianfranco de Bosio's Film of Tosca	John Keefe		Conference Room
16.30 – 16.50	Figure, Ground and the Audiovisual Object in Electroacoustic Audiovisual Composition	Andrew Connor		
16.55 – 17.15	Dramatic Comprehensibility in Improvised Music to Film	Yati Durant		
17.20 – 17.40	Researching Improvisation	Prof. Raymond MacDonald		
18.00 – 19.00	Evening meal			Dining Room
19.30 – 20.30	Evening Concert Staging a Synaesthetic Experience: Audio-Visual Coupling In Varying Socio-Cultural Contexts; From the Nightclub to the White Cube, Jessica Argo Live Musical Improvisation to Film: Frankenstein, Yati Durant & Julia Lungu			Ballroom
20.30 – 23.00	Castle Pub Open			Ground Floor Pub

**THURSDAY 30<sup>th</sup> August 2012**

8.00 – 9.00	Breakfast		Dining Room
9.00 – 9.30	Keynote: Neural Basis of Musical Imagery	Prof. Andrea Halpern	Conference Room
9.40 – 10.00	Auditory and Visual Imagination: Perspectives from Cognitive Neuroscience	Dr. Rebecca Schaefer	
10.05 – 10.25	An fMRI Study of Expert Musical Imagery	Kirsteen Davidson Kelly	
10.30 – 10.50	Neural Correlates of Improvisation in Freestyle Rapping	Dr. Mónica López-González	
11.00 – 11.25	Tea and Coffee		Breakout Room
11.30 – 12.30	Parallel Workshops	(50 minutes + 10 minutes discussion)	
	A. Aural Imagery in Music Pedagogy	Eric Barnhill	Ballroom
	B. A Nexus between Music and Art – Demonstration of Techniques for Enhancing Embodied Perception	Chris Gayford	Film & Video Room
	C. The European Music Portfolio: Integrated Music and Language Learning	Dr. Karen M. Ludke	Seminar Room 4
	D. The Joy of Sound – Human Idiomatic	Will Longden	Seminar Room 6
12.35 – 13.55	Lunch		Dining Room
14.00 – 14.20	Conductors as Surrogate Dancers: Observed Movement in Concert Listening	Chantal Frankenbach	Conference Room
14.25 – 14.45	Walking, Hearing, Sounding: Founding the Voice as Skin in <i>Song Books</i> , <i>Electrical Walks</i> and <i>Sound Walks</i>	Dr. Zeynep Bulut	
14.50 – 15.15	Gestural Control of Tempo in Simultaneous Computer and Human Generated Performances	Dr. Shelley Katz	
15.20 – 16.05	Tea and Coffee		Breakout Room
16.10 – 16.30	Image, Object, Culture, Sound: Music in the Exhibition Space	Prof. Chris Breward	Conference Room
16.35 – 16.55	Music is the Social Body Sounding: Graphic and Verbal Scores from the 1960s and Their Impact on Musical and Artistic Production Now	Alex Waterman	
17.00 – 17.20	Visual Infosthetics and Sonic Gesture: The Art and Design of Graphic Scores	Dr. Jules Rawlinson	
18.00 – 19.00	Evening meal		Dining Room
19.30 – 21.00	Evening Concert Between the Notes: The Use of Portamento as an Expressive Gesture in Classical Vocal Music, Diana Gilchrist and Dr. Shelley Katz Cipher Series, Prof. Pedro Rebelo		Ballroom
21.30 – 23.00	Ceilidh – Scratch Performances and Dancing		Ballroom



FRIDAY 31 <sup>st</sup> August 2012				
8.00 – 9.00	Breakfast			Dining Room
9.00 – 9.30	Rhythm, Play and Imagination		Prof. Pauline von Bonsdorff	Conference Room
9.40 – 10.00	Narrating the Musicality of Imagination, from Infancy		Prof. Colwyn Trevarthen	
10.05 – 10.25	Emotional Correlates of Sense Perception: A Child Psychotherapy Approach to Sensory Integration		Prof. Maria Rhode	
10.30 – 10.50	Affect and Transformative Learning in Community Music-making		Rachel Barreca	
10.55 – 11.25	Tea and Coffee			Breakout Room
11.30 – 13.00	'What's Next?' Proceedings, grant opportunities, new collaborations and research directions		Led by Dr. Katie Overy	Conference Room
13.00 – 13.15	Closing Remarks		Dr. Katie Overy	
13.15 – 14.00	Lunch			Dining Room
14.00	Departures			

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## Abstracts (in order of presentation)

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**Tuesday 14.00 – 17.30 (Chair: Dr. Katie Overy)**

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### **Keynote: Trompe l'oeil, Cubism & Violins: Representing Music**

**Prof. Simon Shaw-Miller**

Department of History of Art & Screen Media, School of Arts  
Birkbeck College, University of London, UK

This paper explores some of the issues around the representation of music by painting. It does this through a comparison and analysis of two different modes of 'realist' representation: *trompe l'oeil* and cubism. The argument focuses on two paintings: *The Old Violin* (1886, National Gallery of Art, Washington) by the Irish-American painter William Michael Harnett (1848–92), and Pablo Picasso's cubist collage *Violin* (late 1912, Musée Picasso, Paris). In the words of Walter Pater, artistic modernism is marked by the desire to aspire to the condition of music, and this condition is understood by the theorist Clement Greenberg as one of media specificity: 'Only by accepting the example of music and defining each of the other arts solely in the terms of the sense or faculty which perceived its effects... will the non-musical arts attain...purity and self-sufficiency'. Conversely, this paper argues that, even in such seemingly opposite approaches as *trompe l'oeil* and cubism, these two works represent an aspiration to question the specificity of media; to aspire beyond, or to triumph over, sight alone.

*Simon Shaw-Miller studied at the Universities of Brighton and Essex (UK). He has taught at the universities of St Andrews and Manchester, and was most recently Professor of the History of Art & Music in the Department of History of Art & Screen Media at Birkbeck College, University of London. In January 2013 he is to take up the Chair in History of Art at the University of Bristol. In 2005 he was made an Honorary Research Fellow, and in 2007 an Associate of the Royal Academy of Music, London. His publications include The Last Post: Music after Modernism (1993), and Visible Deeds of Music: Art and Music from Wagner to Cage (2002). His co-authored book Eye-Music: Kandinsky, Klee & All that Jazz (2007), was short-listed for the Axa/Art Newspaper Catalogue of the Year Award. His jointly edited collection of essays Samuel Palmer Revisited was published last year and his new book Eye hEar: The Visual in Music is due next year.*

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### **Twentieth-Century Opera Posters between Models and Imitations**

**Prof. Carlo Fiore**

Conservatory of Music  
Palermo, Italy

Twentieth-century opera posters are seen not only as iconographic and 'decorative' sources within a larger project of classical musical poster history. They are also important historically, in order to understand the process of stratification of opera repertoire through the rise of some landmark aesthetic models. The description and analysis of the main design and functional categories of the opera posters – through the survey of more than 5,000 items from all over Europe (particularly from Italy, France, Germany, Switzerland, Austria, England, the Netherlands and Poland) and the United States – allow us to evaluate the relationships between opera theatre and the rising consumer society from a new perspective. Such performing art has been living until today thanks to music in itself, but also thanks to the creative and marketing strategies of savvy opera managers.

Furthermore, the main visual communication models adopted by some big opera theatres (such as La Scala di Milano) from the late nineteenth century, and immediately imitated by many others, resulted in the creation of a historicised western opera theatre 'brand'. This branding is easily recognizable to this day, influencing season scheduling, performance practice, direction and set design. On the other hand, there are also some interesting cases of theatres and festivals (Bayerische Staatsoper, Zurich Opernhaus, Rossini Opera Festival) that fostered a completely new image of the operatic background, raising from the second half of the twentieth-century a different kind of musical taste. Binding together the tools of historical musicology, sociology of music, and graphic design criticism, it is possible to better explain the twentieth-century opera's history. This research suggests an interdisciplinary approach useful to performers, operators and fieldworkers.

**Carlo Fiore** is a musicologist, editor and graphic designer; as a music historian he specialises in early music as well as in music bibliography and iconography. Among his publications are the following volumes: *Preparare e scrivere la tesi in musica* (2000), *Josquin des Prez* (2003), *Madonna* (2003), *Il libro di musica. Per una storia materiale delle fonti musicali in Europa* (2004, rep. 2007), *Bach Goldberg Beethoven Diabelli* (2009). He is also a music critic for the monthly Italian magazine «*Classic Voice*» and editor of the "Antiqua" book-CD series. He currently teaches *Music History at the Conservatory of Music in Palermo*.

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## **Memoirs and Miniatures: Dance Iconography from Nineteenth Century India**

**Dr. Margaret Walker**

Director of the School of Music  
Queen's University, Kingston, Canada

History has left us with a wealth of images of Indian music and dance from the nineteenth century that range from stunning miniature paintings created for Rajas and royalty to amateur watercolours illustrating Colonial travel memoirs. A majority of these depict female dancers, women dressed in flowing garments and gauzy veils performing for a select audience in a court or salon. It is easy to lose oneself in the fantasies evoked by such pictures as their dream-like portrayal of a past culture seems divorced from historical reality. Yet, the dancers documented in the paintings played a central role in Indian performance practice in the 1800s and the systematic analysis of the iconographic evidence provides important data in the history of Indian dance. Using a tripartite method of analysis based on the methodology developed by art historian Erwin Panofsky, this paper will examine the dance iconography from nineteenth-century North India including Rajput, Colonial, and Company-Style works, and theorise about what we can learn about both dance and cultural history through these pictures from the past. Pre-iconographic description, iconographic analysis, and iconological interpretation will be combined with embodied knowledge from the researcher's own dance training to move towards further understanding of Indian dance, dancers, and performance contexts in nineteenth-century India.

**Margaret Walker** is Associate Professor of Ethnomusicology and Musicology at Queen's University, Kingston, where she currently serving as Director of the School of Music. Her monograph, *India's Kathak Dance in Historical Perspective*, is forthcoming from Ashgate's SOAS Series in Musicology. She has recent articles published in *MUSICultures* and *The Journal of the Indian Musicological Society* and has chapters forthcoming in *The Oxford Handbook on Music Revivals* and the long-awaited *Music, Dance and the Art of Seduction* from Eburon Academic Press. She has visited India many times conducting fieldwork and has studied kathak dance with teachers in Canada and India.

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## **Music, Sound and Light: Embodied Experiences of the Modernist and Post-Modernist Art-Work**

**Dr. Diane Silverthorne**

Department of History of Art & Screen Media, School of Arts  
Birkbeck College, University of London, UK

In 'Outlines of the Art-Work of the Future', Wagner addressed the contribution of the visual artist to create 'the true Drama'. Wagner presciently predicted that the artist as landscape-painter would bring to the total artwork 'every known device of optics', in the art of lighting, in its urgent purpose to make a direct appeal 'to a common public'. This paper examines two such manifestations, separated by exactly one hundred years, firstly in the opera house, and secondly, in the spaces of the modern art museum, to consider the shared and competing aesthetics of music drama and installation art to manifest a 'total work of art'.

The manipulation of light was a singular concern of the notable early-modernist staging of Wagner's music drama, *Tristan und Isolde*, at the Vienna Court Opera in 1903. A defining characteristic of the 1903 *Tristan und Isolde*, the manipulation of the plastic spaces of the stage by the new technical advances in stage-lighting, was extensively commented on at the time. Praised by most critics as the supreme visualisation of Wagner's musical expressiveness, others argued that these same effects would atomise the experience of the musico-dramatic *Gesamtkunstwerk*. Following Schopenhauer, who had given light a privileged role in his discussion of the distinction between beauty and the sublime, this production was also inspired by the ideas of Wagnerian stage-designer, Adolphe Appia for whom light and colour was music's expressive other.

Artist Olafur Eliasson used 'every known device of optics' in his *Weather Project*, the major installation at Tate Modern in 2003 to draw spectators through the dark envelope-like opening of the Turbine Hall downwards towards the light of his glowing sun. Eliasson's atmosphere, conveyed in light, colour, mist and ambient noise included the throbbing of Tate's turbine engines (at A-flat) – absorbed the audience into its fictive and material spaces. Noises that happen to be heard were nevertheless framed by institutional time and space, suggesting a Cageian *Gesamtkunstwerk*. In both productions, the role of light was transformative. As this paper also argues, Nietzsche's notion of *Schein* (which may be translated as appearance or 'semblance'), the theatrical in art, from *The Birth of Tragedy*, is the immanent sign of the modern artwork. This paper explores the contention that both productions were suggestive of *Schein*, 'the vital quivering of aesthetic beauty, the promise of reconciliation and harmony' in many ways.

**Diane Silverthorne** is Associate Lecturer, Birkbeck History of Art and Screen Media, University of London. She was awarded her PhD on the subject of art, design, music and modernism in fin-de-siècle Vienna. Her research interests include fin-de-siècle Vienna, and the convergence of music and the visual arts more broadly. Publications include contributions to *Music and Modernism* (Cambridge Scholars, 2011); *Music and Visual Culture, A Research Guide* (Routledge, forthcoming). She co-convoked the first panel on music and the visual arts at the AAH Conference 2012, and is currently co-editing an anthology of essays from this conference.

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## Playing Cézanne

**Dr. Charlotte de Mille**

Visiting Lecturer

The Courtauld Institute of Art, UK

Painting and music share a complementary metaphor. Like play, both are modes of communication that are at root beneath or beyond language. This un-sayability means that, just as in play we are translating between interior and exterior, fantasy and reality, so too in art the creator (and receiver) is mediating between the inexpressible (or not-yet-expressed) and the need to forge a new means of communication: i.e. the work. This is helpful for reading Cézanne, whose surface subjects often belie the affect they have. Like Maurice Merleau-Ponty both in 'Cézanne's Doubt' (1945) and *Phenomenology of Perception* (1945), we often suspect that there is something more than meets the eye, but can never be sure if we have grasped it.

Informed by psychoanalytic theories of play put forward by D.W. Winnicott in *Playing and Reality* (1971) and Hanna Segal in 'Imagination, Play and Art' (1991), this paper excavates the significance for Cézanne of the sensation based, provisional reality which play enables. The paper considers both the parallel acts of painting and performing music, and expands upon the musical analogy invoked by Cézanne's contemporary critics Joachim Gasquet, Emile Bernard and Roger Fry to find structural relations between brushstroke and modernising counterpoint. Taking a cue from art historian W.J.T. Mitchell's suggestion of 'playing upon the idol', the paper moves towards an improvisatory methodology in an attempt to 'play' Cézanne.

Cézanne's *Jeune fille au piano* or *L'ouverture du Tannhäuser* (1869, Hermitage, St Petersburg), his set of four *Harlequins* (c.1888) inspired by the combined aural and visual theatre of the Italian commedia dell'arte, and his series of *Card Players* (c.1896) share a common focus on play which is symbolic of a provisional and alternative means of communication. Playing cards, playing music, and playing in theatre form an interwoven seam, which I shall argue is fundamental to Cézanne's overall aesthetic. Through a consideration of what it is to play, this paper uses modes of experience that demand attention to a developing process in the moment of its unfolding. We trace a certain perception of life through art: through painting and music, music and theatre, theatre and painting.

**Charlotte de Mille** is Visiting Lecturer at the Courtauld Institute of Art. Dr. de Mille's current research concerns the intersection of music, painting and philosophy. Editor of the volume *Music and Modernism* (2011), and recently published in *Art History*, she is co-editor with John Mullarkey of *Bergson and the Art of Immanence: Painting, Photography, Film, Performance* (Edinburgh University Press, 2013), and has contributions forthcoming in: *James H. Rubin and Olivia Mattis, eds, Rival Sisters, Music and Art at the Birth of Modernism* (Ashgate, 2012); *Satish Padiyar, ed., Modernist Games: Cézanne and The Card Players*, (Courtauld Institute 2012); and *A. Leonard and T. Shepherd (eds.), Music and Visual Culture: A Research Guide* (Routledge, 2013). She is Chair of the Royal Musical Association's Music and Visual Arts Group. <http://courtauld.academia.edu/CharlottedeMille>

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## **‘Divorce a la mode’: The Schwellenberg Affair and Haydn’s Engagement with English Caricature**

**Dr. Thomas Tolley**

History of Art

Edinburgh College of Art, University of Edinburgh, UK

This paper investigates the relationship of the composer Joseph Haydn with English caricature, and what he learned from this to enhance his reputation as a composer of wit.

Explaining Haydn’s failure to visit London in the 1780s contemporary English newspapers sporadically embroidered from the composer’s matrimonial difficulties a narrative of the hen-pecked husband. When Haydn eventually arrived in London in 1791 – without his wife – one newspaper immediately extended the earlier fiction by reporting that Haydn was about to marry one Madam Schwellenberg, a leading personality in royal service. The public persona of Schwellenberg was such that she was mercilessly caricatured in contemporary prints as an overweight, avaricious woman, lacking conscience.

Haydn, who regularly perused the London newspapers, would have known these reports and probably the caricatures associated with them. The respect he quickly commanded in London and his personal discretion saved him from joining the ranks of those subjected to the caricaturists’ armoury. However, the whole experience, it may be argued, stimulated new creative impulses in Haydn: the principles of caricature, then a uniquely English preoccupation, suggested innovative musical possibilities.

Primary evidence that Haydn engaged directly with techniques of English caricature – particularly *double entendre*, mockery, exaggeration, and a fixation with scatological humour – comes from a passage in his London journal (subtitled *Divorce a la mode*) in which Haydn used English conventions of caricature to satirise fellow musicians. This testimony is the starting-point for the research.

**Tom Tolley** is a historian of medieval art at the University of Edinburgh, with an interest in eighteenth-century music and its interactions with the visual arts. Dr. Tolley is the author of *A Book of Hours* (1993), the prize-winning *Painting the Cannon’s Roar: Music, the Visual Arts and the Rise of an Attentive Public in the Age of Haydn* (2001), and several articles concerning Haydn and musical portraiture. He is currently working on a project to publish Haydn’s extensive collection of prints. With Professor Caryl Clark (University of Toronto) he is completing a book on opera and the French Revolution.

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**18.00 – 19.00    Evening Meal**

**Dining Room**

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**Poster: The Songful Journey: Metaphorical Language in Music Discourse****Caitlin Dawson**

Goldsmiths, University of London, UK

Metaphorical language is crucial to an understanding of the arts because it structures the way we conceptualise our interaction with the world through sensation, movement, and causality. Metaphorical language about music, however, is of special interest because music contains a temporal dimension that visual art does not share. As Mark Turner points out in *The Literary Mind* (1996), the human language is one based around storytelling, which is bound to the temporal domain. Within a narrative, events are structured by the basic schemas of SOURCE-PATH-GOAL and FORCE DYNAMICS, which give rise to metaphoric mappings that enrich our understanding of the story.

I began a study intending to survey the phenomenon of metaphoric speech in free discourse on the topic of a piece of music, comparing three types of participant pairs: musician-musician, musician-nonmusician, and nonmusician-nonmusician. I wanted to analyse the complexity and frequency of metaphors in discourse about music and visual art. Brandt and Brandt (2005) provide a model for structural analysis of conceptual metaphors which relies on the assumption that metaphors come to being by way of a shared schematic structure that informs and supports the blend.

Pairs of participants were presented with a movement of Johannes Brahms' Symphony No. 3 (test condition) and Willem de Kooning's second-generation expressionist painting *Police Gazette* during a control condition and instructed to discuss the piece. Using a unique methodology I developed for coding metaphoric speech, statistical analysis showed no differences between type or frequency of any metaphorical language between pairs of musicians and nonmusicians or mixed pairs, within each condition. In general, the frequency of metaphors of all levels of complexity was much higher for the music condition than for the visual art condition, and mapped to a wider range of domains. Furthermore, no conceptual metaphors were recorded during the control condition, and only one pair of related conceptual metaphors was recorded for the music condition: the dual construction LIFE/LOVE IS A JOURNEY. In-depth analysis of the speech using this metaphor for the musical excerpt showed that it relied heavily on the SOURCE-PATH-GOAL and FORCE DYNAMICS schemas, which were manifested by participants' interpretation of the interactions of 'characters' and forces throughout the piece. These results suggest that participants were conceptualising the music through the temporal framework of narrative structure.

This study provides evidence that high-level metaphoric language may be specific to the musical domain, or also to domains such as dance that contain a temporal dimension necessary to evoke the representation of narrative structure. The metaphor of the narrative is a microstructure for human life which has a beginning, a middle in which competing agents and forces produce events, and an end. The experience of music as narrative is embodied and shared among humans and it is its multidimensionality that makes it universally salient.

***Caitlin Dawson** is a student originally from Ohio. She has a BA in Cognitive Science and Music from Case Western Reserve University and is currently finishing a MSc in Psychology in the Music, Mind and Brain programme at Goldsmiths, University of London, with an original research project investigating the cross-modal mappings between auditory pitch and visual brightness. She is making plans to complete a PhD at the University of Helsinki continuing her research into cross-modal metaphors in music using both behavioural and neuroimaging techniques.*

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## Poster: Music, Imagination, and Philosophical Aesthetics

**Dr. Margaret E. Moore**

Department of Philosophy  
University of Leeds, UK

The relationship between music and imagination is a natural topic of interest to musicologists and psychologists, as well as to composers, listeners, and performers of music. But precisely what is it that we want to know when we study these topics? We could ask questions most immediately pertinent to the musician, such as what role imagination plays in composing or listening to music, or how this imagining relates to creativity more generally, artistic or otherwise. Or we might ask questions that are better thought of as psychological questions, such as what is the nature of the human capacity to imagine, or which brain processes underwrite the experience of imagery. However, many of these questions are either philosophical at root, or depend on accounts of the crucial concepts involved – accounts the discipline of philosophy is uniquely suited to provide. This paper will provide some philosophical background to thinking about music and imagination by first presenting some intellectual history and conceptual distinctions regarding the imagination as they are relevant to music, and then showing which questions in the aesthetics and philosophy of music might be informed by empirical research into the imagination.

*Margaret Moore is a postdoctoral researcher in the Philosophy department at the University of Leeds, working with the AHRC project 'Method in philosophical aesthetics: The challenge from the sciences.' Dr. Moore's research interests include the philosophy of music, aesthetics, and the imagination.*

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**20.30 – 23.00    Castle Pub Open**

**Ground Floor Pub**

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## Wednesday 9.00 – 12.45 (Chair: Dr. Tom Tolley)

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### Iannis Xenakis: *Evryali* and its Graphic Representation

**Stéphanos Thomopoulos**

Conservatoire de Nice, France

I believe that what is lacking today is a theory about shapes. Perhaps in twenty, thirty, forty years' time, fundamental shapes will be classified, along with their applications and expressions in different fields of observation and production.<sup>1</sup>

I. Xenakis

It is true that in nature the same abstract shapes obtain different material forms: the straight line in the stalactites, the rain or the tree trunks in a thick forest, the broken line in a thunder or a seismic fault, the labyrinth on coral surfaces or magnetic fields, the spirals on the horns, galaxies, whirlwinds or whirlpools... All these forms, reappearing infinitely, are the expression of life around us, showing a practical adaption of nature in its environment.

Xenakis in his work has been very sensitive to that fact, and has tried to explore the way that these shapes can be transformed into music. One that has intrigued him the most is the Arborescences, a shape frequently seen in trees and bushes, river deltas, coral gorgons, veins and arteries, snow flakes and microbe colonies. Xenakis sees in arborescences a true metaphor of life.

In this presentation, we will examine the idea of the Arborescences in the music of Xenakis and the way it is applied in *Evryali*, one of the composer's most characteristic pieces. We will also try to understand the way that the graphic representation of the piece can guide the pianist through its performance.

#### References

<sup>1</sup> Varga, Balint Andras, *Synomilies me to Ianni Xenakis* (Conversations with Iannis Xenakis, Traduit en grec par Aleka Symeonidou), Athènes, Editions Potamos, 2004, p. 264.

*Stephanos Thomopoulos is a pianist acknowledged for the originality of his repertoire, performing works ranging from canonical composers, including Chopin, Liszt or Rachmaninov, to contemporary ones, such as Xenakis, Mantovani, Adès, Pesson. He studied with Jacques Rouvier in the Conservatoire National Supérieur de Musique in Paris and has been playing in numerous countries in Europe, the United States, Brazil, Japan, Turkey, Egypt, Ukraine and in venues, including the Athens Music Megaron, the Amsterdam Concertgebouw, the Alti Hall in Kyoto, the Cité de la Musique in Paris, the Garnier Opera in Monaco. His last CD, includes the whole oeuvre of Iannis Xenakis for solo piano. He is the first pianist in France to carry out a Doctorate in performance at the Conservatoire de Paris, where he does research on Xenakis' piano work. In 2010, Stéphanos Thomopoulos was appointed professor and head of the piano department at the Conservatoire de Nice.*

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### Olivier Messiaen's Synaesthesia and Colour Images in *Et exspecto resurrectionem mortuorum*

**Dr. Martin Lee**

Faculty of Arts and Sciences

The Hong Kong Institute of Education, Hong Kong, China

As one of the well-known composers with synaesthesia experience, Olivier Messiaen revealed on many occasions that musical sounds generate all sorts of colours in his mind. Musical 'colours' become one of his compositional materials and considerations

for his creative writings. Though published posthumously in 2002, Messiaen devoted the last volume of *Traité de rythme, de couleur, et d'ornithologie (1949-1992) en sept tomes* in sounds and colours talking about the colours generated by his unique modes of limited transpositions and different special colour chords, and their applications in his music. As a devout Catholic and mystic composer, Messiaen expresses his Catholic belief through his unique and exotic musical language including musical colours, Hindu rhythms and birdsongs.

It is the case for *Et exspecto resurrectionem mortuorum* when Messiaen accepted the commission from the French Minister of Cultural Affairs, André Malraux in 1964, to write for the dead of two World Wars. In order to express the commemorative context and his Catholic belief in eternal life, Messiaen sought inspiration from St. Thomas Aquinas' *Summa Theologica* on resurrection. He quoted biblical inscriptions before movements, which form a narrative portraying how the dead in the Purgatory receive the eternal life in Heaven through Jesus Christ's salvation. Indeed, Messiaen's eternal faith is also revealed in the composition title, which is taken from the end of the *Symbolum Nicaenum-Constantinopolitanum* – the promise for those who overcome and be faithful to enter the heavenly Jerusalem, share the eschatological banquet and praise God loudly.

In this paper, I demonstrate how Messiaen internalises musically the biblical implications of Jesus Christ's resurrection and his second return – the eschatological resurrection. In other words, I will show how Messiaen presents the biblical narrative through his music. Such eternal faith and Catholic belief are further reinforced by his musical language and colours in three ways: i) formal structure; ii) the symbols of lion and victory; iii) the covenant of rainbow. On the one hand, the music portrays the conflicts and (re-)creation within the cosmos; on the other hand, this carefully cultivated music is unified and enhanced by the colour images that the music carry. Therefore, the music has an organic growth through physical sounds – the harmonic language – and evolvment of colours based on Messiaen's synaesthesia experience. Hence, the longing for the promised return of Christ is finally fulfilled at the end of time, and this scene is colourfully presented in Messiaen's music.

**Martin Lee** received his doctorate from the University at Buffalo (State University of New York), and he is one of the very few active music theorists in Hong Kong. In addition to the discipline of music, Dr. Martin Lee also delivers research papers in biblical and theological conferences ranging from local to international levels. His recent research project includes the application of music semiotics in Messiaen's music with respect to his synaesthesia, Catholic and theological beliefs. He currently serves as the Programme Leader in Music in the Unit of Associate Degree Studies at the Hong Kong Institute of Education.

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## Affinities Between Art and Music: The Sketch

**Dr. Clara Marvin**

School of Music

Queen's University, Kingston, Canada

Finding parallels or affinities between drawn or painted works and works of music was a frequent theme of aesthetic enquiry in the nineteenth century. Such perceived relationships have been explored (with varying degrees of persuasiveness) via examination of iconography and visual representation, as well as through conceptualizing their affinities of creative process. One area in which this latter affinity can be investigated is between the 'sketch' in visual media and musical 'sketch' studies or, rather more intriguingly, the genre of the musical 'prelude' and other deliberately introductory or generically 'unfinished' types. The visual sketch in its 'incomplete' and raw expressive quality was understood by Delacroix and others to derive its power from engagement with, and projection into, its 'vague' or 'unfinished' appearance. Likewise, music seemed to many to be powerful in its effect because its materials were abstract and absolute, and its meaning thus elusive and indeterminate. But, via analysis of generic and technical behavior, I would argue that one can extract

an application from this general image of musical meaning to a more specific aesthetic associated with the 'sketch'. Typically, in music this term has referred to the graphic representation of a generative stage in the process of composition, revision and finalising of a work. Such sketches in themselves have been aestheticised and virtually fetishised, especially in the twentieth century. However, I propose to explore the nature of the 'sketch' in an extended sense, namely, in connection with certain musical works that have an 'unfinished' aspect built into them, though they have been published or performed in a 'finalised' state. More particularly, I address some nineteenth-century works of this type through direct theoretical/material analysis of examples by Schubert and Chopin, among others, so as to indicate comparable modes of suggestion and affinities of process between them and certain visual media. I argue that a demonstrably incomplete or unfinished quality not only has enriched the appeal of these works but provides partial explanation for the critical debate that has at times surrounded them.'

***Clara Marvin** is presently Associate Professor and Chair of Undergraduate Studies of the Queen's University School of Music, where she has been on the faculty since 1997. Dr. Marvin's principal scholarly focus is the history of music theory and musical style, with special interests in Palestrina, church music of the Italian and German baroque, Beethoven studies, film music and the interrelationships of art, literature and music in the eighteenth and nineteenth centuries. She has also explored the life and writings of the British soldier-author T.E. Lawrence ('of Arabia'). Currently she is working on a book about images of Beethoven in twentieth-century film.*

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## Listening to Picasso

### Neil Harbisson

I was born without the ability to perceive colour; for most of my life I could only see in black and white. In 2003, I started a collaborative project to create an electronic eye to help me detect the colour frequency in front of me. In other words, I can 'hear' colour via my eyeborg – a camera attached to the back of my neck which extends over my forehead. Colour has now become integrated into my dreams, uniting the software and my brain. I can also 'hear' ultraviolet and infrared light. This presentation will outline my personal and artistic experiences of the eyeborg technology.

***Neil Harbisson** is a Catalan-raised, Northern Ireland-born contemporary artist, composer and cyborg activist best known for his self-extended ability to hear colours and to perceive colours outside the ability of human vision. In 2004 he became the first person in the world to wear an eyeborg. The inclusion of the eyeborg on his passport photo has been claimed by some to be official recognition of Harbisson as a cyborg. Colour and the use of technology as an extension of the performer, and not as part of the performance, are the central themes in Harbisson's work. In 2010, he founded the Cyborg Foundation, an international organisation to help humans become cyborgs.*

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## Composition for Film

### Prof. Nigel Osborne

Institute for Music in Human and Social Development, Reid School of Music  
Edinburgh College of Art, University of Edinburgh, UK

This short presentation concerns ways in which music can support philosophical, psychological and social narratives in film. There will be examples from Osborne's work for documentary and feature films.

***Nigel Osborne** is about to retire as Reid Professor of Music at Edinburgh University. He has had a long relationship with theatre and film. His films have won many awards including an Emmy, BAFTA and Silver Remi, Houston; and for music theatre he has*

been awarded, for example, the Opera Prize of Radio Suisse Romande/Ville de Geneve and the Koussevitzky Award of the Library of Congress, Washington. Prof. Osborne has a particular interest in music neuroscience and has pioneered methods for using music to support children who are victims of conflict in the Balkans; Middle East; Caucasus and East Africa.

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**11.05 – 11.35    Tea and Coffee**

**Breakout Room**

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**11.40 – 12.40    Workshops A-D**

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## **Workshop A: Using Visual Imagery to Connect Movement and Musical Experiences**

### **Ana Almeida**

Institute for Music in Human and Social Development, Reid School of Music  
Edinburgh College of Art, University of Edinburgh, UK

Through experimental observation of young children moving freely to music I have recently assumed that different types of metaphors incite different types of expressive movements. Visual imagery, in particular, seems to effectively facilitate affinities between musical features and motor responses. An illustrative example of this mediation would be to ask a child to imagine that her whole body is a growing/shrinking ball that reacts to music with tempo variations. During this process the teacher observes how the child makes her decisions about the size and the weight of the ball and if her movement and walking pace change according to the slow, moderate and fast tempi.

Although research literature has not yet addressed this topic, metaphorical processes are an integral part of music sessions in early childhood. This recurrent and apparently intuitive practice is also described in some pedagogy literature as a strategic tool for teaching music. Nonetheless, there seems to be a non-existent reflection about the impact of different visual imagery and its inherent goals on the expressive quality of movement in response to music.

During this workshop different images will be explored by the participants throughout a varied set of activities. They will be invited to experience movement patterns and qualities with and without music. Some materials, such as scarves, will be provided and used during this session.

With this practical proposal I hope to contribute to the reflection on new music learning experiences (movement-based) in early childhood, mediated by visual imagery processes. Within this framework I also intend to offer to children, in the near future, different opportunities to understand and to negotiate expressively and creatively with their environment.

*Ana Paula Almeida graduated in Musicology (1997), Music Pedagogy (1999) and completed her MSc in Contemporary Art History (2006) at FCSH – Universidade Nova de Lisboa, later published under the title 'O Universo dos Sons nas Artes Plásticas' – The Universe of Sound in the Visual Arts. She is currently a PhD student in Music at ECA - University of Edinburgh (Doctoral grant awarded by Fundação para a Ciência e a Tecnologia). Her research aims to understand the embodied musical experiences of preschool children, by analysing their spontaneous movement patterns in response to music.*

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## Workshop B: Empirical Approaches to the Relation of Music to Narrative: A Computational Perspective

**Dr. Robin Laney**

The Open University

One of the most common cases in which music and visual art are linked is when they share and support a single narrative. There are currently a number of theories of narrative and music. This workshop will invite researchers in all areas of narrative in music to identify common themes and propose future directions.

There is a well-established repertoire of compositional and performance gestures that, through their usage in Western tonal music over the past several centuries, can bear a perceivable narrative function. This repertoire dates back as far as the Renaissance, but was significantly developed and codified in the nineteenth century within the genres of programme music, melodrama and opera.

Can the narrative functions of this repertoire be captured in computational models? For example, would it be possible to establish a generative theory of musical narrative along the lines of Lerdahl and Jackendoff's application of Chomskian linguistics to musical grammar? More generally, would such models allow us to conduct empirical experiments to validate any of the several well-established theories of narrativity in music?

One computational perspective would be to consider the characterisation of *narrative states* (by which we mean configurations of such things as places, characters, goals, and emotions) and transitions between them. This factors the challenge into first finding ways to computationally link descriptions of narrative states to appropriate musical features, and then finding ways to describe appropriate transitions between features. We welcome alternative views of the potential role for computational models.

The workshop will attempt to scope a programme of research in this area, by, for example:

- 1) Identifying repertoires that are amenable to a computational approach;
- 2) Outlining representative scenarios in which music and narrative are related;
- 3) Exploring computational methods for mapping between music and narrative;
- 4) Sharing empirical methods and resources.

As well as addressing long-standing theoretical debates, such a programme of research might open up new approaches to algorithmic composition, in particular, allowing composers to produce generative works that retain a reflection of their personal interpretation of narrative material.

**Robin Laney** is a Senior Lecturer in Computing and a member of the Centre for Research in Computing at the Open University. Dr. Laney's work is interdisciplinary, and includes topics from Computational Musicology and New Interfaces for Musical Expression. He is involved in the development of shared touchable interfaces, as a way of exploring the social aspects of collaborative creativity. For publications, see: <http://oro.open.ac.uk/view/person/rc146.html>

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## Workshop C: Negotiating Ensemble Improvisations

### Prof. Raymond MacDonald

Psychology  
Glasgow Caledonian University, UK

This workshop explores a number of ways in which group improvisations can be facilitated. It aims to highlight how improvisation can be conceptualised as a uniquely creative, spontaneous, social and accessible type of musical communication. Strategies such as conduction techniques, graphic scores and text-based stimuli will be explored.

The workshop aims to demonstrate how group improvisation involves the creation of music through the idiosyncratic contributions of two or more individuals, each interpreting and musically responding to the playing of the other(s). Since all participants have input into the overall sound – into what gets played and how – the creativity in improvisation can best be seen as essentially social, rather than being attributable to or located within a single individual. Improvisation is accessible since it is a process that everybody can engage in; we are all musical improvisers at some level. Improvisation can be seen as spontaneous in that it is created *as it is being played*. Musicians can create improvisations through moment-by-moment responses to immediate contexts, and do not seek to replicate exactly what they or others might have played at an earlier date, although they may be elaborating and modifying an earlier performance. The process is creative in that improvising musicians produce novel music, within or beyond genre parameters, that may be similar to, but have substantive differences from, any previous musical performances. Issues of aesthetics and notions of 'quality' will also be explored.

**Raymond MacDonald** comes from Glasgow Caledonian University where he was Professor of Music Psychology and Improvisation. After completing his PhD at the University of Glasgow, investigating therapeutic applications of music, he worked as Artistic Director for a music company, Sounds of Progress, specialising in working with people who have special needs. He has published over 70 papers and co-edited four texts, *Musical Identities* (2002), *Musical Communication* (2005), *Music Health and Wellbeing* (2012) and *Musical Imaginations* (2012). He is currently Editor of the journal *Psychology of Music* and Associate Editor for *The International Journal of Music Education*, *Musicae Scientiae*, *Jazz Research Journal*, *Journal of Music Therapy* and *Research Studies in Music Education*. As a saxophonist and composer his work is informed by a view of improvisation as a social, collaborative and uniquely creative process that provides opportunities to develop new ways of working musically. Collaborating with musicians such as Evan Parker, David Byrne, Jim O'Rourke and Marilyn Crispell, he has released over 50 CDs and toured and broadcast worldwide. He has produced music for film, television, theatre and art installations and is a founder member of Glasgow Improvisers Orchestra. He has a particular interest in cross disciplinary collaboration and has extensive experience of working with artists and filmmakers. A recent Creative Scotland Vital Spark Award has allowed him to develop an innovative collaborative project with visual artist Martin Boyce and filmmaker David MacKenzie that experiments with new forms of performative work that adapts to gallery, concert hall and cinema spaces.

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## Workshop D: Creative Approaches to Musical Imagination

### Prof. Nigel Osborne

Institute for Music in Human and Social Development, Reid School of Music  
Edinburgh College of Art, University of Edinburgh, UK

The workshop investigates the relationship between visual and musical imagination: from simple interactions of frequencies of sound and light to colour, figure, movement and meaning.



**Nigel Osborne** is about to retire as Reid Professor of Music at Edinburgh University. He has had a long relationship with theatre and film. His films have won many awards including an Emmy, BAFTA and Silver Remi, Houston; and for music theatre he has been awarded, for example, the Opera Prize of Radio Suisse Romande/Ville de Geneve and the Koussevitzky Award of the Library of Congress, Washington. Prof. Osborne has a particular interest in music neuroscience and has pioneered methods for using music to support children who are victims of conflict in the Balkans; Middle East; Caucasus and East Africa.

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**12.45 – 13.55    Lunch**

**Dining Room**

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## Wednesday 14.00 – 17.45 (Chair: Prof. Nigel Osborne)

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### **Keynote: Music's Influence on Empathy in Film and Dance: Towards a Neural Basis**

**Dr. Steven Brown**

NeuroArts Lab

McMaster University, Hamilton, Canada

Humans are a storytelling species. As a result, people have a natural tendency to become engaged in narratives. This is especially true when these narratives are acted out in the dramatic arts, including theatre, film and dance. People spend hours a day watching TV shows – some of them referred to as 'reality' shows – and engage in the situations and emotions that the characters experience. While much has been written about the influence of music on emotions, much less has been written about music's potential to increase empathic engagement with characters in narratives. Can music make us care more about characters and about what happens to them? Can it make us like or hate characters more than if music were absent? This seemingly fundamental question has been ignored in most discussions of music and emotion. The topic of empathy has two major facets: cognitive empathy and affective empathy. Cognitive empathy is an *awareness* of the emotions that other people feel, whereas affective empathy is a contagious *induction* of the emotions felt by another person. This talk will examine music's potential to influence both cognitive and affective empathy in dramatic narratives from the standpoints of both cognitive psychology and cognitive neuroscience.

*Steven Brown is a cognitive neuroscientist working in the Department of Psychology, Neuroscience & Behaviour at McMaster University in Hamilton, Ontario. He got his PhD in the department of Genetics at Columbia University in New York, and did postdoctoral research at the Pasteur Institute in Paris, the Karolinska Institute in Stockholm, the University of Texas Health Science Center in San Antonio, and Simon Fraser University in Vancouver. His research deals with the neural and evolutionary bases of the arts. He is co-editor of two books: The Origins of Music (MIT Press) and Music and Manipulation (Berghahn Books).*

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### **The Influence of Internal Content on the Emotional Interpretation of Visual Information**

**Fernando Bravo**

Centre for Music and Science, Faculty of Music

University of Cambridge, UK

From the perspective of experimental psychology, the ability of music to influence the emotional interpretation of visual contexts has been supported in several studies. However, we still lack a significant body of empirical studies examining the ways in which specific structural characteristics of music may alter the affective processing of visual information. The present study suggests a way to use algorithmically generated music to assess the effect of sensory dissonance on the emotional judgment of a visual scene. This was examined by presenting participants with the same abstract animated film with consonant, dissonant and no music. The level of sensory dissonance was controlled in this experiment by employing different intervals sets for the two contrasting background music conditions. Immediately after viewing the clip, participants were asked to complete a series of bipolar adjective ratings representing the three connotative dimensions (valence, activity and potency). Results revealed that relative to the control group of no music, consonant background music significantly biased the affective impact by guiding participants toward positive valence ratings. This finding is discussed in terms of content theory within the general perspective and



David Temperley's probabilistic framework.

**Fernando Bravo** has been educated at the University of Cambridge (where he is currently a PhD student), Iowa State University (MS Integrated Electronic Arts, 2011), UnLam (MS Clinic Psychology, 2006), U.C.A. (BS Psychology, 1998; *Alumno Extraordinario: Film scoring / Sound Design*), and the Conservatory of Music 'Manuel de Falla' (Composition, Guitar Performance, 2002). He also has professional practice as a clinical psychologist (1999-2010), *Concurrencia status* (Pirovano Hospital) in psychosis and autism (2001-2003). Fernando also has experience with computer graphics and computer music programming. He is also a classical guitarist and composer. Fernando's research interests include the influence of sound on the emotional interpretation of visual contexts, nonverbal interactive multimedia applications for diagnosis and treatment of severe psychopathological disorders, neural correlates of music-evoked emotions.

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## Musical Illustration: An Examination of Compositional Technique

### Prof. Brenda Ravenscroft

School of Music

Queen's University, Kingston, Canada

Elliott Carter's third song in the cycle *A Mirror on Which to Dwell* (1976) opens with the low rumble of a wave that rapidly swells, crests and breaks into a swirl of eddying water rushing up over the beach. On the shore a small bird darts over the glistening sand, squawking in alarm when the water glazes over his feet.

Or at least that's what I see in my imagination when I listen to the opening of 'sandpiper,' Carter's setting of a poem by the American poet Elizabeth Bishop (1911-79).<sup>1</sup> These pictorial images are not merely suggested by the words being presented by the singer; in fact, the instrumental ensemble sets the scene before the voice enters. In the songs in the *Mirror* cycle, as in all his vocal music, Carter treats the instruments as an equal partner in the portrayal of the words rather than simply as an 'accompaniment' in any traditional sense. David Schiff, writing in the late 1970s explains how Carter's music 'clarifies the text for the listener.'<sup>2</sup>

Carter's long compositional career (he is now 103) has included extensive exploration the vocal medium, particularly in the form of song cycles, and his status as one of the leading musical interpreters of contemporary American poetry is unchallenged.<sup>3</sup> The songs in *A Mirror on Which to Dwell* are particularly rich in illustrative potential given Bishop's penchant for detailed description and the precise depiction of personae and landscapes. Carter recognised this in an interview with Charles Rosen, in which he discussed 'sandpiper' in terms of his visual understanding of the scene and of the bird's behaviours, explaining how he used rhythm (speed) to capture these qualities: '... the sandpiper... is seeing the world in a grain of sand, and... is continually moving around, always at the same speed, while the rest of the song is always changing in speed as the poet considers various aspects of the scene.'<sup>4</sup>

Carter's use of speeds to control rhythm outside of the traditional metric framework is a hallmark of his sophisticated musical language, and a critical tool in his musical portrayal of the text.<sup>5</sup> In this paper I examine rhythm, as well as other compositional techniques involving pitch and texture, in order to reveal how Carter creates his musical illustrations in three songs from the *Mirror* cycle, 'sandpiper,' 'Insomnia' and 'O Breath.' An understanding of the technical means by which Carter stimulates the imagination will provide audience members with insight into their aural – and visual – experience of the songs.

<sup>1</sup> All six songs comprising the *Mirror* cycle – 'Anaphora,' 'Argument,' 'sandpiper,' 'Insomnia,' 'View of the Capitol' and 'O Breath' – set poems by Bishop.

<sup>2</sup> David Schiff, 'Carter in the Seventies,' *Tempo* 130 (1979): 4.

<sup>3</sup> In his song cycles Carter pairs a solo voice with a variety of instruments: with piano, for example in his 1994 cycle *Of Challenge and of Love*, with orchestra, as in *Of Re-waking* (2002), or with chamber ensemble, for instance *In the Distances of Sleep* (2006). His literary inspiration includes many of the major American poets of the twentieth century, figures such as Robert Lowell (1917-77), Hart Crane (1899-1932), John Ashbery (b. 1927), William Carlos Williams (1883-1963) and Ezra Pound (1885-1972).

In addition to the foundational perspectives presented by David Schiff in *The Music of Elliott Carter*, 2nd ed. (Ithaca, NY: Cornell University Press, 1998) and David Harvey in *The Later Music of Elliott Carter* (New York: Garland Publishing, 1989), published analytical writing on Carter's vocal music includes Lawrence Kramer, 'Song as Insight – John Ashbery, Elliott Carter, and Orpheus' in *Music and Poetry: the Nineteenth Century and After* (Berkeley and Los Angeles: University of California Press, 1984), pp. 203–221; Brenda Ravenscroft, 'Setting the Pace: The Role of Speeds in Elliott Carter's *A Mirror on Which to Dwell*,' *Music Analysis* 22/3 (2003): 253–282; Mark Sallmen, 'Listening to the Music Itself: Breaking Through the Shell of Elliott Carter's 'In Genesis',' *Music Theory Online* 13/1 (Sep. 2007); Paul Griffiths, 'It's Full Choir of Echoes,' in M. Ponthus and S. Tang (eds.), *Elliott Carter: A Centennial Celebration* (Hillside, NY: Pendragon Press, 2008), pp. 26–32.

<sup>4</sup> Charles Rosen, *The Musical Languages of Elliott Carter* (Washington, DC: Library of Congress, 1984), p. 41.

<sup>5</sup> In addition to Carter's own writing about rhythm in such collections as Jonathan W. Bernard (ed.), *Elliott Carter: Collected Essays and Lectures, 1937-1995*, (Rochester: University of Rochester Press, 1997), several scholarly articles have focused on Carter's rhythmic organisation including Bernard, 'The Evolution of Elliott Carter's Rhythmic Practice,' *Perspectives of New Music* 26/2 (1988): 164–203, Yayoi Uno, 'The Tempo-Span GIS as a Measure of Continuity in Elliott Carter's *Eight Pieces for Four Timpani*,' *Intégral* 10 (1996): 53–91, and Ravenscroft, 'Setting the Pace.'

**Brenda Ravenscroft** is Associate Professor of music theory and Associate Dean in the Faculty of Arts and Science at Queen's University. Her research focuses on twentieth and twenty-first century American vocal music, on rhythmic organisation, and on undergraduate pedagogy. Current projects include a chapter on Elliott Carter's songs forthcoming in a collection by Cambridge University Press, and an essay on Libby Larsen's songs for a book of analytical essays on music by women, which she is co-editing. After visiting Herstmonceux Castle several times on academic advising trips, she is happy to be here to participate in the Castle's musical and intellectual life.

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15.30 – 15.55    Tea and Coffee

Breakout Room

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## The Ignored Camera: A Close Reading of Gianfranco de Bosio's Film of 'Tosca'

**John Keefe**

Senior Lecturer, JCAMD Undergraduate Office  
London Metropolitan University, UK

The essential qualities of film are the transitions between shots, the juxtaposition of shots and images to manipulate space and time within the frame, the editing and composition of these into a narrative structure, and the close-up.

I wish to look at de Bosio's filmed production of *Tosca* from 1976 as an example of where the possibilities of film are ignored. Here the film is simply a means of recording singers and images (and giving priority to one aspect of the singer – the voice), rather than being a composition in its own right that re-imagines the visual and narrative possibilities in the presenting of the opera.

As such, the film may be regarded as a counterexample to the themes of the workshop whereby seeing, hearing and imaging are not brought together in a dialectical 'mise-en-scène', and thus reduce the role of the spectator's imagination.

Eisenstein argued and advocated that a film was to be polyphonic; a composition of all the elements of sound, music, word and image matched and working on each other as correspondences. I suggest that rather than a dialectical relationship of these elements, the filmic aspects of de Bosio's production are reduced to mere recording serving the opera. Rather than film-as-film that engages the spectator's imagination, the film becomes a spectacle; an exotic recording of *Tosca*, the opera predicated on a simple narrative conceit rather than *Tosca*, a film.

I will present close analyses of extracts from the film to illustrate my arguments. These will be supported by a table deconstructing the shots, transitions, and locations. I will draw on my previous published writings concerning the role and placing of the spectator whose 'knowing suspension of disbelief' is necessary for any piece of theatre or recorded drama to be such. I will suggest that de Bosio denies the spectators complicit imagination by a visual over-literality. I will examine the limited filmic dramaturgy of the production particularly the use of the close-up such that the voice, not the character, is framed and imposed on us; we are looking-gazing at the voice, not the character being presented. This in turn forces us to question the hierarchy of singer-voice-character that forms the predicate of the film.

By way of brief contrast I will take Jarman's 1989 film *War Requiem* (from Britten's setting of the Requiem Mass) as an example of a film version of the original; a visual interpretation, not a film recording.

*John Keefe has worked as a theatre director, performance & production dramaturg, and lecturer in theatre-performance-film since 1979. He teaches the theatre and drama courses at Bader International Study Centre, and is also a senior lecturer at London Metropolitan University. He is a founder member of the Dramaturgs Network. Book and article publications include 'Moving into Performance', 1997; 'Physical theatres: A critical introduction', 2007; 'Berkoff's Londons', 2009; 'Recycling sources and experiencing physical theatre', 2009; 'A spectatorial dramaturgy', 2010; 'Play(ing) it again', 2010; 'The film spectator as 'bricoleur'', publication due in 2012; and he is currently writing a chapter for a volume on 'new dramaturgies' for 2013. John's research interests include physical theatres, site-specific theatres, spectatorial dramaturgies, and the ethical nature of spectatorship in theatre and film. He is currently registered for a PhD by Prior Publication at Kingston University, London for completion in 2012.*

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## Figure, Ground and the Audiovisual Object in Electroacoustic Audiovisual Composition

**Andrew Connor**

Reid School of Music

Edinburgh College of Art, University of Edinburgh, UK

Since Schaeffer's seminal work on musique concrète, *Traité des Objets Musicaux* [1966], electroacoustic composers have been exploring the sound object to create imaginative, engrossing compositions. In general, these compositions have been solely audio, allowing the audience to concentrate fully on the sonic experience created by the composer.

More recently there has been a rising trend to match the electroacoustic music with film or animation, often also created by the composer. This realises both a voice and vision from the audiovisual artist, presenting a cross-disciplinary media experience to the audience.

As with electroacoustic composition, the challenge in audiovisual composition is to

investigate and develop interesting aspects of the medium. In electroacoustic composition, we are used to thinking about the sound object, and exploring its various qualities such as pitch, motion, timbre and spectromorphology. In the visual realm, there may be a similar exploration of a visual object, examining its key properties, such as colour, structure, motion, and perceived texture.

With audiovisual creation, the challenge is to achieve a fusion of these interesting properties so that the audio and visual elements interact, reinforce, challenge or merge to create key moments in the piece which capture the artistic intent. Chion has referred to these moments of fusion as *synchresis*, 'the spontaneous and irresistible weld produced between a particular auditory phenomenon and visual phenomenon when they occur at the same time' [Chion: 1994].

Synchresis is an effect often deliberately planned for by film composers and sound designers. I would argue that this actually creates an *audiovisual* object, which is not just the sum of the audio and vision, but is a separately perceptible phenomenon, capturing the audience's attention – which can be compared to Schaeffer's assertion that the sound object is not the object making the sound, it is an entity in its own right. [Schaeffer: 1966]

One method of creating an audiovisual object and capturing the audience's attention is through the use of figure and ground. For the visual artist, an approach making use of Gestalt principles, outlined by Wertheimer in 1938, allows an easily accessible method of identifying figure and ground, along with the concept of exclusive allocation. In auditory terms, there are some correlations to the visual Gestalt principles, as well as a form of exclusive allocation, as per Bregman's key text on auditory scene analysis. [Bregman: 1990]

By utilising figure and ground, and allowing figures to gradually emerge from a background established both sonically and visually, the audiovisual composer has a powerful tool for creating audiovisual objects to punctuate their work. In this paper, I will investigate and illustrate the concept of figure and ground in creating the audiovisual object, providing examples from contemporary work in the field by established artists, and my own creative practice exploring this phenomenon.

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**Andrew Connor's** area of interest for his PhD in Creative Music Practice at the University of Edinburgh is audiovisual composition, particularly the combination of electroacoustic composition with abstract images in animation. His work starts with music made from the manipulation of recorded sounds, which he uses to create a sonic base for close integration with abstract animation. His work has been shown at the film festival EMERGEANDSEE in Berlin in 2009, and the International Computer Music Conference in Huddersfield in 2011. His most recent work was selected for the Byte Gallery, Transylvania University, USA in 2011, and will be performed at the Toronto Electroacoustic Symposium in August 2012.

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## Dramatic Comprehensibility in Improvised Music to Film

**Yati E. Durant**

Reid School of Music

Edinburgh College of Art, University of Edinburgh, UK

Many studies have looked into the functional-dramatic effectiveness of composed music to film. But what happens to our perception of the meaning in film when the music is improvised? Do we fully perceive the difference between careful non-real time compositional process and improvised composition? This seminar will address the dramatic effectiveness in several aspects of improvised music to film. We will discuss the challenges and opportunities an improviser approaches when playing to picture. Parallels will be drawn to similar functions in traditional composed film scoring, both in technique as well as in semiotic perception.

Furthermore, this seminar will aim to look into what connection music really has to film. As film music is no longer a 'classical' collaborative art form, many new perceptions of what film music should sound like have been emerging. Among those, improvisation is playing a stronger key role. The emergence of pop-improvisation forms has given film music a newer vehicle to represent complex emotions and situations. And, on an extreme level, atonality and aleatoric/free improvisation has allowed even more abstract dramatic support structures to exist in film. We will look at how these trends are developing and in what directions they may go in the future.

*Yati E. Durant studied composition at the Hochschule für Music in Cologne, Germany with Krzysztof Meyer, and electronic composition with Hans Ulrich Humpert. He has also studied composition with Philip Lasser, Narcis Bonet and George Crumb. He is the recipient of a prestigious first Meisterklasse Konzertexam for his critically acclaimed new score for orchestra and surround electronics to Sergei Eisenstein's 1925 classic silent film The Battleship Potemkin. Yati Durant was appointed Lecturer of Music, Sound and Moving Image at the University of Edinburgh in 2010. Yati Durant is known for his extreme versatility in both serious concert and film music, often utilising electronic and jazz elements in combination with classical instrumentations in his compositions. Yati has scored and performed the music to prize winning films at the Berlin International Film Festival, as well as receiving nominations for the BAFA National Commerce Film Award. His compositions have earned him a U.S. Department of State Award (twice). His scores have also been selected as finalist examples at the Strade del Cinema International Silent Film festival in Aosta, Italy. Currently, Yati Durant is founder and musical director of the Edinburgh Film Music Orchestra.*

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## Researching Improvisation

**Prof. Raymond MacDonald**

Psychology

Glasgow Caledonian University, UK

Group musical improvisation, as a spontaneous process of collaborative creativity effected through nonverbal social interaction, is a unique psychological phenomenon and a universal capacity. Existing studies in this area have focussed on improvisation among professional jazz musicians, often using qualitative methods. However, improvisation increasingly transcends genres and takes place at all levels of training or experience; and qualitative data from existing studies is rarely analysed as discourse. This paper reviews previous studies of discourse around improvising among jazz musicians, and compares these findings with data from qualitative interviews with members of an ensemble of free improvisers drawn from varied backgrounds (n=10, 2 female, 8 male). Interviews focused on their practice when improvising together and a number of key themes will be presented. The unique creative, communicative and



social process of musical improvising in groups can best be understood when the entirety of improvisational practice is taken into consideration and its various contexts acknowledged. Continued investigation of group improvising through discursive psychology can enable research to recognise the diversity of, and change in, what improvisation can encompass. Improvisation is rapidly expanding in numerous new directions. These developments not only afford numerous research possibilities and priorities but present exciting challenges to embrace and utilise the creative possibilities produced by these advances. While improvisation is a ubiquitous musical practice, it is undoubtedly under-researched. Moreover, a multidisciplinary approach, incorporating psychological and musicological elements as a key foundation, will significantly enhance understanding of improvisation as a crucial creative process within the landscape of contemporary music.

**Raymond MacDonald** comes from Glasgow Caledonian University where he was Professor of Music Psychology and Improvisation. After completing his PhD at the University of Glasgow, investigating therapeutic applications of music, he worked as Artistic Director for a music company, Sounds of Progress, specialising in working with people who have special needs. He has published over 70 papers and co-edited four texts, *Musical Identities* (2002), *Musical Communication* (2005), *Music Health and Wellbeing* (2012) and *Musical Imaginations* (2012). He is currently Editor of the journal *Psychology of Music* and Associate Editor for *The International Journal of Music Education*, *Musicae Scientiae*, *Jazz Research Journal*, *Journal of Music Therapy* and *Research Studies in Music Education*. As a saxophonist and composer his work is informed by a view of improvisation as a social, collaborative and uniquely creative process that provides opportunities to develop new ways of working musically. Collaborating with musicians such as Evan Parker, David Byrne, Jim O'Rourke and Marilyn Crispell, he has released over 50 CDs and toured and broadcast worldwide. He has produced music for film, television, theatre and art installations and is a founder member of Glasgow Improvisers Orchestra. He has a particular interest in cross disciplinary collaboration and has extensive experience of working with artists and filmmakers. A recent Creative Scotland Vital Spark Award has allowed him to develop an innovative collaborative project with visual artist Martin Boyce and filmmaker David MacKenzie that experiments with new forms of performative work that adapts to gallery, concert hall and cinema spaces.

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**18.00 – 19.00    Evening Meal**

**Dining Room**

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## **Staging a Synaesthetic Experience: Audio-Visual Coupling in Varying Socio-Cultural Contexts; From the Nightclub to the White Cube**

**Jessica Argo**

School of Art

Edinburgh College of Art, University of Edinburgh, UK

My work investigates the imagination involved in staging a synaesthetic experience. Sound production can be triggered from isolating rhythmic movement in a visual sequence, and indeed visual sequences can be generated to simulate my instinctual inner visual musings upon hearing a combination of tempo and timbre. Ultimately, the work is then staged in an installation tailored to specific physiological requirements of the viewer, from the demographic of the intoxicated altered mental state of a nightclub audience, to the more formal, polished, almost flawless black box within the White Cube Gallery experience.

*Graduating from a BA in Painting from Edinburgh College of Art in June, I have collated a thesis exploring 'The social and audio-visual harmonics of progressive house club culture: A case study into the physiological effects of a staged synaesthetic production'. My case study stresses the compound influences of socio-cultural*

collectivity of both the audience's relation and the production methods within club culture, and the necessity of overt manufacture of a succinct bi-modal (audio-visual) programme to provoke the euphoria-like reception of artwork. I am progressing to study an MDes in Sound for the Moving Image at Glasgow School of Art in September, to build a solid tuition of the latest sound software, recording and compositional techniques. Fusion of choreographic and rhythmic composition has been integral to my artistic practice and vision from my early schooling in dance and classical music, performing in orchestras and dance shows from a young age, and continuing in self directed tuition including a Butoh workshop with Katsura Kan, at Defibrillator, Chicago and planning a residency in Dance Base, Edinburgh. Through a vigorous exploration of outputs and theoretical research at ECA, and beyond (notably on international residencies, including a recent long term stay in Chicago), I have personalised these outputs to meet my minimal aesthetic concerns of abstract communication – movement, sound, optical and perceptual experiments.

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## **Live Musical Improvisation to Film: *Frankenstein***

**Yati E. Durant<sup>1</sup> & Julia Lungu<sup>2</sup>**

<sup>1</sup> Reid School of Music, Edinburgh College of Art, University of Edinburgh, UK

<sup>2</sup> Royal Conservatoire of Scotland, UK

**Yati E. Durant** studied composition at the Hochschule für Music in Cologne, Germany with Krzysztof Meyer, and electronic composition with Hans Ulrich Humpert. He has also studied composition with Philip Lasser, Narcis Bonet and George Crumb. He is the recipient of a prestigious first Meisterklasse Konzertexam for his critically acclaimed new score for orchestra and surround electronics to Sergei Eisenstein's 1925 classic silent film *The Battleship Potemkin*. Yati Durant was appointed Lecturer of Music, Sound and Moving Image at the University of Edinburgh in 2010. Yati Durant is known for his extreme versatility in both serious concert and film music, often utilising electronic and jazz elements in combination with classical instrumentations in his compositions. Yati has scored and performed the music to prize winning films at the Berlin International Film Festival, as well as receiving nominations for the BAFA National Commerce Film Award. His compositions have earned him a U.S. Department of State Award (twice). His scores have also been selected as finalist examples at the Strade del Cinema International Silent Film festival in Aosta, Italy. Currently, Yati Durant is founder and musical director of the Edinburgh Film Music Orchestra.

**Julia Lungu** was born in Moldova where she studied the violin at the Republican Lyceum of Music. Later she joined the City of Edinburgh Music School and gained a place at the Royal College of Music. She is currently completing her Masters in performance degree at the Royal Conservatoire of Scotland. She has a particular interest in playing Baroque and twentieth century repertoire as well as teaching. She was a member of Southbank Sinfonia, has worked with Royal Opera House, Dunedin Consort and other various ensembles in London, Scotland and nationwide.

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**20.30 – 23.00    Castle Pub Open**

**Ground Floor Pub**

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## Thursday 9.00 – 12.30 (Chair: Prof. Raymond MacDonald)

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### Keynote: Neural Basis of Musical Imagery

**Prof. Andrea Halpern**

Psychology Department  
Bucknell University, USA

Auditory imagery is more than just mental 'replaying' of tunes in one's head. I will review several studies that capture characteristics of complex imagery tasks, beginning with a behavioral example and continuing with neuroscience approaches. I use behavioral methods to capture people's ability to make emotion judgments about both heard and imagined music in real time. My neuroimaging studies look at the neural correlates of comparing timbre of musical instruments, encoding an imagined melody, anticipating an upcoming tune, and also imagining tunes after mental manipulation, such as mentally transposing or reversing tunes. Several studies show that neural activity in particular areas correlate with self-reports of imagery vividness on a trial by trial basis. Overall self-assessments of one's ability to imagine music also predicts brain activity in several critical areas, particularly those relevant to auditory processing and memory. These studies speak to the ways in which musical imagery allows us not just to remember music, but also how we use those memories to judge rich and dynamic aspects of the internal musical experience. Many of these effects do not depend on years of musical training, and so musical imagery may be a fundamental way many people enjoy music, even when the music is not actually being played.

#### *Dynamic Aspects of Musical Imagery*

I will briefly review some early studies in musical imagery from my lab. By and large, the point was to establish that basic qualities of music, such as pitch and tempo, could be represented in auditory imagery. This goal also inspired the first set of studies I conducted with Robert Zatorre on the neural basis of musical imagery. One of my more recent interests is in the dynamic aspects of imagery. I will review two recently published studies to illustrate this idea. The first was a behavioral study that examined the ability to make emotional judgments about both heard and imagined music *in real time*. The second is a neuroimaging study on the neural correlates of music that is about to be played, or 'anticipatory imagery'. We found activation of several sequence-learning brain areas, some of which varied with the vividness of the anticipated musical memory. These studies speak to the ways in which musical imagery allows us not just to remember music, but also to use those memories to judge temporally changing aspects of the musical experience.

#### *Beyond Auditory Cortex: Working with Musical Thoughts*

The neural and cognitive mechanisms that permit one to transform and manipulate existing representations to create new ones have not been studied as much as the more basic sensory-based imagery phenomenon. Our group has recently begun to address this question by investigating two kinds of musical tasks, one requiring recognition of transposed melodic patterns, the other requiring recognition of temporally reversed melodic patterns. Using functional imaging, we have found converging evidence from several different experiments that such tasks recruit areas outside of traditionally defined auditory cortex, implicating in particular the intraparietal sulcus region. We interpret these findings in light of models of parietal function derived largely from the visual and motor domains that implicate this region in effecting transformations of sensory inputs from one reference frame to another. We suggest that the dorsal pathway of auditory processing performs equivalent operations on musical inputs, yielding the ability to transform musical inputs from one key to another, and from one temporal order to another. The results have implications for models of parietal function, and allow new hypotheses about how novel musical ideas may emerge from pre-existing musical images.



**Andrea Halpern** has been a faculty member in Psychology at Bucknell University, a largely undergraduate liberal arts university in rural Pennsylvania, since receiving her PhD from Stanford University (with Gordon Bower). Prof. Halpern has spent sabbatical leaves in Montreal, Boston, Los Angeles, Dallas, and currently, at Queen Mary and Goldsmiths in London. Since her undergraduate days, she has studied memory for nonverbal information, particularly music. She also has interests in cognitive neuroscience and cognitive ageing, particularly with respect to music. One special interest is the behavioral and neural underpinnings of a particularly rich memory representation: auditory imagery for music. Prof. Halpern also studies how people suffering from dementing diseases like Alzheimer's can process and enjoy both music and art. In addition to teaching cognition and methods courses, she enjoys the teaching of writing and mentoring undergraduate researchers, for which Prof. Halpern received a national award in 2004. She has received grants from several US federal and private agencies, including the Grammy Foundation, and she currently serves as President of the Society for Music Perception and Cognition. In her spare time, Prof. Halpern enjoys singing choral and chamber music, and traveling to see wildlife in endangered habitats (she has been to all 8 continents, if one counts Madagascar!).

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## **Auditory and Visual Imagination: Perspectives from Cognitive Neuroscience**

**Dr. Rebecca Schaefer**

Institute for Music in Human and Social Development, Reid School of Music  
Edinburgh College of Art, University of Edinburgh, UK

Imagination, or inner perceptual experience, is an intriguing topic of research from both philosophical and cognitive neuroscientific perspectives. That said, there seems to be considerable disagreement on its phenomenology and terminology, as imagery may also be a necessary element in other cognitive processes, such as memory and implicit prediction of action outcome. Also, imagination in different modalities does not necessarily have the same characteristics, for instance, auditory imagery necessarily includes timing information, whereas this is not the case for a static visual image. Some of the different types of imagination and their cognitive correlates will be discussed in the context of recent results in cognitive neuroimaging.

I will present electrophysiological data suggesting that effortful, deliberate imagination involves cerebral processing significantly similar to actual perception. Based on these findings as well as data from other studies, I propose that in the musical auditory as well as visual modalities, this shared processing takes place in secondary modality-specific cortices and areas related to the involved (perceived or imagined) stimuli.

**Rebecca Schaefer** is a Marie Curie Fellow at the IMHSD in Edinburgh. After an MSc in Clinical Neuropsychology at the University of Amsterdam (2003) and an MSc in Music Psychology at Keele University (2004), both focusing mainly on perceptual organisation of music, she completed a PhD at Radboud University Nijmegen (2011), focusing on Brain-Computer Interfaces, especially the use of imagined music as a cognitive task to drive the system. Subsequently, Dr. Schaefer worked on a telehealth application for speech therapy at the Maartenskliniek rehabilitation clinic in Nijmegen, before moving to Edinburgh to investigate the use of music imagination in movement rehabilitation.

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## **An fMRI Study of Expert Musical Imagery**

**Kirsteen Davidson Kelly**

Institute for Music in Human and Social Development, Reid School of Music  
Edinburgh College of Art, University of Edinburgh, UK

Expert musicians use integrated auditory, motor and visual imagery during learning and performance (Holmes, 2005). Mental rehearsal of these images may to some

extent replace or supplement physical training (Driskell et al., 1994) and has been proposed as a means of reducing physical overuse, enhancing memorisation and reducing anxiety (Frey, 1999). Previous research has focused on evidence that imagery and simulated performance engage similar neural regions (Meister et al., 2004; Lotze et al., 2003). There are, however, some differences in functional activation alluding to potentially interesting differences in cognitive processing between the two conditions (Macuga and Frey, 2012). We hypothesised that there would be differential activity between imagery and simulated performance, and that by manipulating task difficulty level we might examine more closely the neural mechanisms involved in deliberate expert musical imagery.

Using a 2x2 block design, we compared simulated performance with imagery at two levels of complexity. To date we have studied eight expert pianists who memorised two newly composed stimuli on the day of scanning and verified that they could perform and imagine both accurately. Pianists were scanned during imagery and simulated motor performance of the memorised stimuli; the sound of the stimuli was imagined during both conditions. A 3T scanner was used to acquire 365 functional volumes for analysis, using an interleaved EPI gradient echo sequence (TR/TE/flip angle=3000ms/30ms/90°, slice thickness=3mm, 36 slices, FOV=24 cm, matrix size=64x64). All data were analysed using BrainVoyager QX.

Except for primary motor regions, simulated playing and imagined playing activated similar regions of the extended motor system, including the supplementary motor area, pre-motor cortex and cerebellum. The primary auditory cortex was activated significantly more during simulated playing than during imagining. Imagery showed increased activation in frontal and parietal regions, suggesting a differential cognitive engagement during imagery compared with performance.

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**Kirsteen Davidson Kelly** graduated in Music from the University of Edinburgh and studied piano at the École Normale de Musique in Paris and with Nelly Ben-Or in London. A founder member and director of the innovative ensemble Piano Circus, she has performed internationally and led creative education projects with diverse communities since 1989. Her recordings include classic works by Reich, Fitkin and Stravinsky and her most recent project is KDKDK, a two-piano duo performing exuberant and virtuosic twentieth and twenty-first century repertoire. She is currently carrying out doctoral research investigating musical imagery amongst expert musicians, based at the IMHSD, Reid School of Music, ECA, University of Edinburgh.

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## Neural Correlates of Improvisation in Freestyle Rapping

**Dr. Mónica López-González**

Department of Otolaryngology  
Johns Hopkins School of Medicine, USA

Creativity plays a fundamental role in improvised musical performances whereby novel

auditory-motor sequences are generated, selected, and executed. Previous studies examining highly constrained simple melodic improvisations by classical trained pianists have shown that the generation of musical structures implicates the sensorimotor and classic perisylvian language cortices (i.e. Wernicke's and Broca's semantic and syntactic processing areas), and the prefrontal cortex (PFC), particularly the dorsolateral PFC (DLPFC).<sup>1-3</sup> Limb & Braun (2008) observed that fairly unconstrained improvisations with professional jazz pianists were also characterised by widespread activation in sensorimotor and language areas. However, changes in activity observed in the PFC included both deactivation of the DLPFC and lateral orbital regions and focal activation of the medial prefrontal cortex.<sup>4</sup>

In this functional MRI study, we sought to identify the neural substrates underlying freestyle rapping, a musical genre that involves the rapid, real-time generation of novel lyrics to the accompaniment of a rhythmic beat. Eight professional freestyle rappers (mean age 27.1±3.9 s.d.) participated in this study. Two experimental paradigms were used during scanning: In a low complexity paradigm, subjects either generated simple rhymes to a given cue word (experimental task) or repeated the cue word (control task); in a high complexity paradigm, subjects either incorporated a cue word into spontaneously improvised lyrics (experimental task) or recited a novel rap memorised prior to scanning (control task). All tasks were performed to rhythmic accompaniment at a fixed tempo. Functional MRI whole-brain data analysis revealed intense relative activation of sensorimotor and language areas for both spontaneous generative paradigms. Anterior PFC and DLPFC were also engaged during rhyming and freestyle rapping, lending to frontopolar cortex's role as imperative for problem-solving activities.<sup>5</sup> We also observed deactivation in medial PFC during freestyle rapping; given the attenuation of this region during altered states of mind,<sup>6</sup> this suggests a possible correlation between the creative act and a flow state ('being in the zone').<sup>7</sup> These data suggest that a complex network of brain regions including prefrontal, sensorimotor, and perisylvian language cortices is responsible for the generation of creative output during spontaneous freestyle rapping.

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**Mónica López-González, PhD**, is a postdoctoral research fellow in the Department of Otolaryngology, Johns Hopkins School of Medicine. Dr. López-González received her PhD in Cognitive Science from Johns Hopkins University. Her current research focuses on the neural correlates of artistic creativity; she teaches art, music, and film cognition. Dr. López-González is also a musician, having studied piano at the Peabody Conservatory, and a photographer, having earned her Certificate of Art in Photography at the Maryland Institute College of Art. A filmmaker as well, she is a writer for the New York City-based magazine *Cinespect* and writes on her blog, <http://lapetitenoiseuse.blogspot.com>.

## **Workshop A: Aural Imagery in Music Pedagogy**

**Eric Barnhill**

Medical Physics  
University of Edinburgh, UK

Major music pedagogy methods generally evolve at some point to incorporate activities of aural imagery. However their descriptions of the role of inner hearing in musical training, and the way they incorporate aural imagery into curricular activity, are widely varied. This talk will survey the place of aural imagery in the methods of Gordon, Dalcroze, and Kodály, with interspersed, non-threatening exercises from these methods designed to assess or train aural imagery (or for the intrepid, a few intimidating ones can be added.)

*Eric Barnhill is currently pursuing a PhD in Medical Physics, neuromuscular imaging at the University of Edinburgh. He has an MMus in piano performance from The Juilliard School. He is a licensed Jaques-Dalcroze and a Certified Feldenkrais Practitioner. Creator of Cognitive Eurhythmics music and movement based therapy, he taught in private practice and in New York City area schools for ten years. Eric also taught Dalcroze-based musicianship training from age three and up, through guest workshops at Curtis, Mannes, Yale, and Juilliard. He has given workshops, teacher trainings and presentations in North America and Europe. Eric is also creator of improvised piano music blog The Daily Improvisation, though it will not become daily again until his son gets better at sleeping through the night.*

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## **Workshop B: A Nexus between Music and Art – Demonstration of Techniques for Enhancing Embodied Perception**

**Christopher Gayford**

London, UK

Sloboda, Minassian and Gayford (2002) propose that attentional filters inhibit embodied responses to music, reducing the depth and frequency of emotional engagement with music for both performers and audiences. Do similar attentional filters interfere with our response to visual art, and if so, can techniques designed to enhance emotional responses to music be applied to visual art?

During two interventions with students at Trinity College of Music and Royal Northern College of Music, models were developed to help students enhance a range of perceptual skills relating to music. Each of the models or techniques developed in a musical context had a visual counterpart, and Gayford has explored this nexus with musicians and the public in art galleries. In 2008, he was interviewed by BBC Radio 3 at the Whitworth Art Gallery in Manchester, where he demonstrated a connection between tempo and distance, using Chopin's Barcarolle and a picture by Francesco Tironi; ability to perceive different types of structure changes with a) viewers' distance from a picture, and b) speed of a musical performance. The interview can be found by scrolling forward 60 minutes into this programme:

<http://www.bbc.co.uk/radio3/thechopinexperience/pip/iibem/>

Increased distance from a picture correlates with increased speed of performance. As speed/distance increases, detail is lost but some major structural features become

more apparent, until a threshold is passed when the music/picture is indistinct. Conversely, reducing speed/distance enables the perception of local details, a luxury often only afforded to performing musicians in rehearsal.

In this workshop, Gayford will demonstrate how techniques for enhancing embodied perception acquired through one art form can be applied to others.

**Christopher Gayford** has conducted many British orchestras and opera companies, including the BBC Philharmonic, BBC SSO, BBC CO, Britten Sinfonia, SCO, Ulster Orchestra, RPO, ROH, Opera North and Scottish Opera. Internationally, he won joint first prize at the Besançon competition and has taken part in master classes with Gennadi Rozhdestvensky, Ilya Musin and Peter Eötvös. Research and audience development are now his chief areas of interest. He has been a Research Fellow at TCM where, together with John Sloboda, he developed a new system for teaching listening skills. He has also been a Research Fellow at Keele University and visiting researcher at RNCM, working with Jane Ginsborg.

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## **Workshop C: The European Music Portfolio: Integrated Music and Language Learning**

**Dr. Karen M. Ludke**

Institute for Music in Human and Social Development, Reid School of Music  
Edinburgh College of Art, University of Edinburgh, UK

There is increasing interest in the potential of music to support language learning and memory (Schön *et al.*, 2008; Wallace, 1994). The Comenius Lifelong Learning project *European Music Portfolio: A Creative Way into Languages* (EMP-L) aims to support primary school children's integrated learning in music and languages (EMP, 2012). An international European team of educational researchers and teachers have developed a wide variety of pedagogical materials and activities to support music and language learning in the primary classroom through a flexible, integrated approach. The activities are designed to enhance holistic learning by capturing children's imagination and creativity in different domains, including activities such as composing sound effects and music to accompany a silent film, or drawing and painting pictures whilst listening to a song or a piece of music from another culture.

This workshop will engage participants in several EMP-L activities that are being used in Scotland. At the end participants will be encouraged to reflect on the differences between this integrated approach to music and language learning compared to their own experiences of learning (and/or teaching) in these domains, and invited to provide feedback on the strengths and possibilities for improving the EMP-L activities.

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Wallace, W. (1994). Memory for music: Effect of melody on recall of text. *Learning, Memory, and Cognition*, 20(6), 1471-1485.

**Karen M. Ludke** is a postdoctoral researcher in the Institute for Music in Human and Social Development (IMHSD), Reid School of Music, Edinburgh College of Art, University of Edinburgh. She is currently working on the three-year *European Music Portfolio – A Creative Way into Languages* project, sponsored by the European Commission. After earning a BA in English Language and Literature and French and Francophone Studies at the University of Michigan, Dr. Ludke volunteered as a literacy and ESOL (English for speakers of other languages) teacher in Harlem, New York before moving to Scotland to pursue postgraduate studies at the University of Edinburgh. Her MSc by Research dissertation was titled *Using Music in Foreign Language Education: An Exploratory Study* (2006) and her PhD thesis was titled *Songs and Singing in Foreign Language Learning* (2010).

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## Workshop D: The Joy of Sound – Human Idiomatic

### William Longden

Instrument Design

London Metropolitan University, UK

This Joyofsound (JOS) Demonstration Inclusive Music Workshop will include some of the JOS bespoke instruments and presentation devices, in the manner of our regular and ongoing sessions with dis/abled people. I will demonstrate JOS approaches to inclusive improvisation in building music in the Human Idiomatic, ending with a close in harmony circle in development of the session's improvisations. We would then generally have an in situ immediate debriefing. This workshop will also include a audio-visual presentation of my 'Bespoke music instruments design for disabled players' research, giving 2 or 3 case studies, and the display of several bespoke instruments and auxiliary designs. For more information, visit [www.joyofsound.net](http://www.joyofsound.net).

*William Longden graduated in Fine Arts, Sculpture (1989). Having established a career as a visual artist he gained a Masters in Design Research for Disability (2007). Founding the Joyofsound (JOS), Inclusive Music and Arts charity in 2000, William gained prestigious awards with JOS, for designing and facilitating exploratory workshops and projects that combine mediums and genres in the 'Human Idiomatic'. Currently collaborating with 8 EU countries, exploring Inclusive Approaches to Arts and Theatre practice, William is developing and promoting Grassroots Volunteerism as a potent and vital pathway in forwarding personal and social creativity towards the 'Arts for Health and Wellbeing' agenda.*

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**12.35 – 13.55    Lunch**

**Dining Room**

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**Thursday 14.00 – 17.30 (Chair: Prof. Pedro Rebelo)**

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**Conductors as Surrogate Dancers: Observed Movement in Concert Listening**

**Chantal Frankenbach**

Department of Music  
University of California, Davis, USA

Contemporary concert audiences, aware of established norms for listening to 'serious' music, are accustomed to sitting very still in the presence of music. Yet, as in most musical traditions, Western art music and the movement of dance were once vitally linked. Fundamentally joined to traditions of European social dance in the seventeenth and eighteenth centuries, instrumental music only developed in the nineteenth century as a musical practice that consciously discouraged the physical engagement of its audience. Emerging notions of listening as an elite intellectual activity, along with the rise of public concerts and changing attitudes to social dance, established a culture of enforced stillness in the concert hall where, up to the present, even the tap of a finger is considered a boorish intrusion into the reverent stillness of attentive listening. Aside from the necessary movement of the players performing on stage, the podium conductor's physical activity is conspicuously featured as the only sanctioned movement in concert performance. Many authors have discussed conductors' physical gestures and their effect on musicians. Few, however, have considered how conducting differs from dancing or, more importantly, how a conductor's movement affects the seated listener. I suggest that the conductor functions as a visual replacement for the participatory dance movement audiences have relinquished in concert listening.

In this paper, I examine the gradual transfer of a danced response to music from the perceiving concert audience to the conductor, seeking to understand how the suppression of movement affects musical experience and how the visual stimulus of a moving conductor might supplant this response. With the intimate connections between baroque social dance and European instrumental music as a point of departure, I present images and testimonials of nineteenth-century audiences frustrated by prohibitions of dancing in the concert hall. In addition, I review the history of podium conducting as it developed in relation to audiences' diminishing opportunity to engage physically with music. As concert etiquette demanded more restraint from listeners, conductors' physical flamboyance acquired an increasingly central role in the performance of concert music. Finally, I draw on recent research that investigates a mirror neuron system in human perception. Combined with theories of affordance, action-perception coupling, and motor imagery, this research challenges traditional Western notions of mind/body (and listening/dancing) duality with a view of human perception that erodes distinctions between observed and performed movement. New understandings of observed motion offer important clues to how concert audiences may vicariously access the movement of conductors as a substitute for their own suppressed physical responses.

***Chantal Frankenbach** is in the final stages of her doctoral program in music at the University of California, Davis. A former dancer, Chantal completed her Bachelor of Arts in dance at the University of California, Irvine. Her doctoral dissertation is titled Disdain for Dance, Disdain for France: Choreophobia in German Musical Modernism. Chantal has received numerous fellowships, including the AMS 50 Dissertation Fellowship from the American Musicological Society. She has an article forthcoming titled 'Waltzing around the Musically Beautiful: Listening and Dancing in Hanslick's Hierarchy of Musical Perception.' Chantal currently lectures at California State University at Sacramento.*

## **Walking, Hearing, Sounding: Founding the Voice as Skin in *Song Books*, *Electrical Walks* and *Sound Walks***

**Dr. Zeynep Bulut**

ICI Berlin Institute for Cultural Inquiry, Germany

In the early 1980s, sound artist and composer Christina Kubisch began to install her electrical walks. She developed wireless microphones, which picked a variety of noises from a physical environment and translated them into electromagnetic sounds. One can move around with the microphones, hear the changes in electromagnetic sounds as they correspond to bodily gestures, and then become aware of the instances of resonance between his/her physical body and environment. In the early 1990s, multi-media artist Janet Cardiff introduced her notion of 'audio' or 'sound walks.' The walks are guided by Cardiff's pre-recorded sound effects, music, and voices, which give directions and tell stories. Walking and playing Cardiff's audio recording with a headset, the participant maps onto a particular place through multiple sound tracks. Back in 1970, John Cage wrote his famous *Song Books*. Based on Henry Thoreau's journals and the map of Concord, the book consists of 90 songs using solo voice, electronics and theatre. In the first three solos, Cage instructs the performer to draw melodic lines and apply them to another environment. How can one incorporate a direction on the map, appropriate it personally, and then reflect it back to a place, body and text? Cage urges us to sing, literally to use our own voices exploring and transforming this back and forth relation. His directions organically call for an understanding of the voice as a strain between the physical outside and the psychic inside.

This paper discusses the walks and the solos in dialogue with one another. I argue that the walks and the solos lead us to (1) be actively involved in a particular acoustic ecology, (2) embody sounds as a hybrid of multiple senses, (3) practice hearing as a mode of one's physical and phenomenal integration with the external world, and (4) conceive a voice within the web of embodied sounds' multiple senses, and within the practice of hearing. Drawing on psychoanalysis, phenomenology and physiology, I conceptualise such embodiment of the human voice as skin, as a sensory matrix and a point of both contact and difference between the self and the external world. In the walks and the solos, one can find the presence of what I call 'skin-voice.' The notion of skin-voice, I suggest, encourages us to expand on the discursive limits of the very acts of hearing, voicing and speaking.

***Zeynep Bulut** is currently a postdoctoral research fellow at the ICI Berlin Institute for Cultural Inquiry. She received her PhD in Critical Studies/Experimental Practices in Music, from the University of California at San Diego. Prior to her doctoral education, she studied Sociology (BA), opera, and visual arts (MFA) in Istanbul, Turkey. Analysing contemporary classical and experimental music, Zeynep investigates the physical and phenomenal emergence of the human voice and its role in the constitution of the self. Her research engages readings in contemporary music and sound studies, psychoanalysis, existential phenomenology, philosophy of ordinary language and action, performance studies, and neuropsychology, speech science and kinesiology.*

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## **Gestural Control of Tempo in Simultaneous Computer and Human Generated Performances**

**Dr. Shelley Katz**

Director of the Symphonova Project, University of Surrey,  
Visiting Fellow at Wolfson College, Cambridge University, and  
Musician in Residence, BISC, Queen's University

An important function of a conductor is to coordinate the performances of large groups of musicians. A musical beat may be communicated visually and instantly to hundreds of people simultaneously and without latency. This is accomplished by the conductor



through relatively standard physical gestures. The performing musicians understand and convert the visual communications into a musical intention, and apply it to their performance. By closely monitoring and converting the conductor's gestures into a digital data stream, it is also possible to ensure that a digital musical instrument simultaneously follows the same gestures of the conductor.

***Shelley Katz** is a Canadian/British music-technologist. He holds Bachelors and Masters degrees in piano from the Julliard School and has performed around the world in leading concert halls. He also holds a PhD from the University of Surrey (Guildford) where he is currently the Director of the Symphonova research project. He is a Visiting Fellow at Wolfson College Cambridge and has served as Musician in Residence at the Bader International Study Centre since 1997.*

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**15.20 – 16.05    Tea and Coffee**

**Breakout Room**

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## **Image, Object, Culture, Sound: Music in the Exhibition Space**

**Prof. Chris Breward**

Edinburgh College of Art, University of Edinburgh, UK

This informal paper will focus on the author's experience as co-curator of the current V&A exhibition 'British Design 1948-2012: Innovation in the Modern Age'. An ambitious survey of post-war British Design culture, ranging across all disciplines from architecture to fashion, the exhibition draws heavily on musical traditions and the relationship between music and the plastic and visual arts. Nevertheless, the challenge of representing these connections was significant and raises interesting questions, both about the place of music in design historical narratives and the role of sound as exhibit within multi-disciplinary shows.

***Christopher Breward** is Professor of Cultural History at the University of Edinburgh, where he also holds the positions of Principal of Edinburgh College of Art and Vice Principal of the University (Creative Arts). He was trained at the Courtauld Institute of Art (BA) and the Royal College of Art (MA, PhD), London, and has subsequently taught at Manchester Metropolitan University, the Royal College of Art and London College of Fashion. Before taking up his post at Edinburgh he was Head of Research at the Victoria & Albert Museum, London. Christopher has published widely on the history and theory of fashion and its relationship to masculinities and urban cultures. Key publications include *The Culture of Fashion* (MUP 1995), *The Hidden Consumer* (MUP 1999), *Fashion* (OUP 2003) and *Fashioning London* (Berg 2004). He has most recently co-curated the V&A's major Olympic season exhibition 'British Design 1948-2012'.*

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## **Music is the Social Body Sounding: Graphic and Verbal Scores from the 1960s and their Impact on Musical and Artistic Production Now**

**Alex Waterman**

Musicology

New York University, USA

Graphic and verbal notation transformed musical production and opened up musical practice to other forms of artistic production. Graphic and verbal scores went far beyond mere aesthetic experimentation, opening up the process of musical composition to the performer as well as non-hierarchical forms of collective production (David Tudor, Wadada Leo Smith, AACM, the Scratch Orchestra, the ONCE group).

As Cornelius Cardew wrote in 1961, 'A musical notation is a language which determines what you can say, what you want to say determines your language.' In this paper I will look closely at examples of graphic and verbal scores with these questions in mind: What does graphic notation do to compositional and interpretive practice? By employing pictorial, symbolic, or logical systems for imagining sound versus extending the existing notational system, what does this do to compositional and performance practice and the critical language around those activities? When language itself becomes the score (Alvin Lucier, Robert Ashley, Pauline Oliveros, James Saunders, John Lely, Alison Knowles, Kenneth Gaburo) how are the limits of music and language redefined?

Verbal scores have a close-knit relation to event-scores (Brecht, Fluxus), conceptual art, institutional critique, and the Art and Language movements respectively. Recent scholarship in art history and musicology has provided a much more solid historical framework for us to regard and listen to the ways in which these scores as art objects and simultaneous calls to action, have created entirely new modes of artistic production (Robinson, Kotz, Bishop, Saunders & Lely).

Graphic and verbal scores have reimagined and emboldened a poetics of collaboration, improvisation, collective composition, and celebration of shared spaces. Experimental music as a model for production should be looked at with increasing urgency in our present moment. How does experimental practice relate to non-hierarchical, consensus based, self-organising, 'social media', and other such political movements that seek to level political power in the name of a free and collective expression (Georgia, Ukraine, Iran, Tunisia, Egypt, Libya, and the Occupy Movements in the U.S. and Britain). Where are we now, and who have we become as activists and cultural producers?

Graphic scores and verbal notation are a catalyst for social bodies to sound and re-sound together. How does experimental music establish new forms in which to perform and act collectively in the present moment? In this paper I will treat the scores, texts, actions, and collective improvisations that I discuss as models for listening, conversation, and social action.

*Alex Waterman is working on his PhD in musicology at NYU as well as completing a new book on American opera composer, Robert Ashley with the artist and designer, Will Holder. Alex Waterman and Beatrice Gibson's collectively written and scored film, A Necessary Music, premiered at the Whitney Museum ISP show and won the Tiger Prize for Best Short Film at the Rotterdam Film Festival in 2008. His writings have been published by Dot Dot Dot, Paregon, Bomb, and Artforum. Alongside an active career as composer and cellist, he is currently directing Robert Ashley's opera, Vidas Perfectas which will have its London premiere at the Serpentine Pavilion on September 28th.*

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## **Visual Infosthetics and Sonic Gesture: The Art and Design of Graphic Scores**

**Dr. Jules Rawlinson**

Edinburgh College of Art, University of Edinburgh, UK

When is a line not a line? When it's a series of points.

This paper will address the character and qualities of canonical and current approaches to graphic notation, moving from a presentation and consideration of more open 'art' works to a particular focus on the author's design methodologies for indicating typology, morphology and gestural structures in compositions for live electronics that build on work by Thoreson and Hedman (2007, 2009, 2010), and contrasted with more illustrative, metaphorical and pictorial forms adopted and generated by Manuella Blackburn (2011).

Graphic scores are by turn abstract, reductive, expressive, expansive, iconic and

symbolic. Musical notions of point, line and plane are elaborated through shape, size, colour and texture and often the sonic and musical realisation of a graphic score sees an act of co-creativity and Imagineering between composer concept and performer contribution, and subsequent action. The author's own compositions employ description, direction, prescription and precision, which contrast with more common forms of indeterminacy.

How might we measure visual and/or sonic successes in respect of gesture and outcome? Are there aspects of visual and sonic culture, that provide challenges and opportunities in 'reading' graphic scores in respect of pitch, amplitude, duration and timbre? When developing a visual strategy or style how do we communicate mappings between sounding action and sounding outcome, and what might be the differences in the form and content of a graphic score as an aid to listening and/or performance?

***Jules Rawlinson** is a sound designer, composer and multimedia developer who performs in solo and group settings with live electronics. Jules holds a PhD in Composition from The University of Edinburgh, producing a portfolio of work for live electronics that investigates dependencies between graphic notation, software and hardware. Jules has completed commissions for the BBC, New Media Scotland, Glenmorangie, Cybersonica, Future of Sound / Future of Light, and the recently revived Radiophonic Workshop. Jules is a Teaching Fellow in Design and Digital Media at The University of Edinburgh. For more information and graphic scores visit <http://www.pixelmmechanics.com/phd>.*

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**18.00 – 19.00    Evening Meal**

**Dining Room**

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## **Between the Notes: The Use of Portamento as an Expressive Gesture in Classical Vocal Music**

**Diana Gilchrist and Dr. Shelley Katz**

Bader International Study Centre, Queen's University (Canada)

Emotion in vocal music is conveyed to an audience when a singer interprets a score expressively. Singers are trained to use a variety of expressive vocal gestures (Marchesi, 1901; Salaman, 1989) and these may be applied in styles ranging from subtle to exaggerated. Style depends on many factors including musical genre, voice type, vocal technique, social and cultural conditions, and changing aesthetics. Portamento, an expressive vocal gesture connecting two notes, is used by singers to intensify emotional expressivity and convey information about character. The music that exists between the notes is not notated in the score but becomes apparent in performance, whether live or recorded.

Portamento was a very common expressive gesture until after WWI when its use declined and then almost disappeared following World War II (Leech-Wilkinson, 2009). In the second half of the twentieth century an approach to the interpretation of early music, known as Historically Informed Performance Practice or HIP, became widely accepted and along with it, the notion that style must adhere to rules that are largely rigid. In the latter part of the twentieth century performer/scholars such as Richard Taruskin (Taruskin, 1995) mounted a welcome challenge to the notion that there is a correct and 'authentic' way to perform music.

This creative presentation will begin with a brief description of portamento which is especially good at modeling empathy, love and joy (Leech-Wilkinson, 2006), a theory drawn from Fernald's research on infant-directed speech or 'motherese' (Patel, 2007). Portamento will then be used in two musical examples to demonstrate its expressive capabilities. It is hoped that exploring the history of portamento and developing a better understanding of its function and execution will prove relevant and enriching for current performance practice.

## References

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- Salaman, E. (1989). *Unlocking Your Voice*. London: Kahn and Averill. p. 37-40.
- Taruskin, R. (1995). *Text and Act, Essays on Music and Performance*. Oxford University Press.

**Diana Gilchrist** is a Canadian soprano and the founding Artistic Director of Ottawa's Opera Lyra. Based in England now, she spent several years singing in German opera houses. She has performed leading roles in Paris, Vienna, Berlin and in North America and the Far East. Since 1997 she has served as Musician in Residence at the Bader International Study Centre, Queen's University where she also lectures. She is currently enrolled at the University of Edinburgh, Edinburgh College of Art in a part-time PhD.

**Shelley Katz** is a Canadian/British music-technologist. He holds Bachelors and Masters degrees in piano from the Julliard School and has performed around the world in leading concert halls. He also holds a PhD from the University of Surrey (Guildford) where he is currently the Director of the Symphonova research project. He is a Visiting Fellow at Wolfson College Cambridge and has served as Musician in Residence at the Bader International Study Centre since 1997.

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## Cipher Series

### Prof. Pedro Rebelo

Director of Research  
Sonic Arts Research Centre  
Queen's University Belfast, UK

Cipher Series is a collection of graphic scores that are displayed to audience and performers in accordance to a fixed temporal structure generated for each performance. The performance plays on the role of notation as a mediator of listening, setting up a performative condition based on interpretative strategies based on engagement by both the performer and the audience. The change from one graphic score to the next has immediate formal implications for the music and acts as a way of articulating shifts in musical material or interpretation strategy. Although there are no instructions on how to interpret the graphic scores, their temporal placement and public display exposes the performer as someone who proposes relationships between musical and graphic structures in an otherwise freely improvised context. Cipher Series has been designed for open instrumentation and can be played in a solo, ensemble or network performance situation. The work was premiered at EIMAS, Brasil 2010.

This piano solo performance will be performed by Pedro Rebelo, with the scores being displayed to the audience. The performance includes a short talk on the interpretation of graphic scores.

URL: <http://pedrorebelo.wordpress.com/2010/05/12/cipher-series/improvisations>

**Pedro Rebelo** is a composer, sound artist and performer working primarily in chamber music, improvisation and installation with new technologies. In 2002, he was awarded a PhD by the University of Edinburgh where he conducted research in both music and architecture. Prof. Rebelo's music has been presented in venues such as the Melbourne Recital Hall, National Concert Hall Dublin, Queen Elizabeth Hall, Ars Electronica, Casa da Música, and in events such as Weimarer Frühjahrstage für

*zeitgenössische Musik, Wien Modern Festival, Cynetart and Música Viva. His work as a pianist and improviser has been released by Creative Source Recordings and he has collaborated with musicians such as Chris Brown, Mark Applebaum, Carlos Zingaro, Evan Parker and Pauline Oliveros. Prof. Rebelo's writings reflect his approach to design and creative practice in a wider understanding of contemporary culture and emerging technologies. Pedro has been Visiting Professor at Stanford University (2007) and has been Music Chair for international conferences such as ICMC 2008, SMC 2009, ISMIR 2012. At Queen's University Belfast, he has held posts as Director of Education and Acting Head of School in the School of Music and Sonic Arts and is currently Director of Research at the Sonic Arts Research Centre. In 2012 he was appointed Professor at Queen's and awarded the Northern Bank's 'Building Tomorrow's Belfast' prize.*

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**21.30 – 23.00 Ceilidh – Scratch Performances and Dancing**

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**Ballroom**

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## Friday 9.00 – 13.15 (Chair: Dr. Margaret Walker)

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### Keynote: Rhythm, Play and Imagination

#### Prof. Pauline von Bonsdorff

University of Jyväskylä and University of Helsinki, Finland

Perception, creation and communication take place in time and involve rhythms on many levels. There are rhythms of the objects of perception, such as rhythms of the voice and movements of another person, birdsong, traffic, a virtual game; and corresponding rhythms of action and perception in the perceiving subject. In life as in art, rhythms are typically polyrhythmic; and they engage us holistically rather than through just one sense, such as the auditory, the visual or even the kinaesthetic. In my presentation I explore the idea that if rhythm is repetition *and* variation, it both calls for and presupposes participation; a point made by Henri Lefèbvre in *Rhythmanalysis*. As a dynamic phenomenon rhythm – whether musical, urban, or visual – is co-produced by the perceiver. Repetition or regularity makes it possible to recognise and join in a rhythm while variation and the surprise element both calls forth and makes space for creative contributions. These are particularly significant in the arts, where rhythm is a central carrier of expression. Rhythm, which is evident in music but fundamental also in verbal and visual arts, addresses us in holistic ways. I discuss the relationship of rhythm, play, and imagination through some examples of painting, children's drawings and cinema, and suggest that rhythm is fundamentally related to embodied imagination as described by Gaston Bachelard.

*Pauline von Bonsdorff is Professor of Art Education at the University of Jyväskylä and Docent (Adjunct Professor) of Aesthetics at the University of Helsinki (Finland). Her current research interests include children and aesthetics, developmental and naturalist perspectives on art, philosophy and theory of art education, environmental aesthetics and phenomenology. She is the author of The Human Habitat. Aesthetic and Axiological Perspectives (1998) and numerous articles and book chapters on environmental aesthetics, theory of architecture, art criticism, art education, and phenomenological aesthetics (in English, Finnish and Swedish). She has edited and co-edited books on environmental aesthetics, everyday aesthetics and feminist aesthetics. She is former chair of the Finnish Society for Aesthetics and the Finnish Society for Childhood Studies, and presently chair of the Finnish Society for Research in Art Education.*

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### Narrating the Musicality of Imagination, from Infancy

#### Prof. Colwyn Trevarthen

Department of Psychology  
University of Edinburgh, UK

All the 'imitative' arts express feelings of the human spirit in movement, for communication by 'imaginative intentionality'. Their biological foundation is in the proprioception and viscerosensation or self awareness of living inside the human body with its many members. All arts employ skills of moving with intention, to make apparent to others, with the distance senses of touch, hearing and sight, the imagining of this personal, inner, experience. All gain enrichment from the excitement and joy of other's appreciation of the story being told. From reflective intimacy to tribal carnival, the foundation is in the innate dancing rhythms, emotional qualities and narrative of expressive movement, and especially in its regulation by a felt sense of time for reactions, orientations, serial ordering of moves in phrases, and the affectively modulated syntax of recollections in melodies or pictures. Research on the integrated grace and measured awareness of infants' moving with strong orientation to human presences, first felt and heard, then seen, demonstrates the innate basis for even the



most cultivated forms of musical or graphical art. My talk will summarise research on the 'communicative musicality' of conversations and games before speech, emphasising their artfulness and the learning of conventional stories that strengthen shared meaning with companions. It is important that a newborn baby has already been educated, within the mother's body, in habits of expressive engagement with the more intimate senses of touch and hearing. Birth is the beginning of appreciation for the vitality forms of the mother's movements by sight, by connecting with her eyes, and seeing her face expressions and gestures. Does this give music a priority over the visible and graphical arts, which are necessarily more technical?

**Colwyn Trevarthen** is Professor (Emeritus) of Child Psychology and Psychobiology at The University of Edinburgh. He has published on brain functions of movement and vision and their development, and for the past forty years on the motives and emotions of self-expression and communication in infancy, and their importance for child learning and emotional health. With musician Stephen Malloch he has developed a theory of how the dynamic emotional expressions of 'Communicative Musicality' in expressive movement support shared experience with children and the learning of language and other cultural skills, and how musical improvisation may be applied in therapy. He has an Honorary Doctorate in Psychology from the University of Crete, an Honorary Doctorate in Education from the Tavistock and Portman NHS Trust/University of East London, and is a Fellow of the Royal Society of Edinburgh, a Member of the Norwegian Academy of Sciences and Letters, a Vice-President of the British Association for Early Childhood Education, and a Fellow of the British Psychological Society.

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## **Emotional Correlates of Sense Perception: A Child Psychotherapy Approach to Sensory Integration**

**Prof. Maria Rhode**

Tavistock Clinic, University of East London, UK

Children on the autistic spectrum can encounter a variety of problems surrounding sense perception, and often benefit greatly from sensory integration training. This presentation addresses the emotional context of sensory issues that could be observed in the course of child psychotherapy with children with ASD. These include the auditory hypersensitivity that is characteristic of children with autism, as well as hypersensitivity to light and the confusion of sensory channels shown by a child who shut her eyes (rather than covering her ears) in response to a noise from outside the room.

The clinical usefulness of sensory integration training can be understood from a psychoanalytic perspective in terms of Meltzer's (1975) suggestion that children with ASD can personify the senses in terms of the interaction between the parental couple. A clinical illustration of this is provided by the behavior of a boy who reacted by covering his ears if a man came towards him when he was in the company of his (female) therapist: this was not the case if a woman came towards them, and in other circumstances he got on well with men. It is suggested that this boy personified sound as though his ears were being invaded by a looming masculine presence that might intrude into his relationship with his therapist. In spite of substantial improvement, this boy continued to express emotional distress by complaining of discomfort in his ears for which no physical cause could be found.

The central clinical vignette concerns a toddler at high risk of ASD who made use of the couple formed by his mother and therapist during parent-toddler work in order to integrate the senses of sight and hearing. This boy repeatedly indicated that his mother should sing an action song concerning parts of the body while his therapist performed the actions (without singing). The obvious pleasure this afforded stood in contrast to the frequent clinical observation that children on the spectrum often feel threatened by a link between two people, and suggested that a developmentally useful process had begun. This process is discussed in the light of a clinical report (H. S. Klein 1980) of a very young baby whose feeding was supported by his parents'



conversation, and a parallel is suggested with Trevarthen's video of a congenitally blind baby 'conducting' the mother's singing during a feed. Some speculations are offered concerning possible links between the rhythmicity of vocalization and silence in 'proto-conversations' and the masculine and feminine elements of the emotional environment as experienced by the baby.

**Maria Rhode** is Emeritus Professor of Child Psychotherapy at the Tavistock Clinic/University of East London. She works as Honorary Consultant Child Psychotherapist at the Tavistock Clinic, where she formerly co-convened the autism workshop. Her publications centre on what can be learned about early developmental processes from clinical work with children on the autistic spectrum and from infant observation. One of her main interests concerns early intervention with toddlers at risk of autism.

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## **Affect and Transformative Learning in Community Music-Making**

**Rachel Barreca**

University of Sussex, UK

Grammy Award-winning composer Eric Whitacre recently told the audience at the premiere of his latest recording that singing the opening notes at his first ever choir rehearsal was the single most transformative experience of his life. Whitacre's subsequent career as a successful musician and composer is an illustration of the connection between music and a life-changing, non-rational learning experience. When Jack Mezirow put forward his Transformative Learning theory of adult education more than thirty years ago, however, it emphasised the role of critical self-reflection and rational discourse in the process of making meaning out of what he called 'disorienting dilemmas' – those moments in life that call into question one's frames of reference and ways of viewing the world. Further developments of the theory have come from critiques of this emphasis on rational processes; scholars such as Dirkx, Tisdell, Tolliver, and Yorks have begun to explore the role of affective, spiritual and somatic knowledge in this type of learning. Much of the current literature in the field of adult education indicates that the arts connect individuals with non-rational aspects of knowledge to create holistic and potentially transformative educational experiences. It states that music as an educative tool can evoke and connect us to expressive ways of knowing, when we either listen to recordings or perform it ourselves, and remind us of the connection between our bodies and minds as well as our emotions and reason. My project seeks to uncover the connections between music, affect and transformative learning for adult learners in an informal learning context. More specifically, I am working with a local philharmonic choir to explore the ways in which choristers have learned from the process of communal music making. Through interviews, focus groups and surveys, I hope to document moments and journeys of personal transformation. Mezirow asserts that Transformative Learning should empower learners and create more inclusive beliefs, values, and attitude to guide their future actions. In a world where healing, empathy, empowerment, and peace-making is needed by and for so many, it is important to understand the ways in which this type of learning can be nurtured through music and other creative arts.

**Rachel Barreca** is an MA in Education Studies candidate in the person-centered education cohort at the University of Sussex. She has a Specialised Honours BA in music from the University of Guelph and a diploma in radio broadcasting from Algonquin College. Rachel has worked in the field of student services at universities in Canada and the United Kingdom for almost twenty years (including the Bader International Study Centre), and she was a freelance broadcaster with CBC Radio. Her dissertation research explores the intersection of music, emotions, and Mezirow's Transformative Learning theory of adult education in a community setting. Rachel is a singer and she loves to play the ukulele.

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10.55 – 11.25    Tea and Coffee

Breakout Room

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**‘What’s Next?’ Proceedings, funding opportunities, new collaborations and research directions**

**Led by Dr. Katie Overy**

Group workshop on the potential outcomes of Hearing, Seeing and Imagining: Music and the Visual Arts.

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**Closing Remarks**

**Dr. Katie Overy**

Institute for Music in Human and Social Development, Reid School of Music  
Edinburgh College of Art, University of Edinburgh, UK

*Katie Overy is a Senior Lecturer in Music, Director of the IMHSD and Programme Director of the MSc in Music in the Community at the University of Edinburgh. Katie’s primary interest is the role of music in human learning, with an emphasis on integrating research, theory and practice from a range of disciplinary perspectives. She graduated with a BMus from the University of Edinburgh, an MA in Music Psychology and a PhD in Psychology from the University of Sheffield and a PG Diploma from the Zoltán Kodály Pedagogical Institute of Music. Katie’s post-doctoral research was conducted at Harvard Medical School, where she designed music fMRI research stimuli and protocols for young children and for aphasic stroke patients. Recent publications include a co-edited special issue of Cortex, The Rhythmic Brain (2009), and a co-edited special issue of Annals of the New York Academy of Sciences: Music and the Neurosciences IV: Learning and Memory (2012).*

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13.15 – 14.00    Lunch

Dining Room

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14.00                Departures

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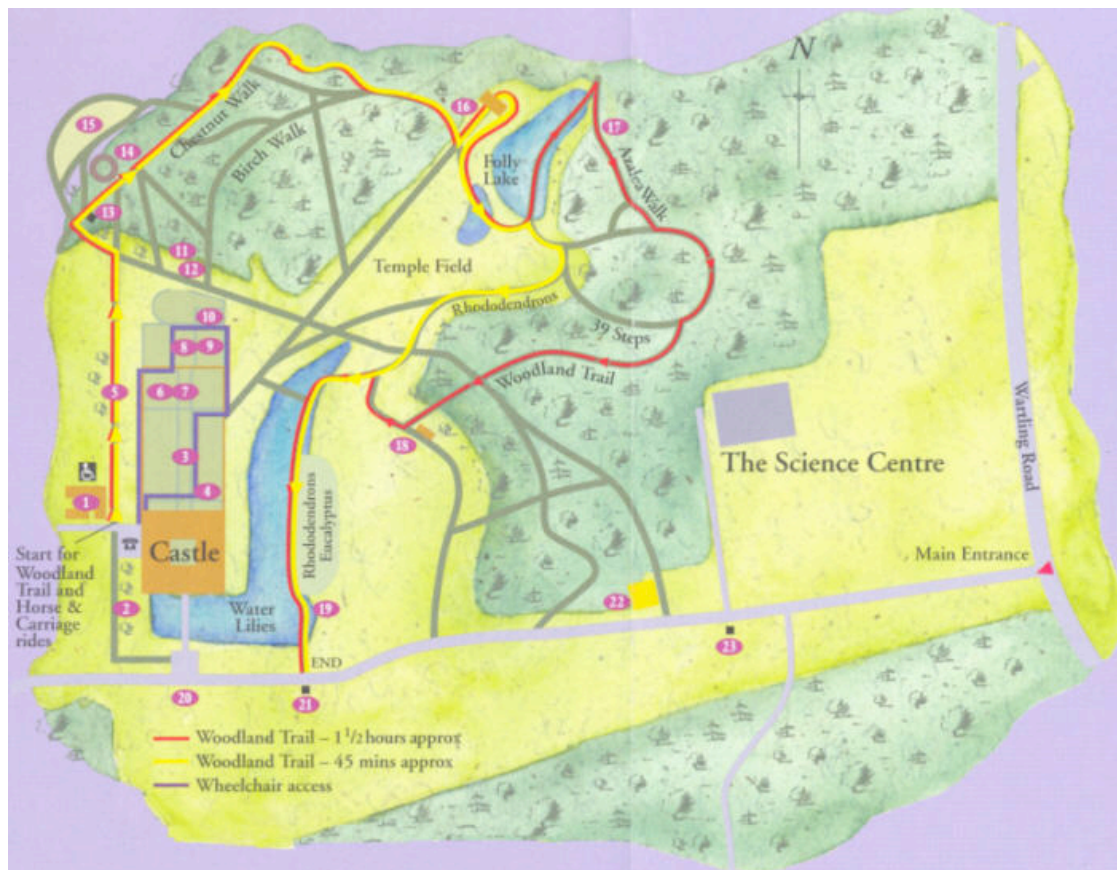
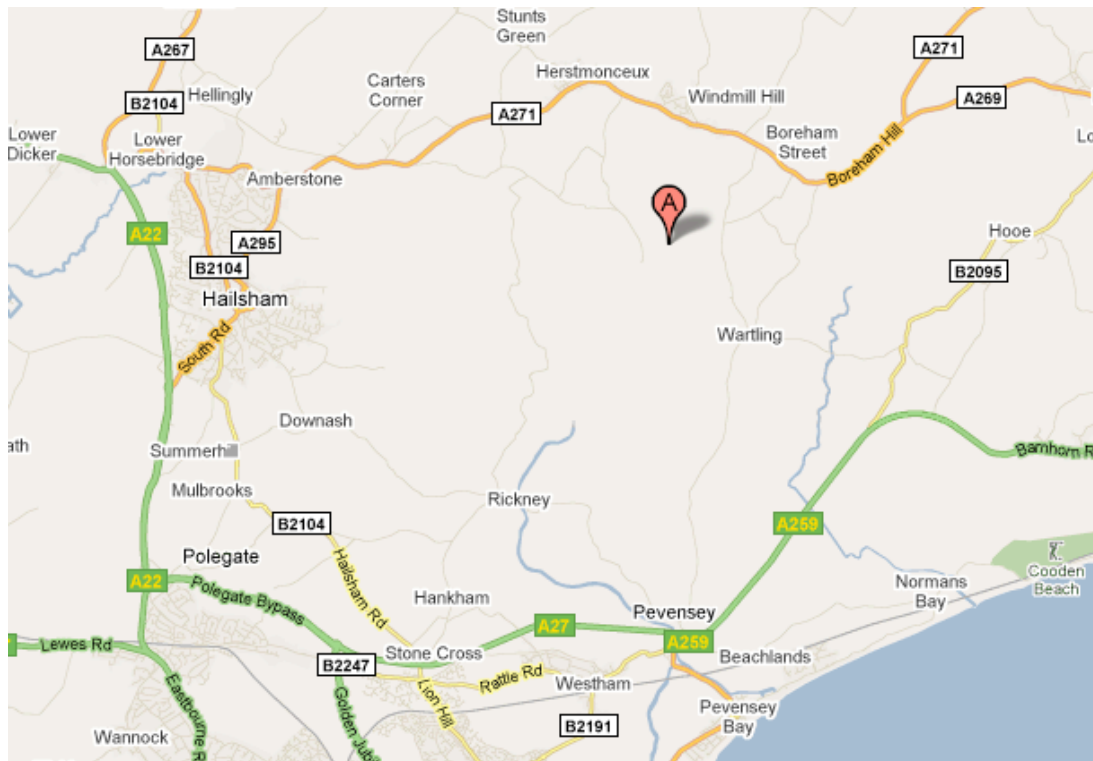
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## Venue Location and Map of Castle Grounds





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## Travel Information

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Herstmonceux Castle is located in a rural setting, so access to amenities such as bank machines, fast food restaurants, and 24-hour shops is limited. The nearest village to the Castle is Herstmonceux Village, which is about a 30-minute walk. There, you'll find amenities such as a bank machine, pharmacist, variety store, post office, hairdresser and pub.

Hailsham and Polegate, which are the closest nearby towns, are about a 20-minute drive from the Castle.

### Trains

The closest train station is Polegate Station, located approximately 9 miles to the southwest. From Polegate you can catch trains to Gatwick or London (Victoria Station). Battle Station, the next closed station after Polegate, provides access to London (Charing Cross Station). Polegate and Battle are each 15-20 minutes by taxi, and the train journey to London is 75 minutes. Same-day return fare is approximately £20 with a Young Person's Railcard; without a Railcard it will cost approximately £27.

### London Underground

For trips on the London Underground (a.k.a. the Tube), you may want to consider purchasing an 'Oyster' card. The Oyster card is a prepaid smartcard that saves you the hassle of purchasing a pass each time you want to travel on the Tube. The Oyster card can also be used on trams, buses, London Overground and some National Rail Services. Fares purchased using an Oyster card are generally cheaper and credits can be used as needed (i.e., they do not expire). The Oyster card also automatically calculates the cheapest fare for the journeys you make in a single day.

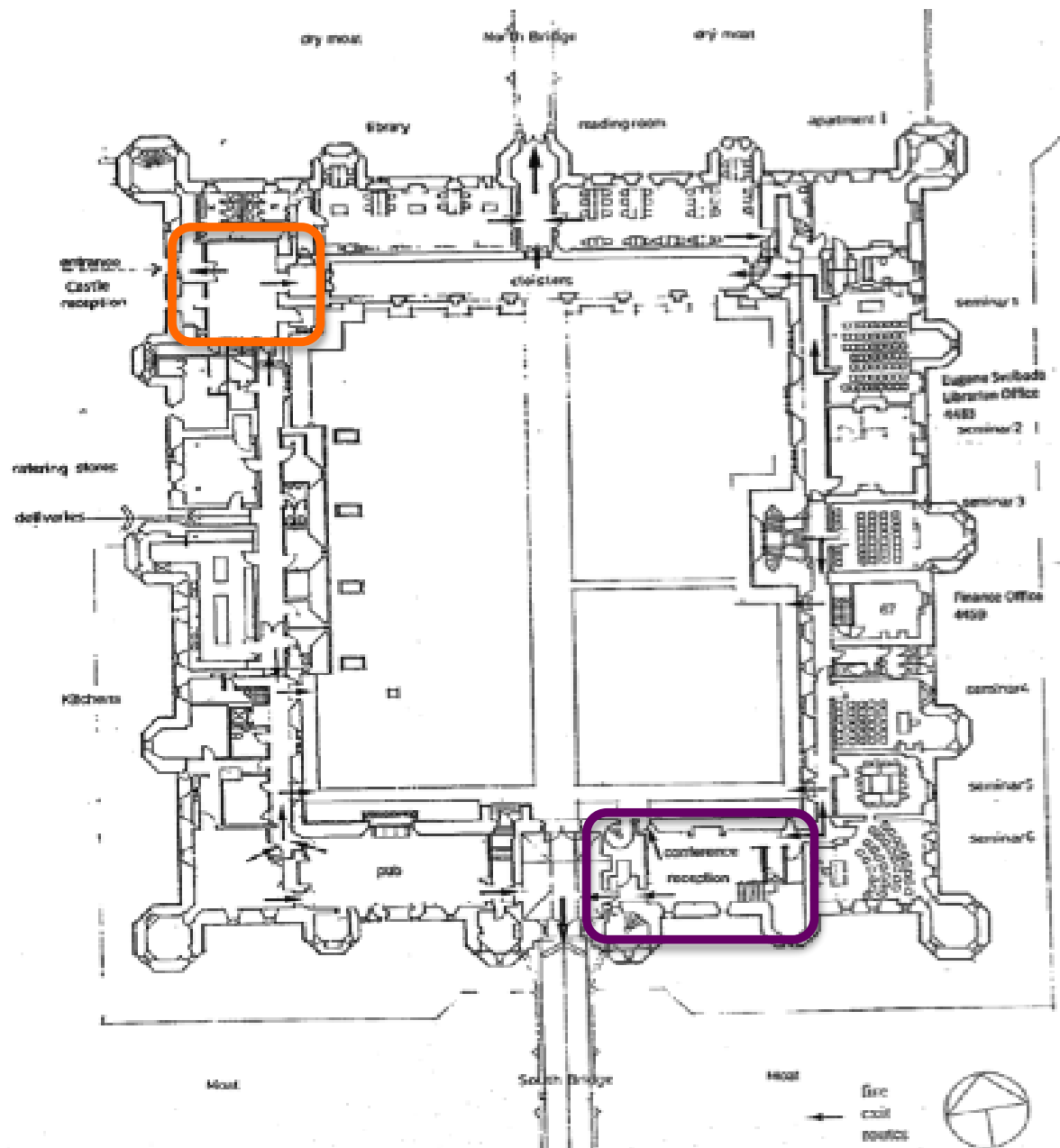
### Taxis

Bader Reception has information on taxi companies that operate locally. When travelling late at night, and particularly when returning from London by train, telephone the taxi company before leaving – they will then be able to have a taxi waiting for you at the station. If you travel late at night and don't call ahead, the likelihood is that you may have to wait quite a while for a taxi, as few cabs work after 11:30 pm in the countryside. A taxi from the Polegate train station should be approximately £12.00 (one way). The main taxi company used is Direct Travel Taxis + 44 (0)1323 484 444.

A telephone booking with a taxi company is accepted as a bona fide contract, and if you cancel without notice you are still liable for the costs incurred. If your plans change, please ensure that you inform the taxi company so as not to incur the cost of the cab. If using an unfamiliar taxi company, check that the meter is switched on when you depart; and if it is a long journey, ask for the estimated cost before you set off. Please use the nominated taxi companies whenever possible. The BISC monitors their service, and the more you use them the better the deal that can be negotiated on your behalf.

## Floor Plans of Castle Interior

### Lower Floor



#### Legend

- Castle Reception** (for registration, castle tour and general queries)
- Elizabethan Room** (for wine reception and posters)

The floor plan shows the 4th floor layout with the following rooms and features:

- Highlighted Areas:**
  - Red Box:** Ballroom
  - Green Box:** Great Hall
  - Blue Box:** Conference Room
- Other Rooms and Features:**
  - apartment 2
  - 4531 Christian Lloyd
  - 180
  - 155
  - 4472 / 4473 Prince Office
  - seminar 3 new gallery
  - conference room
  - conference
  - entrance
  - gallery
  - Drummers Room
  - film and video
  - computer room
  - sanitary
  - 4473 Dave Stubbings
  - 4467 Bruce Stanley
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**Conference Room and Conference Ante-Room** (for talks; tea and coffee breaks)  
**Great Hall** (dining room for breakfast, lunch and dinner)  
**Ballroom** (for evening performances and concerts)

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## **Taxi and Medical Numbers (for information)**

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**999 is the number to dial for the most severe emergencies.**

### **Direct Travel Taxis**

+44 (0)1323 484 444

### **Ambulance**

St. John Ambulance  
19 Grovelands Road  
Hailsham BN27 3BZ  
Emergency: 0132 384 1933

### **Dedicated Care Private Ambulance Service**

105 Greenleaf Gardens  
Polegate BN26 6PH  
Emergency: 0800 849 8034

### **Dentist**

Hailsham Dental Care  
2 Town House Garden  
Market Street  
Hailsham BN27 2AE  
Tel: 01323 848 824

### **Doctor**

Dr. A. Pearce  
Seaforth Farm Surgery  
Vicarage Lane  
Hailsham BN27 1BH  
Tel: 01323 848 494

Note: This list of taxis and medical service providers is provided for information only – the conference organisers and Herstmonceux Castle do not take responsibility for or recommend the services provided by any of these organisations or individuals.