An echo from closed doors

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On 31 December 1999 the La Trobe University Music Department closed its doors. From the outset, La Trobe Music saw itself as providing an alternative tertiary music education to the predominant paradigms of the time by fostering creativity through composition, technology, improvisation and other types of alternative performance practices. The philosophy of teaching electroacoustic music at La Trobe was to encourage students to find their own compositional voice rather than preach a particular style of electroacoustic music. The Department's research areas were in improvisation and technology, signal processing, gestural control devices, computer-assisted composition, analysis of electroacoustic music, realtime DSP, live electronics and installations. La Trobe's excellence in electroacoustic music was recognised by its inclusion in a survey of the world's top twenty-three computer music institutions by the Japanese journal *Intercommunication* 6. La Trobe staff and postgraduate students contributed papers and compositions to international and national computer music conferences and La Trobe was very much a part of the international community for over twenty-five years. The challenge now is for other Victorian institutions to meet the needs of today's students and to provide the deep research foundation in electroacoustic music that informs teaching and generates new music directions in the community.

1. INTRODUCTION

The sound of a closing door is one of the *clichés* of acousmatic music. It has been used as a device of demarcation in composition to close off one segment of time from another within a work. On 31 December 1999 the La Trobe University Music Department closed its doors. While many of the articles elsewhere in this journal focus on the present and future states of sonic art and science, this Australasian/South East Asian feature issue of *Organised Sound* provides an opportunity to reflect on the contribution that the La Trobe Music Department has made to electroacoustic music in Australia for over twenty-five years.

From the outset, La Trobe Music saw itself as providing an alternative tertiary music education to the predominant paradigms of the time by fostering creativity through composition, technology, improvisation and other types of alternative performance practices. A second important *raison d'être* was to provide an opportunity for tertiary music studies to students who were never going to be accepted into the conservatorium style institutions with their emphases on orchestral instruments and the late Romantic western art music repertoire. La Trobe Music also created access to tertiary study for people from the lower socio-economic areas of Melbourne's northern and western suburbs. Later, through the Graduate Diploma in Contemporary Music Technology, La Trobe attracted students from all around Australia and overseas.

While there have been survey-type articles concerning digital music (Gerrard, Harris and Hirst 1988) or live electronic music (Burt 1991) or both (Schiemer 1989), very few have focused on La Trobe in depth.

2. CULTURAL AND POLITICAL CONTEXT

2.1. British colonialism and the 'cultural cringe'

In the period immediately after the Second World War, Australia still bore the legacy of the British invasion of a land that had been occupied by the indigenous people for over 40,000 years. The population was largely Anglo-Celtic in origin and the government pursued a 'White Australia' policy. In this context, young artists and writers of the late 1940s and 1950s felt they had to study and live overseas in Britain and Europe. This was in order to find appropriate teachers and to immerse themselves in a cultural milieu where there were stimulating influences, where art workers had some status, and where there was a critical mass of new music performance – enough to sustain the works they produced themselves.

Keith Humble (1927–95) travelled to the UK in 1950 to study there but soon moved to Paris to study under Rene Leibowitz. Humble subsequently became his teaching assistant and co-founded the *Centre de musique*. Don Banks (1923–80) also left for Europe in 1950 and studied with Luigi Dallapiccola and Luigi Nono, amongst others. In 1969 he became the Musical Director of the University of London Goldsmith's College and established the electronic music studio there. Peter Sculthorpe (b. 1929) attended Wadham College, Oxford and Richard Meale (b. 1933) studied non-western music at the Institute of Ethnomusicology at the

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University of California, Los Angeles in 1960. Australia lost many of its youngest and brightest artists in literature and the visual arts too (Germaine Greer, Robert Hughes, Clive James).

2.2. Expansion of tertiary education and the return of post-war composers

In the 1960s and 1970s, subsequent governments financed the expansion of tertiary education in Australia. Monash and La Trobe Universities were established in Melbourne in the 1960s. Around the same time, the Australia Council was formed to provide more funding for the arts. Perhaps as a result of these policies we witnessed a return of the post-war composers. In 1966 Keith Humble was appointed senior lecturer in composition at the University of Melbourne where he set up the electronic music studios. Don Banks was lured home by a Fellowship in Creative Arts in 1972 and was appointed the Chair of the new Music Board of the Australia Council by the Prime Minister. Banks became Head of Composition and Electronic Music Studies at the Canberra School of Music in 1973 and Head of the School of Composition at the NSW State Conservatorium in Sydney in 1978. Peter Sculthorpe was appointed Reader in Music at the University of Sydney in the late 1960s and Richard Meale was appointed lecturer in composition at the Elder Conservatorium at the University of Adelaide. The influence of these 'returning composers' was about to be felt by the next generation.

2.3. Awakening to American developments

Australia in the 1950s and 1960s came increasingly under the influence of American culture and moved away from its British roots. Television, recordings, and mutual involvement in the Vietnam War brought Australia and the United States closer together. The influential music educators noted above were also touched by developments in art music (and jazz). Don Banks and Keith Humble were both involved in jazz from an early age. Banks also studied with Milton Babbitt in Europe and Humble was appointed to the faculty of the University of California at San Diego after a residency in 1970. Humble's experiences at UCSD had a direct bearing on the type of programmes set up at La Trobe University.

2.4. The 'Baby Boomers'

The next generation, known as the 'Baby Boomers', consisted of those people born immediately after World War II. This generation didn't feel the need to pursue their education overseas as it was possible to take advantage of the new tertiary educational opportunities, the experience of the 'returning composers' teaching in the university sector, and the expanded cultural environment being created with assistance from the Australia Council. The 1970s and early 1980s were characterised by new freedoms and a lot of experimentation.

2.5. Multiculturalism

The second half of the twentieth century in Australia also witnessed a change from the 'White Australia' policy (a policy of assimilation) to a policy of 'Multiculturalism' (the co-existence of many cultures). There was a recognition that the post-1945 wave of European migrants brought with them an interesting richness of culture and cuisine. Aboriginal Australians fought for, and won, equal rights in the 1960s.

The post-Vietnam War influx of South-East Asian refugees and the policies of the Labour Party's Keating Government from the late 1980s created closer ties with Asia. Composers like Eve Duncan formed the *Melbourne Composers' League* with the explicit aim of establishing a closer involvement with the *Asian Composers' League* and its festivals. Ross Hazeldine through his Melbourne-based *Red House* music publishing company has also initiated collaborative projects with people and organisations in Asian countries. (Both Duncan and Hazeldine are La Trobe graduates.)

2.6. Economic rationalism and musical reactionism

In the late 1980s and 1990s (until the present day) we have witnessed the implementation of Economic Rationalist principles, the privatisation of public utilities, the promotion of the free market and globalisation by both Labour and conservative (the Liberal Party–National Party coalition) federal governments. In fact, since 1995–6 the federal government's spending on higher education as a percentage of GDP has almost halved, while the number of students continues to increase.

Is it a characteristic of the same kind of thinking that this period in Australia has seen a reaction in music against twelve-tone instrumental music and against the modernist approach to experimentation? For several years the pages of the *Sounds Australian* journal recorded what was termed the Maximalist–Minimalist debate. A neo-Romantic aesthetic developed as some composers opted for tonal and popular music-inspired styles. In other art forms this was characterised as the post-modern, post-industrial, or post-silicon debate.

2.7. Generations X and Y

The Australian media has dubbed today's youth as generations X and Y. This unkind depiction refers to the media's notion that there are no distinguishing features of the younger generation. It is lazy journalism since it simply demonstrates that the press haven't bothered to ask young people what their aspirations are. Young

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Australians want the freedom to express themselves, each in his or her own individual way. Such individualism is a very important point. Many young people are plugged into the global world too and travel freely without feeling the 'cultural cringe' or the paternalistic legacies of colonial masters that previous generations may have felt.

The catch-22 is that there are also a lot of young people that don't have access to travel, higher education and employment, as the divide between the haves and have-nots grows wider. Australia, popularly thought of as one of the most egalitarian countries, is fast becoming a class society defined by economic means.

3. ELECTROACOUSTIC MUSIC CONTEXT

La Trobe Music's electroacoustic music connections are like threads unravelling from the tapestry of cultural influences noted above. Here I use the term 'electroacoustic' in its broadest possible interpretation, i.e. any electronically created or mediated sound presented with, or without, acoustic instruments.

We can see that La Trobe Music was a product of the expansion of the university education system and its initial style was a product of the 'returning composer', its foundation professor Keith Humble.

3.1. Early influences and experimentalism

Humble's European *musique concrète* influences were evident in his establishment of the tape composition laboratory. His American electronic music influences, for example Milton Babbitt's use of the RCA synthesizer for twelve-tone set manipulations, were also apparent in Humble's electronic work, *Prime One Two*. Add to this eclectic mix the influence of Californian attitudes to musical freedom with Humble's appointment of improvisor Jeff Pressing, and experimentalist Warren Burt, and you get an idea of the electroacoustic foundations at La Trobe. Steve Reich's *Come Out* and Kenneth Gaburo's *Fat Millie's Lament* were held up as models alongside the works of Nono, Schaeffer, and Berio.

The theme of experimentalism in Australian music was also drawn out with reference to composers like Percy Grainger (1882–1961) whose electronic works date back to a quartet for electronic instruments composed in 1937. His 'Free Music' was notated with continuous curves denoting pitch and amplitude. Such scores, and devices for their realisation, are well documented in the *Grainger Museum* in Melbourne.

3.2. Music N and the main-frames

In the late 1970s and the early 1980s another American connection was established when Graham Hair imported a version of the Music N-type software synthesis program (MUSIC 4BF). At this time the La Trobe composers like Hair, Graeme Gerrard, Brian Parish and David Hirst focused more on the use of these software tools for computer-assisted musical composition rather than a timbral emphasis.

3.3. The age of signal processing

In the late 1980s and early 1990s, widespread availability and affordability of the microprocessor and dedicated signal processing hardware provided the opportunity for a change of focus to the manipulation of timbre and the development of live performance pieces. Young postgraduate composers like Steve Adam and Ross Bencina became interested in the 'timbral' works of the acousmatic composers Denis Smalley and Francis Dhomont. Other graduate students such as Lisa Speakman, Roger Alsop and Terry McDermott were interested in the live performance works of Corte Lippe and Zack Settl. The presence of a Next cube-based IRCAM Signal Processing Workstation in the department allowed their own realtime work to flourish.

3.4. Connections with the public domain

In the late 1990s, a number of developments in the public domain influenced the works produced by La Trobe composers. Access to fast processors on the desktop, a rediscovery of analogue synthesizers by young people and their use in the dance culture, plus the influence of Melbourne's freelance (independent) sound artists and performers like Brigid Burke, Rainer Linz, Chris Mann, Warren Burt and Garth Paine all contributed to a broad spectrum of electroacoustic influences for young composers.

4. HISTORY

The La Trobe University Music Department was established in 1974 by Professor Keith Humble, and its first classes were offered in 1975. Electroacoustic music was a part of the curriculum from the outset, with all first-year students creating *musique concrète* pieces in a tape laboratory installed by Ted Grove. A total of approximately 100 tapes pieces per year were composed for nearly twenty years until the mid 1990s. Warren Burt joined the teaching staff in late 1975 fostering experimental music, extended vocal techniques, and electronic music production armed with a large number of Serge Tcherepnin analogue synthesizer modules, which formed the heart of the analogue synthesis equipment into the 1980s. Jim Sosnin introduced the study of acoustics, electronics and other audio theory into the curriculum in 1976, and established the first recording studio the following year. The Department collaborated

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with the School of Physical Sciences to develop courses in the physics of music.

Several unique instruments were acquired in the 1970s. The first of these was an electronic keyboard that had programmable microtuning – the Scalatron. The second was the EMS Spectron video synthesizer. In 1979 the Department took its first steps into the digital world when it installed a Digital Equipment Corporation PDP 11/10. Graeme Hair (now Professor of Music at the University of Glasgow) returned from the United States with a copy of the software synthesis language MUSIC4BF, which he laboriously typed into the University's DEC 10 computer. It was then made functional on a VAX 11/780, by Brian Parish and Graeme Gerrard with the assistance of Kim Horsell. Software synthesis was carried out on the VAX and digital-to-analogue conversion was performed on the Music Department's PDP 11 using software written by Jim Sosnin. Graham Hair and Jim Sosnin introduced the first course in computer music programming in 1980.

In the 1980s the microprocessor exerted its influence and the Department purchased a Charles River Universe 68000 computer for software synthesis. Postgraduate student (and later staff member) Cindy John subsequently created a number of works using the Universe system. Keith Winter became interested in the new desktop technology and a number of Apple II and BBC computers were acquired for use in teaching. The introduction of MIDI and the release of the Yamaha DX7 enlivened Jeff Pressing's interest in music synthesis and he developed a MIDI-based synthesis subject. The Department's strength in music and technology was finally cemented in 1989 when Jeff Pressing, Jim Sosnin and David Hirst introduced the Graduate Diploma in Contemporary Music Technology. The facilities for undergraduate teaching at this time consisted of three Macintosh-based composition laboratories and a recording studio suite – purpose built in 1988. Research was carried out in the Synthesis Research Laboratory on Macintosh and NeXT hardware.

Although most composition was studio based, live performance was explored through Pressing's *Ozdimo* synthesizer ensemble and Hirst's *Bell and Whistle Company* interactive performance collective. In 1994 the La Trobe Music Department became a department of the School of Arts and Media along with the departments of Drama, Cinema Studies, and Media Studies. In this expanded context, David Hirst formed the Digital Media Research Group, and the Synthesis Laboratory became the Digital Media Laboratory with the addition of PowerMac-based multimedia authoring equipment. In 1995 Princeton graduate, Alistair Riddell was appointed to the staff as a postdoctoral research fellow. Larry Polansky from Dartmouth College was in residence as a visiting Fullbright Fellow in the second half of 1996. Demand for electroacoustic courses continued to grow in 1996 and 1997 before government funding cuts resulted in the closure of the Music Department in 1999.

5. EDUCATION

Since the Department's foundation, students had majored in music within a three-year Bachelor of Arts degree. A broad tertiary education was seen as producing rounded 'thinking' musicians who could not only write music but also write on music. Students specialised in any one of five streams in music: Composition, Performance, Musicology, Audio Recording and Computer Music. A Bachelor of Music was introduced in 1996 to allow students to specialise in any two of the above five streams. It was designed to create graduates who were multi-skilled within the music field. This development led to an increase in instrumental music students taking the innovative performance stream created by Graeme Leak. Leak actively encouraged cross-pollination between the performance students and electroacoustic music students through collaborative projects. The Honours programme was offered as an extra year of study in both the B.Mus. and B.A. degrees. The Graduate Diploma in Contemporary Music Technology began in 1989 as a postgraduate year of study made up of coursework and a major project. Coursework consisted of the study of computer music programming, MIDI systems and audio recording. Further postgraduate study at La Trobe was offered by research alone through the Master of Arts and Ph.D. programmes.

The philosophy of teaching electroacoustic music at La Trobe was to encourage students to find their own compositional voice rather than preach a particular style of electroacoustic music. As a result, students produced works that were from a variety of genres: popular, dance, techno, acousmatic, computer-assisted compositions, sound installations, live interactive works, works combined with other media and hybrids of these styles.

6. RESEARCH

The Department's research areas were naturally a reflection of staff research interests. Thus Jeff Pressing's interests in improvisation and technology led him into the cognitive science field. Jim Sosnin was interested in signal processing and gestural control devices. David Hirst carried out work in computer-assisted composition and analysis of electroacoustic music. Cross-fertilisation also occurred; for example, in the work done on realtime DSP on the Macintosh by Jim Sosnin, David Hirst and Graeme Gerrard from the University of Melbourne. La Trobe's excellence in electroacoustic music was recognised by its inclusion in a survey of the world's top twenty-three computer music institutions by the Japanese journal, *Intercommunication* **6**.

The following selected listing of staff and postgraduate student research projects may provide a useful orientation to the research work at La Trobe: Steve Adam's *Gesture and texture relationships in electroacoustic music*; Roger Alsop's *Using linguistic techniques in*

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computer composition through reference to specific Australian poems; Robert Bell's *PITCH: The Percussion Instruments' Timbral Classification Hierarchy*; David Hirst's *Musical analysis using MQ plots*; Stephen Joyce's *A study of the emotional affective qualities of sound within film and the role of expectation and attention*; Stuart Favilla's *Live electronic music based on Vietnamese and Indian traditions using a custom light harp*; Terry McDermott's *Interactive music dance structures*; Jonathan Magill's *A cognitive model for the production of polyrhythm in a master drummer from West Africa*; Alistair Riddell and David Hirst's *Engagement between the representations of sound and artistic intention in electroacoustic music*; David Rodger's *The use and efficacy of non-tactile controllers in real-time music performance*; Christopher Scallan's *Physical modelling of sound under NeXTstep*; Jim Sosnin's *Chaos graphics and sound, using correlated real-time generation on interlinked Amiga, Macintosh and Motorola DSP56000 processors*; Jim Sosnin's *Non-tactile controllers using ultrasonic and RF ranging for multi-dimensional control of synthesis parameters in performance*; Thomas Stainsby's *The identification and isolation of melodic lines as independent audio signals in polyphonic sources*; Sue Speer's *Analysis of women's electroacoustic music*; Lisa Speakman's *Music and non-narrative animation*.

There were some interesting research collaborations at La Trobe too. Michael Hewes and Steve Adam worked with technician Chris Lai to develop a video device for controlling electracoustic music performance. David Rodger built on the work of Jim Sosnin to create the *MIDI corset* – a body suit for realtime MIDI performance control. Alistair Riddell and Ross Bencina ported Paul Lansky's *Cmix* code to the Macintosh. Ross Bencina created *Ross Tools* which provided a test platform for what was later to become his *Audiomulch* audio signal processing software. David Hirst, Thomas Stainsby and Chris Scallan extended David's short-time Fourier transform work to create the audio signal analysis and representation program *AnnaLies* with the assistance of some sound file reading and writing code developed by Graeme Gerrard.

Many other postgraduate and honours students wrote their own software for all sorts of applications like spatialisation, granular synthesis, or computer-assisted composition.

7. CONCERTS AND COMPOSITIONS

La Trobe generally hosted two electroacoustic music concerts a year, and collaborated with other Melbourne producers to present electroacoustic music to a wider audience. One notable example was a combined performance with the Astra Music Society in 1992 under the banner of *Science and Music* at Melbourne's newly opened Scienceworks Museum. In the 1970s and 1980s, many La Trobe people like Warren Burt, David Chesworth and Robert Goodge were associated with running the Clifton Hill Community Centre's regular performance nights. La Trobe also had a close relationship with the Australasian Computer Music Association, providing staff (and student) time and resources for performances and publications.

Specialised concert-giving groups were formed to foster interactive music, such as the Bell and Whistle Company and the combined computer music and performance student concerts developed by Graeme Leak and David Hirst.

Both studio-composed computer music and live electroacoustic works were created at La Trobe, as the following selective list of works demonstrates: Steve Adam's *Pyrotechnica, Fast Window, Chromophony, Storm in a Teacup* – all for computer-generated tape; Roger Alsop's *Sea Vision* – for piano and delay, based on a poem by Alex Skouron; Rob Bell's *Momentum, Theme and Variations for Synthesizer* – both for Ensoniq Synthesizer and Vision software; David Hirst and Graeme Gerrard's *Resonance* – for percussion, controlled feedback and realtime signal processing; David Hirst and Graeme Leak's *Sound Fields* – for percussion and realtime signal processing; David Hirst's *Colonies* – for computer-generated tape; Stephen Joyce's music and sound design for the following films – *Seething Night, Loop, Fishing, Lonely Planet, Crimestoppers, Thangarth's Bedroom*; Terry McDermott's *On the Plains* – computer music to accompany a solo dance; Jeff Pressing's *His Master's Voice* – for live voice, two MIDI keyboards, sampler, and realtime DSP software developed by Gerrard, Sosnin and Hirst; Cindy John's *Blowout* – for eight trombones and computer-generated tape; works by Lisa Speakman, Sue Speer, Shueh Li Ong, Trish Anderson and hundreds of other students spread over twenty-five years.

A collection of ten CDs of original music created by staff and students and rescued from the Department's tape archives has been produced by Robin Fox and David Hirst. About half of the works are electroacoustic. The CD set has not been mass produced but a copy of the set has been deposited in each of the La Trobe University's Borchart Library, the Australian Music Center in Sydney, and Screensound Australia archives in Canberra.

8. FACILITIES AND TECHNICAL SUPPORT

The Music Department established a strong infrastructure to support electroacoustic music. The *oz-computermusic* electronic mailing list was created to foster communication in the Australian computer music community. *ftp.latrobe.edu.au/pub/music/* was developed to freely distribute the original Macintosh software written by staff and students. *Mikropolyphonie*, the online contemporary music journal, was established and is still

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published through La Trobe University (see http://farben.latrobe.edu.au/mikropol/).

It is important to acknowledge the fine technical support the Department received from firstly Julian Driscoll and then Tony Falla and Chris Lai. Much of the hardware and some of the software in many projects was designed and built by Julian, Chris or Tony.

In 1999 the studios in the Music Department consisted of: a Digital Media Laboratory, four Composition Laboratories, a Synthesis Research Laboratory and a Recording Studio Suite. Their 1999 constituents are shown below:

- *Synthesis Research Laboratory (postgraduate and staff research).* 2 × NeXTcubes (one with IRCAM Signal Processing Workstation), Proport A/D box, DAT backup, CD-ROM, DAT recorder, Korg Wavestation MIDI keyboard, IRCAM Max, NeXT public domain music software.
- *Digital Media Laboratory (digitised audio and multimedia production laboratory).* 2 × G3 Macs, DAT recorder, Csound, Code Warrior C/C++, Deck II v. 2.2, AnnaLies & other in-house-developed software for the Macintosh. A Power Macintosh 8100, 2 × 7100s, Kodak CD-ROM writer and software, DAT backup, digitising tablet, colour scanner, Director, Photoshop, Illustrator, Premier, Painter, InfiniD.
- *Composition Labs A, B & C (MIDI-oriented studio and interactive music production).* G3 Macintosh, Opcode Studio 5, Alesis Lexicon PCM 80 digital effects, HR16 drum machine, Kurzweil K2000 with sampling option, CD player, cassette player, Tascam 4-track recorder, 24 × 4 mixer, Max, Studio Vision, Galaxy with editors.
- *Composition Lab D (digital audio workstation).* ProTools, DAT recorder, Opcode Max, MIDI controller.
- *Recording Studio Suite (consisting of two studios with one control room).* 2 × 8-track Alesis ADAT digital recorders, sync controller, 24 × 8 Mackie mixing desk, Lexicon PCM 70 digital effects, 2 × Tascam DAT recorders, digital delay, flanger, graphic EQ, parametric EQ, dbx, MCI 2-track recorder, Otari 2-track recorder, 16 assorted microphones, Tannoy studio monitors.

9. CONCLUSION

Some recent arguments have postulated that with the greater affordability of computer music hardware there may have been a decline in the demand for tertiary electroacoustic music courses. The experience at La Trobe University just prior to the Music Department closure shows that such a proposition is not the case. In the two years from 1995 to 1997 the number of La Trobe music students almost doubled as a result of the introduction of the B.Mus. degree, and the number of students taking second-year undergraduate electroacoustic music subjects increased from around twenty-five to approximately fifty.

As we have seen above, federal government funding for tertiary education has fallen dramatically since the mid-1990s. In the state of Victoria, music faculties at the University of Melbourne, Monash University and the Victorian College of the Arts have experienced cutbacks in funding to the point where their electroacoustic music programmes have been severely compromised. At the present time, gaining selection to study one of the innovative programmes like sound arts in the Department of Media Arts or sound design in the School of Environmental Design at RMIT University is possible, but there can be no doubt that it is much more difficult for a young person to be able to study electroacoustic music at tertiary level in Victoria today compared with five or ten years ago.

While some young composers today will be able to create works in the new free-market, independent environment, La Trobe Music's closure means that many young people will not become aware of the history and possibilities of electroacoustic music-making – especially those from economically disadvantaged backgrounds.

La Trobe staff and postgraduate students contributed papers and compositions to international and national computer music conferences, and La Trobe was very much a part of the international community. Although it never produced large numbers of prize winners in electroacoutic music, La Trobe did produce graduates who were able to assimilate music and technology in their lives and who were able to create unique and creative places for themselves in the community. Aside from Angie Coffey writing film and theatre music, Michael Hewes working in sound design, Gavin White working with new technologies in the UK, Bill Stewart doing Quicktime software development for Apple, Shueh Li Ong and Michael Spicer developing soundcard products in Singapore, Jon Mason working at the forefront of the use of technology in education, Chris Scallan working in film music production, Duncan Foster coordinating the Footscray Community Music Centre, Roger Alsop lecturing in sound production to Victorian College of the Arts drama students, David Rodger working as technical manager for the Methodist Ladies College concert halls complex, many other La Trobe electroacoustic music graduates have been able to take advantage of their tertiary education and carve out their own niche in the wider community.

The challenge now is for other Victorian institutions to meet the needs of this kind of student and to provide the deep research foundation in electroacoustic music that informs teaching and generates new music directions in the community.

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