

APPENDIX 4 — *When Cinderella's Monkey Comes Here, I'll Feed Him* —

Full Score

Programme Notes

Both Cinderella and the Monkey are characters in the continuous, yet primal, play in which we grapple with our own genetic behavioural patterns and emotions. Within such patterns and emotions there is conflict between what we perceive as beauty and what we perceive as darkness. The title of the work refers to both our inherent beauty and darkness, Cinderella a simile for the beauty with which we normally perceive ourselves, and the Monkey a metaphor for the darkneses we painstakingly conceal. The focus of the work is on an acknowledgement of our primal darkneses, our fears, jealousies, manipulations etc., acknowledgement that furthers the understanding of our own nature and hence benefits the beauty we contain within.

The work is cast in three movements, the opening slow movement programmatically focuses on the inner beauty and melancholy mood of Cinderella, the second movement focuses on the Monkey or darker side of Cinderella's own character, and the third movement represents the beneficial acknowledgement of the darker side of our human nature.

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August, 1996.*

Instrumentation

- Clarinet in Bb
- Piano
- Percussion

Percussion Instruments:

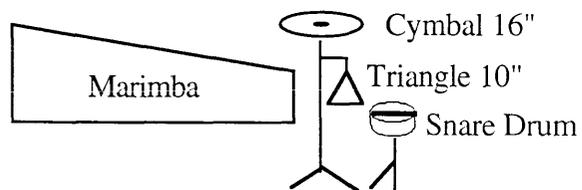
Staff 1:

Marimba

Staff 2:

Triangle 10" (medium size)
Cymbal 16" Crash/Ride
Snare Drum

Layout of Percussion Instruments:



General Notes

1. Accidentals

All pitches without accidentals are natural with the exception of tied notes both within measures and over barlines, i.e. the second note in a tied grouping does not receive an accidental.

Natural signs are given throughout the score in passages where the omission of the natural may result in the mistaken identity of a natural pitch where it succeeds a raised or flattened pitch of the same name.

2. Trills

All trills throughout the work are to the upper semitone.

3. Breath Marks

Breath marks (,) indicate short pauses inserted into the prevailing tempo.

Instrument Notes

Clarinet in Bb:

1. Transposition

The score is notated throughout at concert pitch.

2. Fluttertonguing

Fluttertonguing throughout the score is indicated by the symbol flz ↔ Production of fluttertonguing is left to the discretion of the performer.

3. Smorzato

Smorzato passages are notated with reference to the text by Bruno Bartolozzi (1), indicated with open noteheads 

4. Glissandi

The marking 'gliss' is used to indicate both portamento and glissando effects, achieved with lip/embouchure adjustment and/or fingering. The marking is accompanied by a line indicating pitch direction.

5. Multiphonics

Multiphonics are notated with reference to the text by Phillip Rehfeldt. (2) Suggested multiphonic fingerings are given in the score, along with the corresponding page number given in the Rehfeldt text.

6. Teeth on Reed

The marking  indicates movement within a high pitched screech, by contacting teeth with the reed.

Piano:

Pedalling:

Pedal marks within the score are provided as a guide and all pedalling may be executed at the discretion of the performer. In general however, where pedal marks do occur, appropriate pedalling should be made at the discretion of the performer. Where no pedal is marked use of the pedal is not desired.

(1) Bartolozzi, Bruno, *New Sounds for Woodwind*, London: Oxford University Press, 1967.

(2) Rehfeldt, Phillip, *New Directions for Clarinet*, Rev. ed. Berkely : University of California Press, 1994.

Percussion:

1. Preparation

The snare drum should be inverted on the stand. A sheet of A4 paper, folded circa 4 times, is placed under one bridge of the snares, elevating the snares approximately 4mm over the skin of the drum.

2. Mallets/Beaters

Mallet and beater markings throughout the score are intended as a guide only. Appropriate choices may be made at the discretion of the performer. Two-tone mallets are preferred as medium mallets.

 - soft mallet

 - hard mallet

 - medium (two-tone) mallet

 - triangle beater

 - paintbrush (artist's brush ca.1.cm, soft) with wood handle and a metal casing covering the join between the brush and handle.

3. Symbols

- Cymbal:

 - indicates a cymbal scrape with the triangle beater from the centre to the rim.

 - indicates a slow cymbal scrape with the triangle beater on the edge of the cymbal.

- Snare Drum:

 - snares only. Usually performed with the tip of the paint brush, unless the marking 'with wood' appears in which case the handle of the paintbrush is to be used lightly on the snares.

 - snare skin. Executed with the tip of the paintbrush in a tremolando fashion.

X noteheads indicate rimshots. The part of the mallet or beater to be used to execute the rimshot is indicated in the score; 'with metal' or 'with wood' indicates the use of the metal or wood part of the paint brush, with sticks indicates the use of the mallet stick.



Movement I	—	<i>Calm, but with an underlying tension throughout</i> ♪ = 104	p.1
Movement II	—	<i>With energy</i> ♪ = 176	p.9
Movement III	—	<i>Lightly throughout</i> ♪ = 124	p.22



Duration : c. 15'00



17

Cl. *senza vibrato*
ppp *fp* *ppp sotto voce* *tr*

Pno. *ppp* *fp* *tr* *loco*

Perc. *mf* *pp* *with metal*

25

Cl. *norm.* *ppp* *gliss* *p* *mp* *pp sub.* *ppp* *smorzato* *p.48*

Pno. *p* *una corda* *pp* *loco* *15^{ma}*

Perc. *p* *ppp*

33

Cl. *smorzato*
ppp *pp* *ppp* *pp*

Pno. *tre corde pp sempre*
8va right hand
Red. *loco ppp*

Perc. *pp* *ppp* *pp* *ppp* *pp*

40

Cl. *smorzato* *tr*
ppp *pp* *ppp* *ppp*

Pno. *pp sempre*
8va *loco ppp*

Perc. *ppp* *pp* *pppp* *ppp* *pp* *ppp*
with wood

48

Cl. *p mp p mp mf mp ten.*

Pno.

Perc. *ppp*

56 faster ♩ = 116

Cl. *pp pp pp p mp mf*

Pno. *p ppp loco loco mp mf*

Perc. *pp*

Musical score for measures 63-70. The score is arranged in three staves: Clarinet (Cl.), Piano (Pno.), and Percussion (Perc.).

- Cl. Staff:** Measures 63-70. Dynamics range from *f* to *ppp*. Includes markings for *ten.*, *p sub.*, and various fingerings (3, 5, 6).
- Pno. Staff:** Measures 63-70. Dynamics range from *f* to *ppp*. Includes markings for *scd.* and fingerings (3, 5).
- Perc. Staff:** Measures 63-70. Dynamics range from *f* to *ppp*.

Musical score for measures 71-78. The score is arranged in three staves: Clarinet (Cl.), Piano (Pno.), and Percussion (Perc.).

- Cl. Staff:** Measures 71-78. Dynamics range from *mf* to *ff*. Includes markings for *tr.* and fingerings (3, 5, 6).
- Pno. Staff:** Measures 71-78. Dynamics range from *mf* to *ff*. Includes markings for *scd.*, *mf sempre*, and fingerings (6, 5).
- Perc. Staff:** Measures 71-78. Dynamics range from *mf* to *ff*. Includes markings for *pp*, *mp*, and *p*.

96

Cl. *mp* *mf* *mp* *mf* *f* *mf* *f*

Pno. *mp* *mp* *mf* *cresc.* *mf*

Perc. *p* *p* *mp* *f* *mf* *f* *mp*

with metal

102

Cl. *pp* *pp* *ppp* *pp*

Pno. *p* *pp* *pp*

Perc. *pp* *pp* *ppp* *pp*

senza vibrato

dim.

111

Cl. *pppp* *norm.* *tenuto* *ppp sotto voce*

Pno. *pppp* *ppp* *Sua* *3* *led.*

Perc. *pppp p sempre* *ppp* *ppp*

120

Cl. *pppp* *pp* *p.48* *pp*

Pno. *ppp* *Sua* *5* *led.*

Perc. *pppp*

II

♩ = 176 with energy

System 1 (Measures 1-6):

- Cl:** Starts with a trill (tr), followed by notes with dynamics *ff*, *f*, *f*, *mf*, and *f*. Includes triplets and glissandos (gliss).
- Pno:** Features chords and triplets with dynamics *ff* and *f*.
- imba:** Complex rhythmic patterns with fingerings 5, 5, 6, 5, 5, 6, 3. Dynamics include *ff*, *f*, *ff*, *f*, *ff*, *f*, *ff*, and *f*.

System 2 (Measures 7-12):

- Cl:** Continues with triplets, glissandos, and dynamics *mf*, *f*, *f*, *mf*, *f*, and *ff*. Includes a trill at the end.
- Pno:** Includes a 'loco tr' section and '8vb' markings. Dynamics range from *ff* to *f*.
- Mba:** Continues with complex patterns and fingerings 5, 5, 6, 3, 5, 5, 3. Dynamics include *ff*, *f*, *ff*, and *mf*.

This musical score page contains three systems of music for Clarinet (Cl.), Piano (Pno.), and Mellophone (Mba.).

System 1 (Measures 29-36):

- Cl.:** Measure 29 starts with a box containing the number 29. The notation includes a trill (tr) and a fermata. Dynamics range from *ff* to *f*. A trill is marked with *tr* and a fermata with *f*.
- Pno.:** The piano part features a *molto staccato* marking. It includes complex rhythmic patterns with slurs and fingering (5). A 15-measure rest (*15^{ma}*) is indicated. Dynamics include *ff*, *mf*, and *f*. The word *loco* is written above the staff.
- Mba.:** The mellophone part consists of chords with dynamics *ff*, *sfz*, and *ff*.

System 2 (Measures 37-57):

- Cl.:** Measure 37 starts with a box containing the number 37. The part is mostly silent.
- Pno.:** The piano part continues with complex rhythmic patterns, including triplets (3) and slurs. Dynamics range from *ff* to *f*. A trill is marked with *tr* and a fermata with *ff*.
- Mba.:** The mellophone part features chords with dynamics *f*, *ff*, and *f*.

44

Pno.

Mba.

ff *fff* *ff* *fff*

rall.

51 *a tempo*

Pno.

Mba.

mf *pp*

a tempo

mf *f* *(p)* *mf* *f* *p* *mf*

58

Pno.

Mba.

mf *mp* *mf* *ppp*

f *mp* *mf* *f* *fff* *pp*

65

Pno. *mf* *f* *ff*

Mba. *p* *mf* *f* *f* *ff* *ff*

72

Pno. *fff* *pp* *f* *f* *ff* *f* *ff* *f* *ff*

Mba. *fff* *mf* *f* *mf* *ff* *f*

79

Pno. *f* *mf* *f* *ff* *mf* *ff*

Mba. *f* *f* *ff* *ff* *mf* *f*

Musical score for measures 101-108, featuring Clarinet (Cl.), Piano (Pno.), and Mbaritone (Mba.).

Measures 101-107:

- Cl.:** Starts with a trill (tr) and a series of notes. Dynamics include *mf*, *f*, *f*, *ff*, and *sfz*. Includes a slur over the final notes and a *flz* (flautissimo) marking.
- Pno.:** Mostly rests, with a *ff* dynamic marking in the lower register.
- Mba.:** Features chords and melodic lines. Dynamics include *ff*, *fff*, and *sfz*. Includes a slur and a *flz* marking.

Measure 108:

- Cl.:** Starts with a trill (tr) and notes. Dynamics include *f*, *ff*, *f*, and *f*. Includes a *flz* marking.
- Pno.:** Features chords in the lower register. Dynamics include *ff*, *f*, *ff*, and *f*.
- Mba.:** Features chords. Dynamics include *f* and *ff*.

115 (flz)

Cl.

senza vib.

5

6

p sempre

15^{ma}

ppp

Mba

mp

mf

122

Cl.

pp sempre

5

5

6

5

mf

f

p

mp

Pno.

129

Cl.

tr.

sim.

ppp sempre

Pno.

p

mp

mf

mp



135

Cl.

sim.

pppp

Pno.

mp

tr.

loco

pp

loco

141 *norm.*

Cl. *f* *mf* *f* *mf* *f* *f*

Pno. *ff* *mf* *f* *ff* *f* *mf* *norm.*

Mba. *ff* *f* *ff* *mf* *f* *f* *f*

molto staccato

147

Cl. *ff* *mf* *f* *mf*

Pno. *poco staccato* *sim.* *norm.* *f* *mf*

Mba. *ff* *f* *f* *mf* *ff* *f* *mf* *f*

loco

154

Cl.

Pno.

Mba.

f *f* *ff* *f*

f *mf* *f* *mf* *f*

160

Cl.

Pno.

Mba.

f *ff* *fff*

f *ff* *fff* *sfz*

ff *f* *fff* *sfz* *p*

8va *loco*

332

This musical score page contains two systems of music for Clarinet (Cl.), Piano (Pno.), and Mbari (Mba.).

System 1 (Measures 166-172):

- Measure 166:** Cl. starts with a *ff* dynamic, followed by a *f* dynamic. Pno. and Mba. also begin with *ff* dynamics.
- Measures 167-171:** The music continues with various dynamics including *f*, *ff*, and *mf*. The piano part features complex textures with triplets and quintuplets.
- Measure 172:** The system concludes with a trill (*tr*) in the Clarinet and Mbari parts, and a *mf* dynamic in the Piano part.

System 2 (Measures 172-178):

- Measure 172:** Cl. begins with a *ff* dynamic and a trill (*tr*). Pno. and Mba. also start with *ff* dynamics.
- Measures 173-178:** The music features a variety of dynamics including *f*, *ff*, and *mf*. The Clarinet part includes trills and complex melodic lines with quintuplets and sextuplets. The Piano part continues with intricate textures and dynamics.

178

Cl. *ff* *ff* *fff* *ff*

Pno. *ff* *fff* *loco* *fff* *ff* *fff* *fff*

Mba. *f* *ff* *fff* *f* *fff* *ff*

The musical score consists of three staves: Clarinet (Cl.), Piano (Pno.), and Mellophone (Mba.). The Clarinet staff begins at measure 178 with a dynamic of *ff* and features a sixteenth-note scale with a six-measure slur and a trill. The Piano staff has two parts: the upper part starts with a five-measure slur and a dynamic of *ff*, followed by a *fff* section with a *loco* marking, and the lower part continues with *fff* and *ff* dynamics. The Mellophone staff starts with a dynamic of *f* and includes five-measure and six-measure slurs, with dynamics ranging from *ff* to *fff*.

24

Cl. *mp* *mp* *mf* *pp* *p* *mp*

(Sva) *mp* *mp* *mp* *mf* *mf* *mp* *mf* *mp*

15^{ma} *mp* *mp* *mf* *mf* *mp* *p* *mf* *mp*

Mba. *mp* *mp* *p* *mf* *mp*

Perc. *p*

31

Cl. *mf* *mf* *p* *mp* *pp* (*p*)

(15^{ma}) *p* *mp* *mf* *p* *mp* *mf* *loco* *f*

loco

Mba. *mp* *mp*

Perc. *mp* *p* *p* *mp*

38

Cl. *p* *tr* *mp* *mf* *mp*

Mba. *mp* *mp* *pp* *mp* *mf*

Perc. *mf* *p* *mf*

45

Cl. *mf* *mf* *mp* *f* *mf* *f*

Mba. *f* *p* *mf* *mf* *f* *mf* *mp* *f*

Perc. *mf*

52

Cl. *p* *mp* *p* *mp* *ppp sub.*

so
lo
freely, calm throughout

59

Cl. *pp* *p* *mp* *p* *pp* *ppp* *ppp* *gliss*

66

Cl. *pp* *p* *mp* *p* *mp* *rit.* *a tempo* *tr*

73 faster ♩ = 144

Cl. *tr* *mf* *f* *f* *mf* *f* *p* *mf* *f* *ff*

Pno. *mf* *f* *Red.*

Mba. *ff* *f* *f* *pp* *ff*

Perc. *mp* *mf*

79

Cl. *tr* *mp* *mf* *f* *f* *mf* *f* *mf* *f*

Pno. *p* *f* *f* *Red.* *Red.* *Red.*

Mba. *mf* *f* *f* *mf*

Perc. *mp*

85

Cl. *f sempre* *mf* *f* *f* *ff* *fizz.*

Pno. *mp* *f* *ff*

Mba. *ff* *f* *f* *f*

Perc. *f*

91

Pno. *mf* *mp* *mf* *p*

Mba. *mf* *f* *p* *pp* *p*

Perc.

133

Cl. *f* *mf* *f* *p*

Pno. *p* *mf* *f* *ff*

Mba. *f* *f* *f* *p*

Perc. *f*

140

Cl. *f* *ff* *f* *ff* *ff*

Pno. *f* *ff* *f* *ff* *f* *ff* *mf*

Mba.

Perc. *f* *f* *f* *ff* *ff* *mf*

146

Cl. *f* *ff* *ff* *fff*

Pno. *f* *ff* *ff* *fff* *ff* *staccato*

Mba. *mf* *f* *ff* *fff*

Perc. *f* *fff* *f* *mf*

152

Pno. (Sub) *f* *ff* *fff* *ff* *fff*

Mba. *f* *ff* *ff*

Perc. *ff* *f* *f* *ff* *fff* *ff* *fff*

159

solo
very energetic

Pno.

(Sub)-----

loco

ff

5

tr

fff

mf

6

5

f

ff

Red.

165

Sua-----

loco

3

5

3

f

loco

ff

fff

loco

172

Cl.

p

smorzato

p

ppp sotto voce

Pno.

pp

tr

mp

p

Red.

Mba.

Perc.

ppp

mp

pp

p

p

pp

181

Cl. *tr* *mp* *f* *mf* *p* *tr*

Pno. *mp* *p* *mp* *mf* *mf* *p*

Mba. *mf* *mp* *mf* *p*

Perc. *p* *mf* *mf*

Detailed description: This system contains measures 181 through 188. The Clarinet part features a trill in measure 181, followed by a melodic line with dynamics *mp*, *f*, *mf*, and *p*, ending with another trill. The Piano part has a rhythmic accompaniment with dynamics *mp*, *p*, *mp*, *mf*, *mf*, and *p*. The Mbaritone part has a melodic line with dynamics *mf*, *mp*, *mf*, and *p*. The Percussion part has a simple rhythmic pattern with dynamics *p*, *mf*, and *mf*.

189

Cl. *tr* *mp* *flz* *mp* *f* *ff* *f* *ff* *fff*

Pno. *mp* *f* *8[♭]* *5* *ff* *fff*

Mba. *mp*

Perc. *f* *mf* *ff* *fff*

Detailed description: This system contains measures 189 through 196. The Clarinet part starts with a trill, followed by a melodic line with dynamics *mp*, *flz* (flautissimo), *mp*, *f*, *ff*, *f*, *ff*, and *fff*. The Piano part has a complex accompaniment with dynamics *mp*, *f*, *8[♭]* (octave flat), *5* (fingerings), *ff*, and *fff*. The Mbaritone part has a simple melodic line with dynamics *mp*. The Percussion part has a rhythmic pattern with dynamics *f*, *mf*, *ff*, and *fff*.

APPENDIX 5 — Notes on the Accompanying CD Audio Examples

Each of the four works on the accompanying audio CD was digitally recorded, and the final two works on the CD also digitally edited. In many respects, the edited audio examples represent the completion of a process, one in which the composer's control over the final product moves away from the traditional outcome. Traditionally the completion of the full score is usually the final step of the compositional process. The production, by the composer, of the edited audio examples moves that process closer to one in which control over the final presentation of a work is placed in the hands of the composer. This is a result of the availability of commercial software for the recording and editing of sound in the digital domain. The following notes on each of the recordings detail the processes I have employed to develop the works for CD presentation.

The recording of the *Study for Triangles* was made at a live performance of the work in 1993, with Claudio Pompili, Lou Nano and Andrew Taylor performing the acoustic parts, and myself controlling the triangle samples. The placement of speakers, on either side of the stage for the output of the samples, and the placement of the acoustic triangle performers centre-stage was suitable for the presentation of the work to the live audience, however, in the recording, the speaker placement, in combination with a microphone placement suited to the recording of purely instrumental works performed in the concert, resulted in the samples being recorded at a lower volume level than the centre-stage acoustic triangles. For the CD, an option was to re-record the work in the studio to attain a desired balance between the samples and the acoustic triangles, however the live performance environment of the work would be lost, and to some extent, a loss of interaction between the performers was anticipated. The live performance of the work was thus chosen for the CD, and the listener is asked to bear in mind the lower level of the sampled triangle part. The recording was made directly to digital audio tape, and transferred to hard disk for compilation to CD.

The recording of the *Étude in Memoriam Allan Dagg* was straight-forward, the output of the various sound generating devices used for the work sent to a mixer, and the stereo output from the mixer sent directly to DAT. From DAT the work was transferred to

computer hard disk, ready for the compilation of the CD. No digital editing of the work was carried out.

The two accordion parts of *Descendant Lines*, performed by Stephen Tafra, were recorded separately using the multi-track digital recording program *Pro-Tools*, and the work was recorded in short sections over a period of three months. Using the editing program *Sound Designer*, the separate sections were linked together, the various algorithms within the program allowing cross-fades between sections, equalisation, and minor adjustments to tempi with the program's Time-compression algorithm. However, the performance of the work is considered to be highly satisfactory, and hence digital editing of the performance was minimal.

CM was recorded in a two day period, the three performers, James Atkinson, clarinet, Richard Peter Maddox, piano, and Richard Gleeson, percussion, having had no prior rehearsal together due to constraints of distance and time. The three movements of the work were recorded in stereo directly to DAT, in 56 separate takes. The takes were transferred from DAT to hard disk, and subsequently linked together within a single *Sound Designer* file. As in *Descendant Lines*, *Sound Designer* cross-fade algorithms were employed to provide smooth transitions between the separately recorded sections, and algorithms for equalisation were employed. Often multiple recordings were made of a single section, with various portions of one take being satisfactory, whilst other portions of the same take were not. Where this was the case, unsatisfactory portions of one take were replaced with corresponding portions from a second take. the combination of the two takes then providing satisfactory results. On completion of the editing of *CM*, the final versions of all four works were compiled in a CD mastering program. *Masterlist CD*, and a CD burner used to produce the accompanying audio CD.

BIBLIOGRAPHY

- Ames, Charles 1982, 'Crystals: Recursive structures in automated composition', *Computer Music Journal*, 6(3), 46-64.
- 1987, 'Automated composition in retrospect: 1956-1986', *Leonardo*, 20(2), 169-85.
- 1988, 'The Markov process as a compositional model: A survey and tutorial', *Leonardo*, 22(2), 175-87.
- 1992, 'A catalogue of sequence generators: Accounting for proximity, pattern, exclusion, balance and/or randomness', *Leonardo Music Journal*, 2(1), 55-72.
- Biles, John A. 1994, "GenJam: A genetic algorithm for generating jazz solos", <http://www.it.rit.edu/~jab/GenJam94/Paper.html>
- Borowski, E.J. & Borwein, J.M. 1989, *Collins Dictionary of Mathematics*, Harper Collins Publishers, Great Britain.
- Burns, Kristine Helen 1994, The history and development of algorithms in music composition, 1957-1993, Doctoral dissertation, Indiana, Ball State University, Muncie, Indiana.
- Chadabe, J. & Meyers, R. 1977, 'An introduction to the play program', *Computer Music Journal*, 2(1), 12-18.
- Chadabe, J. & Zicarelli, D. 1986a, *Jam Factory User's Manual*, Intelligent Computer Music Systems Inc., Albany, New York.
- Chadabe, J. & Zicarelli, D. 1986b, *M User's Manual*, Intelligent Computer Music Systems Inc., Albany, New York.
- Chadabe, J. 1984, 'Interactive composing: An overview', *Computer Music Journal*, 8(1), 22-7.
- Chomsky, Noam 1957, *Syntactic Structures*, The Hague, Mouton.
- Chowning, John 1973, 'The synthesis of complex audio spectra by means of frequency modulation', *Journal of the Audio Engineering Society*, 21(7), 526-34. Reprinted in *Foundations of Computer Music*, eds. Curtis Roads and John Strawn, The MIT Press, Cambridge, Massachusetts, pp.6-29.
- Cohen, Daniel I.A. 1991, *Introduction to Computer Theory*, John Wiley & Sons Inc., New York.

Collins, L. 1975, *An Introduction to Markov Chain Analysis*, Geo Abstracts Limited, Norwich.

Cook, Nicholas 1987, *A Guide to Musical Analysis*, J.M. Dent and Sons, London.

Cook, V. J. 1988, *Chomsky's Universal Grammar: An Introduction*, Basil Blackwell, Oxford.

Cope, David 1991, *Computers and Musical Style*, Oxford University Press, Oxford.

Crystal, David 1971, *Linguistics*, Penguin Books, Harmondsworth, Middlesex, England.

Dannenbergh, R. B. 1989, 'Real-time scheduling and computer accompaniment', in *Current Directions in Computer Music Research*, eds. Max V. Mathews and John R. Pierce, The MIT Press, Cambridge, Massachusetts, pp.225-61.

Davies, Paul & Gribbin, John 1991, *The Matter Myth: Beyond Chaos and Complexity*, Penguin Books, London.

Dawkins, Richard 1986, *The Blind Watchmaker*, Penguin Books, London.

— 1989 'The evolution of evolvability' in *A-Life*, ed. C.G. Langton, Addison-Wesley, Redwood City, California, pp.201-20.

De Furia, S. & Scacciaferro, J. 1987, *The Sampling Book*, Third Earth Publishing Inc., Pompton Lakes, New Jersey.

Dobrian, J. Christopher 1990a, *MAX User Manual — Getting Started*, Opcode Systems Inc., Palo Alto, California.

— 1990b, *MAX User Manual — Reference*, Opcode Systems Inc., Palo Alto, California.

Dodge, Charles & Bahn, Curtis R. 1986, 'Musical fractals', *Byte Magazine*, Vol.11, 185-96.

Dodge, Charles & Jerse, T. 1985, *Computer Music Synthesis, Composition and Performance*, Schirmer Books, New York.

Dodge, Charles 1988, 'Profile: A musical fractal', *Computer Music Journal*, 12(3), 10-14.

Douady, Adrien 1986, 'Julia sets and the Mandelbrot set', in *The Beauty of Fractals*, eds. H.O. Peitgen, & P.H. Richter, Springer-Verlag, Berlin, pp.161-73.

- Favilla, Stuart 1996, 'Interactive installations for schools', *Sounds Australian*, 14(47), 27-9.
- Feder, Jens 1988, *Fractals*, Plenum Press, New York.
- Forte, Allen 1973, *The Structure of Atonal Music*, Yale University Press, New Haven.
- Grout, Donald J. 1980, *A History of Western Music*, Third Edition, J.M. Dent and Sons Ltd., London.
- Gutowitz, Howard 1995, "Artificial-Life simulators and their applications".
<http://alife.santafe.edu/alife/topics/simulators/dret/dret.html>
- Guttman, Anthony J. 1977, *Programming and Algorithms: An Introduction*, Heinemann Educational Books, London.
- Hall, Nina 1991, 'Introduction' in *The New Scientist Guide to Chaos*, ed. Nina Hall, Penguin Books, London, pp.7-10.
- Henderson-Sellers, B. & White, G. 1995a "An evaluation of the object-orientedness of MAXTM and how to develop a library of musical objects", *Mikropolyphonie*, Vol.1.01. <http://farben.latrobe.edu.au/mikropol>
- Henderson-Sellers, B. & White, G. 1995b "LorenzSA MAXTM patch", *Mikropolyphonie*, Vol.1.01, <http://farben.latrobe.edu.au/mikropol>
- Hiller, Lejaren 1970, 'Music composed with computers — a historical survey' in *The Computer and Music*, ed. Harry Lincoln, Cornell University Press, New York, pp.42-96
- Holtzmann, S. 1981, 'Using generative grammars for music composition', *Computer Music Journal*, 5(1), 51-64.
- Jones, Kevin 1981, 'Compositional applications of stochastic processes', *Computer Music Journal*, 5(2), 45-61.
- 1989, 'Generative models in computer-assisted musical composition', *Contemporary Music Review*, Vol.3, 177-96.
- Knuth, Donald, E. 1973, *The Art of Computer Programming Volume 1 — Fundamental Algorithms*, Addison-Wesley, Reading, Massachusetts.
- Langton, Christopher G. 1989 'A-Life', in *Artificial Life*, ed. C.G. Langton, Addison-Wesley, Redwood City, California, pp.1-47

- LaRue, Jan 1970, *Guidelines for Style Analysis*, W.W. Norton & Co. Inc., New York.
- Laske, Otto 1981, 'Composition theory in Koenig's Project One and Project Two', *Computer Music Journal*, 5(4), 54-65.
- Latham, William 1991, 'Form Synth: The rule-based evolution of complex forms from geometric primitives' in *Computers in Art, Design and Animation*, eds. John Lansdown and Rae A. Earnshaw, Springer-Verlag, Berlin, pp.80-108.
- Les Enfants Du Paradis* (motion picture) 1945, Paris, Pathé Consortium Cinéma, Producer Marcel Carné.
- Levy, Stephen 1992, *Artificial Life — The Quest for a New Creation*, Penguin Books, London.
- Loy, Gareth 1985, 'Musicians make a standard: The MIDI phenomenon' *Computer Music Journal*, 9(4), 8-26.
- 1989a, 'Composing with computers - a survey of some compositional formalisms and music programming languages', in *Current Directions in Computer Music Research*, eds. Max V. Mathews and John R. Pierce, The MIT Press, Cambridge, Massachusetts, pp.291-396.
- 1989b, 'Preface to the special issue on parallel distributed processing and neural networks', *Computer Music Journal*, 13(3), 24-7.
- Mandelbrot, Benoit 1991, 'Fractals — a geometry of nature', in *The New Scientist Guide to Chaos*, ed. Nina Hall, Penguin Books, London, pp.122-35.
- Mather, Betty 1987, *Dance Rhythms of the French Baroque*, Faber and Faber, London.
- Matossian, Nouritza 1986, *Xenakis*, Kahn & Averill, London.
- Mathews, Max V. & Moore, Richard F. 1970, 'GROOVE — a program to compose, store and edit functions of time' *Communications of the Association for Computing Machinery*, 13(12), 715-21.
- Meyer, Leonard 1989, *Style and Music*, University of Pennsylvania Press, Philadelphia.
- Millen, Dale 1994, "Cellular Automata Music, Version 1.0",
<ftp://notam.uio.no/pub/mac/midi>
- Moore, F.R. 1990, *Elements of Computer Music*, Prentice Hall, Englewood Cliffs, New Jersey.

- Morgan, Nigel 1990a, 'An introduction to Symbolic Composer', Hypercard stack supplied in *Symbolic Composer Software Program*, Tonality Systems, Amsterdam, Holland.
- 1990b, 'Symbolic Composer — a description and evaluation', Paper supplied in *Symbolic Composer Software Program*, Tonality Systems, Amsterdam, Holland.
- Nelson, Gary Lee 1993, "Sonomorphs: An application of genetic algorithms to the growth and development of musical organisms"
<http://talbert3.con.oberlin.edu/~gnelson/papers/morph93/morph93.htm>
- 1995, "Max Markov object by Orm Finr endahl",
 algo-comp@kahless.isca.uiowa.edu (6th April, 1995).
- Olsen, H. & Belar, H. 1961, 'Aid to music composition employing a random probability system', *Journal of the Acoustical Society of America*, 33(9), 1163-71.
- Palmer, Tim 1991, 'A weather eye on unpredictability', in *The New Scientist Guide to Chaos*, ed. Nina Hall, Penguin Books, London, pp.69-81.
- Parks, Richard S. 1989, *The Music of Claude Debussy*, Yale University Press, New Haven.
- Peitgen, H.O. & Richter, P.H. 1986, *The Beauty of Fractals*, Springer-Verlag, Berlin.
- Percival, Ian 1991, 'Chaos: a science for the real world', in *The New Scientist Guide to Chaos*, ed. Nina Hall, Penguin Books, London, pp.11-21.
- Pinkerton, R. 1956, 'Information theory and melody', *Scientific American*, Vol.194, 77-86.
- Polansky, L., Burk, P., & Rosenboom, D. 1990, 'HMSL: A theoretical overview', *Perspectives of New Music*, 28(2), 136-78.
- Risset, Jean-Claude 1985, 'Digital techniques and sound structures in music', in *Composers and the Computer*, ed. Curtis Roads, William Kauffman Inc., Los Altos, California, pp.114-38.
- Roads, Curtis 1985a, 'Grammars as representations for music', in *Foundations of Computer Music*, eds. Curtis Roads and John Strawn, The MIT Press, Cambridge, Massachusetts, pp.403-42.
- 1985b, 'Interview with Gottfried Michael Koenig', in *Foundations of Computer Music*, eds. Curtis Roads and John Strawn, The MIT Press, Cambridge, Massachusetts, pp.568-80.

- 1985c, 'Introduction' in *Composers and the Computer*, ed. Curtis Roads, William Kauffman Inc., Los Altos, California, pp. xi-xxi.
- Rozenburg, G. & Salomaa L. 1985, *The Book of L*, Springer-Verlag, Berlin.
- Rowe, Robert 1993, *Interactive Music Systems*, The MIT Press, Cambridge, Massachusetts.
- Saunders, David 1994, 'Shot man stabbing himself, court told', *The Melbourne Age*, 4 October, p.1.
- Schrade, Leo 1956, (ed.) *Polyphonic Music of the 14th Century*, L'Oiseau - Lyre, Monaco.
- Series, Caroline 1991, 'Fractals, reflections and distortions', in *The New Scientist Guide to Chaos*, ed. Nina Hall, Penguin Books, London, pp.136-48.
- Shiflet, Angela B. 1987, *Discrete Mathematics for Computer Science*, West Publishing Company, St. Paul.
- Sica, Giancarlo 1994, 'Symbolic Composer for Apple Macintosh and Atari computers' *Computer Music Journal*, 18(2), 107.
- Sigmund, Karl 1993, *Games of Life*, Penguin Books, London.
- Simons, S. & Marks, G. 1931, 'All of Me', in *70 years of Popular Music: The Thirties*, International Music Publications Ltd., Essex, England.
- Sims, Karl 1991, 'Artificial evolution for computer graphics' in *Computer Graphics (SIGGRAPH '91 Proceedings)*, 25(4), 319-28.
- Sipper, Moshe 1996a, "A brief introduction to cellular automata", <http://lslwww.epfl.ch/%7Emoshes/ca.html>
- 1996b, "A brief introduction to genetic algorithms", <http://lslwww.epfl.ch/%7Emoshes/ga.html>
- Smith-Brindle, Reginald 1987, *The New Music* (Second Edition), Oxford University Press, Oxford.
- Stewart, Ian 1991, 'Portraits of chaos', in *The New Scientist Guide to Chaos*, ed. Nina Hall, Penguin Books, London, pp.44-58.

Thomas, Janet Owen & Morgan, Nigel 1990, *Symbolic Composer User's Manual*, Tonality Systems, Amsterdam, Holland.

Todd, P. & Loy, G. 1991, *Music and Connectionism*, The MIT Press, Cambridge, Massachusetts.

Vickery, Lindsay 1996, 'Software applications for composition' *Sounds Australian*, 14 (47), 9-10.

Xenakis, I. 1971, *Formalized Music*, Indiana University Press, Bloomington.

Yavelow, Christopher 1987, 'Music and microprocessors: MIDI and the state of the art', in *The Music Machine*, ed. Curtis Roads, The MIT Press, Cambridge, Massachusetts, pp.199-234.

— 1992, *Macworld Music and Sound Bible*. IDG Books, San Mateo, California.

Zicarelli, David 1987, 'M and Jam Factory', *Computer Music Journal*, 11(4), 13-29.

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