EDITORIAL

This is the fifth and final issue in an annual series of collaborations between the International Computer Music Association and *Organised Sound*. The four previous issue themes were Interactivity, Networked Music, Collaboration and Intermedia, and Performing with Technology. It seems only appropriate that this last issue address the question of the future of these practices. The articles submitted on this theme suggest that performance with technology in particular presents significant problems of sustainability.

Live performance with electroacoustic sounds (interactive or otherwise) has reached the 'awkward age': no reliable practices for documenting these works for preservation or performance have yet been established, yet the number of works in the repertoire and the number of performers who wish to present them make it difficult to proceed without such documentation. The genre is coming of age, but it doesn't quite know how to behave as a mature repertoire. Traditional concert works require no greater technology than ink and paper to be sustainable over time; their performance practice changes, but the works live on. In our own repertoire, the thresholds for acceptable performance practice appear to be narrower. Moreover, the technologies required for live electroacoustic music, and even tape music – and particularly the rate of their transformation – make the problems of keeping paper scores in circulation seem trivial. This affects every aspect of the work, from distribution to performance to storage and maintenance; as Teruggi's article 'Is there a right to rights?' points out, the legal aspects of ownership and use of a work are no less subject to the problems of technological evolution.

The guest Editors, both of whom are active composers, performers and engineers of live electroacoustic and interactive works, have been impressed by the range of approaches the authors of the articles in this volume have brought to bear on this problem. We have also noted a great deal of commonality between their experiences. Working from many directions, researchers and musicians appear to converge on a similar set of issues, of which these introductory remarks present a brief overview.

A dilemma, at once practical and moral, is evident in these articles. It may be inevitable in preserving and performing this repertoire. As technologies change and composers move on to new projects, older works risk languishing in obscurity if they are not ported to new systems. In these updates, however, pieces are subject to alterations in sonic details, interactive relationships, performance practices, staging and dramatic situations. Particularly when the composer is not involved, how closely can a composer's intent be known and followed? If a performer or technician feels confident about a composer's intentions, is it appropriate to make intentional 'improvements' to a work?

At first blush this might seem out of the question; we all know that the work should not be tampered with! On further reflection, though, it is self-evident that we accept such subtle transformations all the time. Consider how differently a work from the 1960s sounds when modern microphones and loudspeakers are used – or when a multi-channel work is diffused on a modern 8.1 sound system instead of the original loudspeaker array – or indeed, how radically the effect of a work changes when it is moved from one performance space to another. These are primary determinants of the sound and experience of a piece, and yet we often take their transformation for granted.

Possible genre-specific changes the editors have encountered in dealing with live electroacoustic repertoire include:

- substituting new synthesizers, samplers, or effects processors (hardware or software) – which may well be more robust, consistent, or sonically attractive – but in any event differ from the originals,
- substituting new controls (e.g. sensors, pedals, keyboards) whose response and/or appearance may vary from those originally used,
- substituting new interactive systems (e.g. pitch detectors, amplitude sensors, video displays) that respond differently – perhaps better – than those originally used,
- improving reliability and accuracy of cueing, e.g. by giving physical control of cues to a performer rather than an off-stage technician, by automating cueing, or *per contra* by removing automation and substituting a human 'score follower', and
- de-noising or removing artefacts (e.g. clicks, aliases, clipping) from pre-recorded tracks.

In many cases, these involve changes that seem obviously desirable: reduced surface noise, more readable computer screens, more reliable pitch following, more comfortable and responsive pedals. However, these ostensible improvements might go against the grain of the composer's wishes – or, for a work that is widely known, might contradict the accepted and familiar experience of a work. After all, artifacts of technological limitation can become, over time, aspects of a work's 'character' that would be missed if 'corrected'. Would Mario Davidovsky have asked the performer of his *Synchronisms #1* to trigger each prerecorded cue with an on-stage pedal, had the technology been available? (Today this presents a tempting opportunity for a 'solo' performance, *sans* technical assistant!) Do the original DX-7 patches used in a piece capture its composer's sonic intent as well as more recent instruments might?

Ideally the composer can be a part of the process – if (s)he is still alive, continues to take an interest in the piece, and keeps up with current technology, or at least can take the time to revisit it in collaboration with engineers and performers. The composer might choose to make any number of improvements in the process, and no one would have any qualms about it (even if those improvements were first suggested by a performer or engineer). On the other hand – risking heresy against the sacred doctrine of 'composer's intent' – might a performer or engineer, working independently from the composer, actually have a *better* idea for the effective presentation of a piece? Should this understanding be part of our performance practice?

This notion is somewhat foreign to the culture of electroacoustic music, where composers expect more or less complete control over their pieces. On the other hand, we should hope that at least some of today's live electroacoustic works will survive for a long time – perhaps centuries, to be optimistic. Emmerson's article 'In what form can "live electronic music" live on?' explores the notion of an 'urtext' edition that compromises between what can be known about the composer's intentions and what can be achieved in terms of performance practice, much as one finds in editions of common practice music.

A comparison with the treatment of common practice works provides valuable context for our efforts. Looking back across centuries, no scholar claims to know the exact intent of Bach, Mozart, Beethoven and company; and yet we delight in their music, not decrying (or at least, not always decrying – everyone has a different threshold of authenticity and purism) the inevitable anachronisms involved. How 'pure' should we electroacoustic musicians be about our emerging repertoire? Without Mendelssohn's interpretations and editions of Bach's organ music, we probably would not have access to much of this music today. Many would regard this as a terrible loss. On the other hand, the organ of Mendelssohn's time differed substantially from the instruments for which Bach wrote; the new stops, the greater technical and interpretive flexibility Mendelssohn employed as he played Bach (not to mention the significant stylistic differences we may infer from historical context) – were these changes unacceptably detrimental to Bach's music? Would it have been better for Mendelssohn, lacking access to the composer's technological and sonic intentions, to leave those works alone?

If the technological aspects of a work are reproduced on a new platform – following as best possible the composer's documentation, close study of the original equipment, and/or available recordings – the result will surely be closer to the timbres the composer imagined than any performance of Bach, Mozart or Beethoven. In their paper, 'Modernising musical works involving Yamaha DX-based synthesis: a case study', Bullock and Coccioli document the extraordinary care they took to reproduce the sound of Yamaha FM synthesizers for Jonathan Harvey's music. Their work demonstrates clearly that we can be much more accurate in reproducing our electronic 'original instruments' than any builder or performer of acoustic instruments.

Exhibiting a less 'purist' point of view, Polfreman, Sheppard and Dearden examine the issue of maintenance versus improvement in 'Time to re-wire? Problems and strategies for the maintenance of live electronics'. The authors make a strong case for rendering pieces more robust and rehearsable, and sometimes even more sonically appealing, over the course of reverse-engineering older works into software. Pianist Kerry Yong adds another dimension to the continuum between pragmatism and purism, suggesting that performers' 'arrangements' of electronic music are necessary for the vitality of the art form. His paper 'Electroacoustic adaptation as a mode of survival: arranging Giacinto Scelsi's *Aitsi pour piano amplifié* (1974) for piano and computer' argues, in effect, for the primacy of performability over period practice.

The vital perspective of performance comes to the fore in these essays – something to be welcomed in a discourse too often dominated by composers. Performance involves choices, and these choices represent a significant personal investment of time, thought and intuition. Good performers assimilate and re-invent the repertoire they play, in a complex collaboration with the composer – who may be available in person, or failing that, will be represented only by the score and whatever other materials and documents are available from the performer's research. The more a performer knows about a composer's intentions in a work (whether or not it involves electronics), the more the performance will be an effective collaboration in which the composer's intentions are well represented. Thus, the burden lies on composers to be clear about their

desires and ideals. Bach was hardly forthcoming about dynamics, stops and registration – but his intentions regarding style, performance practice, and historical survival were clearly different from those of most present-day composers. We have the opportunity to be much clearer and more specific, if our compositional and historical intentions demand it.

We also have the opportunity to facilitate performance – both by making the electronics easy to use (a powerful argument for improving older works!) and by considering the element of rehearsal, a process that is self-evidently intertwined with performance. As Ding explains in her paper, 'Developing a rhythmic performance practice in music for piano and tape', practice techniques for electroacoustic music require careful consideration, and the ease of practising an electroacoustic work varies greatly depending on the degree to which a composer has considered the issue. Cutting a pre-recorded part into smaller pieces is an extremely useful practice technique, which should eventually facilitate performing the work as intended. Nevertheless, the fragmentation of the recording in rehearsal will have an effect on the performer's perception of the form. How much better if the composer provides cues for rehearsal (easy to do on computer, CD, or even DAT), rather than leaving the performer to make these formal inferences!

The best performers of live electroacoustic music, of course, will find ways to make their repertoire work effectively, both in rehearsal and performance. This requires that they learn a great deal about their technological accompanists. Wetzel's article, 'A model for the conservation of interactive electroacoustic repertoire: analysis, reconstruction, and performance in the face of technological obsolescence', demonstrates the depth of his investment. His observations about the formation of 'standard repertoire' and the separation between the work and both its electronic 'instrumentation' and, eventually, its composer, are salutary. Wetzel, as well as Polfreman, Sheppard and Dearden, make it clear that if performers choose to maintain a work, it will live on through technologies the composer might be unable to predict – and if performers don't keep a work in circulation, composers and publishers may well lack motivation to keep its technology up to date.

At the end of the day, maybe the most important point to be made is: performance is the key to preservation of live electroacoustic music. Preservation of works without performers presents important technological challenges, and the emerging practice of live diffusion will no doubt present issues of performance practice in time. However, the repertoire for live performance with electroacoustic music, now reaching back nearly half a century, presents even greater demands in order to be sustained into the future. The greatest driving force for sustainability is the demand for works to be performed and heard. Even the most dedicated performer will balk at a work whose technologies are hard to procure, whose intentions are hard to decipher, whose rehearsal is fraught with difficulty, or whose performance is unreliable. Composers have ample opportunity to address all of these issues through careful documentation, both technical and aesthetic; abundant consideration of the needs of performers and performance situations; engagement in the process of adapting their works to new platforms and technologies; and a healthy recognition that in a sustainable repertoire, performance practices must be allowed – even invited – to evolve.

Two articles not directly involved in this issue's theme are also included: 'An enactive approach to the design of new tangible musical instruments' by Georg Essl and Sile O'Modhrain, and 'A comparative evaluation of auditory-visual mappings for sound visualisation' by Kostas Giannakis. The Editors are delighted to have these reminders that composed works are not the only means toward immortality: research is the foundation for all that electroacoustic composers do, besides being an important end in itself! While the theme of this volume focuses on the particular factors involved in sustaining a performance repertoire, this is clearly a subset of a larger symbiosis: the ecosystem of musical research, teaching, invention and creation that constitutes the growing world of computer music.

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As stated in the main editorial to this issue **11**(3) of *Organised Sound*, the originally proposed cycle of five collaborative issues with the International Computer Music Association has come to an end. This collaboration has led to five excellent issues of the journal and, for me personally, to new friendships with people passionate about the field that *Organised Sound* represents. I am certain that former ICMA president, Mary Simoni, will agree that our informal chat about collaboration six years ago has led to a laudable outcome.

Ironically, the majority of articles we have published over these five issues has not come from mainstream ICMA members, but a wide variety of very interesting specialists within the world of electroacoustic music and its corresponding field of studies, many not directly related to the ICMA or their annual ICMC event. The

fact that the ICMA has cast its net so widely has been very fortunate from our, and, I hope, their point of view.

I would like to personally thank all of the ICMA Guest Editors, Mara Helmuth, John Paul Young, Andrew May and, in particular Margaret (Meg) Schedel, who has been my main 'e-mail pal' in the most recent issues. Mary Simoni has been ICMA representative on the Editorial Board and will continue as an *Organised Sound* editor. I am pleased to announce that as of the **12**(1) issue, Meg will be joining the board as well. In this way, an *OS/ICMA* continuity will be assured. Thanks to all of you and other ICMA board members who have supported the collaboration over these five years.

Leigh Landy
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