Peter Manning 1948–2022

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Peter Manning first established an international reputation with his book *Electronic and Computer Music*, originally published by Oxford University Press in 1985 and now in its fourth edition (Manning 2004). The book presents a detailed account of the technical and creative evolution of electronic music from its earliest days. Starting from Thaddeus Cahill's 1897 patent application for the Dynamophone, it traces developments in North America and Europe and discusses a range of analogue techniques including tape manipulation and voltage-controlled synthesisers. Later chapters consider the digital revolution that followed, including developments in MIDI and digital workstations. In later editions, the sections on computer music were significantly revised and expanded to reflect the major and rapid transformation of the field. A distinctive feature of the book is the way it combines detailed historical information and thorough explanations of technical developments, often clarified by use of explanatory diagrams, with insightful accounts of the musical repertoire produced using this technology. The book was derived from Peter's PhD thesis at Durham University in which he surveyed and analysed numerous contemporaneous texts documenting developments in minute detail.

Peter went on to spend his entire academic career at Durham University, initially as a senior experimental officer, later going on to become a professor and serving in senior leadership positions as head of department and dean. He taught generations of undergraduates and supervised many graduate students who themselves went on to make significant contributions to the discipline. But perhaps his most important achievement at Durham was his development over many years of the Electronic Music Studio instigated by David Lumsdaine. The initial analogue studio was expanded in the late 1970s and early 1980s to include one of the first computer music facilities in the UK. Peter, with technical support from Peter Eassty, John Emmett and Ron Berry, adapted the Music 11 software developed by Barry Vercoe at MIT to run on the PDP-11/23 machine on which the computer studio was centred, providing users (undergraduates, postgraduates, staff and visiting composers) with cutting-edge resources in digital synthesis and processing.

A distinctive feature of the Durham studio at the time was that it was not primarily used by specialist electroacoustic composers. Many users, both staff and students, were instrumental composers, or rather, they would not make the distinction – it was simply another means of composing music. Peter worked very closely with many of these composers in the production of new works. For example, he assisted David Lumsdaine on *Big Meeting* (Lumsdaine 1978), a quadraphonic work based on field recordings made in 1971 during the (then) annual Durham Miners' Gala. The resulting collage is a highly sophisticated aural experience exploring the varied sound worlds and acoustics of the event, as well as documenting for posterity a major political and social event in northeast England. Likewise, Peter worked with John Casken on the composition *Piper's Linn* (Casken 1984), another work with northern connections, which combines live performance on the traditional Northumbrian small pipes with an evocative 'textural canvas', an electronic tape produced in the Durham studio using analogue techniques to transform recordings of the pipes into rich and varied textures. In all such situations, Peter brought a high level of technical expertise combined with attention to detail and a very acute ear.

Peter himself was not generally known as a composer during his lifetime, and in fact his main electroacoustic works emerged from his two visits to Simon Fraser University (SFU) in 1994 and 2000, where he spent time working in the Sonic Research Studio there, primarily with Barry Truax's PODX computer music system (Truax 1994). It seemed that only when he was far away from the UK on a sabbatical that his creative powers as a composer could emerge in such full force.

The first visit resulted in a somewhat whimsical 11′ work called *By-Law 2531, City of Vancouver* (1994), a text-sound piece based on a recording originally published in a documentary on the World Soundscape Project's *Vancouver Soundscape* LP where members of the public were asked to read the city's seemingly

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antiquated noise by-law. Peter stretched one such reading, slightly at first, then extensively to create ambient noise textures. The second work composed during that visit and completed once he returned home, *The Ghost of Eriboll*, was a much longer stereo work that created a soundscape evoking the misty Scottish Highlands with a distant bagpipe.

In Memoriam CPR was composed during June 2000 at SFU, also using sound material drawn from the World Soundscape Project tape archive, and spatialised in eight channels with Richmond Sound Design's AudioBox, developed at SFU. The Canadian Pacific Railway (CPR) was established in 1880, specifically to develop a railway linking British Columbia with the eastern provinces. For almost 50 years the CPR provided the primary mode of long distance transport across Canada. In 1992 this transcontinental passenger service was discontinued and the CPR became a freight-only enterprise. Peter's soundscape work created a poignant image of the train through granular stretching of its typical sounds, its unique E flat minor horn being a Canadian soundmark.

Consistent with his lifelong interest and extensive research into the specific technology used in the historical developments and practices of electronic and computer music, Peter was fascinated by the concept of microsound as represented by granular synthesis and the time-stretching of sampled sound. His experimental soundscape-based works realised at SFU demonstrated his commitment not only to understanding this new sonic domain, but also to using it for expressive, compositional purposes through first-hand experience.

Peter's interest in the relationship between technological developments and creative innovation continued after *Electronic and Computer Music*. In the late 1980s, Peter, together with Allan Purvis in the Engineering Department at Durham, gained funding for a research project investigating the use of transputers for parallel processing in a musical context, together with Nick Bailey.

In addition to his book, Peter published a number of significant academic writings, including the chapter 'Sound Synthesis using Computers' in *The Oxford Handbook of Computer Music* (Manning 2009), and in prominent journals in the fields of computer music and electroacoustic music studies such as the *Leonardo Music Journal* and *Organised Sound*. It is for the latter that Peter wrote in 2006 an article that can be viewed retrospectively as seminal for his research in the subsequent 15 years. In this article entitled 'The Significance of *techné* in Understanding the Art and Practice of Electroacoustic Composition' (Manning 2006), he argued for the necessity, in studying electroacoustic music, of a detailed scrutiny of technology and of a full consideration of its integral role in the compositional process. The article, contextualised with the technologies of the tape recorder and historical approaches to sound imaging, was followed with others developing the approach with specific case studies: Karlheinz Stockhausen's *Octophonie* (Clarke and Manning, 2008) and Daphne Oram's unique synthesizer, the Oramics Machine (Manning 2012).

Peter's formal collaboration with Michael Clarke continued with a joint application for a major grant from the United Kingdom's Arts and Humanities Research Council (AHRC), submitted as 'The impact of technology on the creative processes of composing electroacoustic music'. When awarded in 2012, the grant led to the project entitled TaCEM (Technology and Creativity in Electroacoustic Music), with Frédéric Dufeu joining the team. The project aimed at producing historical and analytical research into a substantial range of case studies, combining Peter's established expertise as historian of the field with Clarke's interactive aural approach to music analysis (Clarke 2012) and Dufeu's software developments for digital organology (Dufeu 2010). The works selected for investigation were from pioneers of computer music (John Chowning's *Stria*, Barry Truax's *Riverrun*), of real-time interactions between classical instruments and electronics (Philippe Manoury's *Pluton*, Jonathan Harvey's *Fourth String Quartet*, Cort Lippe's *Music for Tuba and Computer*), of acoustic ecology (Hildegard Westerkamp's *Beneath the Forest Floor*), of musique concrète and acousmatic music (Francis Dhomont's *Phonurgie*, Trevor Wishart's *Imago*) and, pursuing areas focused on in Peter's 2006 and 2008 articles, of advanced approaches to the spatialisation and imaging of sound (Natasha Barrett's *Hidden Values*).

For all these case studies, the historical, analytical and technological research was conducted in close contact with the composers themselves[1] and their collaborators, both addressing and demonstrating the importance of first-hand accounts by the artistic community of its own *techné*, as initially formulated by Peter (Manning 2006). The TaCEM project resulted in a significant number of presentations at international conferences such as the International Computer Music Conference (ICMC), the Electroacoustic Music Studies network conference (EMS), the European Music Analysis conference (EuroMAC) and the Royal Musical Association (RMA) annual meeting, as well as intermediary publications (e.g., Clarke, Dufeu and Manning 2013, 2015, 2016). The major output of TaCEM was the book *Inside Computer Music* (Clarke, Dufeu and Manning 2020) comprising, for each of the nine case studies, a written chapter

[1]With the exception of Jonathan Harvey, who sadly passed away in the first months of the project, in December 2012.

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contextualising the composer's artistic and technological contribution to electroacoustic music, a musical analysis of the selected work, and a software application providing the opportunity to engage interactively with reproductions of the techniques originally used and the formal organisation of the sound materials, as well as video recordings of direct accounts from the composers and collaborators.

Beyond his own research and composition, Peter also worked to promote new music and enrich cultural life. For many years, he was a key figure in the running of the Durham concert series *Musicon* bringing leading composers such as Arvo Pärt to Durham Cathedral. In the 1970s he chaired the Music Panel of Northern Arts and in the 1980s he served as chair of the UK Arts Council's national *Contemporary Music Network*, as well as working with Newcastle's *Dance City*.

Tributes to Peter from around the world have mentioned not only his academic achievements but also his kindness, generosity, concern for others and his dry humour. The authors of this article all gained greatly from knowing and working with Peter in many different ways, as a teacher, friend and colleague. Peter Manning made a major contribution to the field of electronic and computer music and he will be greatly missed.

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