Editorial
20 Years of *Organised Sound*: Looking back and forward

LEIGH LANDY

Organised Sound (*OS*) is twenty; well, nineteen really – issue 20/1 commences our twentieth year, but that is a good enough reason to celebrate. The journal has become a focal point in the field of electroacoustic music studies over the years and has a good deal to be proud of. This issue is not about selecting 'the best of' the past 57 issues nor is it about self-promotion. Instead it celebrates a rapidly developing area of scholarship not only in terms of its breadth and its global reach, but also of the editorial team that has made it happen. With the latter point in mind, I invited all of the journal's editors to contribute a modest submission to this issue on the subject of their choice, investigating twenty years of development and/or the future of our field. Some were unfortunately unable to contribute, but most have and the diversity of what has been collected reflects *OS*'s eclectic view of both electroacoustic music's horizon and the area of study related to it.

1. A BRIEF HISTORICAL OVERVIEW

The journal's history commenced when Penny Carter, head of music journals at Cambridge University Press (CUP), launched a discussion with three colleagues working at the University of York – Ross Kirk, Tony Myatt and Richard Orton – in 1991. By chance I was a visiting fellow at York that year for two terms on sabbatical leave from the University of Amsterdam and I was talking with them about a potential periodical as well. As thoughts developed about the possible focus of a future journal, our collaborative proposal ranged from a European version of *Computer Music Journal* (*CMJ*) to one that might help develop the musicology of electroacoustic music. Given the fact that Kirk was a member of the Electrical Engineering Department of Electronics at York, there was certainly going to be an arts–science feel to the new journal. Once the name of the journal had been selected, 'Organised Sound' (including a substantial debate about the British 's' or the more common 'z' in 'Organized'), a step was made in the direction of a journal about electroacoustic music. However, it would take a few years to allow the dust to settle and the journal to fully establish its focus.

The content of the early issues of *OS* offered a wide variety of subjects that one might find at the annual International Computer Music Conference (ICMC). The original editorial board reflected this breadth and, indeed, a Europe-based journal was born in which its very first editorial's title was 'The Dynamics of Computer Music'. In fact, in its fifth year of existence, a formal partnership was organised with the International Computer Music Association (ICMA), the organisation that hosts the annual ICMC conferences. This collaboration lasted for five years and included several issues that appeared either involving an ICMC event (issue 5/3) or guest edited by a board member of the ICMA (8/3, 9/3, 10/3 and 11/3).

Promising ideas from the early years that faded away after a while included both a 'tutorial article' and a 'student article' in each issue. The late Hugh Davies wrote a tutorial article in 1/1 about sampling and set an extremely high standard. In time, it became more difficult to headhunt authors for the tutorial articles; many postgraduate students felt they were being treated as second-class authors by having the designation 'student article' placed above their publications. Both types of headers therefore disappeared in volume 5. Suffice to say that many students still publish with *OS*. It is now up to the careful reader to discover this. Furthermore, in terms of the tutorial articles, one of our original ideas was to publish books related to the journal, including tutorial article collections. In the early years, this never gained any traction with the staff responsible in the books department at CUP. In fact, it was around the time that the editors were invited to contribute to this celebration issue that the current head of performing arts books at CUP finally welcomed the plan to launch an *OS*-related book series. Stay tuned!

The founding editors agreed that *OS* would publish book reviews, but no reviews of recordings or products, despite the fact that other journals did. The reason for the limitation had to do with our apprehension that recordings might not be reviewed completely fairly – why criticise the music of composers in a field that is already having difficulty gaining wider appreciation? The product reports would not gel easily with the scholarly tone of the journal. For a period *OS*

listed information from other international journals, but here again, a good idea proved awkward as the time to develop an issue from its date of receiving articles to publication was understandably long, meaning such announcements, or announcements of any sort, would often appear a bit later than would normally be deemed useful.

Oragnised Sound went online in its third year, and all media examples taken from its annual CD were placed online quickly after the appearance of each individual issue. The first video example appeared on volume 7's CD; DVDs replaced the CDs after volume 9.

With the start of volume 6, *OS* underwent two important changes: Richard Orton (who sadly passed away in 2013) and Ross Kirk stepped back and became Founding Editors, and the two remaining *OS* editors started inviting guest editors for each issue. Two years later, Tony Myatt decided that the journal could not receive as much of his time as he thought it deserved and he joined the editorial team and has made significant contributions to this day.

The journal was the home of a few conference proceedings' selections over the years. Issue 12/2 would be the last of these as, once more, there was a sense that *OS* had accepted the first-class group from the conference for publication with the rest being published in the event's own proceedings. In fact, the editors often chose items to display the diversity of the given event, not necessarily the top ten, as it were.

With volume 15 the journal was given a new look with its current cover design.

Only one issue, 4/1, had no theme (although 1/1 was an issue with quite a wide spread to illustrate the journal's breadth). This was due to the number of off-thematic items that we had received and not yet published that were deemed worthy of publication. Since then a balance has somehow evolved between thematic and off-theme contributions over the years. Issue 5/2, 'Use of Technology in Popular Music' was a unique case where we only received two publishable items: quite a surprise, as this was a gesture to identify how there was a two-way leakage between the art music and popular music worlds as far as our field was concerned. Fortunately, this lack of submissions was never repeated. And, of course, *OS* has published some celebrated figures within our realm, such as Iannis Xenakis in issue 1/3 and Jean-Claude Risset in this one, and milestone articles, such as Denis Smalley's key text on spatiomorphology in 12/1.

Gradually during the period leading to volume 8, the breadth of the journal's scope narrowed; this was compensated for by its clear focus and depth. I wrote an article in issue 4/1 in which I attempted to review the musicology of electroacoustic music, which I shall return to below. The area delineated in that article was to become *OS*'s focus from the late 1990s onwards.

Organised Sound now has a very clear position with regard to its sister journals. One might describe it as follows: in the beginning the journal was to *Computer Music Journal* what the SMC (Europe-based) conferences were to the ICMC events: slightly more Europe focused, more attention given to musical matters but quite broad in scope. By the time the journal had found its niche the Electroacoustic Music Studies Network (EMS, www.ems-network.org) had been born, a subject organisation reflecting the critical mass of this rapidly evolving field, and, in consequence, *OS*'s main focus had settled. Today *OS* is with respect to *CMJ* and, to a lesser extent, *Leonardo Music Journal* (*LMJ*, which finds itself somewhere in the middle between *CMJ* and *OS* with its own particular signature) what EMS is to ICMC (and New Iinterfaces for Musical Expression, Music Information Retrieval and other computer music events). In other words, *OS* covers a relatively narrower field in greater depth whilst *CMJ* continues to cover a broader field in which electroacoustic music studies forms one of its subfields. Of course, other journals contain articles in the field of electroacoustic music studies, but none other than *OS* has it as its key focus. Although the field may be more modest, the journal sees this body of music as a broad church and thus emphasises its breadth through the diversity of its issues' themes that have focused on, for example, acousmatic composition, sound art, electronica and dirty electronics, each including discussions that hopefully have been of interest to the entire readership.

The publishers are contributing to this twenty-year celebration in the form of a birthday present, namely expanding the journal's size by up to a quarter for each issue starting with 20/1. This decision was based on both the amount of publishable scripts we receive and the size of the readership, in particular those downloading *OS*-published materials. We are very grateful to CUP for this opportunity.

2. A SURVEY OF TWENTY YEARS

The journal's themes offer an interesting overview of *OS*'s journey. The issue numbers with their respective themes now follow.

2.1. *Organised Sound* issues' thematic overview

1/1 The Dynamics of Computer Music (April 1996)
1/2 Time Domain
1/3 Algorithmic Composition
2/1 The Electroacoustic Community
2/2 Frequency Domain
2/3 Analysis/Synthesis Paradigm
3/1 Microstructure and Macrostructure
3/2 Sound in Space

One can clearly identify the computer music-like signature in themes such as Time Domain (1/2) and Frequency Domain a year later (2/2) as these can be applied to so many aspects of many types of music, whether note- or sound-based. Analysis/Synthesis (2/3) is more to do with production than with musical works. By the time we reach volume 6, the note-based paradigm takes a back seat to the sound-based paradigm and *OS* begins to resemble what it is today.

Some themes return in a similar or slightly altered guise. Some themes returned later on, such as Outside the Academy (6/3) that came back later as New Aesthetics and Practice in Experimental Electronic Music (13/1: both edited by Tony Myatt, who, by choosing the term 'electronic music' tried to emphasise a distance from what one might call mainstream electroacoustic music). Music in cultures and music related to cultures appear in different forms in 6/1 (Australasia), 10/1 (New Technology, Non-Western Instruments and Composition), 13/2 (Global/Local) and 19/2 (The Sound of Cultures). Institutions of importance have celebrated their round-number birthdays as we are now: GRM 12/3 and ZKM 14/3. And links to works often associated with fine art appear under many themes including Sound Installations 8/2, Public Art 10/2, Sound Art 14/1 and Sound Art and Music: Continuum and fissure 20/2, to be published later this year. Some issues have offered an analytical twist – others, philosophical – and there have been contributions now and then in the areas of community arts and education, not least issue 18/3 on Best Practice in the Pedagogy of Electroacoustic Music and Its Technology. Some investigate new practices (e.g. 18/1 Audience and Participation) whilst others, production (19/1 Sonification). Social issues, and questions related to electroacoustic music performance, to listening and memory have also received attention. In fact, issue 16/3, Sound, Listening and Place, edited by Katharine Norman, over-recruited so heavily that we had to reserve a second issue a year later (17/3) for part II.

What the journal has attempted to avoid is work that focuses on a technological development, an artist's work or anything else without a full contextualisation and some sort of argument related to the submission's musicological relevance and/or musical applicability. For many contributors, being told that we do not seek discussions about their own work as the main focus of

an article appears odd. Our view is that there are other homes for artist self-portraits (e.g. *LMJ*) and that such discussions tend to have little musicological significance beyond the description of the 'what' and the 'how' of the artist's work. There are exceptions and many of these have indeed been published in the journal.

What *OS* has attempted is to aid in the delineation of the field of electroacoustic music studies and, subsequently, to support its dynamic development. With that in mind, it seemed logical in this celebration editorial to return to my 1999 article, fifteen years later, and see to what extent the review deserves updating.

3. RE-REVIEWING MY 'REVIEWING THE MUSICOLOGY OF ELECTROACOUSTIC MUSIC'

In *Organised Sound*'s issue 4/1 (April 1999), I published an article entitled 'Reviewing the Musicology of Electroacoustic Music: A plea for greater triangulation' ('Reviewing'). This will be re-reviewed taking into account the evolution of the field of electroacoustic music studies in the interim and providing a general status report of the situation a decade and a half further on. The original article discussed what it called 'holes in the market' in terms of the study of this musical corpus. How many have been filled and where do we go from here?

'Reviewing' had a dual purpose: firstly to facilitate a discussion about the field and its future and secondly to help define the future of the journal itself. Let's see how things have evolved.

Under the section of this article entitled 'Systematic electroacoustic musicology' I wrote that research in this area should include:

- a statement of the intended relevancy of any research outcome. This could emphasise the 'why' of the project or at least contextualise it,
- the use of an action research model or at least the inclusion of some sort(s) of triangulation as part of any project, and
- applicability/linkage with regard to any outcomes. (Landy 1999: 66)

If we replace the second point here with 'a clear presentation of the article's main issue with relevant case studies if needed', we have the formula that has been sent to dozens of potential *OS* authors over the years, as this has become the structure for most of the articles published since 1999.

The 1999 article stated that most people writing about this music are those who are making it, and this is still true today. In other words, many of these authors might have had difficulty writing from an etic (detached from the community in question) point of view (1999: 61). A significant portion of articles received by the journal are clearly emic – that is, from

within the community and, not unusually, largely self-enclosed – offering a fairly tokenistic contextualisation and little to no discussion of how the work presented might be of relevance or applicable to the readership. The current term for this is 'transferable'. (All such articles are sent back to their authors for further development.) Nonetheless, one notes a tendency of authors within the community becoming better able to look at their subjects from a distance; they are thus better able to contextualise their work, identifying points of originality and innovation as well as transferability, a positive development. Still, the need for a greater number of people working within electroacoustic music studies who are not (primarily) practitioners would be most welcome.

Three points were listed under 'Historical electroacoustic musicology' as well (1999: 65). They suggested that research in this area should:

- take relevant aspects of systematic electroacoustic musicology into account for relevant support,
- attempt to merge musical developments with the technological where pertinent, and
- attempt to create one single history, i.e., the pop and contemporary {art} music versions of history should fuse into one {single history}.

In this case, again looking at how *OS* has evolved over the period, one can conclude that the first two have succeeded to a large extent. Ideally, every article in *OS* should focus on the musical, above or fully integrated with its subject's technological features. Many of the more historical articles published since 1999 have indeed integrated items from the list of subjects related to systematic electroacoustic musicology proposed in that article (1999: 66).

There are relatively few articles in *OS* that have focused on the subject of the pop/art music divide; however, and this is rather significant in my view, there have been many discussions of electroacoustic music published in the journal and elsewhere that have fully ignored the art/popular music divide despite the fact that the music being discussed may have roots in either (e.g. discussions of subjects related to electronica). This attitude reflects my often-published view, dating from after 'Reviewing', that much of this music indeed transcends that type of categorisation whilst allowing for the influences from both to be part of descriptive or analytical discourse. Therefore, the point made in the 1990s has evolved beyond art vs. pop music histories into a more holistic approach to sound-based music and its related field of studies.

If there is one area in which one can speak of relatively little progress that was put forward in the 'Reviewing' article, it is what was presented as 'ethno-electroacoustic musicology' – that is, the study of electroacoustic music as a cultural phenomenon. Here I must clarify that there is a difference between music reflecting aspects of a culture or place on the one hand, and *OS* has received a number of texts on this

subject, and the place of the music within culture on the other. It is the latter that is of interest in the current discussion. Given the fact that the field of studies has included publications with a philosophical thrust, a fine arts discourse and many more approaches and scholarly dialects related to electroacoustic music studies demonstrating how interdisciplinary the subject matter is, it seems odd that this area remains relatively untouched. 'Reviewing' claimed that there were 'holes in the market' to be identified. Research in this field remains one of them.

The points presented in 1999 related to the three general areas of study remain important today. As *Organised Sound* is clearly a microcosm of the field of electroacoustic music studies internationally, any holes in the market that remain will hopefully find a home in the journal in the future.

In 'Reviewing' it was also suggested that there were too few important theories or related tools evolved for this type of music. One could put this in another way. Without disrespect, might it be said that Pierre Schaeffer's *typo-morphologie* and Denis Smalley's spectro- and spatiomorphology are perhaps cited too often due to the lack of any alternatives? On a smaller scale can the same not be said about Simon Emmerson's 'language grid' or my 'something to hold on to factor'? The number of tools and methods for musicological use remains low, although the quantity of tools for production resides at the other end of the scale. The problems associated with this, as described in 1999, were that: a) too much was being written at a high level and too little at foundation levels and, related to this, b) an 'island mentality' existed where both composers and those working within electroacoustic music studies were more interested in the unique elements within their work above making connections. Looking at this again a decade and a half later, I am pleased to write that one cannot state either with the same conviction.

The number of foundational texts related to theory, to listening and the like (that is, not history and not technology), indicated as an area worthy of attention in 'Reviewing', has improved but is still fairly modest. The appearance and further announcements of Handbook and Companion volumes by a number of key publishers have been a welcome development, thus offering a wider range of texts for a more general readership, and, of course, my own two 2007 book publications (Landy 2007a and 2007b) were intended to support this growing list.

And what about the island mentality? Certainly, there are those hundreds of artists' self-portraits that tend to avoid making too many connections. However, there also exists, for example, an acousmatic school of composition that shares compositional tools, a sense of gesture and a 'sound' that has gained significant critical mass over the years and was already fairly substantial in the 1990s. Scholarship related to the efforts of this critical mass has increased significantly in recent years. This can be said today of a great deal of noise music as well. There is, of course, room for improvement in some areas of investigation. But the point here is that these and other clusters of interest have developed, such as those related to electronica, improvisation, soundscape and sound art or related to philosophical issues, archiving, sound and memory and even electroacoustic performance and analysis, all welcome tendencies.

Having attended the EMS conferences, I have noticed that the cross-talk amongst researchers is much greater than before. The creation of those clusters of interest represents an important step forward. Cross-fertilisation comes next. Those more interested in production and those more interested in the listeners' experience are now talking together. This is an important first step towards the goal of triangulation emphasised in 'Reviewing'. Given the radical departure this music represents, having production and reception meet seems not only logical, but also, in fact, essential, and it will support both analysis and aesthetics and all that is related to both. The notion of a paradigm for sound-based music as launched in the 2007 books suggests that aspects of knowledge may be local to a single type of this music, but many cross boundaries within the universe of sound-based creativity. These deserve to be nurtured. It is at both levels, the genre and across boundaries, that best-practice models will be discovered.

Cross-fertilisation can take place both within the electroacoustic music community and across disciplines. I had the pleasure of participating in a conference called Re-* Recycling_Sampling_Jamming Künstlerische Strategieen der Gegenwart (Contemporary Artistic Strategies) in Berlin in 2009. Representatives from fields of studies across the arts presented fascinating talks about appropriation in their media. Some of what was introduced was new to me; however, many of the political and other types of questions related to sampling culture went across the board. Questions involving intention, reception, method, politics and culture were mixed together. That area of cultural resonance so carefully treated or ignored in our field represented a normal topic in other new media arts, fine art, writing and theatre. The works discussed were controversial. The analyses of these works were highly engaging. The notions of interdisciplinarity and holism were normal for the presenters. It came to mind that, despite music employing technology more rapidly and diversely than the sister arts, its corresponding area of studies had evolved more slowly than the others, an unexpected and slightly saddening discovery.

This experience did remind me that those working in soundscape composition and in sound art are very

aware of the societal elements of their work; this is indeed well documented in their writing. Is it, therefore, the abstraction of so much electroacoustic music or the desire to leave the listening experience fully open to the audience – is such a thing possible? – that keeps many of us confined within the realm of post-Schaefferian acousmatic thinking?

Despite the remarks above regarding signalled weaknesses, at least all of the subjects identified in 1999 as holes in the market *are* now being studied.[1] Still, fifteen years later, the urgency to *collaborate with musicologists*, including the so-called critical musicologists, is as important as ever. Having presented the notion of a sound-based music paradigm, this by no means prevents us from collaborations and advice from those working in the realm of note-based music. Nor does it prevent us from working with specialists in other new media arts, the fine arts or rapidly evolving areas such as that of sound studies. There are modes of critical discourse in each of these areas that could be of use within our field (as are facets of our scholarship of value to them as well). Their etic contribution would be most welcome in this phase of our development and would hopefully help foresee the evolution to new hybrid fields of interest in the future.

Perhaps the need that seems greatest at this point can be described as the search for those best-practice models that are applicable beyond the individual work. Such models may be related to analysis, but also to other aspects of musical scholarly investigation. It is indeed difficult to apply a tool or method that works well within a single work or the works of a single composer to a genre or any other group of electroacoustic works, but not necessarily impossible. Reviewing the *Organised Sound* contents over the twenty years for this issue, it was quite clear that only a minority of authors look beyond the specific work or issue in question. For those interested in analysis, the search for such models should appear as an attractive challenge. Others would hopefully then wish to adapt the new model within their own field.

To summarise, one can speak of great progress since 'Reviewing' was published. In recent years the field has definitely matured and broadened. Some of those gaps are being filled and new interdisciplinary initiatives are evolving. Progress refers here, therefore, to developments within electroacoustic music studies and across subject boundaries, but we still have a long way to go. We are in a much better place than was the case when 'Reviewing' was published. Like *Organised Sound*, the field is broad, full of life and still finding itself.

Where are we going? Some of this future is described above as forms of scholarship that are in need of further development, including those cross-genre and cross-discipline developments that will lead to new insights. There is much to be awaited within areas that have yet to be born. This combination will continue to offer both the field and this journal an exciting dynamic in the future. In electroacoustic music studies, we need to continue to develop both its breadth and its depth. *Organised Sound* intends to remain a focal point for these developments and debates.

4. THIS CELEBRATION ISSUE

In this issue contributions have come from the majority of editors. The range demonstrates a great diversity reflecting the journal's history. Five authors have presented personal overviews, and these will start and end the issue; two have focused on pedagogical issues and all others have chosen a specific focus normally linked to either artistic production or analysis or both. Understandably, given the vision statement aspect of this issue, no sound or movie examples were submitted.

Rosemary Mountain leads with a highly personal view of the journal's history. Her worries, introduced early on, included how the journal might tackle the interdisciplinary nature of the subject and, perhaps more importantly, whether the articles appearing would only be of interest to readers within the modest community and incomprehensible to others with associated but different interests. In short, how transferable is the original knowledge appearing in the journal? Mountain sketches her own reaction over the years and, whilst allowing for constructive criticism throughout, seems to have come to the conclusion that the journal's journey is a valuable one to those within the community as well as interested people outside of it, within and beyond academe.

Jean-Claude Risset, *OS* editor from the start and even someone approached by the publishers to request his views on the importance and viability of the new initiative prior to our first issue, writes for the journal for the first time. In his text, he looks at the evolution of composition software packages and the functions that they offer in parallel with other developments, commenting on how the journal has reflected many of these. One fascinating suggestion that is presented in his text is the thought that analysis of electroacoustic music might best involve the analysis by the maker(s) as well as by a musicologist.

The following two articles may be seen as a pair. Rajmil Fischman steps back from the focus on how the

[1] Ironically 1999 was the year that I moved to my current university, where I was asked to set up the Music, Technology and Innovation Research Centre (MTI). The MTI sets itself apart from many other centres due to its focus on artistic and humanities research, as opposed to artistic and scientific foci common to many other institutions. Initiatives at the MTI – including the EARS site (www.ears.dmu.ac.uk), its pedagogical successor (www.ears2.dmu.ac.uk), the 'Intention/Reception' projects and our focus on electroacoustic music analysis – demonstrate our reflection of the need for both high-level and fundamental research to be undertaken in the field of electroacoustic music studies. Members of the MTI are thus able as musicians to practise artistically what we preach and, as researchers and through our outreach initiatives, preach what we practise.

journal has reflected change and instead looks at the changes themselves from the point of view of technological, musical and cultural developments. He also demonstrates clearly the interpenetration of these three, as I had suggested in the 'Reviewing' article: that history, theory and culture should not be treated in isolation. In his conclusion, in which he looks forward, he suggests that accelerating technological change deserves being challenged or, in his words, counteracted, by a greater concentration on aesthetic content and form. He further suggests that we move beyond organised sound to organised media, due to the blurring between art forms and their genres/categories in today's world of digital arts.

Jøran Rudi, like Fischman, looks simultaneously at the technological, musical and cultural, although his historical overview includes different milestones to those in the previous article. Rudi arrives towards the end of his survey at the age of participation and networks, suggesting that 'Digital technology has become the new folk instrument, and technology-based music currently emerges in much the same way as traditional folk music, although without the local anchoring to site and population group that the traditional folk music depends on. The new folk music is global, with dialects that are quite similar across continents and national borders.' This view reflects the dynamic development of what constitutes a musical community, an essential part of the journal's remit.

The two pedagogical submissions are from Mary Simoni and Alessandro Cipriani, the latter in collaboration with Vincenzo Core and Maurizio Giri. Simoni's is a clear personal statement in the form of what she called an editorial. As she became Dean at Rensselaer Polytechnic Institute not long ago, an organisation known for its strengths in science and technology, her focus on curriculum development has perhaps become increasingly urgent. She frames her discussion with remarks concerning globalisation and the evolution of the multiplicity of online communities. Within this context, what is relevant to the student? She states: 'It's time for us to work toward a mature understanding of the philosophical and ideological underpinnings of curricula, what constitutes the building blocks of curricula, and what are the pedagogies that produce the desired learning outcomes for our students.' She goes on to use her institution as a case study regarding the development of a new programme in Music and Media, attempting to 'square the circle' between what is to be taught with how things are taught.

Cipriani et al. offer more specific practical proposals. After setting the stage investigating current methodologies' strengths and weakness and presenting some issues they have experienced in their pedagogical experience, relevant theories of learning are presented which they include in their proposed individual and group activities. Their final proposal, in the detailed section called 'The software tag and the "search for the right sound"' is based on audio games in which there is a full integration of theory and practice. They are interested to discover how a games-based approach to education in our field can be expanded in the future.

The following seven articles all have a specific theme, thus getting more into depth in terms of the chosen focus. In the case of Daniel Teruggi, who is Director of the Groupe de Recherches Musicales (GRM) in Paris, it may come as no surprise to readers that his contribution focuses on the development and evolution of the term 'musique concrète' and those associated with it. This is the most comprehensive text that I have read focusing on the evolution, rejection, replacements for and heritage of the term. Teruggi discusses how the term came into being and how Pierre Schaeffer subsequently decided to replace it with the term 'experimental music'. He goes on to introduce the term 'acousmatic music' and how it represents an evolution as well as, for example, Chion's, *art des sons fixés.* His conclusion focuses on the value of musique concrète in terms of today's musical practices.

Representation is the focus of Marc Battier's contribution. Starting with early examples of notation in electroacoustic music history, Battier sensibly separates construction scores from postscriptive forms of notation. He then goes on to survey the goals and applications of notation for electroacoustic music and looks forward to challenges posed by, for example, network music with regards to appropriate representations. Although much has evolved including specific software tools over the decades and especially recently, he concludes that notation remains a problematic area within electroacoustic music studies, one deserving increased attention.

Simon Emmerson takes a step into the unknown in the sense that he has written here about an area with which we do not associate him, namely machine listening, presenting relevant developments from the last twenty years. After commencing with a brief survey covering the breadth and depth of various forms of music information retrieval within electroacoustic music or music in general, the article subsequently becomes more speculative, investigating the *raisons d'être* for the application of machine listening in our field and asking valuable questions for further debate, and subsequently development, related to how we can best integrate machine listening into areas including music analysis and performance.

Eduardo Miranda predictably tackles the area of artificial intelligence (AI) in terms of sound organisation with his co-author Duncan Williams. Their survey is solely based on what has appeared in *Organised Sound* throughout the years. As editor, this is simultaneously flattering and daunting, as AI has never been one of the journal's issue themes and it is perhaps

better represented in journals covering both sound- and note-based issues. They discover that the discussions within the journal tend to fall under one of two general categories, philosophically and/or psychologically inspired symbolic approaches and those related to biological approaches, also generally known as Artificial Life approaches. Although the authors surprisingly identify a wealth of foci and applications over the twenty-year period, they also conclude that there is also a major area that has not been covered, namely that of form, something for which they claim AI can be used to advantage. Ironically, I would also suggest that form (or structure) is an area of weakness in electroacoustic music studies in general. Therefore, following Emmerson's lead and Miranda and Williams' suggestion, perhaps this can be a subject for further exploration in future issues of the journal.

Equally predictably perhaps, Garth Paine returns to the subject of interactivity. Although this is not his sole interest in terms of his research and artistic work, he his written on the subject a number of times in the journal and guest edited an issue on the subject. Therefore, a 'next step' article seemed logical. His next step is a plea for what he calls the techno-somatic dimension of interactivity. He states: 'The reason for this extended consideration of the nature of the proposed techno-somatic dimension is that designing the way in which the elements of performative engagement (technical and somatic) meet is critical to the instruments' performance, be they analogue or digital. The techno-somatic dimension defines the "feel" of the instrument, formed through both somatosensory feedback and listening, and represents the cognitive map the performer develops about how to play the instrument, the technique, and how the instrument responds under differing circumstances.' His case studies focus on the embodied relations between performer and instrument and how heightening these relationships can lead to the creation of more expressive and intuitive interfaces.

Telematics is the focus of Ian Whalley's contribution. He proposes a rethink of what the possible future might be of networked electroacoustic performance given the potential of multi-location performance as opposed to basing telematics performance largely on the traditional concert performance paradigm. He commences by citing four important trends of relevance: 'i) connectivity and the increase in bandwidth; ii) processing power in areas like High Performance Computing (HPC) and smart/embedded technology; iii) artificial intelligence and automated decision making; and iv) data streams and how to make knowledge out of information.' He goes on to discuss his thoughts regarding their awaited convergence. Linking with issues launched earlier by Emmerson and Miranda/Williams, Whalley calls for further research in machine intelligence and automation as well as data sonification as means to move away from traditional performance concepts. The goal is to turn 'complex networked information into useful knowledge, while also continuing to inhabit bodies and local physical environments as telematic participants. And exploring multi-dimensional activity may allow us reimagine wider changing networked presence.'

The seventh article in the single-themed submissions is more to do with the application of technological advances, in particular on portable devices, than the specific issues of the previous six articles. Joel Chadabe is of the view that the development of these technologies including the apps that become available for them may redefine our music and increase our public through the growth of musical communities. He develops his argument through a historical overview that is relevant to his argument. As he reaches the age of network music, the redefinition of participation becomes important thus linking technological advance with community development, appreciation and participation. After illustrating his ideas with three recent music apps, he concludes by thinking out loud regarding how new music will evolve given the presence of these new technologies, apps and communities.

This celebration's final article returns us to the broader surveys and vision group that included this issue's first four entries. Barry Truax, previously author of a 'looking back' article written by *OS* editors (issue 4/3), looks back again and closes the series of articles in this celebration issue. Truax notes that he has published eight times over these twenty years, and thus he is most probably *OS*'s most published author. This achievement is due to his many areas of expertise. Here Truax focuses on the question whether paradigm shifts have occurred over these two decades. He begins by investigating two he had predicted in earlier publications – regarding 'the end of the Fourier era' and 'the end of the "literate composer"' – and goes on to discuss things that he did not predict at the time, ranging from data compression to the 'explosion' of the field of sound studies. He investigates culture as being dictated in economic terms and consequently discusses the ramifications of a world of cultural industries in terms of our field. This changing culture, linked with the musical communities presented by Jøran Rudi, leaves the educators amongst the *OS* readership with the great challenge of working together in order to predict what will be relevant in terms of knowledge and potential careers for today's and tomorrow's student.

As always, the journal welcomes off-thematic contributions. Given the fact that this issue is longer than any from the first nineteen volumes, we are able to include two off-thematic entries. The first is from James Mooney, who brings us back to the journal's first tutorial author, Hugh Davies. In the 1960s Davies provided the electroacoustic music community with some of its most important documentation to date.

Mooney provides our readers with a critical overview, understandably focusing primarily on Davies' key publication of the period, the *International Electronic Music Catalog* (1968).

Nick Collins has submitted a slightly unusual text for *OS*. As readers will know, UbuWeb provides an invaluable collection of (historical) recordings of electroacoustic music. Using music information retrieval techniques such as feature extraction, Collins investigates several aspects of this corpus including diachronic trends. The article offers readers the pros and cons of this unique collection in its opening sections and then follows on to use MIR techniques for its core study. This is the first time the journal has included an investigation of an archive in this manner and opens doors for future archival studies in our field.

5. A FINAL WORD

To close: for me, as *OS* editor, the work has become easier as the years have passed. The average quality of the submissions rose as the identity of the journal became clearer. The editorial board offered more targeted suggestions regarding issues and potential contributors, and the number of themes and potential guest editors increased accordingly. It is difficult to tell a potential guest editor that a proposed idea is great

and go on to say that we can publish an issue about it in approximately two to three years, but that is the rhythm of life of *Organised Sound*.

This success is down to a number of factors: electroacoustic music studies has matured and is evolving in a healthy manner; the editorial board has been extremely supportive over the years and deserves my heartfelt gratitude; the support from the community has been fantastic and the ideas coming from authors and readers in general have made *OS* what it is today. Thanks to all and, in particular, to Cambridge University Press for all of its support. Here's to the next twenty years.

Leigh Landy
llandy@dmu.ac.uk

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