

Editorial

February 23rd 2017

A while ago, one of the professors from the Electronic Engineering discipline at The School of Engineering of the University of Glasgow bounded into the coffee room. He brandished an email he'd received from the Head of School at me. It was an invitation to show a VIP around the facility at very short notice. I'd have thought nothing of it, but read on: "I do hope you can do it because I've asked everybody else."

Sometimes utter frankness is not the best way to win friends and influence, but I can say truly that it is an honour to have been asked to edit this issue of this journal at very short notice. It also affords me the opportunity to fall back on that device excluded from any normal academic literary output: the anecdote. I should like to tell you what happened in a particular session of the Conference on Interdisciplinary Musicology held in Glasgow, Scotland, 30th August – 3rd September, 2011.

The conference, run under the auspices of the [Society for Interdisciplinary Musicology](#) was combined that year with two other academic gatherings. The first was a colloquium called The Anatomy of Listening, part of a series hosted from time to time by the Science and Music Research Group at The University of Glasgow. Its purpose on that occasion was to "consider the relationship of 'music as listened to' with other manifestations of music (scores, audio files etc.), music as an artefact of human culture with music as an empirically-measurable phenomenon, eg the relationship between listening and 'machine listening', *inter alia*." Thanks to the advocacy and industry of our Honorary Research Fellow, Prof Graham Hair, the event attracted financial support from The Royal Society of Edinburgh.

The second was the Workshop on Interdisciplinary Cross-Disciplinary Research Collaboration in Science and Music, and its Impact on Teaching and Practice, "WCRCSM." *Universitas21*, described on its web site as "The leading global network of research universities for the 21st century," of which Glasgow University was a member. *Universitas21* generously provided us with the funding to invite our keynote speakers. These included, from the University of Virginia, Prof Judith Shatin, William R. Kenan Jr. professor of music and director of the Virginia Center for Computer Music and Prof Michael Kubovy, Professor of Cognitive Psychology; Prof Mark Pollard, Composer and Head of the School of Contemporary Music at the University of Melbourne; and Prof Emery Schubert, music psychologist, from the School of Arts and Media at the University of New South Wales, Sydney.

Our event called for papers across disciplines as diverse as aesthetics, anthropology, archaeology, art history and theory, cultural studies, ethnology, linguistics, literary studies, music history, ethnomusicology, cultural studies, prehistory, theoretical sociology, philosophy, semiotics, sociology and music theory/analysis, acoustics, biology, linguistics, mathematics, perception, psychoacoustics, empirical psychology and sociology, physiology, statistics and computer science, performance,

composition, education, engineering, medicine and therapy. There were 95 delegates. Two of Glasgow's Universities collaborated in hosting the event. The ancient University of Glasgow (established 1451) hosted concerts of new music from four continents performed by Scottish Voices and associate artists, a concert by Aberdeen University's Early Music Group, and the final conference session, focussing on singing. Glasgow Caledonian University, and especially Dr Don Knox and Ms Denise Smith, offered us its excellent modern conference facilities. The Lord Provost of Glasgow caused his council to host a civic reception on the event's second evening.

Internationally renowned professors spoke at the conference, but to make a point about interdisciplinary research, I'd like to tell you instead about a paper delivered by my then Masters student, Luiz Gomez. He was studying for an M.Sc. in Signal Processing, Electronic and Computing Techniques for Researching and Understanding Music, an interdisciplinary degree in which applied computing students were also taught elements of music analysis and orchestration not so that they could be accomplished musicians, but in order to render them better able to collaborate with expert musicians on interdisciplinary projects. Luiz' dissertation was of such high quality that I suggested he submit an abbreviated version, "Determination of Parametric Modal Parameters for String Instrument Models," to the conference, and it was accepted. He presented it at a session chaired by Dr Ingrid Pearson from the Royal College of Music in London, and in his second language. His presentation, aimed at the whole interdisciplinary audience, attracted a question: wasn't this just an Eigenvalue problem? [a well-understood principle in engineering mathematics, taught to undergraduates in their first year.] Luiz paused. He appeared to stare into space. Was the inexperienced Masters student going to suffer ignominy at his very first conference outing? No. *He was looking at the clock.* "Exactly," he said, and without any preparation, taking a whiteboard marker in his hand, continued, "Let me write it out for you in matrix form."

So with this kind of graduate appearing, is it time for JIMS and CIM conferences to drop their requirements for multiple authorship? Are we at the birth of a new discipline, in a position similar to Computer Science in the 1970s? This must remain an open question. I think not. I once asked a professional freelance musician with a successful, international career as an orchestral player, whether she got bored playing duets with amateurs, or maybe there were amateurs who could play like her. She replied, no there aren't. There were undoubtedly many who could be as accomplished, and it was easy to learn to play: application to one's instrument throughout childhood and half a decade practising assiduously in a music conservatoire, followed by a few hours' practice a day throughout one's professional career was all that was required. But non-musicians with day jobs simply don't have the time for that. Perhaps a similar principle applies to interdisciplinary music studies? Some of the presentations at our original double-conference which fell outside the CIM/JIMS umbrella did so because they were not interdisciplinary. Some were monographs, and it is true that some of these weren't truly transdisciplinary either, but must that always be the case? Are there really no genuinely interdisciplinary authors? Are we all confined, apart from amateur adventures, to our own disciplinary cage? Maybe you should ask Luiz. He graduated top of the year in the whole of the University of Glasgow's School of Engineering Masters cohort (all subjects) and returned to Mexico.

The double-structure conference in 2011 has left us with a selection of papers which certainly do not make any compromise in quality and which, after augmentation and passing the usual procedures, we are delighted and honoured (finally) to present in this special edition of the Scottish Music Review. In the event, this proved a time-consuming process. Although the papers had already been reviewed as conference presentations, many of the authors augmented them for journal publication. The

editors felt it in the interests of the Scottish Music Review and its readers to pass the new versions through a second editorial scrutiny. Perhaps surprisingly, the contributors infrastructure for the journal didn't strongly support rich media (audio, video, and printed score, multiple languages etc) required by this edition, so I took it upon myself to provide a completely new framework for the presentation of these texts. Hyperlinked media is available if you are reading on-line, and the presentation should nevertheless be uncompromised if printed onto dead trees.

Last, literally but not figuratively, we are pleased to present a thought-provoking afterword by Prof Richard Parncutt on positivist and relativist thinking on music from the point of view from science and humanities researchers, not excluding some mention of the viewpoint of practitioners.

In science, it is common for papers to have multiple authors. We know of instances of papers in science in which dozens of scientists are listed as authors. Although this is sometimes merely acknowledgement that particular scientists carried out their work under the supervision of, or even in the research group of, a senior member of their profession, whose input is at most very general, there are nevertheless instances when many authors made real contributions to the research.

The producers of this issue gratefully acknowledge the work of a number of our collaborators, to which in some cases the staff of The University of Glasgow's Science and Music Research Group have nevertheless made real contributions. These collaborators include singers Larry Mays and Jane Manning, clarinettist Alex South and music psychologist Richard Parncutt. Keziah Milligan, currently a PhD candidate at SMRG is the principal author of another paper. Sonic artist Bill Evans, who has recently submitted his PhD dissertation to Manchester Metropolitan University made important contributions to the paper which focuses on Alex South's work.

Engineer Nick Bailey (volume editor) and composer and co-editor Graham Hair made substantial contributions to several of these papers, all of which could only have come into being because of the cross-disciplinary nature of the work described.

Particular thanks are due to Don Knox of Glasgow Caledonian University's Engineering Department for his assistance with the organisation and implementation of the 2011 conference. Work carried out at and by SMRG pursuant to its contributions here have subsequently been reported at conferences in Aberdeen, Stirling, Oxford, Germany, Portugal, the United States, New Zealand and elsewhere.

The Authors

Larry Mays is a singer who recently completed his PhD at the Australian National University in Canberra, after pursuing a career in medicine for many years. Jane Manning is a singer of international renown, who has appeared in performance of (especially) contemporary music all over the world. She has a special association with Schoenberg's famous work "Pierrot Lunaire", of which she has given 150 performances with many of the world's leading ensembles and conductors. SMRG, in association with the Australian edition Southern Voices, published Jane's book "Voicing Pierrot", an authoritative account of every aspect of that notable work, and an indispensable guide to other putative performers.

Alex South is a clarinettist, and director of the Scottish Clarinet Quartet, who has worked with SMRG on performances of many kinds, but including microtonal works using the 19-EDO scale and system of tuning and temperament. One of these works has been issued on Ravello Recordings in the United States. SMRG was the locus for the development of a special instrument designed to perform 19-EDO music, an instrument based on Yamaha's WX5 Wind Controller technology.

Following this work, SMRG also developed a scordatura keyboard system to accompany the WX5 in such repertoire, and produced some 19-EDO songs in which the “adapted” WX5 and the scordatura keyboard accompany the singer.

Keziah Milligan, a current PhD candidate at SMRG, reports work of one of the most difficult and intractable problems in Empirical Musicology: machine-segmentation of performed melodies via note-onset detection. Her article contextualises this work on this particular and challenging problem within the development of the field of Empirical Musicology in recent years and decades.

Phil Wigham is a drummer, musician and educator, that is currently undertaking a Ph.D at Manchester Metropolitan University, researching into Mimetic Influenced Music Instrument design. His co-author, Carola Böhm, worked on a variety of interdisciplinary projects at the SMRG and elsewhere before taking up a post as Associate Dean at Manchester Metropolitan University’s Crew campus. She has previously held University posts in Mainz, Glasgow (as a leading member of the SMRG), and Woverhampton (Head of Music) as well as at conservatories in Hannover and Den Haag.

Richard Parncutt is an internationally respected researcher on the Perception and Psychology of Music, working from the University of Graz in Austria. Author of about 100 journal articles and a much-sought-after keynote speaker at international conferences, he founded the Conference of Interdisciplinary Musicology in 2004.

It has been a great privilege for SMRG to be able to participate in the outstanding work of all of these contributors to this issue of the Scottish Music Review, along with many other excellent musicians from 3 or 4 continents — performers, composers, theorists, historians, musicologists, scientists, philosophers and others — on a great variety of topics.

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