



SHARE

Science, Humanities and Arts Research Exchange

Interdisciplinary Mini-Symposium

Supported by the Royal Conservatoire of Scotland Department of Research and Knowledge Exchange, St Leonard's College, and the University of St Andrews Proctor's Office

November 21, 2019
Upper and Lower College Hall
St Andrews University



University of
St Andrews



Royal Conservatoire
of Scotland

Welcome to the first Interdisciplinary Mini-Symposium, organized by SHARE. SHARE (Science, Humanities and Arts Research Exchange) seeks to build a supportive network of researchers at St Andrews, the Royal Conservatoire of Scotland, and beyond. The network is open to all who are interested in interdisciplinary collaboration between people in the arts and people in the humanities and sciences. Current collaborations have resulted in performances, lectures, papers, and interdisciplinary PhD students co-supervised and co-enrolled between RCS and St Andrews.

Let us know how we can help support your current interdisciplinary projects or help you find new collaborations! For further information, please get in touch with Emily Doolittle (e.doolittle@rcs.ac.uk) and Ines Jentzsch (ij7@st-andrews.ac.uk)

An enormous thank you to everyone who made this Mini-Symposium possible:

Stephen Broad, Stephanie Edwards, Deborah Keogh, Elaine Hook, Laura González, Laura Bissell, Sarah Hopfinger, and Alistair MacDonald at RCS

Proctor Clare Peddie, Emmy Feamster, and the Proctor's Office; Provost Monique MacKenzie and St Leonard's College; Mhairi Stewart; and Sibylle Scheipers at St Andrews University

All the presenters and participants!

Schedule

Lower College Hall

10:00-10:30 **Coffee/registration**

If you're presenting in the first block, please find Ines Jentzsch to help check that your technology works

Upper College Hall

10:30-10:45 **Welcome**

10:30 Emily Doolittle and Ines Jentzsch

10:35 Stephen Broad

10:45-12:05 **Presentations 1**

10:45 Kevin Laland, Laura Gonzalez, Isabella Gould, Nicky Clayton

11:05 Anne-Marie Weijmans, Tim Fitzpatrick, Bede Williams

11:25 Richard Bates

11:45 Simon Kirby, Tommy Perman

Lower College Hall

12:05-12:10 **Brief coffee refill**

12:10-12:45 **Discussion 1**

12:45-1:20 **Lunch**

1:20-2:30 **Discussion/Workshop 2** (Mhairi Stewart)

2:30-2:55 **Coffee**

If you're presenting in the second block, please find Ines Jentzsch to help check that your technology works

Upper College Hall

2:55-4:15 **Presentation 2** (15" presentation, 5" questions)

2:55 Ines Jentzsch, Konstantin Semilakovs, Jonathan Kemp

3:15 Corinne Jola

3:35 Alex South, Ellen Garland, Luke Rendell, Emily Doolittle

3:55 Kat Jones, Hannah Imlach

4:15-4:30 **Clare Peddie: Closing Words**

Lower College Hall

4:30-5:30 **Wine Reception/Sharing**

Josh Armstrong is an interdisciplinary director working in the medium of performance, and a Lecturer in Contemporary Performance Practice at the Royal Conservatoire of Scotland. Starting his career as a dancer, his works now span a wide range of disciplines from theatrical design to installations, collaboratively devised performances to direction of music-theatre works.

Richard Bates is a Reader in the School of Earth and Environmental Sciences at the University of St Andrews. He is a co-founder of Music Planet, which was born out of his desire to bring out the relationship between his research, which includes investigating the impact of climate change with cutting-edge geophysical surveys, and the music produced in the landscapes he studies. A very active member of the University community, Richard is involved in several interdisciplinary projects including the Centre for Landscape Studies, the Marine Alliance for Science & Technology Scotland, the Scottish Oceans Institute, and the St Andrews Sustainability Institute.

Laura Bissell is a Lecturer in Contemporary Performance and Lecturer in Research at the Royal Conservatoire of Scotland. She has taught on the MRes in Creative Practices programme at Glasgow School of Art and the Transart Institute MFA in Berlin. Laura's research interests include: contemporary performance practices; technology and performance; feminist performance; ecology and performance; and performance and journeys, and she has presented her research at conferences nationally and internationally.

Emma Black is an interdisciplinary PhD student at St Andrews University, co-supervised by Morven Shearer and Jeremy Howard, looking at the role of medical museums.

Emma Bond is a Reader in the School of Modern Languages at St Andrews University. She is interested in the transnational circulation of people, texts, and – increasingly – of objects and cultural artifacts.

Stephen Broad is Director of Research and Knowledge Exchange at the Royal Conservatoire of Scotland. He has a longstanding interest in the intersections of arts and sciences, having undertaken a multidisciplinary undergraduate degree in music and physics. His research interests include music education, twentieth-century French music, and practice-based research. He is chair of the European Platform for Artistic Research in Music.

Michael Carroll has been a Lecturer in Greek Literature at the University of St Andrews since 2017. Most of his research to date has been on Greek tragedy, and his first book – which applies insights from cognitive linguistics to the metaphorical language of Aeschylus – is close to completion.

Nicola Clayton is a scientist and a dancer. She is a Professor of Comparative Cognition in the Department of Psychology at the University of Cambridge and a Fellow of the Royal Society. She is also Scientist in Residence at Rambert and Co-Founder of the Captured Thought.

Margaret Connolly's research focuses on 14th and 15th-century English texts and their manuscript contexts; her work on medieval manuscripts includes the scribes who

produced them and their readers, as well as their later owners from the Tudor period to Victorian and 20th-century collectors. Manuscript fragments that survive as recycled materials in the bindings of early printed books, and which include Latin texts of all types (e.g. music, liturgy, theology, law, sermons), are her particular current interest, especially in the context of Scottish collections. Margaret is the Director of the St Andrews Institute of Medieval Studies (SAIMS), and is Senior Lecturer in the Schools of English and History at St Andrews University.

Emily Doolittle is an Athenaeum Research Fellow and Lecturer in Composition at the Royal Conservatoire of Scotland. For the past 20 years she has been exploring the relationship between animal songs and human music, both as a composer and through interdisciplinary academic research. Other ongoing interests include storytelling through music, folklore, and inter-arts collaborations. She is a founder and organizer of SHARE (Science, Humanities, and Arts Research Exchange), which facilitates interdisciplinary collaborations between researchers at RCS, St Andrews and beyond. www.emilydoolittle.com

Maria Dornelas is a macroecologist who studies biodiversity change across the planet. In addition to working with global trends, she has a special focus on coral reefs, where she collects 3D imagery to track how reefs change through time and space. She has a particular interest in interacting with people from Arts and Humanities to explore different ways to convey the changes she uncovers. She is a Reader in the School of Biology at St Andrews University.

Ewan Downie is a theatremaker, writer and teacher. Trained in Philosophy at Edinburgh University and in Theatre in Dublin and Poland, Ewan is co-artistic director of Glasgow's Company of Wolves.

Rachel Drury is a Lecturer in Learning and Teaching in the Performing Arts at the Royal Conservatoire of Scotland. Rachel has a doctorate in music psychology, and her research interests are centred around the non-musical impact of music with specific regard to health and wellbeing, and child development.

David Evans is Reader in French at St Andrews. He works on French poetry, mostly of the 19th and 20th centuries, and its various relationships with music.

Emily Feamster is the Academic Policy Officer in the Office of the Vice-Principal Education (Proctor) at University of St Andrews, and is responsible for supporting the development and implementation of educational strategy and policy, as well as developing and supporting pedagogical initiatives.

Tim Fitzpatrick is a Fife-based visual artist who makes site-specific and multi-media art. Since 2015 he has been collaborating with Anne-Marie Weijmans of the School of Physics and Astronomy at the University of St Andrews and with trumpeter and conductor Bede Williams, also of the University of St Andrews. As a contributor and partner in this collaboration Tim is developing a body of work which takes its inspiration from the science of spectroscopy.

Andy Gardner is a Professor of Biology at the University of St Andrews. He works on Darwinian adaptation,

developing general theory on the topics of inclusive fitness and multilevel selection, and also tailoring general theory to the biology of particular species to facilitate empirical testing. He works on a wide range of biological systems, including viruses, bacteria, protozoa, crustaceans, insects, fish and humans.

Ellen Garland is a Royal Society University Research Fellow in the School of Biology with broad research interests in animal culture, social learning, bioacoustics, and behavioural ecology. Her main research focuses on cetaceans, and in particular the cultural transmission, vocal learning, and function of humpback whale song. She currently co-supervises an interdisciplinary music-science PhD student with the Royal Conservatoire.

Laura González is an artist, writer, yoga teacher and an Athenaeum Research Fellow at the Royal Conservatoire of Scotland. Her work inhabits the space between medical humanities, psychoanalysis, performance and Eastern thought, investigating knowledge production and the body of the hysteric through text, voice, dance and image. She is currently translating Freud's case histories into performance and she is also exploring the performative potential of a breath practice. www.lauragonzalez.co.uk

Isabella Gould is an RCS/St Andrews doctoral student exploring social learning in dance and the psychological profiles of dancers. Her interdisciplinary interests intersect dance, psychology and medicine. She is passionate about the health benefits of dance in diverse populations across the lifespan and creative collaborations within dance creation.

Peter Hannay completed his undergraduate and master's degrees in physics at the University of Edinburgh. He is now in the first year of his PhD at the University of York on the Emergence of Dancing in Human Evolution.

Sarah Hopfinger is an artist-academic whose main areas of practice and research are contemporary performance, live art, ecological performance, intergenerational practice, and chronic pain and dance. Her interdisciplinary interests include the intersections between performance, dance, ecology, ecological pain/grief, chronic pain and disability studies. She is a Lecturer in Contemporary Performance Practice at the Royal Conservatoire of Scotland. www.sarahhopfinger.org.uk

Jeremy Howard is a Senior Lecturer and Director of Postgraduate Research in the School of Art History, University of St Andrews. He works on connections between art, architecture, design and education, with a focus on the 19th and 20th centuries. He explores national and transnational styles, particularly as expressed in central, eastern and northern Europe (most notably in the lands of the former Russian empire and Scotland). Known as an art historian, his first degree was in Religious Studies and Social Anthropology (Lancaster, 1981).

Robert Humphreys is a Lecturer in the School of Medicine at St Andrews University.

Hannah Imlach is a visual artist working predominantly in sculpture and photography. Her work is research-based, informed by the experiential qualities of specific ecologies and current environmental research. Hannah is in her first year of a practice research PhD within Human Geography

at the University of Glasgow exploring the role of creative practice at sites of environmental conservation, specifically the potential for site-specific sculpture within the RSPB Loch Lomond nature reserve. The project is a Collaborative Doctoral Award in partnership with the RSPB, supported by the Scottish Graduate School for Arts and Humanities.

Ines Jentsch is a Reader in Cognitive Neuroscience at the School of Psychology and Neuroscience, St Andrews. Her current research focuses on attentional and performance-related processes in humans, such as how we plan and control our actions, how we make decisions, and how past events affect our current actions. She is also interested in how these processes change as a function of expertise (e.g., in groups with high levels of motor skills such as instrumental musicians), normal aging and psychological illness.

Corinne Jola is a Senior Lecturer in Psychology at Abertay University, who uses artistic and scientific methods to study and disseminate findings on kinaesthetic experience in movers and spectators and its mechanisms in the human brain. Through her works, she establishes how the experience of the sense of movement is intertwined with empathic and spatial abilities in order to make better predictions of human performance and sensation across sensory modes, as well as to design theory-driven and evidence-based effective intervention programmes that can enhance the lives of people suffering from long term mental and physical illnesses (for more information see <http://tiny.cc/cjola> or www.CoCoDanse.com).

Kat Jones worked at RSPB on all aspects of people engagement from press and media, education and visitor experience, to membership and fundraising. She now

works for Stop Climate Chaos Scotland but volunteers back at RSPB for the purposes of supervising an SGSAH-CDA interdisciplinary student. Her background is as a scientist with her PhD being on the breeding ecology of lesser black backed gulls

Jonathan Kemp is the Head of Music Technology at St Andrews University, with a research background in physics and music. His recent work involves the pitch sensitivity of guitar strings to player control and has resulted in a sets of guitar strings that bend in tune on four strings with tremolo arm use and is the subject of a PLOS One journal paper, an international patent application through the University of St Andrews, UK (International Patent Application No: PCT/GB2018/050296) and commercial release through kempstrings.com.

Simon Kirby is Professor of Language Evolution at the University of Edinburgh. He works in parallel on scientific and artistic investigations of cultural evolution and the origins of human uniqueness. He heads the Centre for Language Evolution, which has pioneered techniques for growing languages in the lab. His artistic work includes *Cybraphon*, which won a BAFTA in 2009 and is now part of the permanent collection of the National Museum of Scotland.

Kevin Laland is Professor of Behavioural and Evolutionary Biology at the University of St Andrews. He is particularly interested in human cognitive evolution, including the evolution of culture, which he investigates using a range of experimental and theoretical approaches. He will speak today about a new research project that sets out to test the

hypothesis that the capacity to dance utilises neural circuitry that evolved to facilitate imitation.

Siobhain Lynch is a Lecturer in Medical Professionalism at University of St Andrews, with a focus on the personal and professional development of medical students. Her PhD in psychology focused on the development of a mindfulness-based programme for university students, and she has also co-developed a mindfulness programme for health professionals. You can find her on Twitter @Mindful_Kiwi.

Alistair MacDonald is a Professor of Music at the Royal Conservatoire of Scotland. His practice combines composition and computer-based improvisation environments. Often collaborative, it encompasses field recording, live processing, interactivity and improvisation, taking the form of standalone electroacoustic works, fixed compositions for instruments, improvisations, and installations. He uses hydrophones, contact and standard microphones, and devises his own computer-based environments, extending beyond the conventional to create rich, spatialised textures. He work across art forms collaborating with colleagues in dance and visual arts as well as with other musicians.

Victoria MacKenzie is a fiction writer and poet with a particular interest in human interactions with other species. She has a PhD in English Literature from the University of St Andrews and her thesis explored how contemporary poets engage with scientific ideas in their work. She is working on a short story collection, titled 'Creaturely', and recently returned from a two-month residency at Saari in Finland where she was researching a

book about the life of plants. She teaches creative writing for the University for the Creative Arts. victoriamackenzie.net

Garry MacKenzie is a poet and non-fiction writer, and teaches literature and creative writing courses for the University of St Andrews and the University for the Creative Arts. He's interested in how poetry might explore ecology in its form as well as its content, and has recently completed a long poem which brings together field studies of red deer, the Gaelic nature tradition and contemporary environmental philosophy. He's now working on a collection which examines the technology, phenomenology and environmental impact of various kinds of net, from trawler nets to weaving, and from cobwebs to net curtains.

Stuart MacRae is an Edinburgh-based composer working in a variety of genres, including operas, orchestral, choral and chamber music. He is a Senior Research Fellow at the Royal Conservatoire of Scotland. His current practice-based research investigates word-setting for the operatic voice and musical dramaturgy.

Karen McAulay's musicological research has all focused on the 18th and 19th centuries, initially into Scottish song and dance music, and more recently into British legal deposit music collections of the same era. She is fascinated by paratext in published music collections, and her interdisciplinary interests extend into cultural, book and library history. She is a Researcher and Performing Arts Librarian at the Royal Conservatoire of Scotland.

Helen McVey is the Director of Business Development at the Royal Conservatoire of Scotland. She was awarded her MBA in 2011, and an Advanced Diploma in European

Management from the University of Aarhus, Denmark in the same year. Prior to this, Helen toured extensively as a performer on the cello, worked as Creative Executive for Enterprise Music Scotland and taught at the RCS. She has undertaken a broad range of community outreach activities including projects with Scottish Opera, Scottish Ballet and Children's Classic Concerts, and was part of the inaugural teaching team at Big Noise Raploch, Sistema Scotland. Helen works internationally as a consultant for Quality Assurance in Higher Education, and frequently gives guest lectures for organisations such as Enterprise Music Scotland, Classical Music NEXT, Association of European Conservatoires and the Association of British Orchestras.

Emily Michelson is a Senior Lecturer in modern history at the University of St Andrews. Emily specializes in the religious culture of 16th and 17th century Italy, especially interfaith relations; and has a growing scholarly interest in early modern walking as a lens on human interaction and encounter, which means paying attention to the senses, including music.

Sara Niksic is doing a PhD on humpback whale song ontogeny, evolution and vocal learning at School of Biology, University of St Andrews. Besides bioacoustics, animal culture and social learning, she is interested in research combining art and science. Sara is also developing innovative ways of science communication, with art as her main tool. Her album *Canticum Megapterae*, based on humpback whale song, recently received a St Andrews Engagement Award.

Clare Peddie is the Vice-Principal in Education (Proctor) for St Andrews University. She is a Marine Biologist with

post-doctoral experience in cancer and physiological research. Her research and teaching interests encompass diving physiology, scientific diving techniques, the value of fieldwork in effective teaching, and the development of employability through leadership and management experience in fieldwork and engagement in tutorials. She was previously Head of Biology at St Andrews.

Tommy Perman is an artist, designer and musician who loves collaborating with others to make work that blurs the lines between those three disciplines. He has exhibited extensively and released lots of records. Tommy lectures in Communication Design at Duncan of Jordanstone College of Art and Design at the University of Dundee. www.surfacepressure.net

Jane Pettegree is Head of Curriculum in the Music Centre at St Andrews University, and has been involved in research/outreach/impact projects combining music and drama that use public performance to illuminate research. Recent projects include: a) Working with Classics to reconstruct music in a Plautus comedy, culminating in public performance (2019); b) SHINE (Music and Astronomy, with Anne-Marie Weijmans) – directing a baroque opera and using this as a vehicle to think about colour and light spectra (2018); c) Music Planet (Music and Environmental Science, with Richard Bates) – organising the public study day that disseminated sustainability research associated with the Xerxes opera production (2018); d) Supervising an English literature PhD project combining music and early modern drama (2017); e) with Modern Languages (Italian) design and delivery of musical events surrounding celebrating the 500th anniversary of

Ariosto's Orlando Furioso and its contribution to opera (2016)

Rhiannon Purdie is a Professor in the School of English at St Andrews University. Her main areas of research are in Older Scots literature of the 14th-16th centuries; Older Scots and Middle English scholarly editing, and Middle English romance. She is the current Editorial Secretary of the Scottish Text Society. "The combination of these interests has often led me out of my comfort zone towards the history of oral literature, memorial transmission and the confluence of literature and music, e.g. in the form of ballads or the potential musical dimensions of medieval romance. I have published on the textual aspects of such works, but feel at a loss as to how to deal with this musical dimension. I possess two mandolins, neither of which I can play."

Roger Rees works in the School of Classics at St Andrews. Most of his research is in classical Roman literature and culture, especially praise discourse/s; he has associated interests in classical reception, and has published, for example, on classical influences in Ted Hughes.

Luke Rendell came to the University of St Andrews in 2003 as a post-doctoral fellow, after completing a PhD studying sperm whale vocal communication at Dalhousie University in Canada. After post-doctoral positions working on sperm whales, the evolution of learning and cultural evolution, he joined the faculty of the School of Biology in 2012. Since then he has pursued eclectic and often inter-disciplinary research interests spanning marine conservation, cetacean, and fish behaviour, and human cultural evolution.

Claire Ruckert holds a Bachelor of Music Degree from the Royal Conservatoire of Scotland in Vocal Studies, a Master of Science in Performance Science from the Royal College of Music, and a Master of Science in Psychology from the University of St Andrews. She is currently completing a PhD based at the Royal Conservatoire of Scotland and accredited by the University of St Andrews under the supervision of Rachel Drury and Ines Jentsch. Her research is in interventions in applied psychophysiology and how these can be implemented in a conservatoire environment to combat performance anxiety and improve mental resilience in musicians.

Born in Latvia and brought up in Germany, **Konstantin Semilakovs** is a classical pianist and Professor of Piano at the University of Music and Performing Arts Vienna. In addition to performing and pedagogical activities, he is researching the phenomenon of synaesthesia in classical music within his doctoral programme at the University of St Andrews (supervised by Ines Jentsch and Jonathan Kemp). The focus of his studies is the relationship between harmony, consonance and colour in the compositions of Alexander Scriabin and Olivier Messiaen. He is further working on visualisations of these works and introducing the concert audience to musical synaesthesia.

A scientist by training, **Morven Shearer** now works in the area of medical ethics and law. Morven is interested in trust, research ethics, and global health. Recent projects include collaborating with partners in Tanzania to streamline their ethical review process, and working with clinicians in Edinburgh Cancer Centre to explore patients' decision-making. Morven's current PhD student, Emma

Black, is co-supervised with Jeremy Howard in Art History, looking at the role of medical museums. She is a Senior Lecturer in the School of Medicine at St Andrews University, and is also an Associate Dean and a Senate Assessor on the University Court.

Tom Smith is a Lecturer in German at the University of St Andrews and his current project is on emotions and marginalisation in the German techno music scene. His main interdisciplinary interests include gender, queer and critical race studies; music in German and Austrian culture; social and cultural history and work across disciplines on institutions. He was chosen as one of the AHRC/BBC New Generation Thinkers in 2019.

Alex South is a PhD candidate, carrying out an interdisciplinary investigation into humpback whale song considered as a cultural and aesthetic phenomenon and approached with the trained ear of a professional clarinettist. Supervised by composer Emily Doolittle at the Royal Conservatoire of Scotland, and biologists Luke Rendell and Ellen Garland at the University of St Andrews, Alex is using ethological and zoömusicological methods to study quantitative and qualitative aspects of humpback song structure, performance and evolution, and creating and performing new music informed by these studies. In a past life Alex was a researcher in atmospheric chemistry at the University of Cambridge.

Mhairi Stewart is the Head of Public Engagement with Research at St Andrews University. She has extensive experience and recognition for producing and facilitating engagement programmes and activities including co-production between external partners and researchers

from multiple disciplines. The Public Engagement Team are responsible for developing strategies for individuals, academic schools and the institution alongside training and developing best practice in engagement.

Emma Sutton is a Professor in the School of English at St Andrews University. She works mainly on the relations among literature, music and fine art in the nineteenth and twentieth centuries. Her publications include *Aubrey Beardsley and British Wagnerism in the 1890s*, *Virginia Woolf and Classical Music* and, with Michael Downes, *Opera and the Novel*; she is also Founding Director of the Virginia Woolf & Music project that explores the musical lives and afterlives of the Bloomsbury Group through public talks, workshops, concerts and the commission of new works of art. She is currently writing a study of music's role in late nineteenth-century Pacific colonial history, focused on the writer and composer Robert Louis Stevenson, and is Principal Investigator of a collaboration with the National University of Samoa recording rare Samoan music.

Ellen Thomson is Head of Outreach for the University's Music Centre. Her work involves liaising with different community groups and schools to devise projects that deliver specific outcomes or educational experiences. She has over twenty years of experience delivering music outreach work; previous roles include working for the Royal Albert Hall and Royal Scottish National Orchestra. She now splits her time between the Music Centre and contemporary music organisation sound in Aberdeen.

Anne-Marie Weijmans is a Reader in Astronomy at the University of St Andrews. Her main research area is the

formation and evolution of galaxies. She holds an STFC Leadership Fellowship in Public Engagement, and leads the Shine project: exploring the properties of light with science, music and art.

Bethany Whiteside is Research Lecturer and Doctoral Degrees Coordinator at the Royal Conservatoire of Scotland. Her research focuses on the cultural and social analysis of participatory dance. Since 2015 Bethany has worked closely with Scottish Ballet, Scotland's national dance company, through leading mixed methods evaluations and conducting research primarily in the area of Dance for Health. These programmes include Dance for Parkinson's Scotland (run in partnership with Dance Base) (pilot evaluation (2016/2017) and national expansion (2018-2021), Time to Dance (working with dancers with dementia, 2018-2020), and Elevate (a pilot working with dancers with Multiple Sclerosis, 2019-2020).

Bede Williams is Head of Instrumental Studies at the Music Centre. His interdisciplinary work started in 2015 with astronomer Anne-Marie Weijmans and Fife based visual artist Tim Fitzpatrick on the Shine project. He continues to be engaged with Shine, though has also been a collaborator for Theoartistry (music + theology), Music Planet (music + earth and environmental science), HARK (music + anthropology), BioMusic (music + biology) and more recently a project to celebrate the 2019 International Year of the Periodic Table.