

Compositions by Matthew Hindson

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A folio of original musical compositions and accompanying introductory essay
submitted in fulfilment of the requirements of the degree of

Doctor of Philosophy

Department of Music University of Sydney

December 2001

Volume I: Introductory Essay

This submission comprises a folio of creative work. It is in two volumes and includes two accompanying compact discs, musical scores and an introductory essay.

Abstract

As an Australian composer living at the beginning of the twenty-first century, I believe in the importance of exploring musical and extra-musical ideas that I regard as relevant to, and representative of, the society in which I live. To this end, I have taken aspects of popular music and integrated them into predominantly “classical” music forms using “classical” instrumentation. My early attempts were precise, almost literal transcriptions. In time, however, they became much more subtle and an integral part of my personal style. I no longer make conscious reference to these popular music concepts, yet their origins may be easily traced.

This introductory essay gives a chronological account of my development as a composer before and during my period of candidature. It focuses on both philosophy and technique, recognizing that the two are sometimes interdependent.

Certification

I certify that this work has not been submitted for a degree to any other university or institution and, to the best of my knowledge and belief, contains no material previously published or written by any other person, except where due references has been made in the text.

Matthew Hindson
31st December 2001

Acknowledgements

I would like to acknowledge a number of people who have helped me over the course of this degree.

My supervisors, Peter Sculthorpe and Ross Edwards, have served as sources of inspiration and enlightenment over the past five years. It has been a privilege to work with such fine composers and mentors. Their constant encouragement has been invaluable.

My fellow composer colleagues, including John Peterson, Stuart Greenbaum, Paul Stanhope and Stephen Adams, have offered much encouragement, advice and fellowship.

Ross Edwards and my mother, Barbara Hindson, were particularly helpful in the preparation of this introductory essay. They ensured that this essay was in a readable state before submission.

My fiancée, Christine Myers, has had to put up with a lot of moaning and groaning, and I thank her for helping to keep me sane.

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Index of Compositions Provided In Volume II and Accompanying

Recordings

Composition	Year	Instrumentation	Page *	CD, Track
<i>Speed</i>	1996	Orchestra	1	1, 1
<i>technologic 2</i>	1997	String orchestra with percussion	66	1, 2
<i>Night Pieces</i>	1998	Soprano saxophone and piano		
		<i>I: Night Song</i>	86	1, 3
		<i>II: Night Dance</i>	88	
<i>Rush</i>	1999	Guitar and string quartet	93	1, 5
<i>Siegfried Interlude No. 1</i>	1999	Brass ensemble	117	1, 6
<i>Siegfried Interlude No. 2</i>	1999	Woodwind octet	127	1, 7**
<i>Siegfried Interlude No. 3</i>	1999	Percussion trio	136	N/A**
<i>Boom-Box</i>	2000	orchestra	143	1, 8
<i>In Memoriam: Concerto for Amplified Cello and Orchestra</i>	2000	Solo amplified cello and orchestra		
		<i>I: Lament</i>	161	2, 1 2, 2 2, 3
		<i>II: Celebration</i>	193	2, 4

* Title pages have not been included in the pagination.

** There is no recording available of the woodwind octet version of *Siegfried Interlude No. 2*.

A recording of an arrangement of this piece, for soprano saxophone and piano, has been provided as a guide. There is no recording of *Siegfried Interlude No. 3*.

Chapter 1: Formative Period¹

During 1991 and 1992, I worked towards a Master of Music degree at the University of Melbourne, majoring in composition. This gave me the opportunity to move to Melbourne to study with Brenton Broadstock, whose music I admired. Before and during this time of study my music was generally extroverted in gesture. I was still searching for a harmonic and musical language of personal significance which could adequately express my musical ideas. I felt I had much I wanted to say, but not the means by which to express it.

The contemporary musical scene in Melbourne at this time was exciting and vibrant. The most high-profile contemporary ensemble was Elision. In addition, composers including Chris Dench, Ian Shanahan and Michael Smetanin were in residence at the university. Richard Barrett gave guest lectures, and Elision featured his music in a concert which included the premiere of the very impressive work, *Earth*. Liza Lim was a composition lecturer in the Faculty of Music at the time and the director of Elision, Darryl Buckley, gave a guest lecture at a composers' seminar.

Elision is an ensemble dedicated to European-derived modernism. Modernist musical philosophies were also presented to the students by its members and associates. For example, in the course of discussion, Michael Smetanin mentioned that his goal was to create music

¹ Please note that there are compositions referred to in this historical overview that, for the sake of brevity, are not represented in the attached folio of works. In addition, the date of composition of some of these fall outside the period of candidature. They have been included as they are important to the overall narrative.

that was totally new, that was not influenced by anything else. He stated that although he did not know how to achieve this, it was an important precept of his philosophy of composition.² Such ideas played an important role in influencing undergraduate and postgraduate composition students at the time. While it was never overtly stated, the ascendancy of Elision in Melbourne meant that that its preferred musical style became the dominant paradigm.

In the course of my private composition lessons with Brenton Broadstock, it became clear to me that he did not espouse such a view. However, I was told that since my M. Mus. composition portfolio was to be an academic document, the music I presented must conform to academic requirements, the insinuation being that the music needed to be somewhat ‘academic’ in character.

I am most satisfied with three works written during that period. These are: *Elvis* (1991) for twelve virtuoso solo singers and electronic bass drum; *The Power of the Gun* (1992) for amplified chamber choir and ensemble; and *Mace* (1992) for amplified guitar with effects pedals. Upon reflection, these three works all include some integration of popular music within a classical music context. *Elvis* is a set of four movements based upon four phases of the life of Elvis Presley. The first movement is “Teddy Bear”, which is based on a song recorded by Elvis in the 1950s. The second movement is “Suspicious Minds”, which is based on a song mirroring his personal relationship with Priscilla Presley. The third is “The Death of Elvis”, which based upon public reaction to Presley’s death. The final movement, “Elvis is Alive!”, is based upon Presley’s “resurrection” and the alleged sightings of the singer more than ten years after his death. The first three movements mutate elements from popular music so as to render their heritage largely unrecognisable. “Elvis is Alive!” uses substantial aspects

² Personal communication, 21 August 1991.

of the house music genre, including rhythm patterns and harmonic motives. It was not particularly successful in performance, as the choral medium did not lend itself readily to precise rhythmic layering techniques that were employed. Figure 1 shows an excerpt from this movement.

Aspects of popular music were also represented within *The Power of the Gun* and *Mace*. *The Power of the Gun* is a piece based upon contemporary reactions to violence in society. It uses vocal rap-style delivery, amplification of instrumental forces and extended rhythmic figurations derived from the funk music genre. *Mace* is a ten-minute showpiece for amplified acoustic guitar. It includes effects pedals in its final section to make reference to the sounds and gestures typical of some electric guitar figurations in rock music, such as wah-wah and octaver effects. At the same time, both of these works employ harmonic and structural techniques derived from modernism, such as pitch sets and chord multiplication, illustrating that I had not yet fully embraced the popular music genre.

A

f *sim.*
t k t Ht etc.

f *simile*
t k t Ht etc.

⑩ *f* quasi electric piano
dehu dehu de dehu de de dehu de dehu de de du dehu dehu de dehu de de

f quasi electric piano
dehu dehu de dehu de de dehu de dehu de de du dehu dehu de dehu de de

f quasi electric piano
dehu de de hu de dehu de de dehu de dehu de de du dehu de de hu de dehu de de

f quasi electric piano
dehu de de hu de dehu de de dehu de dehu de de du dehu de de hu de dehu de de

⑩ quasi electric bass
dhaow dhaow dhaow dhaow dhaow dhaow dhaow dhaow da dhaow dhaow

dhaow dhaow dhaow dhaow dhaow da dhaow dhaow dhaow dhaow dhaow

dhaow dhaow dhaow dhaow dhaow da dhaow dhaow dhaow dhaow dhaow dhaow etc.

f

NOTE: de = "dead"
hu = silent 'h' + french 'u'

Regarding the 'dehu' & 'dhaow' word groups, on long(er) notes the 'oo' sound should cover most of the duration, leaving the first part of the words as an 'attack' to the note. e.g. $\overset{J}{dehu} \neq \overset{J}{de}hu$

Figure 1: bb. 10-12 of "Elvis is Alive!" from *Elvis*

While composing these works, I became more and more involved in listening to popular music. The radio station that I listened to the most was 3RRR, an independent subscriber-funded station that specialises in playing some of the less “mainstream” types of popular

music. Every Saturday night, the station would present several hours of death-metal music intermixed with the latest techno, garage band and folk music releases. I gained as much from my exposure to these alternative popular music genres as I did from hearing the latest contemporary music from Europe.

The music with which I felt the strongest connection was techno and death-metal. These genres are comprised of a diverse range of sub-genres. For instance within the broad techno genres there is trance, house, jungle, drum 'n' bass and happy-hardcore, and within the broader heavy metal category there is speed-metal and rave-metal. At the same time, they have in common a number of elements that I found were of great personal appeal. For one thing, both of these genres are harmonically, rhythmically and structurally very clear. Secondly, they are extroverted in character and provide immediacy of delivery. Thirdly, interesting rhythmic and sound-layering structures are used, and there is often subtlety in sound-creation. Furthermore, the music is physical in terms of the visceral reaction that it intends to create. Finally, there is virtuosity in performance, especially in death-metal where the technical facility of the performer(s) is of paramount concern. Many of these elements are indeed present in my own works of this period, while others are not. For example, I made use of harmonic and rhythmic techniques derived from modernism, as previously mentioned with regard to *Mace* and *The Power of the Gun*.

The turning point in my compositional development occurred in 1993, during the premiere of *Mace*. In fact, it occurred while I was listening to the middle section of the work. This is constructed around a large passacaglia. A chord progression is repeated three times, each time becoming more ornamented in a rhythmic, motivic, timbral and harmonic sense. It was an attempt on my part to experiment with some of the modernistic techniques to which I had been exposed during my two years of study in Melbourne.

When it came to listening to that music in concert, I suddenly felt that I could have been listening to the music of any other composer. There was no personal relevance in what I was hearing. While it contained interesting surface material and a satisfying structure, on a deeper level it conveyed *nothing at all* of me as an individual. The musical techniques I had employed suddenly seemed unauthentic and irrelevant to me as an Australian living in a contemporary Australian culture.

In contrast, I experienced a totally different reaction to techno and death-metal music. I felt a personal connection to their intent and execution. I also felt them resonate with my own attitudes towards music and music performance. On the one hand, these insights were disturbing as they seemed to invalidate what I had been attempting to create up until then. On the other hand, they produced a sensation of liberation. In that moment, I knew what sort of music I was *not* going to compose.

Chapter 2: Increased integration of popular music

In 1993 I was based once again in Sydney, working full-time as Director of Strings and Composition at MLC School, Burwood. An opportunity arose to write a work for a talented violinist's final music examination. For this purpose, a work based upon European modernistic models would have been inappropriate, so I decided to try incorporating aspects of popular music genres within a classical music context. This was an experiment which proved to be fruitful in the long-term.

For this piece, I began looking directly at the techno and death-metal genres for my compositional source material. Up until this point, I had used aspects of popular music styles in earlier works but not in a systematic way. In this new piece, the intention was to employ easily identifiable musical constructs directly derived from techno and death-metal in a more purposeful manner. The result was *Chrissietina's Magic Fantasy* (1994), a ten-minute work for two violins.

Chrissietina's Magic Fantasy differs from my previous compositions in a number of ways. First, there is much greater use of triadic harmony. Second, rhythmic features are derived directly from techno music, especially the groupings of three and two semiquaver patterns above an actual or implied strong crotchet pulse. This is illustrated in Figure 2 below. Third, there is imitation of timbral and/or instrumental qualities (Figure 3), such as the unintelligible and indecipherable shouting of a death-metal soloist.

A ♩ = 138

B

Figure 2: bb. 4-13 of *Chrissietina's Magic Fantasy*

L **Subito Più Mosso** ♩ = 144

^ sul tasto *----- sul pont.* *pos. ord.*

75 *(f sempre)* *Sul D, G* *ff*

In the manner of a grunge or death-metal vocalist: scratchy, forced and out-of-tune, very definitely over-the-top.

* *Block-shaped noteheads* : approximate pitch on played across two strings.

Figure 3: bb. 75-85 of *Chrissietina's Magic Fantasy*

As also shown in Figures 2 and 3, stylistic influences are presented very directly, with less filtering than in previous works. The virtuosity and extroversion inherent in most death-metal music are directly reflected in this work. In addition, there is more use of repetition as a musical element. There is also a very clear, though not necessarily constant, pulse throughout the piece.

I felt a degree of unease during the compositional process. This was due to the significant differences between the popular music sources used in this work and the modernist paradigm to which a young composer was “expected” to subscribe. Although the dominant modernist paradigm of Melbourne was not as strong in Sydney, there was a sense that the music I was composing would not be an acceptable contribution to the canon of Western art music. I nevertheless felt a strong urge to persevere and continue to experiment with popular music which I believed to be a valid mode of expression.

Other works written during this time include *Homage to Metallica* (1993) and *AK-47* (1994). *Homage to Metallica* is an orchestral work composed for the National Orchestral Composers’ School. As the title implies, it was written with direct reference to heavy-metal and death-metal music. The work incorporates some of the thick textures typical of the death-metal genre, with gigantic block orchestral tutti chords at the opening and closing of the piece. It also features an amplified 1/8th – sized violin solo in the second half of the work. In this mini-violin concerto, conscious references are made to the virtuosity of heavy-metal and death-metal music, with an attempt to integrate some of their typical harmonic and rhythmic progressions into the orchestral writing.

AK-47 is a piece written for piano with optional electronic bass drum. The title underscores its aggressive content. The opening two-thirds of *AK-47* do not directly feature any musical

gestures related to popular music, although some of the repetitive structures correspond to those used in *Chrissietina's Magic Fantasy* (see Figure 4 below).

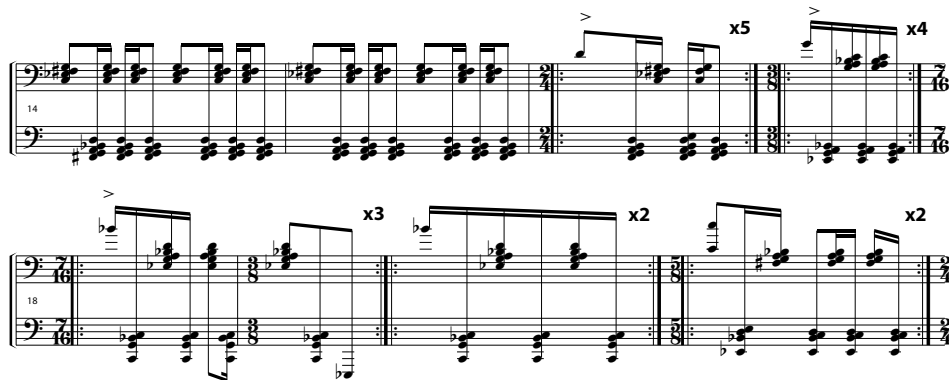


Figure 4: bb. 114-121 of *AK-47*

One reference to popular music is the use of electronic bass drum. It enters about half-way through the piece, as if commenting on the repetitive machine gun-like semiquaver chords in the piano part (see Figure 5).

116

poco meno f

El. Bass Dr. w/ ft. ped.

f sempre

120

123

Figure 5: bb. 116-126 of AK-47

The electronic bass drum part is then transformed into a continuous crotchet ostinato pattern, directly reminiscent of the thumping bass drum patterns of techno music. The piano part mutates accordingly into a section often described by listeners as “that ‘70s disco tune” (Figure 6).

rall. . . (exact notes unimportant in this bar)

(Short Cadenza)

Hyperactive (never relaxed),
but with a slightly psychotic nostalgia ♩ = 144

Improvise a short cadenza to link into the next passage.

NOTE: This passage must be played with a frenziedness in keeping with the rest of the piece.

Figure 6: bb. 136-147 of AK-47

The incongruity between styles of piano writing in different parts of *AK-47* is intended to depict “the shell-shocked reminiscence of a 19-year old Bosnian freedom fighter.”³ It provides a good illustration of the change in direction that my music was taking.

³ Hindson, Matthew. Programme notes to *AK-47*, 1995.

In general, my main sources of popular music inspiration at this time were the techno and death-metal genres. This was to change in 1995. After composing *Homage to Metallica*, *AK-47* and other pieces such as *Believe in Yourself* (1994) and *SCUD* (1995), I began to find death-metal to be a less fruitful source of inspiration than techno. Death-metal relies upon extreme textural and timbral density, which I found difficult to successfully transport into more traditional “classical” forms and instrumentations. For its sonic properties, death-metal music is dependent upon amplification and effects pedals such as distortion and gates. Further, the stereotypical harmonic structures of death-metal music are built on a small core of progressions⁴. Correspondingly I found myself being drawn towards the musical concepts of techno music.

I did not totally abandon concepts derived from death-metal music in future pieces. To some extent, *Death Stench* (1996) and *The Rage Within* (1997, revised 1999) still employ these concepts. However, in comparison to works such as *Homage to Metallica*, the degree to which they are used is substantially diminished.

⁴ Especially open-fifth chords moving in parallel motion based upon a variant of the Phrygian mode.

Chapter 3: *Speed*

After *Chrissietina's Magic Fantasy*, the next piece to use the techno genre as its musical foundation was the orchestral work, *Speed* (1996). This work was commissioned by the Tasmanian Symphony Orchestra.

Speed was another step in the progression of integrating elements and gestures from techno music to a classical music context. The orchestra, being the performing medium, enabled greater expansion of tonal and textural contrast than was possible in *Chrissietina's Magic Fantasy* with its instrumentation of two violins. To the best of my knowledge, this constitutes the first conscious attempt to use techno techniques in an orchestral work⁵.

Writing for the Tasmanian Symphony Orchestra provided a significant compositional opportunity. It meant that I was forced to evaluate and analyse several characteristics of techno music in a detailed way. It also meant that I needed to assess whether any of these characteristics could be suitably translated into a work for orchestra. This involved listening to large volumes of techno and dance-related pieces on radio and CD and drawing general conclusions about the genre.

Another consideration in writing *Speed* was that I was essentially drawing upon characteristics from a purely pre-recorded medium and introducing them into the acoustic

⁵ I have since heard the music found on American composer Todd Levin's CD *de Luxe* (1996), which is perhaps the most similar to my own that I have yet encountered, though he seems to use 1970s disco as his starting point rather than techno.

domain⁶. There were several problems that needed to be tackled. The first was the problem of achieving balance. In pre-recorded music, any balance issues can be overcome by changing the levels. Similarly, the fullness of sound can be influenced by judicious employment of chorus effects, expander plugins or stereo panning. In the case of acoustic performance, these problems are more difficult to resolve, and compensation needed to be provided through orchestration. There was some possibility of balance adjustment during the rehearsal process but, compared with working in a studio, this was minimal.

Some allowances were made to replicate the original recorded nature of the techno underpinnings. For example, a MIDI drum kit was specified for the percussion section instead of the usual acoustic drum kit. This was to allow the percussionist to play with as much passion and verve as the music dictated, without submerging the rest of the orchestra in an unfocussed wash of sound.

The overall structure of *Speed* is similar to that of *Chrissietina's Magic Fantasy*, although it incorporates extended sections catering for the larger colouristic opportunities. The following table illustrates these structural similarities.

⁶ Death-metal music is usually performed live by bands as well as being recorded, whilst techno music is reproduced only from CD or vinyl record. Some bands such as PSX in Melbourne sometimes perform along with backing tracks, but these performances are less common than a straight reproduction from CD in a club.

Table 1: Structural Similarities between *Chrissietina's Magic Fantasy* and *Speed*.

	Introduction	A	B	
Feature	Introductory flourish/gesture	Statement and repetition of first 'techno' motive	Series of bars and figures repeated, gradually moving harmonically upwards, mainly by semitone, thinner texture	Return to original pitch area, again repetition, thicker texture, moving to climax
<i>C. M. F.</i>	1	2	13	29
<i>Speed</i>	1	18, 24	91	124

	C	A (subsection)	D	
Feature	Melodic section, chord progressions from triadic functional harmony, extended phrase lengths	Last part of section A is repeated with some minor changes.	'Bridge' section, change of tempo, utilizing continuous semiquavers in one part, darker mood, many smaller subsections, building up to a climactic point.	Climactic point
<i>C. M. F.</i>	44	61	73	108
<i>Speed</i>	163	189	213	275

	D cont'	E	A (subsection)	F
Feature	Much activity dying away...	Much slower tempo, a series of homophonic phrases with 'interruptions', legato articulation. Link to next section based upon main 'techno' motives.	An abridged portion of section A with minor changes.	New material utilizing sustained melodic material merged with similar rhythmic patterns to those used in section B .
<i>C. M. F.</i>	115	116	147	152
<i>Speed</i>	(275)	287	326	369

	C	A (subsection)	Coda
Feature	Section C repeated with some alterations.	An abridged portion of section A though extended through repetition.	Based upon the main 'techno' motives (<i>Speed</i>) or material from the introduction (<i>C.M.F.</i>).
<i>C. M. F.</i>	169	186	199
<i>Speed</i>	443	469	485

The structures of *Speed* and *Chrissietina's Magic Fantasy* are both related to the sectional nature of techno music. Techno is created almost exclusively on computers, using either MIDI-based or audio-based sequencers (such as Logic Audio, Cubase or ProTools). Entire blocks of sound are organised, layered and manipulated. The discrete structures of *Speed* and *Chrissietina's Magic Fantasy* (as outlined above) are linked to a similar working process.

The opening of *Speed* serves to delineate the dominant rhythmic style of the work.

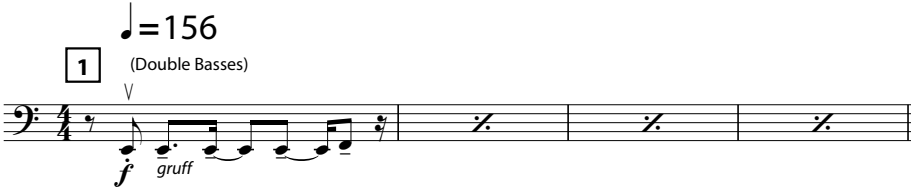


Figure 7: bb. 1-4 of *Speed*

The rhythmic durations of a quaver or dotted quaver (or semiquavers with appropriate rests) contained within a one-bar framework are typical of most forms of electronic dance music. The fast tempo marking is indicative of the general tempo range found in techno pieces.⁷

Although the register and orchestration of this motive may not immediately identify the origins of this rhythm, there is no doubt when the main motive of the work first appears. This is in bar 18 (Figure 8).

⁷ The fast tempo also serves to delineate techno as a dance form as opposed to other dance forms that may use similar rhythmic motivic patterns (such as a rumba, for example, which may use



18

(Picc,Fl) *8va*
ff *sempre staccatissimo* *sim.*

(Ob,CA)
ff *sempre staccatissimo* *sim.*

(Horns)
f + *sempre* (*brassy*) + *sempre* *sim.*

(Vn1,Va)
f (*brassy*) *sempre staccatissimo* *sim.*

(Vn2,Vc) *ff* *sempre staccatissimo*

Figure 8: bb. 18-19 of *Speed*

It will be observed that the note values are all one, two or three semiquavers in length. The motive is one bar long, repeated. Harmonically, the chords progress in parallel motion.

When the clarinet enters at bar 24, it starts on G#, thereby completing the parallel triadic movement. The orchestration of this motive emphasises the tonic notes of each triad. These are the notes that are most audible.

The rest of the orchestra (excluding timpani) enters at bar 24, reinforcing the one-bar nature of most of the material used in this section of the piece. There are four distinct layers in this section. First, there are the repeated motives. Second, there is the bass line and its variants (bass clarinet, bassoon, contrabassoon, bass trombone, tuba, and double bass).

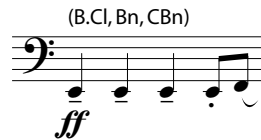


Figure 9: bar 24 of *Speed*, bass clarinet, bassoon and contrabassoon parts

Third, there is the percussion part, which includes the bass drum in consecutive crotchets, fundamental to techno.

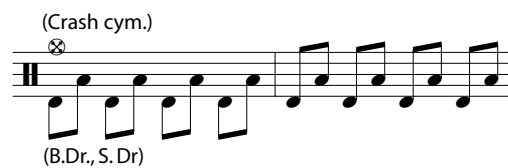


Figure 10: bb. 24-25 of *Speed*, percussion part

Finally, there is trombone part with its one-bar repetitive gesture.



Figure 11: bar 24 of *Speed*, trombone 1

Each of these layers is based upon a one-bar unit. The repetition of these layers throughout most of this section serves to reinforce the music’s origins in the techno genre. As the section progresses, they form part of longer structures consisting of four bars, which are then repeated (Figure 12). The fourth bar functions as a “turnaround” figure, defining the four-bar pattern length.

The image shows a musical score for five string instruments: Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Double Bass (D.Bass.). The score covers measures 68 through 72. A box containing the number '68' is placed above the first measure of the Violin I part. The dynamic marking *ff* (fortissimo) is present at the beginning of each instrument's part. The Violoncello part includes a *DIV.* (divisi) instruction in measure 70. The notation is dense, featuring many accents (>) and slurs over the notes, indicating a complex rhythmic and articulation pattern.

Figure 12: bb. 68-72 of *Speed*, string parts

The next section (Section **B** in the structural diagram presented in Table 1) extends some of the ideas derived from techno music and adapts them into a series of a longer-term harmonic progressions. This propels the music forward, while keeping the largely repetitive bar-to-bar motivic structure, usually two bars in this case, as illustrated in Figure 13.

Figure 13: bb. 96-119 of *Speed*

The techno-related cliché of parallel triad-based motion is clearly enunciated in this section. In addition, the bass parts pump out a crotchet pulse that is much stronger than in previous sections. This is achieved by reducing the orchestration and thinning the texture.

In this way, the piece departs from a straightforward techno heritage. In a techno work, the harmonic motion would not be present in the form taken in this section. Rhythmic devices (e.g., changing time signatures) are another deviation: most techno pieces are in 4/4 time and do not vary. In this section of *Speed*, phrases are not necessarily grouped in the conventional 4/8/16-bar paradigm. All of these elements culminate at bars 152-163, where the crotchet pulse is stripped away in a repeated 7/16, 7/16, 3/8 rhythmic progression (Figure 14). Such an extension would be rarely encountered in techno music.

Figure 14: bb.154-162 of *Speed*

While only transitory, this rhythmic inconsistency signals another change in the treatment of techno-derived motives in the next section of the piece, Section **C** (bb. 163 to 188). In this section, the main motives from Section **A** assume an accompanying role beneath the legato melodies in the trumpet and trombone parts. They reassume the main focus at bar 189, which is fundamentally a recapitulation of material from Section **A**. Whereas Section **A** concludes with a large C major chord, this recapitulation contains a series of large, repeated, dissonant chords covering bars 208 to 212 (Figure 15).

The image shows a musical score for measures 208-212 of the piece 'Speed'. It consists of three systems of staves:

- Woodwinds (ww.):** The top system shows woodwinds. The treble clef staff has notes G4, A4, B4, and C5. The bass clef staff has notes G3, A3, B3, and C4. Dynamics are *fff*, *ff*, and *f* across the measures.
- Brass & Percussion (br. & perc.):** The middle system shows brass and percussion. The treble clef staff has notes G4, A4, B4, and C5. The bass clef staff has notes G3, A3, B3, and C4. Dynamics are *fff*, *ff*, and *f* across the measures.
- Strings (str.):** The bottom system shows strings. The treble clef staff has notes G4, A4, B4, and C5. The bass clef staff has notes G3, A3, B3, and C4. Dynamics are *fff*, *p*, *fff*, *p*, and *fff* across the measures.

The score is in 4/4 time and features a key signature of one flat (Bb). The measures are marked with measure numbers 208, 209, and 210.

Figure 15: bb. 208-212 of *Speed*

These chords provide a general contrast to the harmonic language previously explored in the piece. They also pre-empt a change which occurs in following sections. Harmonically, these chords are not related to techno. This is also the case in the next section, which commences with a change of tempo, a percussion solo above *glissando* strings and a Violin II solo part consisting of repeated semiquavers (Figure 16). This passage for solo instrument is the first of any length in the work.

Figure 16 shows musical notation for measures 223-234 of the piece *Speed*. The score includes parts for Percussion, Violin I, Violin II, Viola, Violoncello, Double Bass, Trumpets, Trombones, and other instruments. Measure 223 is marked with a box and contains dynamics like "diminuendo....." and "ppp". Measure 230 is marked with a box and contains the tempo marking "Anxious, On-Edge" and "♩ = 136". The score also includes performance instructions like "poco sul pont. Solo" and "con sord."

Figure 16: bb. 217-234 of *Speed*

Upon the re-entry of the string parts at bar 230 (Figure 16), some links to techno music can be observed. Some examples are the triadic nature of the harmony and the “reverse tape” dynamics. However, it is a tenuous and fairly subtle link due to the surrounding context. With the exception of aspects of syncopation as seen in the bass clarinet and contrabassoon parts from bar 243, the entire section of *Speed* from bars 213 to 285 has little in common with popular music genres. The melodic or motivic phrases that are used are no longer strictly

based around the bar. The strong crotchet beat is no longer present. The layers of sound are aurally less clear than in previous parts of the piece.

When this large section eventually winds down (bars 279 to 285), a slow interlude follows in which various solos – clarinet, cello, harp and trumpet – play over largely string-based slow-moving chords. The material for these solos is directly or indirectly derived from previous material in the work. For example, the end of both the clarinet and cello solos comes from a trumpet melody from Section **A**:



Figure 17: bb. 69-73 of *Speed*, trumpet part

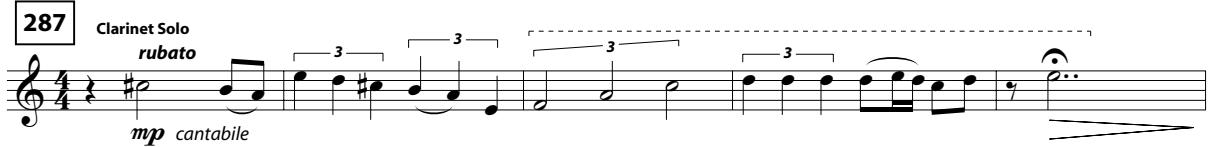


Figure 18: bar 289 of *Speed*, clarinet part

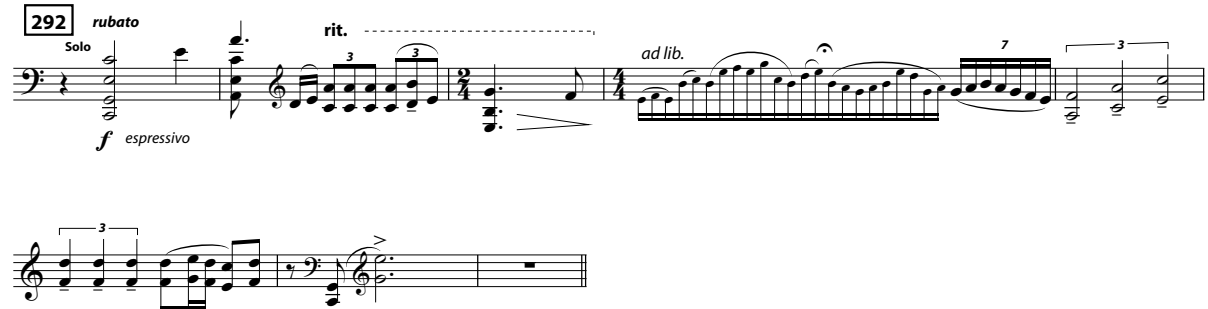


Figure 19: bar 292 of *Speed*, cello solo

The main purpose of this section is to provide a contrast with the frenetic nature of the surrounding material. In a 16-minute work, I felt that it was aurally refreshing to include such a contrast.⁸

The gradual introduction of the main motive at the end of this section provides a link to the return of Section [A], in a truncated form. This includes a 16-bar tuba solo over the restatement of the main motive. With its dominant seventh chord based upon E (bar 364-368), the climax of this section contrasts with the C major chord at the climax of Section [A] (bars 86-90). The dominant seventh chord serves to push the music into the next section, which is largely melodic in nature. An accompanying rhythmic ostinato in the horn parts (Figure 20) is constructed in groupings of quavers and dotted quavers. This is the most obvious link to the rhythmic construction of the majority of the work.



Figure 20: bar 369 of *Speed*, horns

This paradigm continues almost to the end of the work, through recapitulations of Sections [C] and [A], the last part of which encompasses an *accelerando* from $\downarrow = 156$ to $\downarrow = 200$ (bar 521). After this *accelerando* the music comes to a sudden halt, followed by a brass fanfare in

⁸ After writing the piece, I was informed that there are rooms at rave parties that provide a similar purpose, that is, to provide a break from frenetic surroundings. In these 'chill-out' rooms, the temperature is low, soft sustained music is played and everyone lounges about, taking a break from the intense dancing in the main areas. I was not aware of the existence of these rooms, however, when writing the piece.

parallel major chords. The effect of this short coda passage is to interrupt the flow to the “Ecstatic” conclusion of the work.⁹

In summary, while *Speed* represented an attempt to write a techno piece for orchestra, it is not really a piece of pure techno. I wish to emphasize this point. Apart from obvious differences in instrumentation, there are more contrasting sections in its construction. Harmonically and rhythmically, a greater range of devices have been employed. Orchestration is more extensive and uses greater degrees of contrast than would be found in a typical techno work. *Speed* is not a dance piece, and thus does not need to conform to the strictures of electronic-based dance music. For example, time signatures can change fluidly. Rather, it invites listeners to attend to the subtleties and flexibilities of instrumental colour and construction while appreciating its high energy, visceral dance music elements.

⁹ Again, after writing the piece, I was informed that it is traditional near the end of rave-parties to play synthesised brass fanfares. I was unaware of this point when writing *Speed*.

Chapter 4: *technologic 2*

In the middle of 1997, I was commissioned to write a string quartet for the Elektra String Quartet. My only other attempt at seriously writing for string quartet was *Head Over* (1991)¹⁰. As a string player myself, I had had exposure to the long history of string quartets in Western art music. This caused some degree of apprehension as I began to consider the many masterworks that had been written – everything from Haydn and Mozart quartets to those of Lutoslawski and Sculthorpe. My dilemma was whether the techno music style with which I had been experimenting could be accommodated within the string quartet idiom.

A deciding factor was that the composition was to be performed by the Elektra String Quartet. This ensemble did not perform standard repertoire, but rather music from the late twentieth century. Its musical and artistic director, Romano Crevici, enthused over the possibility of including some popular music influences. He suggested that I write a piece called “Techno-Logic”, the title of which alluded to the fact that the quartet was interested in using technology such as samplers and effects pedals in performance.

Consequently, *Techno-Logic* (1997) represented an important stage in my own compositional development. In this work I decided to completely immerse myself in the techno genre, a process which had begun in the work, *Speed*. The result was that for two of the five movements, I chose two existing techno pieces, took them apart, and then reassembled them, substituting my own material. In the process I decided to import as many aspects of the techno pieces as possible into the classical, predominantly acoustic, domain. For me, this was

¹⁰ I now consider *Head Over* to be unsuccessful and have withdrawn the piece.

a consummation of my increasing preoccupation with popular styles of music and their transformation into the Western art music tradition.

Later, I revised and arranged part of this work for string orchestra with percussion or pre-recorded CD. The second movement of the string quartet became *technologic 2*.

As the model for *technologic 2*, I used *Turn on the Music*, by S. Imrei and J. O'Halloran¹¹. The instrumentation in the *Turn on the Music* is very different from that of a string quartet. *Turn on the Music* contains several different instrumental layers, including drum and vocal samples. There are no obvious string sounds. In addition, digital effects such as delay, flange, reverberation and compression are extensively employed, both to create the original sounds as well as to alter the effect of the sounds being mixed together. In live performance it is not possible for a string orchestra to recreate these sounds. The realities of real-time performance prohibit their implementation.

Techno is constructed on a computer using layers or blocks of sound. Percussion sounds are present in every piece. Typically a bass drum plays every crotchet beat, with hi-hats playing repeated closed-semiquaver, closed-semiquaver, open-quaver patterns. There may or may not be a snare drum reinforcing the second and fourth crotchets in the 4/4 bar. The time signature is always 4/4, and phrases tend to occur in one-, two-, four- or eight-bar patterns. Other instruments such as tambourines may play a cross-rhythm within the 4/4 bar structure.

¹¹ Imrei, S., and O'Halloran, J.. *Turn on the Music*, Polygram Music, 1991.

Figure 21: An example of Percussion Layering in Typical Techno Piece

There is an obvious problem in translating such percussion writing typical of techno music into instrumentations without the extensive use of percussion. My solution to this problem has been to replicate some of the rhythmic patterns amongst the ensemble. For example, see bar 17 in *technologic 2*, reproduced in Figure 22 below.

Figure 22: bar 17 of *technologic 2*, string parts

In this bar, the layers interlock to create a continuous and full rhythmic texture. Even without the arpeggiated semiquaver pattern in the Violin 1 part, there are a number of coordinated patterns – from the quaver-based patterns of the Violin 2 and Double Bass parts to the semiquaver-quaver enunciation of the Viola and Cello parts. The parts are syncopated within the one-bar unit. The effect of this is to create a driving sense of tightly controlled momentum, in much the same way as the percussion does in a piece of techno music.

Techno music is characterised by a constant pulse. Some limited percussion is used in *technologic 2* to enhance this effect. The two matching percussion instruments play a continuous quaver pattern, acting as a type of click track. More complicated rhythmic patterns are allocated to the string players, rather than to the percussion instruments. For example, see Figure 23 below.

17

Figure 23: bar 17 of *technologic 2* with percussion parts

Like most forms of popular music, techno is characterised by a strong repeated bassline.

As shown in Figure 24, the bassline in *Turn on the Music* is predominantly a one-bar, three-pitch pattern.

Figure 24: bar 9 of *Turn on the Music*, bassline

The majority of the bass parts in *technologic 2* are just as simple in their construction, as can be seen by examining the bass part in Figure 23 above.

Another typical gesture of techno music is the “stabbing piano”, most often found in techno works from the early 1990s. This technique can be defined as a piano part playing repeated riffs with cross-rhythms between left and right hands, employing a variety of triadic chord progressions.

The piano stab progression in *Turn on the Music* is unusually simple in its rhythmic and harmonic complexity:



Figure 25: bb. 59-60 of *Turn on the Music*, piano part

In *technologic 2*, a “stabbing piano” cross-rhythmic pattern is achieved at bars 70-73 (Figure 26) by the solo strings. Its rhythmic construction is more complex than the “stabbing piano” used in *Turn on the Music*. The intention was to compensate for the absence of extensive percussion parts within the string ensemble.



Figure 26: bb. 70-73 of *technologic 2*

In the techno genre, the composition and treatment of melodic material varies from piece to piece. Some works, for example, *Take Me Away*¹² and *Frequency*¹³, employ anthemic synthesized “Clarion” sounds. Other, such as *Seance*¹⁴, utilize a melange of synthesized sounds. Vocal and/or instrumental samples may be used. In some cases, these take the form of short spoken fragments that are repeated (e.g. “turn on the music” in *Turn on the Music*). In other cases, there may be a longer sampled text block (e.g. the fictitious interview between a policeman and a dead boy’s father in *Mr Kirks(sic) Nightmare*¹⁵). These longer fragments are often deconstructed and later re-used as shorter fragments in the same piece.

There are limitations in including vocal material in a work for string orchestra (without tape or sampler). One possibility would be to require the performers to sing or speak, but this acoustic effect would be very different from the sampled nature of pre-recorded voices. In *technologic 2*, the effect was approximated through the use of small repeated motivic fragments, such as those present in bars 29-31 in the Violin II and Viola parts (see Figure 27).

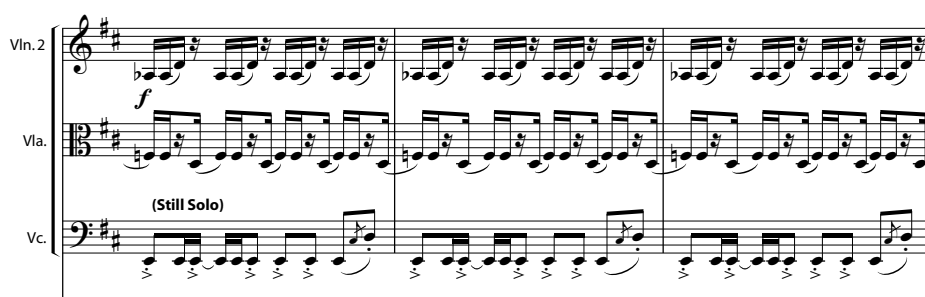


Figure 27: bb. 29-31 of *technologic 2*

¹² Persona, M., Carpella, L., and Bortolotti, G. *Take Me Away*, All Boys Music, 1992.

¹³ Aromer, M., and Peat, C. *Frequency*, Kool Kat/Virgin Music, 1992.

¹⁴ Nebula II. *Seance*, Westbury/Reinforced Music, 1991.

¹⁵ 4 Hero: *Mr. Kirks Nightmare*, Westbury/Reinforced Music, 1992.

In addition, synthesized pad sounds are often used to fill out the middle register of a techno piece. As in *Go*¹⁶, these may be slow-moving patterns that mirror the harmonic changes of a passage of music. Alternatively, as in the opening 1' 20" of *Red Herring*¹⁷, they may be arpeggiated across several octaves in semiquavers. These are less commonly found in pure techno pieces than in techno sub-genres, especially trance.

Arpeggiation has been included at various stages of *technologic 2*, such as at bars 17-24 (Figure 28), where an F#7 chord is outlined between the divided Violin I parts.



Figure 28: bb. 17-21 of *technologic 2*, violin I part

As most of these sounds and structures in techno music are created in the digital domain, digital effects - applied through the use of external effects units or else directly inside the computer via software - are used to alter the sound. Typical of this technique is the manipulation of cutoff filters applied to small sections and motives or to entire sections of a mix. The effect of this is to gradually accentuate or diminish the frequency range of a sound. A similar acoustic effect is achieved by going from *sul tasto* to *sul ponticello* on a string instrument, though the electronic cutoff can achieve this effect to a much greater extent.

¹⁶ Paul, Richard M. *Go*, Urban Arts, 1991.

¹⁷ S. Berry, Claudio. *Red Herring*, Platipus Records, 1994.

Textural contrasts are used in *technologic 2*. The juxtaposition of solo and tutti passages also create changes in tone colour, from the massed string sound to that of solo instruments. For example, there is a drastic change of texture occurring at bar 25 (Figure 29) with the entry of the solo cello. Its tone and presence contrast markedly with the previous tutti section.

The image displays a musical score for the piece *technologic 2*, specifically measures 21 through 28. The score is arranged in a system with seven staves: Violin 1 (Vln. 1), Violin 2 (Vln. 2), Viola (Vla.), Violoncello (Vc.), Double Bass (Db.), and Xylophone (Xylos.). A double bar line with a box containing the number 25 is positioned above the Violoncello staff at the beginning of the second system. The Violoncello part starts with a 'Solo' marking and a forte 'f' dynamic. The Xylophone part continues with a rhythmic pattern of eighth notes. The other instruments (Vln. 1, Vln. 2, Vla., and Db.) are mostly silent in this section, with some rests and occasional notes.

Figure 29: bb. 21-28 of *technologic 2*

Harmonically, techno is almost exclusively triadic in content. Deviations from this paradigm are uncommon. Furthermore, chords move in parallel motion rather than obeying tonal voice-leading rules. The use of parallel triads extends to melodic figurations in techno music, to the extent that melody is just a set of parallel triads. The melodic line from *Get Ready for This*¹⁸ (Figure 30) is probably the best-known example of this construction.



Figure 30: Melody constructed in consecutive parallel triads from *Get Ready for This*

Harmony often delineates structure in techno music. Contrast is created between adjacent sections of music through changes in tonality or modality. This is exemplified in *Turn on the Music* with its flattened second chords forming the harmonic basis of some sections, as well as modulation to the subdominant.

In *technologic 2*, the overall key centre is based on F#. It uses the Mixolydian mode, typical in much popular music. The five different sections in *technologic 2* are differentiated by their contrasting harmonic centres: F# mixolydian (bb. 1-24, 33-48, 92-107, 156-191), E mixolydian (bb. 25-32, 84-91, 147-155) A major (bb. 49-61, 108-117), A and E major simultaneously (bb. 62-69, 118-126) and G major (bb. 70-83, 146) are all employed throughout the movement.

Rhythmically, techno has several defining features, some of which have already been described in relation to the percussion and “stabbing piano” parts. These include: continuous

¹⁸ 2Unlimited. *Get Ready for This*, BMG, 1982.

bass drum crotchets; constant beat throughout the entire piece; cross-rhythmic patterns placed in several instruments; quantized syncopation interlocking with great precision; fast tempo markings; and small scale rhythms based upon quaver and dotted quaver values (as has already been discussed with relation to *Speed*).

The continuous bass drum crotchets of techno are not utilized in *technologic 2*, although they are used in other works such as *Speed*. The determining factor was the limited number of parts available. Allocating a constant crotchet beat to one part would have been a wasteful use of resources. Instead, as already described, constant quavers were used in the percussion part to create a click-track effect. I found it more useful to imply the crotchet beat through syncopation and interlocking between parts. The tempo marking of ♩=144 in *technologic 2* is in the same area as the tempo in *Turn on the Music*, ♩=132. The extensive use of cross-rhythms between parts has been described above in relation to percussion forms typical of techno music. In *technologic 2*, other examples of this approach to rhythmic construction occur in bars 62-69 (Figure 31), at its reprise in bars 118-125 and also in the front desk parts in bars 70-73 (Figure 26).

62

Vln. 1 *f*

Vln. 2 *f* *bouncing at the heel* *NON DIV.*

Vla. *f*

Vc. *sim.*

Db. *sim.*

Xylos.

Figure 31: bb. 62-69 of *technologic 2*

The majority of the rhythmic figures in *technologic 2* are based upon quaver or dotted quaver note values. The first motive played by the viola at bar 7 illustrates this:

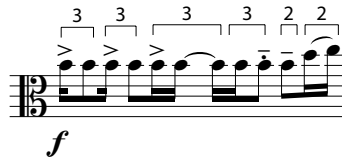


Figure 32: bar 7 of *technologic 2*, viola part, showing rhythmic values

Fundamental to the techno genre is repetition of motives or phrases. One way in which techno music differs from minimalist music is that change is achieved through the direct juxtaposition of totally contrasting material and/or by the addition or subtraction of layers of sound rather than through the evolution of motives. Contrast is also achieved by means of textural and orchestration change. Notions of motivic development characteristic of most Western art music are rare.

Motives in *technologic 2* were created in accordance with those found in *Turn on the Music*. These motives are used extensively and repetitively throughout the piece. However, in terms of its motivic treatment, *technologic 2* differs from *Turn on the Music* in one important respect. When they are repeated later in *technologic 2*, motives are altered through orchestration or pitch displacement, whereas in *Turn on the Music* they are simply repeated literally. The reason was simply that *technologic 2* was primarily intended to provide the listener with an aural experience; it was not intended to be a work for dance.

These are some of the issues which I needed to take into consideration when I embarked upon the task of transforming musical genres in *technologic 2*. The music needs to be realised acoustically by a multitude of musicians, none of whom are linked electronically via timecode. Digital effects such as cutoff filters are difficult to replicate. They are not as successful in live performance as they are on recording. Other concerns include

instrumentation and balance. In acoustic performance it is difficult to achieve the clarity of sound that is possible through effective production and mastering of a pre-recorded track. A string orchestra does not provide the same access to percussive instruments which give techno its rhythmic drive. Even if this were possible, balance would be a problem, especially when the music is performed at the fast tempos typical of this genre. *technologic 2* contains a number of workable solutions for addressing these points of concern.

Chapter 5: Post *technologic 2*

I was generally happy with *technologic 2*, which has now been successfully performed by a number of ensembles. The next pressing issue was whether my future works would follow the same process. In my next piece, *n-trance* (1998) for harp, I attempted to use similar deconstruction-reconstruction techniques with a piece of trance music¹⁹. In that *n-trance* was written for solo harp as opposed to string orchestra, it was not possible to recreate the level of synergy as achieved between *technologic 2* and *Turn on the Music*. It was this that made me realise that it was not possible to achieve a high level of synchronicity between techno and “classical” music in every piece. Through the deconstruction-reconstruction process, however, I had gained important insights into the fundamentals of techno music. These insights enabled me to create new pieces based on the concepts of techno music without needing to use existing pieces as models.

It should be noted that while many pieces written during this period were influenced by techno music, *Night Pieces* (1998) is one example of a piece that was not. This is a piece in two movements for soprano saxophone and piano. The first movement, “Night Song”, is a short, slow, flowing introductory piece. In its melodic nature and improvisatory character, it is more reminiscent of the performance style of the American popular saxophonist Kenny Gee than of techno music. An excerpt from this movement is reproduced below.

¹⁹ Trance music is a variant of techno, differentiated by its smoother textures, generally slower tempi, decreased reliance on repeated bass-drum crotchets and use of pad sounds delineating harmonic changes every two bars, these harmonic changes being typically parallel chords constructed of 2nds and 3rds, moving by step.

I. - Night Song

Flowing, Langorous, tempo poco rubato (♩ ca. 90)

The musical score is written for Soprano Saxophone in Bb and Piano. It is in 3/4 time and the key signature has three flats (Bb, Eb, Ab). The tempo is marked 'Flowing, Langorous, tempo poco rubato' with a quarter note equal to approximately 90 beats per minute. The score is divided into four systems, each starting with a rehearsal mark (Reo).

- System 1 (Measures 1-4):** The saxophone part begins with a *p cantabile* dynamic. The piano accompaniment starts with a *pp gently* dynamic. A 'tie 2nd time' instruction is present between measures 2 and 3.
- System 2 (Measures 5-8):** The saxophone part continues with flowing lines. The piano accompaniment features sustained chords. A '8-8' marking is visible in the saxophone part at the end of measure 8.
- System 3 (Measures 9-11):** A section marked 'A' begins. The saxophone part has a *mp* dynamic. The piano accompaniment has a *p* dynamic and includes the instruction 'poco a poco crescendo...'.
- System 4 (Measures 12-14):** The saxophone part includes a 'bend' instruction and a 'crescendo' marking. The piano accompaniment continues with sustained chords.

Figure 33: bb. 1-14 of "Night Song" from *Night Pieces*

The second movement, "Night Dance", is evocative of aspects of Middle-Eastern music. It is not, as one might infer from its title, derived from the dance music of the modern-day nightclub.

II. - Night Dance

Emphatically, Very Slowly, $\text{♩} = 48$ rubato

Soprano Saxophone in B \flat

Piano

8

f

ff

cluster

5

timbre

bend

9

timbre

slow fast

A Dance-like ($\text{♩} = 138$)

G.P.

f rich

fff

G.P.

G.P.

15

22

B

Figure 34: bb. 1-28 of "Night Dance" from *Night Pieces*

The evocation of Middle-Eastern music comes from the use of quarter-tones throughout the movement. Quarter-tones are used as a form of ornamentation, but at the same time they are also fully integrated into the character of the piece. “Night Dance” is structured as a set of slowly accelerating sections contained within fanfare-like proclamations at the beginning and end of the movement. In this way, the movement attempts to convey the physical action of a dance as it increases in intensity.

Other works written around this time include *Yandarra* (1998) for double bass and piano, *Jungle Fever* (1998) for french horn and piano, *Ignition: Positive* (1998) for trumpet and piano and *Love Serenade* (1998) for bassoon and piano. Of these, *Ignition: Positive* is the most heavily influenced by techno music. The others tend to be more influenced by other forms of popular music, as can be seen in their choice of harmonic progressions and motivic rhythmic construction. Writing these diverse works shortly after *Speed* and *technologic 2* meant that I was not limited to the composition of techno-inspired works. In terms of my creative development, reconstructing previously composed works in the manner of *technologic 2* would not have been a fulfilling long-term proposition.

Chapter 6: *Rush*

In the middle of 1998 I was commissioned by Musica Viva Australia to write a work for their 1999 season. The work was to be scored for guitar and string quartet. It was to be of ten minutes duration and to be performed by Slava Grigoryan (guitar) and the Goldner String Quartet. My concerns with writing for such a traditional medium as the string quartet has been mentioned in relation to *Techno-Logic*. *Rush* differed from *Techno-Logic* in that the intention was no longer to reconstitute an existing work, but rather to extend some of the techniques explored in previous pieces and to integrate them into a new composition.

The beginning of *Rush* is not derived from techno music. The opening section functions as a large introductory passage based around the canon and/or quasi-canon of small three-quaver and two-quaver cells. The inspiration came from by Pat Metheny²⁰, in which additive rhythmic figures constructed of groups of two and three quavers are clapped at the beginning of the piece, thereby establishing the rhythmic basis of the material which follows the introduction. Figure 35 below presents a transcription of the first 20 bars of *The First Circle*.

²⁰ Metheny, Pat and Mays, Lyle, trans. Greenbaum, Stuart. *The First Circle: Transcribed from the ECM recording by Stuart Greenbaum*, unpublished, 1992.

THE FIRST CIRCLE

© Metheny / Mays 1984

Transcribed from the ECM recording by Stuart Greenbaum

Clapping

Percussion 1

S. gt.

Perc. 1

11

Voc. 1

N. gt.

S. gt.

Perc. 1

16

Voc. 1

N. gt.

S. gt.

Perc. 1

Detailed description: The image shows a musical score for 'The First Circle'. It consists of three systems of staves. The first system includes Percussion 1 (Clapping) and S. gt. (Solo Guitar). The second system includes Voc. 1 (Vocal), N. gt. (Nylon Guitar), S. gt. (Solo Guitar), and Perc. 1 (Percussion). The third system includes Voc. 1 (Vocal), N. gt. (Nylon Guitar), S. gt. (Solo Guitar), and Perc. 1 (Percussion). The score features complex rhythmic patterns with frequent time signature changes (e.g., 12/8, 10/8, 12/8, 10/8, 12/8, 10/8) and dynamic markings like 'Gliss.'. The Perc. 1 part is a driving, repetitive pattern of eighth notes.

Figure 35: bb. 1-20 from *The First Circle*, transcribed by Stuart Greenbaum

In *Rush*, the use of two- and three-quaver patterns is reminiscent of the opening of *The First Circle*. For the purposes of comparison, the first 19 bars of *Rush* are presented in Figure 36 below.

Rush

for guitar and string quartet

by Matthew Hindson, 1999

Fast (♩. = 150 / ♩ = 225)
PIZZ.
p
but incisive and precise

Guitar

Violin I

Gtr.

Vln. I

Vln. II

Vla.

Vc.

16

Figure 36: bb. 1-19 of *Rush*

The opening harmonic progression finally resolves to repeated E's, mutating into a cross-rhythmic figure at bar 67 between the guitar and violin 2 parts. This paves the way for the entry of the work's main motivic figure in the viola part at bar 71, as shown in Figure 37.

61

♩. = ♩ = ca. 150

let inner notes ring...

mp

67

f

sul pont.

ARCO

P non troppo

71

mf

ARCO

sim.

Figure 37: bb. 57 to 74 of *Rush*

The viola pattern from bars 71-74 (see Figure 38) betrays its techno origins in a number of ways. These include the one-bar repetition within a four-bar structure, its rhythmic construction and the outline of a dominant seventh in its pitch material.

(Main melodic motive of piece)

ARCO

mf

sim.

Notes in melody

Span

Figure 38: bb. 71-74 of *Rush*, viola part

The first tutti statement of this theme at bar 89 continues this pattern, with harmonic change occurring only in the last bar of the four-bar pattern:

89

Gtr. *f* strumming

Vln. I

Vln. II *f* rhythmic

Vla. *f* scrubbing

Vc. *f* heavy

based upon E major/minor

D11

Figure 39: bb. 89-92 of *Rush*

Indeed, much of *Rush* is harmonically constant, being based strongly around an E tonal centre. Contrast is created using timbral and textural changes as well as small-scale harmonic and orchestration changes. Shown in Figure 40 is an example of reduction in texture accompanied by a change in orchestration and harmonic centre.

118

Gtr. *f*

Vln. I *mf*

Vln. II *mf*

Vla. *f*

Vc. *mf* PIZZ.

E tonal centre

D tonal centre, reduced texture

Figure 40: bb. 115-120 of *Rush*

The middle section of *Rush*, from bars 106 to 251, establishes a pattern of increasingly developed sections interrupted by smaller interjections. In the second half of this section the main motivic development is undermined by a *moto perpetuo* idea that has so far been used primarily as accompaniment in this piece. Figures 41 and 42 illustrate the development of this idea.

Figure 41: bb. 122-125 of *Rush*

Figure 42: bb. 196-199 of *Rush*

This mutation assumes the form of a series of overlapping descending scales that emerge from each of the parts, reaching their most obvious statement at bar 214 (Figure 43).

214

Figure 43: bb. 214-217 of *Rush*

The overlapping scales are derived from mensuration canon as used by composers such as Arvo Part in *Tabula Rasa*²¹ and Stuart Greenbaum in *Moments of Falling*²².

The final main section of *Rush* begins at bar 257 and functions as an accelerando in tempo and mood *al fine*. This section contains musical derivations from the techno genre such as the consecutive major triads in the bowed string parts of bars 257-274 (Figure 44).

²¹ Part, Arvo: *Tabula Rasa*, Universal Edition, 1980.

²² Greenbaum, Stuart. *Moments of Falling*, GRT Press, 1997.

257

Figure 44: bb. 257-261 of *Rush*

The heritage of many of the musical elements used in *Rush* is fairly clear, but the palette of musical features used throughout this piece is larger than that of earlier works. This diversity becomes an increasingly noticeable characteristic of my compositional development post-*technologic 2*.

Chapter 7: Attachment with the Sydney Symphony Orchestra (Part I)

One of the major aims of any composer is to obtain good performances of his or her own works. One way to achieve this is to build good relationships with performers. I was able to build a good relationship with the Sydney Symphony Orchestra through the composition of works such as *RPM* (1996) and the performance of *Homage to Metallica* in 1997. This culminated in a composer “attachment” for six months during 1999.

As part of this attachment, I was expected to compose five main pieces. Three of these came about as a result of the orchestra’s intention to perform Wagner’s *Siegfried*. For these performances I was asked to write a set of three short pieces using specific sub-groups of the orchestra that could function as ‘interval calls’ to the opera. These three interval calls were to become the three *Siegfried Interludes*. In the tradition of such works, themes and motives were taken from *Siegfried* and planted into a new context. The first of these was for brass ensemble, and featured themes from Acts I and II of *Siegfried*, which were then transformed into what was jokingly dubbed “Siegfried meets Mission Impossible” by the tuba player. The second piece was written for wind octet, and featured two motives. One was Siegfried’s “Nothung! Nothung! Neidliches Schwert!” theme from Act II. The other was the Woodbird’s theme. In the second interlude, these themes were transformed to the extent that they were almost unrecognisable. The third interlude was written for three percussionists, and was subtitled “Metal Chorus” in a reference to the famous Anvil Chorus, as well as Siegfried’s forging of the Sword. The instruments used in this work were all metallic percussion instruments, consisting of anvils, crotales and tuned cowbells.

Composing works which transformed material written centuries ago into a current musical style proved to be a rewarding experience²³. I enjoyed taking the contemporary music of earlier centuries and “remixing” it using current instrumental and musical techniques. The analysis and reworking of previously composed music expanded my range of musical influences, and encouraged me to think in a way that I would not have otherwise.

The next piece I composed during my attachment was *Boom-Box*. This piece was written specifically for the Education Programme of the Sydney Symphony Orchestra. The audience was to be children from Kindergarten to Year 2. The SSO Education officers suggested that I feature percussion in some way, as the other instrumental sections of the orchestra were to be highlighted in other works on the programme. My response to this suggestion was to aim to include many instrumental colours in the work. This resulted in the use of a reasonably large number of percussion instruments shared amongst the three percussionists, with some “novelty” percussion such as flexatones and sirens. There were also a number of extended techniques used with other instruments as well (e.g. clarinet *glissandi* and timbre-trills). The aim was to maximise orchestral colour to produce an energetic and vibrant “sound-picture” that could capture and hold the attention of young children.

In order to create a compact and tangible sound-picture, *Boom-Box* is based upon a small number of ideas. The main motive is stated most emphatically at the opening and conclusion of the piece using large orchestral tuttis, as shown in Figure 45 below.

²³ This process was again taken into consideration with the composition of *The Rave and the Nightingale* in 2001.

Figure 45: Main motivic idea of *Boom-Box*, bb. 1-2

This idea is developed throughout the piece using techniques such as diminution, fragmentation and transposition. To this extent, *Boom-Box* is more representative of traditional motivic developmental techniques than those of techno music or other popular music genres.

Figure 45: bb. 35-37 of *Boom-Box*, Percussion II part

Some of the influences of techno music that are discernable in *Boom-Box* include bar to bar repetition and rhythmic cells based upon units of two- and three-semiquaver duration.

Examples of these rhythmic cells can be seen in Figure 47 below.

Figure 46: bb. 38-41 of *Boom-Box*, Violin 1, 2 and Viola parts

The middle section of *Boom-Box* uses a number of instrumental gestures reminiscent of lounge music. These include “swooning” strings in octaves, a shaker playing constant semiquavers, and added-note marimba chords. However, the percussion writing of Xenakis (e.g., *Idmen A-B* for choir and percussion²⁴) was also influential in early parts of the work, so much so that it was acknowledged with the indication “Xenakis-like” at bar 16 of the Percussion parts I and III (see Figure 48).

The image shows a musical score for three percussion parts (I, II, and III) from measures 15 to 18 of the piece *Boom-Box*. A box labeled 'B' is positioned above measure 16. Part I (top staff) is for 5 Tom-Toms, s.dr. sticks, starting with a piano (*p*) dynamic and a crescendo to fortissimo (*ff*) by measure 16, which is marked 'Xenakis-like'. Part II (middle staff) is for 5 Tom-Toms, s.dr. sticks, also starting with *p* and reaching *ff* by measure 16, marked 'Xenakis-like'. Part III (bottom staff) is for 4 Tom-Toms, s.dr. sticks and Orch. B.Dr., starting with *p* and reaching *ff* by measure 16, marked 'Xenakis-like'. The notation includes various rhythmic patterns, including semiquaver runs and chords.

Figure 47: bb. 15-18 of *Boom-Box*

The end result is that *Boom-Box* is broader in outlook than earlier works such as *Speed* and *technologic 2*. This feature is carried over into subsequent pieces.

²⁴ Xenakis, Iannis. *Idmen A-B*, Editions Salabert, 1985.

Chapter 8: Attachment with the Sydney Symphony Orchestra (Part II) -

In Memoriam

The fifth and final work I was required to compose for the SSO Composer Attachment was a concerto. Initially, my brief was to write a work of about ten minutes duration, possibly for a wind instrument. A short work for cor anglais and orchestra was suggested.

Also included in my brief was the stipulation that the work should lie “outside the composer’s usual idiom”²⁵. The reason for this stipulation was never clearly enunciated, and initially this struck me as curious, since a commissioner usually has some firm idea about what they would like to be produced. Despite my initial reservations, I found it to be a gratifying experience to be given the chance to experiment, even if it was within the bounds of normal concert presentation.

The piece I wrote was a concerto for amplified cello and orchestra entitled *In Memoriam*. It comprises two movements, “Lament” and “Celebration”. “Lament” was completed in 1999, and “Celebration” in 2000.

It was Nathan Waks, principal cellist with the SSO, who first suggested that I write a cello concerto. He made this suggestion during the rehearsal process of *Speed* in August 1999. As I recall, Waks expressed his enthusiasm for a work that was “amplified with lots of wacky effects pedals”²⁶. The idea of writing a string concerto sat more comfortably with me than the

²⁵ Dixon, Samuel: *Letter of Agreement*, 30 April 1999, page 6.

²⁶ Personal communication, Sydney, 13 August 1999.

idea of writing a concerto for a wind or brass instrument. This was probably because, as a child, I had learnt violin and viola, and so felt confident writing for strings²⁷. The wide range of tonal expression of a string instrument such as a cello and the possibility of amplification produced many initial ideas.

As a response to the direction that I write a work “outside my usual idiom”, I decided that since I had never before written a concerto, this, in itself, constituted a new exploration. I chose to interpret this directive as applying to technical issues rather than stylistic ones.

Amplification became an issue. Waks was very keen to have the cello part amplified for this piece. I was aware of the obvious advantages to be gained from amplifying the instrument. One was the artificial correction of any balance problems between the cello and the orchestra. The middle register of the cello could be used more extensively than might otherwise be the case. One disadvantage was the potential for changes in tone. The sound transmitted to the audience can differ considerably depending on the amplification equipment employed by the sound engineers²⁸.

At this point, I believe it is important to express some of my own thoughts on amplification. For *In Memoriam*, I decided that amplification should be allowed to affect the tone of the soloist. By contrast, in some of my other pieces (e.g., *Violin Concerto*, *The Rave and the*

²⁷ This has continued through other works such as the *Violin Concerto* (2000) and *The Rave and the Nightingale* (2001) for string quartet and string orchestra.

²⁸ For the performance of *In Memoriam* we decided to use a Fishman contact microphone that plugged into the bridge of the instrument. Waks had to alter his overall playing style somewhat as this microphone tended to favour certain strings.

Nightingale), amplification is used purely to enhance the volume of the soloist(s), changing the tone as little as possible.

Over the past 50 years, amplification systems have improved in sophistication and quality. For the performance of my *Violin Concerto* in the Concert Hall of the Sydney Opera House in 2001, a small but high quality non-contact microphone was placed under the bridge of the soloist's instrument. Backed up by an excellent sound system and careful sound engineering, this produced such a natural violin tone that many members of the audience could not tell whether the soloist was amplified or not.

It seems logical that over the next period of time, the quality of amplification systems available in concert halls is only going to improve. This leads me to believe that there will be an increased number of concertos written for amplified instruments.²⁹ Composers of the future will not be inhibited by the possibility of the soloist producing any unintended distortion in tone colour.

At the same time, I recognise that this view is not shared by all contemporary composers. For instance, Stuart Greenbaum once remarked in conversation that he would not use amplification for a solo instrument in a concerto, but would rather “write the work properly so that it does not need amplification”³⁰. This is a valid point. However, my response to this line of argument was that much of my musical style depends on loud, vigorous and often

²⁹ As the tone quality is largely dependent on equipment used, it will be interesting to consider how amplification is approached in the distant future, with regard to works that are composed with today's equipment in mind. Perhaps this will form part of performance practice research of the future.

³⁰ Personal communication, 1999.

thick texture, intending to impart high energy levels. For a composer such as myself, who is intent upon writing a work for a solo instrument such as the cello - which is renowned for experiencing balance problems with orchestra - amplification must be considered a valid option. In fact, it is a justifiable option if I am not prepared to significantly alter my musical style.

Having resolved these issues, I began to consider the content of the piece. I have always been aware of the immensely expressive qualities of the cello. My previously written or arranged works for cello and piano include *Lament* (1996), *Love Serenade* (1998) and *Jungle Fever* (1998). *technologic 1-2* and *technologic 145* (1998) also feature the cello in some of their movements.

It was therefore important to choose a subject that was of deep emotional significance for me. *In Memoriam* is dedicated to two of my cousins, Hargret Davis and Robert Hopkins, both of whom died suddenly when they were about my age. In the piece, I aimed to express all the emotions I experienced as a result of their deaths. These include anger, shock, disbelief, desolation and acceptance. In order to provide contrast and relief, the second movement embraced the idea of celebration, and of remembering the joyful times I had shared with my cousins.

“Lament”

“Lament” differs from much of the music so far discussed, in that popular music elements do not play a major role. The links between this movement and other works such as *technologic 2* are few, and possibly confined to a sense of extroversion and confrontational gesture.

The movement is essentially a very personal response to the loss of my two cousins. Thus the work begins angrily, with a disjunct melody in the strings and oboes (Figure 49) that later forms the basis for the entry of the solo cello.

Figure 48: bb. 3-7 of “Lament”, oboe 1, 2, violin 1, 2, viola parts

The first gesture played by the cello, the naturally-distorted “noise” event (Figure 50), does not conform to how an audience would normally expect a cello to sound. This effect is further reinforced by the amplification of the cello.³¹

Figure 49: bb. 19-22 of "Lament", solo cello part

The opening introductory section of “Lament” exploits extremes of register in the cello part, and moves between them. I wrote the solo part as if I were writing an “acoustic” concerto.

³¹ In writing such a gesture, I was aware of a story related by Peter Sculthorpe about a performance of his *Piano Concerto* by pianist Tony Fogg. Apparently Fogg complained to Sculthorpe about the somewhat innocuous nature of the initial entry of the soloist, stating that he didn’t consider it appropriate for a concerto. Hence the very aggressive and pointed entry of the cello in *In Memoriam*.

The sound was intended to be cutting and distinctive. The overall effect is further enhanced by the amplification.

The musical score for the solo cello part consists of five systems of notation. The first system (measures 48-52) begins with a treble clef and a 'D' chord symbol, followed by a change to bass clef and a 3/4 time signature. The second system (measures 53-56) features a 6/8 time signature. The third system (measures 57-60) is in 4/4 time. The fourth system (measures 61-63) includes the instruction 'random 3-finger patterns, up and down' and a 5/4 time signature. The fifth system (measure 64) is in 4/4 time and contains a high note marked with an accent (>) and the text '(any really high note)'.

Figure 50: bb. 48-66 of "Lament", solo cello part

Towards the end of the introductory section the orchestral part is so dense that the cello is difficult to hear, even with the aid of amplification. It concludes with the cello playing a scale run up to a chord at the extreme top of its range. This passage would lose much of its effect without use of amplification. The distinctive character of the cello in this part of its range would have been extremely difficult to project at any soloistic dynamic without being artificially increased. Amplification also allows the performer to concentrate on the dramatic qualities inherent in the gesture rather requiring attention to balance and tone projection.

Meno Mosso ad lib. (accel.)

86 **2** Solo *ff*

[Cadenza] 3"

91 *moltiss. vibr.* long **F** *L'istesso Tempo*
random but precise finger patterns
fff approximate pitch only
extremely distorted *still ff, sempre*

98 (non rall.) 8-10" Insert random *fingered tritones (approximate only)*
begin to move down in pitch,
slowly, introducing more string crossings *fast glisses*
random fast rhythms *etc.* *gliss. over Sul D/A*
more than Sul G/A

101 15" 4" *gradual rall. in*
glissando speed **Sul A**
diminuendo sempre but no rall... *incorporate increasing slurred bowing*
gradually add longer
notes with the gliss. *flautando, fingered harmonics*
random pitches - it's OK if the
harmonics don't 'come out'

104 15-20" 3" *+ random occurrences of non-harmonics*
including quarter-tone pitches
Incorporate sudden stops between 1 and 4 seconds in length,
keeping the bow and l.h. fingers motionless on the string
as if freeze-framing a film.

Figure 51: bb. 86-105 of "Lament"

The climactic nature of this section extends into the next part, marked “Cadenza”, the opening of which is presented above in Figure 51. As the title suggests, it is a cadenza for the solo cello, joined later by strings, brass and percussion playing predominantly textural material. In its dramatic intent, the first half of this section is related to heavy rock electric guitar solos. While harmonically different, the feelings and extreme virtuosity it explores are similar to those expressed in these popular music genres.

This orchestral virtuosity gradually changes into a didjeridu-type rhythmic figuration for the solo cello, joined by the strings. This is reproduced below in Figure 52.

The musical score for Figure 52, bb.118-133 of "Lament", is a complex orchestral arrangement. It features a variety of instruments and parts, including a Solo part, Horns 1.2 and 3.4, Percussion 5, Violins 1 and 2, Viola, and Double Bass. The Solo part is particularly prominent, featuring a didjeridu-type rhythmic figuration. The score includes numerous performance instructions, such as "rall. but still really heavy", "like a grinding didjeridu", and "increase the range of the glissandos...". Dynamic markings range from *ff* to *mf*, and there are several instances of acceleration and deceleration. Section markers G, H, and I are used to denote different parts of the score. The Solo part includes a "bowed distortion effect" and "flexatone" markings. The string parts include "con sord." (con sordina) and "cluster including quartertones" markings. The Double Bass part includes "1st time only" and "increase the range of the glissandos..." markings.

Figure 52: bb.118-133 of "Lament"

One of my cousins was an Aboriginal, and the choice of material in this section reflects his heritage. It is not intended to be an extensive exploration of Australian Aboriginal music. Rather, it almost becomes a background to the textural effects used in the string parts. When effects pedals are added to the solo part, the repeated didjeridu gesture assumes a more unearthly dimension, with the flange, regenerative delay and ring modulation distorting the sound beyond the capabilities of an acoustic instrument. The cello part seems to merge with the surrounding sounds, perhaps in way that a body eventually merges with the earth in which it is interred.

The image displays a musical score for measures 146-160 of the piece "Lament". It is divided into two systems. The first system (measures 146-160) includes parts for Solo, Violin 1, Violin 2, Viola, Cello, and Double Bass. The Solo part features a melodic line with a "Sul G&D" marking and a "L" (Lento) tempo marking. The string parts are marked "Tutti" and "f" (forte), with instructions for "slow, independent downwards glisses" and "sempre dim..." (sempre diminuendo). The Cello part includes a "3 Pizz per bar per player" marking. The Double Bass part is marked "f" and "sempre dim...". The second system (measures 157-160) shows the Solo part moving "to high harmonics..." and playing a "v. high-pitched harmonic". The string parts continue with "pppp" (pianissimo) dynamics and "sempre dim..." markings. The Cello part has a "4 Soli" marking and "ppp" (pianissimo) dynamics. The Double Bass part is marked "ppp".

Figure 53: bb. 148-160 of "Lament", solo and string parts

In the cor anglais solo that follows, the textural string material is generally played very softly, echoing its function in the previous section. It serves as a noise-like background underneath the mournful cor anglais part. The aboriginal aspects of the work are continued through the trora-stick patterns played in the percussion parts (see Figure 54).

Figure 54: bb. 166-168 of "Lament", percussion parts

The cadenza and the cor anglais solo may be heard as an expression of grief and mourning. This continues into the next section, marked Lament, which opens with a piece of quasi-Gregorian chant:

Figure 55: bb. 186-189 of "Lament", solo cello part

The Lament section of this movement is based upon an earlier piece, namely *Lament* (1996) for cello and piano. The original work was composed not long after the funeral service for the Port Arthur massacre victims in May 1996. It is not so much a direct response to this particular event, but rather an attempt to capture the feeling of immense sadness inherent in funeral services in general. It was therefore an appropriate piece to integrate into *In Memoriam*.

This funereal mood which pervades this section was created in various ways. One was through the use of slow, continuous plodding accompaniment figures beneath the solo, conveying the image of a funeral march. Another was through the use of bell-like interjections, reminiscent of the sounds heard during a funeral service.

The image displays a page of a musical score for measures 193 to 206 of the piece "Lament". The score is arranged in a standard orchestral format with multiple staves for different instruments. The top section, starting at measure 193, features a tempo marking of "molto rall." and a metronome marking of $\text{♩} = 48$. A rehearsal mark "Q" is placed above the score with the instruction "Very Slowly, Like a Funeral March". The Percussion 5 staff includes a "Tubular Bell" part with a dynamic of *mf*. The Piano/Cello staff includes a "Piano" part with a dynamic of *mf* and a performance instruction "like a tolling bell". The Solo part begins with a melodic line in the bass clef, also marked "molto rall." and $\text{♩} = 48$. The Violin 1 and Violin 2 parts are mostly silent in this section. The Viola and Violoncello parts play a plodding accompaniment figure with a dynamic of *p*. The Double Bass part includes a "DIV." (divisi) instruction and a dynamic of *mp*. The bottom section, starting at measure 200, features a rehearsal mark "R". The Percussion 5 staff has a dynamic of *mf*. The Horn part has a dynamic of *mf*. The Piano/Cello staff has a dynamic of *mf* and a performance instruction "sim." (sustained). The Solo part has a dynamic of *p* and a performance instruction "p espressivo". The Violin 1 and Violin 2 parts are silent. The Viola part has a dynamic of *mp*. The Violoncello part has a dynamic of *pp*. The Double Bass part has a dynamic of *mp* and a performance instruction "PIZZ. Solo" (pizzicato solo). The score concludes with dynamics of *mf pesante* and *sim sempre*.

Figure 56: bb. 193-206 of "Lament"

As illustrated in Figure 57 below, the cello part was largely based upon the speech-rhythms of “The Lord is My Shepherd”, a psalm that was read out at the Port Arthur Memorial Service, and which is used at most Christian funeral services.

203 **R** *p* *espressivo* *mp* <

The Lord is my shep - herd, I shall not want, He

206 <

lea - deth me to green pas - tures etc.

Figure 57: bb.203-207 of "Lament", solo cello part with words from “The Lord is My Shepherd” placed underneath for reference

The structure too, is loosely based around this psalm, with the gentle “The Lord is my shepherd, I shall not want” giving way to the more assertive “Yea, though I walk through the valley of death” section at bar 226 (Figure 58), which represents a slight modification of the original psalm text.

T ♩ = 66-72 (*rubato colla parte*)

226 *quasi recitative* *f* *with strength*

Yea, though I walk through the val - ley of death I shall fear no e - vil

Figure 58: bb. 226-229 of "Lament", solo cello part

After the brief tumult of this middle section, the initial plain-chant of the opening returns, though transposed up an augmented octave into a brighter region of the cello’s tone. Its transposition to an E major tonality is intended to convey a sense of acceptance. Here, the

sombre tone is replaced by a more optimistic one, thus foreshadowing the next movement, “Celebration”.

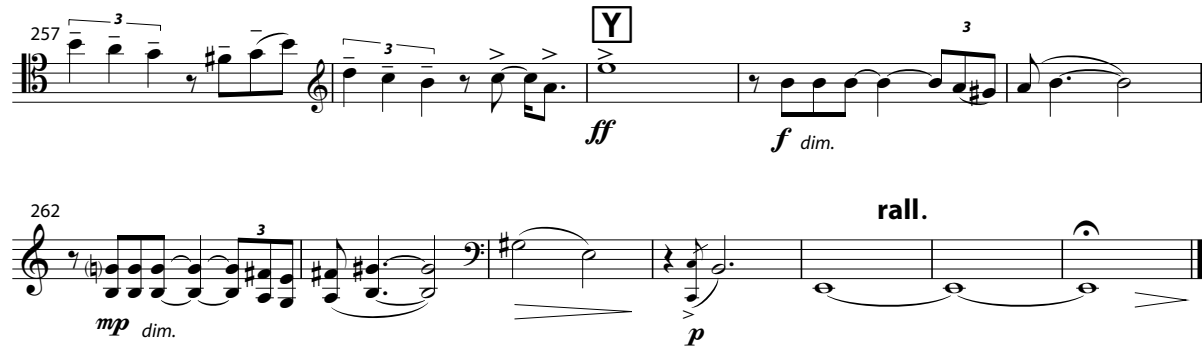


Figure 59: bb. 257-268 of "Lament", solo cello part

The musical material of the Lament is not influenced by popular music. Rather, it is more closely aligned with works such as the last movement of Messiaen’s *Quartet for the End of Time*³² and perhaps, John Rutter’s *The Lord is My Shepherd*³³. Lament was not only an expression of personal loss. It was also a reflection of the general societal response to the tragedy of the Port Arthur massacre. In this way, the gamut of emotions produced by my cousins’ deaths were universalised.

“Celebration”

As previously mentioned, the second movement of *In Memoriam* commemorates the lives of my cousins and the happy times we spent together. My cousin Robert had an extremely energetic, vibrant, and at times uncontrollably exuberant personality. This was something I intended to convey in this movement. For me, it was more important to establish this

³² Messiaen, Olivier. *Quartet for the End of Time*, Durand, 1942.

³³ Rutter, John. *The Lord is My Shepherd*, Oxford University Press, 1984.

celebratory mood than to create pictorial or directly programmatic references as were relevant in the first movement.

“Celebration” demonstrates many more direct influences of popular music styles than does “Lament”. These include: the fast tempo ($\text{♩}=132$) used with semiquaver-based rhythms grouped in two- and three-semiquaver patterns within a one-bar unit; the use of bar-to-bar repetition; a strong beat generally based upon the crotchet; the predominantly triadic-based harmony; the employment of a drum kit within the percussion section; and the sectional nature of the movement. Most of these characteristics relate to techno music, although they can also be observed in other types of music.

Works such as *Speed* and *technologic 2* use similar techniques to those listed above.

“Celebration”, however, differs from these works in a number of ways. For one thing, the concerto format implies question and answer dialogue between the soloist and orchestra. This reduces reliance upon textural addition and subtraction within the orchestral parts to create contrast. Second, “Celebration” makes less use of short repeated motivic cells than either *Speed* or *Rave-Elation*. A selection of motives is used throughout the movement, but they are developed into longer phrases. An example of this occurs in the solo cello part from bars 84 to 99 (Figure 60). The motivic content of this passage includes an arpeggiated figure, repeated notes derived from the repetitive notes in the quasi-plainchant of “Lament” and syncopated rhythmic figures largely derived from the opening of the movement. These form a large-scale phrase structure rather than being independent, self-contained units.

The image shows a musical score for a solo cello part, spanning measures 84 to 99. The score is written in bass clef and features complex rhythmic patterns with frequent changes in time signature. It includes dynamic markings such as 'f' and 'fz', and articulation marks like accents and slurs. A box labeled 'F' is placed above measure 84, and a box labeled 'G' is placed above measure 97.

Figure 60: bb. 84-99 of "Celebration", solo cello part

To achieve its fast, rhythmic pace, “Celebration” includes a good deal of passagework for the soloist. An example of the type of passagework used is given above in Figure 60. Normally this type of writing is problematic for a cello soloist, as it is difficult to cut through the orchestral sound, particularly in the middle to lower registers. Consultation between the composer and soloist was required in order to ensure that the passagework was as playable as possible. Amplification also helped.

Two examples from “Celebration” illustrate the influence of popular music styles such as techno still evident in my works of this period. This influence can be seen in the layering of sound featured in the orchestral tutti from bars 29 to 40 within the two repeated six-bar phrases (Figure 61). Also, in this section, there is a rhythmic foundation within the untuned percussion parts that has been derived from techno music. This rhythmic foundation is

achieved through the use of repeated bass drum crotchets, off-beat open hi-hats and continuous semiquavers on the tambourines. Furthermore, the harmony is based upon consecutive parallel triads.

29 **B**

Picc. *f*

Fl. *f*

Ob. 1 *f*
open notehead = alt. fingering if available

Ob. 2 / C.Angl. *f*
open notehead = alt. fingering if available

B. Cl. *f*
open notehead = alt. fingering if available

B. C. *f*

Bn. *f*

C. Bn. *f*

Hr. 1, 2 *f* *sim.*

Hr. 3, 4 *f* *sim.*

Tpts. *f* *1: Straight Mute* *f* *2: Straight Mute*

Troms. *f*

B. Trom. *f*

Tuba *f*

29 **B**

Timp. *f*

Perc. 1 *f*
Xylophone
Large Crash

Perc. 2 *f*
Smaller Hi-Hat

Perc. 3 *f*
omit low D if not available

Perc. 4 *f*
Tambourine

Perc. 5 *f*
even semiquavers, none accented

Hp. *f*

Picc./Ccl. *f*

29 **B**

Solo *f*

29 **B**

Vln. 1 *f*

Vln. 2 *f*

Vla. *f*

Vcl. *f*

D. Bass *f*
ARCO

36

Picc. Fl. Ob. 1 Ob. 2 / C. Angl. B. Cl. B. Cl. Bn. C. Bn.

36

Hr. 1, 2 Hr. 3, 4 Tpts. Trpms. B. Trom. Tuba

36

Temp. Perc. 1 Perc. 2 Perc. 3 Perc. 4 Perc. 5

36

Hp. Pno. / Cel. Solo

36

Vln. 1 Vln. 2 Vla. Vc. D. Bass

The image displays a page of a musical score for the piece "Celebration". The score is arranged in systems, with measures 29 through 40 indicated by a large '36' at the beginning of each system. The instruments listed on the left include Piccolo, Flute, Oboe 1 and 2, Cor Anglais, Bass Clarinet, Baritone Clarinet, Bassoon, Contrabassoon, Horns 1-2 and 3-4, Trumpets, Trombones, Baritone Trombone, Tuba, Timpani, Percussion 1-5, Harp, Piano/Cello, Solo, Violins 1 and 2, Viola, Violoncello, and Double Bass. The score features complex rhythmic patterns, including sixteenth and thirty-second notes, and rests. Dynamic markings such as *sfz*, *sf*, and *pp* are present. The key signature has two flats, and the time signature is 4/4. The page number '- 75 -' is centered at the bottom.

Figure 61: bb. 29-40 of "Celebration"

Other influences of techno music can be seen in the material from bars 147-177 (Figure 62).

At bar 147, the piano plays material that is rhythmically, gesturally, registrally and harmonically representative of a typical piano figure in techno or house music. There is use of added-note chords, as well as sequences moving by tone that complement the two-bar phrasing of this pattern. There are also the rhythmic elements of each part, which can be broken down into groups of two or three semiquavers within a one-bar unit. Finally, the orchestration of this section - that is, the use of a piano in its middle register – makes deliberate reference to the “stabbing piano” patterns discussed above in relation to *technologic 2*.

The image shows a musical score for Figure 62, starting at bar 157. The score is arranged in a standard orchestral format with multiple staves. The instruments and their parts are as follows:

- Oboe 1:** Melodic line with dynamics *mp*.
- Oboe 2/Clarinet:** Melodic line with dynamics *mp*.
- Bass Clarinet:** Melodic line with dynamics *mf*.
- Vibraphone:** Melodic line with dynamics *f* and *sfz*.
- Percussion:** Rhythmic accompaniment.
- Piano/Celli:** Harmonic accompaniment with dynamics *f*.
- Solo:** Melodic line with dynamics *mf*.
- Violin 1:** Melodic line with dynamics *p*.
- Violin 2:** Melodic line with dynamics *p*.
- Viola:** Melodic line with dynamics *p*.
- Violoncello:** Melodic line with dynamics *p*.
- Double Bass:** Melodic line with dynamics *mf* and a *Tutti* marking.

The score includes various musical notations such as notes, rests, and dynamic markings. A key signature change is indicated by a 'K' in a box at the beginning of the section.

The image shows a page of a musical score for the piece "Celebration", specifically measures 157 through 168. The score is arranged in a standard orchestral format with multiple staves. From top to bottom, the staves are: Flute (Fl.), Oboe 1 (Ob. 1), Oboe 2 / Cor Anglais (Ob. 2 / C. Angl.), Bassoon (B. Cl.), Percussion 4 (Perc. 4), Percussion / Cymbal (Perc. / Cyl.), Solo Bassoon (Solo), Violin 1 (Vln. 1), Violin 2 (Vln. 2), Viola (Vla.), Violoncello (Vc.), and Double Bass (D. Bass). The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. Dynamic markings such as *f* (forte) and *mf* (mezzo-forte) are present. The score is written in a key signature of two flats (B-flat and E-flat) and a common time signature (C).

Figure 62: bb.157-168 of "Celebration"

“Celebration” is structurally different from earlier works such as *Speed*. As illustrated in Figure 62, “Celebration” contains less bar-to-bar repetitions. It also makes greater use of longer and more freely constructed phrase groupings. Another important difference is that the lengths of sections tend to be shorter and more frequent than those in earlier pieces.

Despite the influence of techno music, “Celebration” differs from techno music in several important respects. For one thing, contrast between adjacent sections in “Celebration” is not dependent on textural change. For another, there is more extensive use of divergent musical styles and gestures. For example, the harmonic, rhythmic, gestural or functional notions of orchestral climax before the cadenza (bb. 190-214) would not be found in a typical piece of techno. There is also the strong sense of motivic development throughout the movement,

including the development from a pitch cell (given below in Figure 63) and from the plainchant passage of “Lament”. Such development is rarely encountered in techno music.



Figure 63: One of the motivic pitch cells used in "Celebration"

In summary, “Celebration” represents an important stage in the process of integrating popular music influences into my own compositional style. When composing “Celebration”, I did not refer to any pieces of popular music, but rather sought to build on ideas explored in previous works. By that point, these ideas had been subconsciously assimilated into my own style of composition.

Chapter 9: Influences of Other Composers

A large part of this introductory essay has described my attempt to integrate certain popular music characteristics into a classical music context. I have also cited some of my other compositions that have used materials directly related to popular music styles. The use of one musical influence does not preclude the use of others.

The extent to which the music of other composers has influenced my own work has varied. Although Brahms and Ravel are remote from period in which I live, I have found the study of their scores to be valuable. I hope, one day, to achieve Ravel's orchestral clarity and Brahms' melodic and harmonic fluidity. For the present, though, their compositions serve more as inspirational material than as direct models.

By comparison, other composers have had a greater influence. One is Ross Edwards, with whom I had the privilege of working in 2000. As Edwards' part-time assistant, I was largely responsible for typesetting his music via computer. This enabled me to gain insight into the way Edwards constructs his music. I found his process of accretive growth very different from my own modular approach, which essentially consists of constructing music in blocks and later organizing them in sequence.

Working in this way with Edwards also enabled me to gain insight into his harmonic and rhythmic language. To some degree, this has influenced my own style of composition in recent years, as can be seen in the "Stand Up" movement of *Heartland* (2001), and some "quotation" passages (e.g., the final movement of *Violin Concerto: Australian Postcards*(2000)). In its accumulative style, the opening of "Stand Up" (Figure 64) is

reflective of Edwards' choral work *Dance Mantras*³⁴. Based around an A7 chord, the static harmony of this passage is similar to the first movement of Edwards' *Flower Songs*.³⁵

³⁴ Edwards, Ross. *Dance Mantras*, Ricordi, 1992.

³⁵ Edwards, Ross. *Flower Songs*, Universal Editions, 1987.

i : Stand Up

Music by Matthew Hindson
Words by Sappho

Energico ♩ = 192 / ♪ = 96

f Solo

Tenor

Stand up, Stand ___ up and look at me, ___ and look at me, ___ face to face ___



6

+ more tenors

T

friend to friend; Stand up, Stand ___ up and look at me, ___ and look at me, ___



11

+ more tenors

T

B

f a small group of basses

face to face ___ friend to friend; Stand up, Stand ___ up and look at me, ___ and look at me, ___ face to face ___ friend to friend; Stand up, Stand ___



15

all the tenors

T

B

+ more basses

look at me, ___ and look at me, ___ face to face ___ friend to friend; Stand up, Stand ___ look at me, ___ and look at me, ___ face to face ___ friend to friend; Stand up, Stand ___



20

T

B

___ up and look at me, ___ and look at me, ___ face to face ___ friend to friend; ___ up and look at me, ___ and look at me, ___ face to face ___ friend to friend;

25 *f* some altos

A Stand up, Stand up and look at me, and look at me, face to face friend to friend;

T Stand up, Stand up and look at me, and look at me, face to face friend to friend;

B + more basses Stand up, Stand up and look at me, and look at me, face to face friend to friend;

25

Pno.1 *mp* stabbing

31 *f* some sopranos

S Stand up, Stand up and look at me, and look at me, face to face

A + more altos Stand up, Stand up and look at me, and look at me, face to face

T Stand up, Stand up and look at me, and look at me, face to face

B + more basses Stand up, Stand up and look at me, and look at me, face to face

31

Pno.1 *sim.*

31 *mp* stabbing

Pno.2

Figure 64: bb. 1-35 of "Stand Up" from *Heartland*.

Another composer who has had considerable influence upon my compositional style is Peter Sculthorpe. I was fortunate to have studied with Sculthorpe when I was an undergraduate as well as in the first part of my doctoral programme. As far as structure is concerned, Sculthorpe's music tends to be more sectional than that of Edwards, and in this respect it is more similar to my own. It is therefore not surprising that some gestural, motivic, melodic and harmonic characteristics typical of Sculthorpe's music have found their way into my own pieces. One example is the repeated bongo pattern which is used in *Earth Cry*³⁶ and *Kakadu*³⁷, which can be heard in the first movement of my *Violin Concerto*.

The introductory section of the first movement of *In Memoriam* was partly conceived as a "Peter Sculthorpe meets Richard Strauss" episode. Even Sculthorpe himself has remarked³⁸ that the chant-like cello solo is very similar to chant-like figures in his own *Requiem for Cello Alone*.³⁹ Structurally, the whole of *In Memoriam* resembles the fast-solo-slow-fast sectional construction of *Kakadu*. This was intentional, as I was aware of the possibility of *Kakadu* providing a solid structural model.

At this point, one might ask whether there is a problem in having so many musical influences upon my general compositional style. Personally, I do not believe so. In contrast to the

³⁶ Sculthorpe, Peter. *Earth Cry*, Faber Music, 1986.

³⁷ Sculthorpe, Peter. *Kakadu*, Faber Music, 1988.

³⁸ Personal communication, June 2000.

³⁹ This resemblance occurred subconsciously. I had only heard Sculthorpe's *Requiem* one or two times before, back in the 1980s. Also, I have always had an interest in Gregorian Chant, and have previously used it in pieces such as *In the Lady Chapel* (1987) and *Alleluia Justus Palma* (1989). However, as it turns out, the similarity of material was fortuitous as the soloist for whom *In Memoriam* was written, Nathan Waks, was the performer with which Sculthorpe collaborated in writing the *Requiem*.

position taken by Michael Smetanin described in Chapter 1, I find that I cannot subscribe to the modernist aesthetic of the *tabula rasa*.

The direction that my music has taken has not gone unquestioned. During the rehearsal process leading up to the first performance of *Homage to Metallica* in 1993, conductor David Porcelijn challenged me with: “Why are you writing this ‘Funkytown music’? [Louis] Andriessen did this thirty years ago!”⁴⁰. A similar concern was expressed by tutor Roger Smalley who, during the same meeting, put forward the point of view that the development of music must go forward, and that “progress”⁴¹ could not be achieved if we use pre-existing compositional styles.

The general notion of progress was hotly debated by the composers present at this meeting. For their part, the younger composers questioned the necessity for such “progress”, if what was implied was the active rejection of pre-existing models. In my own approach to musical composition, I have striven to remain open to a diverse range of musical models, from Gregorian chant to the orchestral works of Gerard Brophy to Fijian-Indian pop songs. When access to such a wide variety of musical styles is so readily available, closing off potential sources of inspiration seems either arrogant or self-limiting.

Of course, this does not imply that all styles of music will, or should, appeal to everyone. Part of the training for a Western art-music composer involves analytical dissection and consequent acceptance or rejection of different forms of music. Openness to varied musical influences is not a substitute for imagination or invention. My own imagination and

⁴⁰ Personal communication, Adelaide, October 1993.

⁴¹ *ibid.*

invention have been stimulated by a variety of different musical genres, some of which have been integrated, consciously or unconsciously, into my own musical language.

Chapter 10: Crossover and Connotation

Over the past decade, one of the most common questions I have been asked has been, “If you like techno music so much, then why don’t you just write it? Why do you write for acoustic instruments?” My response to this question has always been that I do not write techno music. I have never pretended to. *technologic 2* is not a piece of techno, in spite of the fact that it is significantly derived from the techno genre. It is an expression of another quite different cultural tradition, namely that of Western classical acoustic music.

I am convinced it is possible to create fresh and exciting music by transforming a variety of influences and source materials. During the introduction to the performance of *Homage to Metallica* by the Sydney Symphony Orchestra in 1997, the conductor Simone Young drew the comparison between my popular music sources and those of folk-music collectors in the early twentieth century. Bartók, Vaughan Williams, Grainger and Szymanowski were all composers who were interested in the folk music of their own and other cultures. They created works that utilized folk melodies, rhythms and forms. In more recent times composers such as Peter Sculthorpe and Paul Stanhope have been influenced by Australian indigenous music, just as Barry Conyngham and Anne Boyd have been influenced by the music of Asia.

There have been many instances of composers integrating elements of jazz. Ravel, Don Banks, Bozidar Kos, Stuart Greenbaum and Gunther Schuller are just a few examples. The influence of other popular music styles, such as music for silent film or animation, is evident in the music of Shostakovich and Graeme Koehne. Martin Wesley-Smith has taken a very

eclectic approach to many of his acoustic works. An example is his use of barbershop quartets in *Who Killed Cock-Robin?*⁴².

My “folk music” - my musical heritage - has included recent popular music of one form or another. Although I have never been a regular player in a rock band, I find that I am still moved by the varied tone colours of The Buggles’ rendition of *Video Killed the Radio Star*⁴³, or the directness of *My Sharona*, as performed by The Knack⁴⁴.

It is also interesting to consider the issue of “crossover” styles. By crossover style, I mean the taking of elements from one musical genre and transplanting them into another. There are more cross-over attempts to “remix” or rearrange classical music into the dance music domain than the other way around. One recent example of the acoustic-to-electronic remix phenomenon is Apotheosis’ techno version of “O Fortuna” from *Carmina Burana*⁴⁵. Another is the recent CD of remixes by William Orbit, entitled *Pieces in a Modern Style*, which includes electronic re-interpretations of Ravel’s *Pavane for a Dead Infanta* and “Winter” from *The Four Seasons* by Vivaldi.⁴⁶

It is difficult to explain why techno music has not inspired more composers. One reason may be that other composers have felt no affinity with techno music. Perhaps, it does not interest them, either musically or sociologically. I do not wish to make value judgements about

⁴² Wesley-Smith, Martin. *Who Killed Cock Robin*, unpublished, 1979.

⁴³ Ewatts, B. *Video Killed the Radio Star*, Carbert Music, 1979.

⁴⁴ Fieger, Doug and Averre, Berton. *My Sharona*, Capitol, 1979.

⁴⁵ Rigaux, L, Samoy, P.: *O Fortuna (Apocalypse Chorus Remix)*, Radikal Records, 1992.

⁴⁶ Orbit, William (arr.). *Pieces in a Modern Style*, Warner Bros., 2000.

personal preferences. Another reason may be that techno is often perceived as being “low art”. In its original form, techno music was predominantly the music of the young, and is a more populist form than many composers would consider appropriate to contemporary art music. Techno music is primarily the music of the nightclub, whereas art music is primarily the music of the concert hall. Also, there are many other musical influences within the world of contemporary art music and beyond upon which composers may draw. Western art music has a very rich tradition spanning at least the last one thousand years. By comparison, techno music is a relatively new genre.

My own approach has been to have an open mind to these influences. I am not overly concerned with the origin of the music or what it represents. What most interests me is the musical quality of a particular genre rather than the context from which it is derived. In death-metal music for instance, what captures my imagination is the power, theatricality and virtuosity of the music, not the *poseur* quasi-Satanic nature of the lyrics⁴⁷ or the black T-shirts worn by the its devotees. In techno music it is not the popular association with rave parties and drug-taking that attracts my attention. What inspires me are its harmonic, rhythmic and gestural attributes. Thus *Speed*, despite one interpretation of its title, is not a homage to drug use, but rather an essay on the general feelings of excitement, physicality and exhilaration associated with the techno music genre.

As explained in this introductory essay, my compositional development has been influenced by a variety of popular music genres. Out of this has emerged my own compositional style. My musical development from *Chrissietina's Magic Fantasy* to *In Memoriam* chronicles an expanding range of musical influences which now work together to create a new and

⁴⁷ In reality the lyrics in death-metal are almost always intelligible as a result of their method of delivery.

distinctive musical idiom. My compositional style reflects a range of musical influences, yet cannot be said to form part of any of the genres from which it is derived. They have been subsumed into a language which is my own.

Appendix I: Chronological List of Works

This appendix comprises a chronological list of pieces referred to in this introductory essay as well as all works composed during the candidature period January 1996 to June 2001.

	<i>Title</i>	<i>Instrumentation</i>	<i>Duration</i>	<i>Other</i>
1991				
	<i>Elvis</i>	twelve voice choir and electronic bass drum	25 minutes	
1992				
	<i>Mace</i>	amplified acoustic guitar with effects pedals	9 minutes	
	<i>The Power of the Gun</i>	chamber choir and large mixed ensemble	15 minutes	
1993				
	<i>Chrissietina's Magic Fantasy</i>	two violins	10 minutes	also rearranged for violin and viola in 1998
	<i>Homage to Metallica</i>	orchestra: 3333 5331 Hp Timp 2Perc Strings + amplified 1/8th sized violin	14 minutes	
1994				
	<i>AK-47</i>	piano with optional electronic bass drum	5 minutes	
1996				
	<i>Speed</i>	orchestra: 2222 4331 Hp Timp 1Perc Strings	16 minutes	also rearranged into a 6 minute version called <i>LiteSpeed</i>
	<i>SCUD</i>	large chamber ensemble of 18 players	6 minutes	
	<i>In Search of Ecstasy</i>	alto or tenor saxophone and piano	6 minutes	
	<i>Lament</i>	cello and piano	8 minutes	
	<i>Five Movements for Saxophone Quartet</i>	saxophone quartet	25 minutes	
	<i>DeathStench</i>	amplified flute with effects pedals, amplified clarinet with effects pedals, piano	14 minutes	

1997				
	<i>RPM</i>	orchestra: 2222 4220 Hp Timp 2Perc Strings	4 minutes	also rearranged for orchestra without trombones, and for amateur orchestra
	<i>Two Marine Portraits</i>	two amplified bass recorders with effects pedals	10 minutes	
	<i>Rave-Elation</i>	double chamber orchestra: 2 x (2222 2200 Strings), Piano, Strings	14 minutes	
	<i>Techno-Logic</i>	string quartet with optional amplification and effects pedals	25 minutes	
	<i>The Rage Within</i>	six-voice ensemble, 2 percussion, 2 sampling keyboards and live electronics	8 minutes	revised in 1999, now withdrawn
	<i>GameBoy Music</i>	clarinet and piano	5 minutes	arranged from the last movement of <i>Five Movements for Saxophone Quartet</i>
1998				
	<i>technologic 145</i>	large ensemble of 13 players (1111 1110 Hp 2111)	14 minutes	arranged from movements 1, 4 and 5 of <i>Techno-Logic</i>
	<i>Pixellate</i>	four female voices, tape and video	4 minutes	
	<i>n-trance</i>	harp	6 minutes	
	<i>technologic 1-2</i>	string orchestra with percussion or CD	8 minutes	arranged from movements 1 and 2 of <i>Techno-Logic</i>
	<i>Velvet</i>	two guitars	4 minutes	reworked from <i>n-trance</i>

	<i>Yandarra</i>	double bass and piano	7 minutes	
	<i>Jungle Fever</i>	french horn and piano	6 minutes	also arranged for cello and piano, and tenor saxophone and piano
	<i>Night Pieces</i>	oboe and piano	6 minutes	also arranged for soprano saxophone and piano
	<i>Love Serenade</i>	bassoon and piano	8 minutes	also arranged for cello and piano
	<i>Ignition: Positive</i>	trumpet in C and piano	5 minutes	
	<i>Insect Songs</i>	mezzo-soprano and guitar	10 minutes	
	<i>GameBoy Music</i>	mandolin quartet	5 minutes	arranged from the last movement of <i>Five Movements for Saxophone Quartet</i>
1999				
	π	SATB choir, 3 perc and piano	10 minutes	also rearranged for large SATB choir and orchestra
	<i>Velvet Dreams</i>	Massed SATB choir and orchestra: 2222 4220 Timp 3Perc Hp Strings	6 minutes	reworked from <i>n-trance</i> and <i>Velvet</i>
	<i>Rush</i>	guitar and string quartet	9 minutes	
	<i>Boom-Box</i>	orchestra: 2222 4231 Hp 3Perc Strings	4 minutes	

	<i>Siegfried Interlude No. 1</i>	brass ensemble: 4 horns, 2 trumpets, 2 trombones, bass trombone, tuba (optional crash cymbals)	4 minutes	also arranged for brass ensemble: 1 horn, 4 trumpets, 2 trombones, 1 bass trombone, tuba (optional crash cymbals)
	<i>Siegfried Interlude No. 2</i>	wind octet: piccolo, flute, oboe, cor anglais, clarinet, bass clarinet, bassoon and contrabassoon	3 minutes	also arranged for clarinet and piano, also for soprano saxophone and piano
	<i>Siegfried Interlude No. 3</i>	three percussion	3 minutes	
	<i>Moments of Plastic Jubilation</i>	piano	5 minutes	
2000				
	<i>Whitewater</i>	String ensemble of 12 players: 7221	20 minutes	
	<i>Plastic Jubilation</i>	piano and pre-recorded tape	13 minutes	the first movement of this piece is a reworking of <i>Moments of Plastic Jubilation</i>
	<i>In Memoriam: Concerto for amplified cello and orchestra</i>	Amplified Cello and orchestra: 2222 4231Timp 5Perc Hp Pno/Cel Strings	34 minutes	the first movement of this piece contains a reworking of <i>Lament</i> (1996) for cello and piano
	<i>Violin Concerto: Australian Postcards</i>	Violin and orchestra: 3333 4231 Timp 2Perc Hp Strings	29 minutes	

	<i>The Blue Alice</i>	SATB choir and orchestra: 3222 4231 Timp 3Perc Pno Strings	8 minutes	
2001				
	<i>Heartland</i>	massed SATB choir and 2 pianos	25 minutes	
	<i>The Rave and the Nightingale</i>	string quartet and string orchestra	16 minutes	
	<i>Always on Time</i>	violin and cello	2 minutes	also rearranged for piano solo
	<i>Mechanically Speaking</i>	piano	5 minutes	
	<i>Headbanger</i>	Orchestra 3333.4331.Timp 2 Perc. Hp.Strings	5 minutes	
	<i>Pulse Magnet</i>	two pianos and two percussionists	15 minutes	
	<i>My Own Personal Robot</i>	piano	2 minutes	
	<i>Racing Greens</i>	piano	2 minutes	
	<i>Swarm</i>	piano	2 minutes	
	<i>Xmas Bells</i>	piano	2 minutes	

Bibliography

- Dixon, Samuel. *Letter of Agreement*, 30 April 1999.
- Edwards, Ross. *Dance Mantras*, Ricordi, 1992.
- Edwards, Ross. *Flower Songs*, Universal Editions, 1987.
- Greenbaum, Stuart. *Moments of Falling*, GRT Press, 1997.
- Greenbaum, Stuart. *Pat Metheny's The First Circle*. Diss. U of Melbourne, 1992.
- Hindson, Matthew. Programme notes to *AK-47*, 1995.
- Messiaen, Olivier. *Quartet for the End of Time*, Durand, 1942.
- Part, Arvo. *Tabula Rasa*, Universal Edition, 1980.
- Rutter, John. *The Lord is My Shepherd*, Oxford University Press, 1984.
- Sculthorpe, Peter. *Earth Cry*, Faber Music, 1986.
- Sculthorpe, Peter. *Kakadu*, Faber Music, 1988
- Wesley-Smith, Martin. *Who Killed Cock Robin*, unpublished, 1979.
- Xenakis, Iannis. *Idmen A-B*, Editions Salabert, 1985.

Recordings

- Aromer M., Peat, C. *Frequency*, Kool Kat/Virgin Music, 1992.
- Berry S., Claudio. *Red Herring*, Platipus Records, 1994.
- Ewarts, B. *Video Killed the Radio Star*, Carbert Music, 1979.
- Fieger, Doug and Averre, Berton. *My Sharona*, Capitol, 1979.
- 4 Hero: *Mr. Kirks Nightmare*, Westbury/Reinforced Music, 1992.
- Imrei S., O'Halloran J. *Turn on the Music*, Polygram Music, 1991.
- Nebula II. *Seance*, Westbury/Reinforced Music, 1991.
- Orbit, William (arr.). *Pieces in a Modern Style*, Warner Bros., 2000.

Paul, Richard M.. *Go*, Urban Arts, 1991.

Persona M., Carpella L., Bortolotti G. *Take Me Away*, All Boys Music, 1992.

Rigaux, L, Samoy, P.: *O Fortuna (Apocalypse Chorus Remix)*, Radikal Records, 1992.

2Unlimited. *Get Ready for This*, BMG, 1982.