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# EDITORIAL

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Writing in this journal some 12 years ago, one of us (Harrison) discussed the practice of sound diffusion in terms of its link to compositional thinking, and of the inevitable interrelatedness of composition and performance practice in the field of spatialised electroacoustic music. In the course of that article, a distinction was made between qualitative and quantitative compositional approaches and the implications of each for a performance practice still dominated by real-time control of analogue signal chains. Since then, the technical aspects of the field have changed dramatically: after the ADAT and DA-88 tape-based formats came the explosion in the availability of computer sound cards and audio interfaces with eight channels of digital-to-analogue conversion. Yet – as we discuss elsewhere in this issue – eight-channel has not entirely become a ‘standard’, and indeed what is meant by ‘eight-channel’ can vary considerably. Some composers – especially, but by no means exclusively, in site-specific works – have gone well beyond eight channels, whilst commercial recording has (perversely, according to many, and somewhat unsuccessfully, in terms of music at least) adopted the ‘reduced’ 5.1 format of the cinema.

But all of these ‘format wars’ (to overstate the case somewhat) make a possibly false assumption: that the number of channels in which a work is composed only needs to be translated into an equivalent number of correctly placed loudspeakers in order for the original spatial image to be restored. This is demonstrably not so, beyond the confines of the studio/control room or a high-quality domestic setup. As with stereo, ‘fixed position’ multichannel systems tend to assume that the speakers are all equidistant from the listener (the first problem, if there is more than one listener!) and thus have to rely on creating the *illusion* of, for example, distance through manipulating aspects of the sound such as amplitude, equalisation, reverberation and phase. And these manipulations can be somewhat fragile when they are replayed in a large public listening space with a wayward acoustic, which may provide conflicting distance cues. The acousmonium response to this issue was to include speakers that are *in fact* distant – the resulting image may be less subtle than the original, but is likely to be read more successfully as ‘distant’ by a larger proportion of the audience.

The notion of format wars, however, raises a more fundamental question in the whole issue of working with multichannel sound and large loudspeaker systems: are we trying to reproduce a sonic image or sound field perfected in the studio, or are the sound files the point of departure for a further layer of articulation of the work’s meaning and structure, or even for ‘interpretation’? The idea of continuing the paradigm of diffusion, even for multichannel works, suggests that, far from being spatially fixed (or *absolutist* in terms of the location of a sound or the perception of an idealised listener in an ideal location), one might adopt a more *relativist* approach, where the important image for the listener to perceive is not that the sound moves from *here* to *there*, but *that it moves*. What is then critical is the quality of that motion – fast, erratic and unpredictable, or stately from front to rear, or springing upward from low to high – which may be considered more important and more in tune with the spirit of the music than the precise distances, angles and elevations of the start and stop points. Once again, this must be understood in a context in which the main arbiter is the degree to which movement, location and aural image can be successfully understood by the listener as being integrated within the meaning of the musical experience. In other words, whilst we know we *can* move sound around and we know *how* to do it, we must – in an unfortunate mixing of metaphors – never lose sight of *why* we are doing it.

What is becoming increasingly interesting as this field develops is the clear indication that the two approaches – absolute and relative – seem to be on trajectories of convergence. Several of the papers in this issue hint at or discuss the possibility of composing in a manner which – as happens in stereo diffusion – to some extent defers spatialisation until the performance stage, taking into account at that point the specifics of different systems and performance venues. This requires a somewhat hybridised approach as, however relativist in principle a composer’s thinking may be, there will come a point where decisions have to be made – and those decisions will require a certain degree of precision of a type more normally dealt with by practitioners of a more absolutist tendency. Similarly, the experience of hearing a work destroyed in a less than perfect space tempers the enthusiasm for

fixed and absolute systems in favour of something more pragmatic and adjustable.

The truth is – and it is a truth which makes this an exciting period in which to be working – that no single approach or system has emerged as the clear answer to everything. There is no universal solution, only a collection of local ones. Ambisonics, wave field synthesis, 5.1, eight-channel, n-channel, unique installation setups and diffusion can all, though at different times and in differing circumstances, provide excellent listening experiences – but no system can fool all of the people all of the time! So the fact that the writers represented in this collection of papers may approach the ‘problem’ from different standpoints, traditions, disciplines and practices yet begin to propose similar ‘solutions’ is a situation to be celebrated by those of us engaged in this field.

This issue of *Organised Sound*, then, includes contributions which offer overviews of historical practice and the current state of play in various balances of the technical and the artistic (accepting that there is significant overlap between these two). Michael Fowler illuminates an iconic spatial work from the mid twentieth century through visualisations of the spatial components of Stockhausen’s *Pole für 2*. Colin Black’s paper focuses on broadcasting and radio arts practice, but the discussion of space has wider relevance. Marije Baalman’s summary of

approaches makes an important distinction between the description of spatial events and the technologies used to realise them, and the paper by Matthias Geier, Jens Ahrens and Sascha Spors continues this trend, describing an object-based approach to the transmission and storage of spatial audio. Gary Kendall advocates a related approach, whilst underlining the central importance of the listener’s experience in the definition of any standard. Our own contribution hopefully draws together several threads by describing our attempt to accommodate many different approaches, with pragmatic verification rather than theoretical purity as the ultimate arbiter of success. Ewan Stefani and Karen Lauke continue the theme of pragmatism in their discussion of the merits of site-specific approaches to spatialisation, whereas Jonas Braasch, Johannes Goebel and Todd Vos describe a specific facility within a multimedia context. Returning to specifically musical concerns, Marlon Schumacher and Jean Bresson argue for the description of spatialisation as an integrated part of composition and the creation of sound material itself and the issue concludes with Daniel Barreiro’s description of his approaches to spatialisation in three of his multichannel works.

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