# Editorial: Collective and networked sound practices

Networks are pervasive. Varela and Maturana write of how networks of interaction create people and cultures, that individuals 'are characterized by their autopoietic organization' (Maturana and Varela, 1987: 47), that autopoiesis is the process of self-making, auto-creation and organisation within an a priori environment. Marshall McLuhan reflected on networks of media broadcast in his famous statement about how new technology consumes the forms of the past, and in doing so, transforms them; his proclamation that 'the content of a medium is always another medium' (McLuhan 1964) hints at a morphology of both medium and message. Marilyn Strathern commented that networks are difficult to identify and have a 'fragile temporality' (1996: 523). She extends these comments, pointing to how one has to first identify a specific assemblage, among thousands of possible networks, and then unfold and interrogate such complexity in order to say anything meaningful about it.

Of course, there are many forms of networks: from biological, mycorrhizal networks that connect plants in mutualistic partnerships to personal community or business networks to electronic and digital networks. This latter meaning of the 'network' refers to digital infrastructure that enables intercommunication between computers within an institution and expands out across the Internet to the rest of the world, making possible technologies such as file sharing, email and the World Wide Web.

As an enabling technology, it also lends itself to creative exploration. It may form the body of a new instrument or be enacted to create new forms of shared musical experience. In this edition of *Organised Sound*, we focus on the network as applied in sound-based music or sonic art. We engage with the idea that the network is a critical material within the musical work itself, that is to say, that the materiality of the network is so deeply enmeshed with and integral to the entire behaviour of the musical practice or artwork that it cannot be separated out as merely enabling technology or infrastructure. Such an ergodic nature is described by Tim Ingold as the 'lines *along* which things continually come into being … a meshwork of interwoven lines of growth and movement' (Ingold 2008: 1807).

Many artists and researchers working in sound have explored the concept of 'the network' and developed a wide range of musical practices such as tele-presence performances, telematics artwork, network jamming, streaming or multiuser interactive environments. In this issue, the focus is not on the technical problem, the technology or the software per se, but rather on the emergent phenomenology that arises when engaging the broader concept of 'network' through a deep enmeshment as a substrate of music making, composing and performing. From this point of view, the network is therefore not only about remote access, but can also be entangled in co-located experiences and emergent musical properties.

The 'network' has been at the core of several innovative musical ensembles and digital arts practices from the Hub to Roy Ascott's telepresence performances. This edition of *Organised Sound* presents a snapshot of ideas and developing practices from 2020. A time when the infrastructure of the Internet became one of a small number of ways to engage with each other while battling an international pandemic (COVID-19) and also, therefore, an important means for communal music-making and performance. This issue presents works from large-scale installations using hundreds of microprocessors networked together to generate emergent musical behaviour (Bown et al.) to the application of off-the-shelf ubiquitous tools such as Zoom or Skype to allow collaboration (Bouillot et al. and Strauss et al). It also touches on the way networks can be used to share intimacy in a sound walk while physically distant, and while doing so, open up channels for feedback and audience engagement with the unfolding of the walkers' actions (Papadomanoliki). Stone takes us on a personal journey into the magic of emergent behaviours through Claude Shannon's enlightened conceptual framing of Network Theory, and through his contribution connects us to the early work of the Hub Ensemble. In this nascent domain, Bevilacqua, Matuszewski, Paine and Schnell outline some of the developments at IRCAM over the last decade addressing collaborative performances and listening, as well as designing and composing, for and using smartphones. These deliberations are augmented by Pilches and Wilson's excellent discussion about the development of an extensive online repository of publications about online musical performance.

We then take a leap into communal performance with Befera examining Alexander Schubert's Wiki-Piano.net, followed by a discussion of collaborative improvisation in the form of the KaonCPT Collective (Bouillot et al.). Engum et al. discuss how years of exploration and improvised performance over a network has informed their performance practice and even their fundamental notions of music and synchronicity, with Strauss et al. (mentioned previously) expanding that discussion to an improvised dance duet.

Many of the works include players on multiple continents, pointing towards inclusivity and the shrinking of global distances through these new approaches while simultaneously opening new challenges for cultural diaspora and the ethics of cultural appropriation.

This edition is rounded out by three important contributions commemorating the lives of Noah Creshevsky (Windleburn), Peter Zinovieff (Battier) and R. Murray Schafer (Truax).

Creshevsky brought the sounds of his home town, New York City, into the electroacoustic language of his 'hyper-real' works. Drawing on his studies with Nadia Boulanger and Luciano Berio, Creshevsky spliced magnetic tape and later utilised digital samplers to create complex collages of sounds of the world at large.

Peter Zinovieff's influence as a designer of synthesizers saw his famous EMS synthesizers grace the stage of big stadium progressive-rock acts such as Pink Floyd, David Bowe and Kraftwerk among many others. As a composer and performer, he was instrumental in organising the first public concert of all-electronic music in Britain, at the Queen Elizabeth Hall, London, in January 1968. His impact on synthesiser design still looms large today.

Through his famous book, *The Tuning of the World*, and the collaborative *World Soundscape Project* (WSP), R. Murray Schafer was instrumental in developing a framework for considering the sounds of the world around us as a form of ecology. His work with students (e.g., Truax, Westerkamp) and colleagues at Simon Fraser University produced critical documentation of Acoustic Ecology as an area of practice, scholarship, theory, field recording and composition that remains central to research and practice today. An international conference on soundscape at Banff, Alberta, in 1993, to mark Schafer's 60th birthday, established the World Forum for Acoustic Ecology (WFAE), the pre-eminent international body, seeking to foster a 'desirable acoustic community where sound connects all of its inhabitants'.

All three composers were innovators of tremendous influence and are rightly remembered here. They have each contributed to a central tenant of this journal, which Barry Truax references in his discussion of soundscape, drawing on Tim Ingold's eloquently statement that 'sound … is not the object but the medium of our perception' (Ingold 2007: 11).

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