THE MUSICOLOGIST AS COMPOSER / PRODUCER – THE INTERSECTIONS OF TRADITIONAL MUSIC, CREATIVE PRACTICE AND TECHNOLOGY

Dr Kim Cunio, Queensland Conservatorium Griffith University (Music and Moving Image) – k.cunio@griffith.edu.au
Dr Nicholas Ng, Queensland Conservatorium Griffith University (Research Fellow) – n.ng@griffith.edu.au

Abstract

This reflective paper examines the process of producing new art music underpinned by musicological research in our project work. It responds to a hybrid space where traditional notions of the separate researcher are suspended in favour of an emerging model that sees the musicologist as an artistic collaborator in the continued development of music tradition. Arrangement, composition, music production and project management are therefore important skills for the researcher to develop in such project-based interactions. This emerging model of cross disciplinary musicology can help to facilitate artistic and musical outcomes as well as navigate the complex ethical and personal issues relating to custodianship and development of music traditions. Crucial to this is an increasing interaction with technology that such projects increasingly require. It is argued that traditional and hybrid music forms need the same access to physical resources, composition practice and productions skill sets as western art and popular music styles, and where possible that these skill sets should be developed and harnessed by the custodians of traditions.

Keywords

Musicology, traditional music, composition, arrangement, music production, music technology.

SLIDE 1

This is a joint, reflective presentation, with a brief evaluation of the history and application of music technology on research. I will begin by reading Kim Cunio’s contribution, which, due to the limited time, I’ve revised with his permission. I hope you enjoy the pictures I’ve inserted.

SLIDE 2

1. Kim Cunio

Twenty years ago the majority of composers in art music worked within traditional means. Handwriting was the core skill taught in music institutions, and expertise on an instrument, preferably the piano, was almost essential for composers and critics alike. In my own tuition, music technology was rarely mentioned. Scoring programs such as Finale were appearing, but the majority of composers still wrote by hand. MIDI ¹ was easily accessible but seen as suitable only for popular music. Computational models of composition were emerging in Australia, but there was little scope in an undergraduate setting to explore this as computers were relatively expensive and difficult to operate.

Similarly, as a musicology student, the skills that were taught to me were those of the social sciences. Whereas writing, clear thinking, research methods, attribution of ideas, and the framing of research questions were important, the role of technology was never covered, and few papers even mentioned the use of technology in the documentation process.

In summary, I had no idea before commencing my career that both these disciplines would require me to develop many of the skills of music technologists and producers.

¹ The Musical Instrument Digital Interface
SLIDE 3

Like many composers, I started writing new art music after completing my studies, and readily embraced music scoring when it became affordable. The role of technology began to grow. Like many others, I also wished to make recordings of my own. At this point, recordings seemed to have a gravitas comparable even to the score itself. A recording, or broadcast signified a point of arrival for composers, as head of ABC Music Publishing Eloise Nolan pointed out to me in 2000. The ensembles I played in began to be recorded by mobile recordists in contexts ranging from commercial studios to concert halls. The possibilities became evident, but for me, something was required to bring the worlds of research and music production together.

SLIDE 4

In 2000, the Art Gallery of NSW and the Israeli Department of Antiquities engaged me to musically realise a number of seminal texts contained in the Dead Sea Scrolls. It was a vast research and composition project. In hindsight, I realise that something new was happening for me during this time, and for many others in my field.

The commission involved the writing and testing of a composition-based research problem: is it possible to write new music based on the texts of the Essenes in ancient Israel? This was firmly grounded within musicology and other disciplines such as linguistics, archaeology and comparative studies. However, the commission also required the scoring, recording and dissemination of a new musical work.

In order to realise this task, I purchased my first recording studio, a Pro Tools Mix 24 ² system. The cost price was substantial compared to the present time, but the opportunities afforded were significant. For the first time I was able to combine field recording, the performance of transcribed music, and new composition in the one project. The results exceeded my expectations. Not only was I able to realise traditional tunes with the aid of the studio, but many significant production processes also evolved. These are summarised below.

- The 24 track sequencer made it possible for a 2 person ensemble to record multiple parts, enabling choir textures, multiple instruments and significant variations in performance style.
- By recording in a home environment it was possible to record over a longer period of time, enabling a higher performance standard.
- Pro Tools software made it possible to edit the actual source recordings of the project, Timing, emphasis, placement, dynamic range, spatiality and many more parameters, could be manipulated in a post-production environment.
- The forms of a number of compositions were realised in the software itself, changing fundamentally notions of the role of scoring in my own work.
- It was possible to write adaptive scores and an exegetical paper after production logging the creative and musicological process.

This was significant to me. Only two years before, I had worked on a composition which used smuggled footage and sound recording from the 1988 Burmese democratic uprisings. For this piece, analogue tapes had to be converted in audio studios, and video footage edited in a film post-production house. Suddenly, I had available most of the tools of the experimentalists.

If we forward another decade, these processes seem almost embedded in our culture. Indeed my work laptop doubles as a portable recorder (with the addition of a firewire sound card) that exceeds the audio specifications of many studios...

SLIDE 5

Frances Densmore (1915), Thomas Edison’s pallophotophone (1922), Ludwig Koch’s disc recorder

---

² A type of Digital Audio Workstation (DAW).
Most musicologists possess a professional recording system capable of making fine quality stereo recordings in the field, and increasingly they are starting to employ the production techniques of classical and popular music to make their recordings sound as professional as possible. Some researchers even have small modular studios and many have high quality video tools in their possession. Emerging advancements include the role of technology in transcription. It is possible to slow down the speed of a field recording, enabling greater accuracy in notation. However, if the source recording is still difficult to notate, it is even possible to load an audio file into certain software programs that enable full pitch recognition of the sounds, which can then be copied into MIDI and exported into a notation program. We can hypothesise that many of the tasks of field-work will be automated and enhanced by technology over the next decade.

Similarly, notions of what a composer should be able to do have radically changed. While some composers still work within traditional means, the majority of younger composers work in multiple mediums, using full scoring, partial scoring, multi track recording, sampling and synthesis. The role of MIDI is especially relevant. Many composers write and listen to music played as MIDI data, which triggers either sample based virtual instruments (VI) or synthesised instruments that can sound similar to traditional instruments. Piano scores written in Finale or Sibelius generate sounds of a number of high quality grand pianos that provide a startling illusion of 'realness'.

SLIDE 6

The accompanying listening example is taken from Garden and Cosmos, a 2009-10 commission to research and set the Maharajah of Jodhpur's sacred art collection to music. The Cosmos, the final work of this project sums up the possibilities that music technology has afforded me and my present workflow.

In brief, Dr Natesan Ramani’s recording was made in Eb. Kim decided to orchestrate in E and obtained Dr Ramani’s permission to digitally transpose his recording down by a semitone. A vocal part was overlaid and digital reverb added.

- A field recording of the Indian flautist Dr Natesan Ramani was made, after a week-long process of responding artistically to Hindu sacred texts.
- The recording was in the key of Eb.
- It was decided with Dr Ramani to write an orchestral track with the flute.
- I decided to orchestrate for string orchestra, brass and piano in the key of E.
- The flute was transposed digitally by 1 semi tone with the permission and approval of Dr Ramani.
- A basic orchestration was hand scored, then played into a sequencing (DAW) program, which was used to trigger virtual instruments.
- This was subjected to a post production process to make the samples appear more realistic, based on orchestral editing and processing techniques.
- The flute was arranged with the orchestra within the DAW, and a vocal part was scored and recorded.
- Digital reverb was added to simulate a concert hall.

SLIDE 7

1st EXAMPLE

2nd EXAMPLE

It is almost obvious that the skill sets of composers and musicologists have come together, but what has brought them together is the increasing use of technology in research, data collection and the writing and editing of music. For myself as a composer, the results have not led to a cheapening of...
craft but to the unfolding of a new set of possibilities that combine research, composition and music dissemination.

SLIDE 8

2. Nicholas Ng

(Now that Kim has done the groundwork, I can talk about myself)

Introduction

In 1999, I found myself enrolled in the course ‘Introduction to Computer Music’. This was during my second year as an undergraduate composer at what was then the Sydney University Music Department. Jon Drummond showed us how to record sound onto a DAT machine with a very basic microphone before uploading onto a communal dinosaur-aged G4. It was on this computer that we were to create our very first soundscape projects, an exercise that I found both eye opening and slightly intimidating. (Little did I realise how important this experience would be for my future development.)

SLIDE 9

Due to a fear of all things digital and technological, I spent the rest of my undergraduate years focusing on writing acoustic music. I was enrolled in Aline Scott-Maxwell’s course ‘Introduction to Ethnomusicology’ course and began to ethnographically study various genres of music performed in Sydney’s Chinese community.

It wasn’t until 2002, that I became properly ensconced in the world of music technology and production. Putting my technological trepidations aside in 2002, I invested in a high fidelity 2496 bit sound card and a Rode NT3 microphone (which suited the dulcet tones of my erhu quite perfectly). I discovered MIDI, learned about the latest virtual instrument developments and acquired an intuitive understanding of latency, compression and reverb. (Most importantly, I managed to work out where to insert my cables.) Before long, I had set up a self-sufficient and expansive home studio, organically patching together essential pieces of hardware and software for the creation of music I had not even thought possible in the realm acoustic writing.

SLIDE 10

Instinctively, I began recording myself on Chinese instruments, and using (with permission) sounds from my fieldwork in various projects and commissions. I discovered with great joy the public domain CD set ‘Instant Asia’, an impressive and fully comprehensive sample library of diverse musical genres from the Subcontinent, South East and East Asia. With a few-found passion for music, I mixed, sequenced, processed and rendered sound files like bricoleur struck by acute kleptomania.

SLIDE 11

My doctorate, part composition and part research, involved an ethnographic study of two Sydney-based immigrant Chinese collectivities: the Buddha’s Light International Association and the Australian Catholic Chinese Community. Here, I focused on issues of tradition, innovation and transmission and have over the years brought my research to a comparative level in the observation of parallel sub-communities in Canberra, Brisbane, Perth, London and Manchester (England), Calgary and Montreal (Canada). Inspired by the amount of new music being composed by culture bearers as they grappled with cultural stagnation on the one hand, and assimilation on the other, I began to apply the sounds, sights and experiences from the field in my commissions as a means of developing my creative practice. Today, I am continually reminded of my migrant status in these communities and feel a strong connection with my informants.
SLIDE 12

The Lost Buddhas (2008)

In 2008, The Art Gallery of NSW commissioned me to create a musical composition inspired by a cache of Buddhist statues dating from 6th century China, an era of great social turbulence accompanied by intense cultural change and the solidification of Daoism and the Mahayana Buddhist faith in both northern and southern Chinese dynasties (Tsiang 2002: 222). Interestingly, the statues of various Buddhas and Bodhisattvas in this collection were found mostly broken but neatly assembled and wrapped under a sports ground in Qingzhou, Shandong Province.

My research into secular Chinese ensemble music and Chan Buddhist repertories enabled me to construct something of the essence of the collection’s vintage, although with much artistic licence. It is quite unlikely that the erhu would have been played during China’s Northern Wei period. However, Anne Flanagan (deputy director of the gallery), was keen for a contemporary but research-inspired piece and appreciated the sound of bowed strings. Due to her limited budget, the installation music was limited to xiao (transverse flute), erhu, pipa, voice and various percussion instruments.

Example 1 The Lost Buddhas (erhu sounds)

SLIDE 13

In the following passage, I emulated the traditional Chan practice of sutra recitation based on a recording I had made while observing the rites and rituals of the Buddha’s Light International Association, Sydney. The Heart Sutra apparently summarises the entire Mahayana Buddhist doctrine in fifty characters.

Example 2 The Lost Buddhas (sutra)

SLIDE 14

Select Option (2009)

The following contemporary dance rehearsal includes music that I composed for an Australian Choreographic Centre production at the Canberra Theatre in 2009. I arrived at this particular negotiation of sound through years of contact with my primary instrument, the erhu, and a superficial understanding of Balinese music. Because I didn’t have access to a Balinese orchestra, I decided to simulate the peal of the rayon’s running passages through virtual instrument technology. Here, 2 glockenspiel types a minor ninth apart are given an unusually long echo effect over a drum loop built on Javanese, Hindustani and Chinese sampled percussion. At risk of gross simplification, I see this as a pan-Asian fusion piece created to suit the needs of the choreographer.

Example 3 Select Option

Conclusion

Ethnomusicology has long inspired and facilitated my creative and research output. Today, I continue to negotiate a soundscape reflective of my ethnic ‘Otherness’ in Australian society, and my desire to work in a variety of genres and contexts. Despite Anne Boyd’s remonstrations of music software as a ‘danger’ for traditional composition, many of my electro-acoustic works are produced on Cubase, my preferred sequencing program. Conceptually, my creative and scholarly output continues to be informed by my ethnographic activities as much as it is influenced by my performance practice, and my colleagues in the ever-burgeoning field of Asian-Australian studies. (In 2003, I was invited to present my work to date at the 3rd Asian-Australian Identities conference.) In my work today, I continue to be inspired by connecting ‘the seemingly

Example 3 Select Option
unconnected’, to borrow from wordsmith William Plomer, in maintaining a creativity that springs from the intersection of traditional music, creative practice and music technology.

The China Project (2010)

Example 4 The China Project