Events

Voices: Peninsula Arts Contemporary Music Festival


Reviewed by Nigel Morgan
Wakefield, West Yorkshire, UK

The South West peninsula of the United Kingdom is all set to become one of the major new areas of technological and cultural growth in Europe. At the epicenter lies the city of Plymouth, whose enterprise university is already making waves in the academic world, not least in its establishment of the Interdisciplinary Centre for Computer Music Research (ICCMR). This center is formed of scholars from different backgrounds and different departments across the University, bringing together Computing, Neuroscience Education, Music, and Media. ICCMR is led by Eduardo Reck Miranda, a composer who deftly marries in his academic work visionary ideas about future states of music with the ability to articulate accessible and realistic music experiences.

Voices was a weekend festival of performances, lectures, demonstrations, and workshops exploring contemporary music for voices and showcasing computer music research and new creative developments at the University of Plymouth. It was a most successful collaboration between ICCRM and Peninsula Arts, an organization set up by the university under the direction of Simon Wymouth's session could have benefited from a different slot in the schedule. What she said about her work and her background in community and theatre arts was most revealing, but those who heard her did so at the end of six hours of continuous events.

Voices was a most imaginatively planned and well-executed mini-festival that deserves to be established as a regular part of the contemporary music calendar in the UK. Further information can be found on the festival Web site (cmr.soc.plymouth.ac.uk/event.htm).

Reviewed by Nigel Morgan
Wakefield, West Yorkshire, UK

The opening event brought together the jazz partnership of Mike and Kate Westbrook with ICCMR researcher Marcelo Gimenes, an accomplished pianist whose program of music from Brazil made a lively mix with the Westbrooks' cabaret performances of Kurt Weill alongside their celebrated William Blake settings. Saturday's concert focused on the unique presence of Frances Lynch, one of the few international singers to have worked closely with composers of electroacoustic music. Her dramatic and most committed performances continue to inspire many composers, not least Mr. Miranda, whose Requiem per una perduta Ms. Lynch was able to rehearse and develop during a short residency promoted by ICCMR. Her concert also featured one of the classics of the genre, Alejandro Viñao's Hildegard's Dream. The third concert gave listeners an opportunity to experience something of Plymouth's own alternative musical scene in a performance shared between remix performers Daniel and Matthew Smith and the songwriter John Matthias.

Woven into and around these events were performances that celebrated the wealth of community involvement in regional music-making. Saturday's concert with Frances Lynch was shared with Voces, an amateur choir of 24 voices who performed under their conductor Martyn Warren an impressive and articulate new work by Karen Wimhurst. The choir also participated in electroacoustic works by Andrew Lovett and Mr. Miranda. A lively program of lectures and workshops surrounded the concert events. Mr. Miranda gave a presentation of great clarity that examined the techniques he has been developing to create an artificial phonological system for his work Sacra Conversazione, an opera in five acts. His coda to the lecture introduced the intriguing notion that his newly developed research tools could well be used to explore how early humans may have spoken, and in conjunction with robotic simulations, might go further to exploring communication and behaviors. Ms. Lynch gave an invaluable “how to do it” guide for performers and composers. It was the kind of common-sense presentation all too rare in a cultural climate where the interpretation of digitally mediated work is so often regarded as the sole property of the artist and no one else. Sadly, composer Karen Wimhurst's session could have benefited from a different slot in the schedule. What she said about her work and her background in community and theatre arts was most revealing, but those who heard her did so at the end of six hours of continuous events.

Voices was a most imaginatively planned and well-executed mini-festival that deserves to be established as a regular part of the contemporary music calendar in the UK. Further information can be found on the festival Web site (cmr.soc.plymouth.ac.uk/event.htm).
James Wierzbicki: Louis and Bebe Barron’s Forbidden Planet: A Film Score Guide


Reviewed by James Harley
Guelph, Ontario, Canada

The music produced by Louis and Bebe Barron for the 1956 Hollywood science-fiction film, Forbidden Planet, ranks as one of the important milestones in the history of electronic music for being the first such major commercial project to be created entirely from electronic sounds. Furthermore, although many film scores today are likely to have been produced using entirely digital means, most imitate traditional instruments at least in part. The music for Forbidden Planet was created from custom-built electronic circuits, and the sounds resemble traditional instruments or styles not at all.

The soundtrack album for Forbidden Planet was released on vinyl in 1977 (and on compact disc in 1989) and was reviewed in these pages by Curtis Roads in 1983 (CMJ 7:1). The music is commonly discussed in historical accounts of electronic music and an excerpt of the soundtrack is included on at least one compilation recording: OHM: The Early Gurus of Electronic Music. The film itself is shown on late-night television on occasion, and it is possible to rent or purchase on DVD. Until this publication by musicologist James Wierzbicki, however, the music has not been studied in depth, either on its own or in the functional context of the film.

Louis and Bebe Barron’s FORBIDDEN PLANET: A Film Score Guide is the fourth of the Scarecrow Film Score Guides. It is an admirable book, looking in detail at the music and the film, and setting Forbidden Planet—and the Barrons—into historical context. The text is organized into five chapters. The first, “Origins and Connections,” provides biographical information on the Barrons, including their relationship with John Cage.

I had always understood that the Barrons had supported his Music for Magnetic Tape project by providing equipment and technical assistance. Here, though, I learned that in fact Cage had paid them for this work from a grant he had received, and that they in essence were his employees for a period of about one year. Mr. Wierzbicki notes an often-overlooked point, that the Barrons’ tape composition For An Electronic Nervous System [1954] was one of the creative outcomes of this project, along with Cage’s William Mix [1952], Earle Brown’s Octet I [1953], and Christian Wolff’s Music for Magnetic Tape [1952]. This chapter also discusses the genesis of the film, how the Barrons came to be hired to provide the music (the studio never intended that they should score the whole film, apparently), and the aftermath, both with regard to the film and the Barrons’ career. One should not (definitely not!) follow a similar path if one is aiming to make a career doing music in Hollywood, but the Barrons’ determination and uncompromising aesthetic vision are a joy to read about.

Chapter 2, “Compositional Techniques,” describes the Barrons’ approach to creating electronic music, and also provides an outline history of electronic instruments and studios, experimental techniques, and other uses of electronic sounds in film. The listing of films that make use of Theremin sounds and so forth is a useful resource for anyone wanting to explore the wider context for the Forbidden Planet soundtrack. The invented circuits that Louis Barron built were intended to make “interesting sounds” that were “nonlogical” and “unstable.” He apparently found theoretical justification for his approach in the cybernetics of mathematician Norbert Weiner, who attempted to link the organizational systems of machines and living organisms to information theory. For Barron, the creation of sound-producing circuits that behaved in unpredictable, but controllable, ways and that followed a natural life cycle (the period of activity before circuit components failed) was extremely attractive. Bebe Barron’s main creative role, we learn, was to listen to the many recorded hours of circuitry output to select musically interesting moments. The couple would then work on the material using standard tape manipulation techniques.

Chapter 3, “Historical and Critical Contexts,” focuses on the film. The author presents the social and aesthetic backgrounds for Forbidden Planet and its critical reception over time. He also discusses the screenplay, including its Freudian psychological elements and its resemblance to Shakespeare’s The Tempest.

Chapter 4 presents a detailed musical analysis of the soundtrack as heard on the Forbidden Planet album. The recording differs from the music heard in the film in many ways, which Mr. Wierzbicki carefully notes. Some of the cues are shorter, some are longer, and of course none of the dialogue or diegetic sound ef-
effects are present. The music is presented on the album in stereo, and the mix has made use of a range of spatialization and panning effects; the music as heard on the film is entirely monophonic. The final track of the album features music that is not heard in the film at all. Apparently, the Barrons were concerned that the music stand on its own, compositionally, and expended much effort in putting together the tracks for the 1977 album release. The author studies the music in each track, noting salient features, often providing transcriptions of important thematic materials. His analysis represents an impressive effort, particularly given the absence of cue sheets, scores, or other notes. He has had to come up with language to describe unusual sound effects, and for the most part he has done well in this, even if such an effort is doomed to fail (“shimmery tone clusters” will no doubt mean quite different things for different readers/listeners). Particularly useful is the section on motivic relationships, showing the musical connections between tracks. The author provides specific details on the leitmotif aspect of the music, a common enough element in many film scores but particularly difficult to study with precision in this case due to the non-traditional electronic character of the film score.

In chapter 5, Mr. Wierzbicki charts an equally careful listening to the soundtrack of the film. Here the music is set into the context of the film’s plot and editing decisions, along with the diegetic sounds heard alongside the Barrons’ “electronic tonalities,” as their music was described in the film credits. Given how much the soundtrack album differs from the music in the film, and how the function of the music differs, it is invaluable that the author has taken on this double analysis.

Mr. Wierzbicki does not appear to be aware of recent work on developing new tools for analyzing electroacoustic music— that of Pierre Couprie, Stéphane Roy, or others. I believe he would have benefited from the functional and graphical techniques these researchers have proposed and utilized for analyses of nontraditional music. That being said, this study of Forbidden Planet is quite remarkable—clearly written, and highly informative in many ways. I would love to be able to read similarly thorough studies of major electroacoustic compositions unconnected with Hollywood films. Scarecrow Press ought to launch another series: the Electroacoustic Music Guides!

James Matthew Bohn: The Music of American Composer Lejaren Hiller and an Examination of His Early Works Involving Technology


Reviewed by Louis Ferdinand Meudon, France

Looking back from a technical point of view on computer music from the 1950s, one has the impression that it is ancient history; at the same time, it is surprising how contemporary the ideas from 50 years ago still appear. Descriptions of hardware and software from 50 years ago probably seem like cave drawings to most people today. Although hardware and software developments were significant from the 1950s through the 1980s, for most practitioners of computer music these developments were relatively transparent. The working method and environment of a user sitting in front of a teletype, punching cards, waiting for batch jobs on a large, somewhat non-descript behemoth computer at a university did not change much for the lone “eccentric” from a music department sharing time with scientific researchers who fortunately were sympathetic to anyone in the arts even vaguely interested in computing.

For most composers of computer music, except for the odd mini- or micro-computer user or the fortunate few to have worked in “elite” research centers, it has only been in the past 15 years or so that hardware and software have gone through a major revolution. Some might argue that this “revolution” is nothing more than a change of working habits, a change on the surface, whereas others would insist that this overhaul in the tools of the trade is directly related to artistic creativity in profound ways. Although this discussion of the tools and technology is engaging, the fact remains that many of the prevalent ideas of the 1950s [independent of hardware and software] remain surprisingly relevant today. David Rosenboom, in his heady forward to James Bohn’s The Music of American Composer Lejaren Hiller and an Examination of His Early Works Involving Technology, recaptures some of the intellectual adventurousness of the pioneer era of computer music:
Hiller's contributions to procedural thinking... he employed serial techniques and understood them as a subset... inside combinatorial mathematics... He introduced the idea of the interval row... developed a measure of linear angularity... dissonance measures... weighting schemes for parametric behaviors... geometry and topological ideas... as descriptors of forms... pseudo-random numbers, Monte Carlo-like generate-and-test loops, moving-window filters on stochastic cannons... notions of formal and perceptual hierarchy... rhythmic hierarchies... Markov transition probabilities... systems and information theory [pp. vii–x]

Add a couple of popular terms like "chaos theory" and "genetic algorithms" to the mix, and one has a reasonable list of much of today's intellectual fodder.

If only Hiller could have done a computer search of the terms "algorithmic music" and "computer generated music" 50 years ago! The other day, Google returned about 38,000 [in 0.11 seconds] and 51,300 [in 0.07 seconds] hits, respectively, for these terms. What would be different today without his decision to abandon chemistry to pursue a career in music? What is his historical importance, and what are his major contributions to the field of computer music? Any serious study of algorithmic music must begin with Hiller's seminal work Experimental Music, published in 1959. (Iannis Xenakis's Formalized Music from 1963 makes up the other half of seminal publications in the field from that period.)

The most striking thing about Experimental Music are the musical questions that Hiller poses. But where do we go from there? Or even better, where does algorithmic music fit into contemporary computer music society? Algorithmic composition using digital computers was on an equal footing with digital synthesis 50 years ago. Using proceedings of the International Computer Music Conference as a yardstick, one could argue that the discipline has become a backwater in a long slow fadeout. I found this rather disgruntled comment in one of the Google hits: “There are those that in agreeing with Xenakis' statement that ‘music, by its very abstract nature is the first of the arts to have attempted the cancellation of artistic creation with scientific thought’ wonder why computer music conferences are filled with engineers dedicated to cutting-edge technologies, speaking favorably about conservative and embryonic ideas of music composition, if they even mention music composition.” Are there still composers bothered by the question of whether or not a computer should be involved in the composing process? As Mr. Rosenboom states in his introduction to Mr. Bohn's book: “The term, algorithm, is already off-putting to many. The components of intuitionism, valued as a part of humanistic music making, are presumed to be absent from algorithms” [p. vi]. Has algorithmic music become a dirty little secret of the computer music field: does everyone do it while no one admits it, or else do very few composers actually employ algorithms in their music? What is your algorithm?

A recent article about a very prominent American composer stated that the composer used the computer to solve certain musical problems using a variety of composition software. The reader could infer that this was not the composer's "normal" way of working. [To be fair, the same article mentions that his most recent opera has a two-minute electronic introduction which is noise, not music. It is inferred that this electronic introduction was created by a sound designer and not by the composer himself. Just because synthesis techniques have more cachet in the computer music literature today, we should not lull ourselves into thinking that computer sounds are favored over algorithmic composition techniques by "mainstream" composers.]

Although Mr. Bohn's book has the air of a published thesis, the print quality and photo reprint quality is low, and it contains a number of typographical errors, it is a hugely significant book. There is a serious lack of publications on algorithmic music in general and on Hiller in particular. This first in-depth evaluation of Hiller's contributions to contemporary music should be forgiven its cosmetic faults. The book has introductory chapters on Hiller's life and works, and his computer music output. While Hiller studied music in a traditional academic setting with Roger Sessions and Milton Babbitt during his undergraduate days at Princeton, and while he presented himself as researcher, he clearly belongs to the American experimental tradition of Charles Ives, Henry Cowell, and John Cage. His compositions, both computer-assisted and non-computer-assisted, are grounded in the experimental tradition.

Some will be surprised to read that he composed a fairly large number of piano sonatas, string quartets, chamber pieces, incidental music, and orchestral works, well before the famous ILLIAC Suite of 1957. [Of his 75 listed works, only a fifth of his output employed computer-assisted techniques, and less than two-fifths employed electronic or computer-generated sounds.] Mr. Bohn states that since his “work will investigate
four of Hiller’s compositions whose creation involved technology . . . a fair portion of this text is devoted to the technology itself” [p. 18]. The technology used for the four compositions includes the ILLIAC I and II computers, the IBM 7090 computer, the CSX computer, and the Experimental Music Studio [EMS] founded by Hiller at the University of Illinois in Urbana-Champaign. A chapter is devoted to each of the four computers and to analog equipment in the EMS. The history, development, and operation of the computers are described in great detail. (It might be unexpected for some to learn that Hiller made use of computers for algorithmic composition, music printing, and real-time digital audio by the early 1960s.)

The chapter on the EMS covers virtually every piece of equipment that existed in that studio during the late 1950s and early 1960s. These chapters will probably be skimmed by some [they comprise one-third of the book], but will be relished by others. They are written with the same attention to detail as Paul Doorbusch’s marvelous tome The Music of CSIRAC [reviewed elsewhere in this issue], which describes Australia’s first computer music from the early 1950s. Anyone who enjoys reading about the mercury acoustic delay line-based memory of the CSIRAC computer and how this unusual technology influenced the music made, will find these chapters in Mr. Bohn’s book fascinating reading. Mr. Bohn understands that a detailed explanation of the tools and techniques that make up a particular technology contribute to an understanding of what was created with the technology.

Following these chapters, Mr. Bohn has a general chapter entitled “Common Stylistic Traits of Hiller’s Oeuvre.” Hiller was eclectic and diverse in both his influences and his style. The composer’s comment that “this American experimental tradition exists . . . its central attribute is its emphasis on the empirical and practical rather than on the speculative and theoretical” [p. 118] illustrates his own sense of self, and contradicts some of the mythology about him. Ives, jazz, music theater, environmental soundscapes, collages, world music, the “half-baked” musical concept serialism, stylistic parody, micro-tonality, and numerical schemes all found their way into his music. We need more traces like this, of the origins of our post-modern period, to counter the simplistic notion that post-modernism was a heroic revolt against modernism.

The four detailed chapters on Hiller’s early works involving technology [a chapter is devoted to each of them] are first-rate. Anyone who has been confused by Markov chains or the Monte Carlo method will no longer be, after reading the chapter on the ILLIAC Suite. Although the flow-charts are sometimes difficult to read due to print quality, and the 35-page description is less detailed than Hiller’s own explanation in Experimental Music, less patient readers might prefer Mr. Bohn’s accurate distillation to Hiller’s extremely detailed analysis. The next chapter on the 1963 composition Computer Cantata makes much use of Robert A. Baker and Hiller’s 1964 article “Computer Cantata: A Study in Compositional Method” from Perspectives of New Music, but Mr. Bohn has some novel things to say about the piece. Hiller’s harmonic and linear dissonance concepts are clearly explained and the discussion of form is original.

After this, we step into less well-charted waters with the chapter on the 1964 composition Machine Music for Piano, Percussion, and Tape. With less thorough documentation by Hiller himself to draw on, Mr. Bohn combines information from two or three documents by Hiller with his own original analysis of the work. Here, Hiller’s fascination with information theory is integral to the composition and to Mr. Bohn’s analysis. The final chapter of the book covers HPSCHD, composed in 1968. Mr. Bohn makes heavy use of the in-depth interview “John Cage and Lejaren Hiller: HPSCHD” by Larry Austin in the now-classic Source magazine, as well as significant use of Hiller’s article “Programming the I-Ching Oracle.” [This chapter contains an excellent explanation of the I-Ching for anyone who has missed out on that tidbit of ancient knowledge.] Mr. Bohn’s contributions to the record are significant from a historical perspective.

The author makes a striking point: Hiller apparently had an unusual ego for a composer: He was a collaborator. Three of the four pieces covered in the book were co-composed. The co-composers range from a laboratory chemist, to a Ph.D. student in musicology, to John Cage. In other works, he collaborated with a composition student, a performer, and the mathematician John Myhill. Mr. Bohn’s discussion of the music as works of art is positive, but ambiguous. This ambiguity is refreshing. We are not treated to the word “masterpiece.” Perhaps this very issue should have been discussed.

In the book Collapse: How Societies Choose to Fail or Succeed, Jared Diamond writes: “The values to which people cling most stubbornly under inappropriate conditions are those values that were previously the source of their greatest triumphs over adversity.” Replace the word values with ideas, and perhaps one could argue that Hiller clung too tightly to the idea of music as an expression of information theory and form as an
expression of symmetry. These were certainly two of the most significant ideas running through his music. I am not ready to make sweeping aesthetic judgments about Hiller. It is true that his music is not performed much today. He is remembered for the ILLIAC Suite, which many consider an interesting “experiment”; he is thought of as the person who helped Cage realize HPSCHD (rather than as co-composer), and he still suffers from the reputation that plagued him all of his life: scientist first, composer second.Possibly this book will contribute to a more intelligent re-evaluation of Hiller the composer.

Do we still need to have discussions about algorithmic composition? No one would dispute the fact that algorithmic thinking has always been an integral part of the act of composition. Is it solely the fact that computers are used to realize algorithmic processes that has caused controversy? Do architects, artists, filmmakers, and others in the arts use computers without the fears mentioned by Mr. Rosenboom? Perhaps music suffers from the fact that it was in the vanguard of computer use for artistic pursuits? Perhaps it is no longer a separate category in the discipline of computer music? Have computers been absorbed into the act of composition, as they have been absorbed into much of modern life? Is it possible that technology’s transparency and ease of use, the “revolution” that has put the computer on our desk next to the musical keyboard and the pencil as just one more extension of our tools, have finally freed the term “algorithmic” to be absorbed into the larger concept of composition? If there is no longer a need to qualify composition with this label, then perhaps we are all forever in Hiller’s debt. But, then again, he might be surprised to see how algorithmic music has become a less distinct discipline. He might even be disappointed at composing-by-numbers software that offers algorithmic presets. After all, Hiller was interested in using the computer to explore essential musical issues. As he pointed out on page 1 of Experimental Music, composing using a digital computer “immediately raises fundamental questions concerning the nature of musical communication and its relation to formal musical structures.”

Charles Madden: FIB and PHI in Music: The Golden Proportion in Musical Form


Reviewed by alcides lanza
Montreal, Quebec, Canada

FIB and PHI in Music: The Golden Proportion in Musical Form is a promising book by Charles Madden, a well-presented edition, hardcover, from High Art Press, the fourth volume of its InMusic series.

The initial pages of the book are the most engaging, providing interesting historical data on PHI and its uses by the Egyptians and the Greeks, and touching on Fibonacci numbers from the year 1200 on. Almost immediately, the reader encounters innumerable charts and tables where the majority of the cases under discussion are defined. To take one example: “Phi remains elusive in this music . . . as seen in tables 5.13 to 5.15 there is little evidence of Phi proportions . . . it seems clear that [the composer] was not an important user of phi proportions” (pp. 206–207). It seems that the writer has focused more on discussing examples where the proportions were not used, or even not approximated. Why bother?

There are some contradictions in the book. On page 247, the conclusion to the all-important Romantic chapter, one can read that “in the symphony the golden proportion was found in several movements of [Felix] Mendelssohn.” Then, referring to the pages devoted to this composer, Mr. Madden starts with the Songs Without Words, finding that a few were “close to [Golden Section]” (GS). Nonetheless, it is hard to refrain from thinking that he must have had some awareness of phi.” Then follows a not very convincing chart concerning these songs, where only a few are
noted as close enough to be placed under the subheading “At GS or GS2” (p. 236), with the majority of these many songs included under the subheading “Too far [from GS].” Arriving at the paragraph concerning the symphonies, Mr. Madden criticizes another author—Michael Richard Adkins—in reference to the Symphony No. 3 by Mendelssohn: “our results were far from his.” He proceeds to chart his own figures and concludes with “Not GS.” In all fairness, Mr. Madden finally finds GS [or very near it] in two movements of the Symphony No. 3 and the same in the Symphony No. 4. However, he repeatedly classifies all other movements as “Not GS.”

Nevertheless, the author provides a résumé of all Mendelssohn symphonies on Table 6.7, apparently with a fewer number of movements found to be GS. It is obvious that the greater number of movements in that classification are “Too far from GS.” Mr. Madden asserts that based on the above tables “it seems that Mendelssohn must have known about phi.” Hmm . . . not convincing at all.

Furthermore, it is baffling how anyone can dismiss Frédéric Chopin’s Prelude No. 4, in E minor, in one short sentence, saying “[Michael Richard Rogers] said that the dramatic peak of Pr. #4 occurred at measure 16 of 25. This is correct, for the leap from a#1 to g2 is after beat 62, which is GS. He also correctly stated that the piece was structurally not phi, as shown in fig. 6.4.”

Mr. Madden misses the opportunity of “re-enforcing” the notion that Chopin may have actually effectively used GS by adding that, [1] this prelude can be “perceived” as being slightly longer: there is the anacrusis on bar zero that should be accounted for, then fermatas on bars 23 and 25; and [2] there is the possibility that GS is actually an “area” and not just a “point”—this GS zone then, could be defined as comprising bars 16 and 17.

An analytical mind should consider it important that Chopin had intentionally put into this GS zone [1] the only grupetto and stretto indications of the whole piece; [2] the loudest and only forte dynamic indication [bar 17]; [3] the highest and lowest sounds in the piece (excepting the Coda); [4] the first octave duplication on the left hand; [5] the first—exceptional and brief—use of four-note chords (making a total of five notes heard simultaneously once the melodic note is included); and I must stop here.

When I listen to this prelude, I sense that the composer has brought all attention to the high drama of this moment [at the GS zone], a dramatic departure from the calm and tender beginning, before returning to a possible reprise with a surprising ending.

Another composer that deserves further research in connection to the topic of this publication is Anton Webern. Feeble references to two of his works appear in this book, and these are less than enlightening. Charts listing possible usage by Webern are contradictory and confusing. On my own I have found Webern’s Piano Variations rather intriguing: the first and third movements respond to GS analysis beautifully; the middle one, sadly, is too symmetrical to be part of that family.

The series of questions put forward in the book’s Preface, on pages xi and xii, are excellent. Unfortunately, this book has failed to answer those questions, a big disappointment for the reader.

The final section, Conclusions, is too brief and poorly argued. This part of the book should have had many more conclusions and should have been enriched with musical ex-

Paul Doornbusch: The Music of CSIRAC: Australia’s First Computer Music


Reviewed by James Harley
Guelph, Ontario, Canada

Readers of Computer Music Journal will likely be aware of Paul Doornbusch’s work on early computer music in Australia [see his Spring 2004 article, “Computer Sound Synthesis in 1951: The Music of CSIRAC,” 28[1]: 10–25]. For many, it was a revelation to realize that music was being produced “down under” as early as 1951, several years before Max Mathews and his colleagues were producing digital sounds at Bell Labs in New Jersey [but at just about the same time that the Ferranti Mark I computer in the UK was also producing simple musical examples]. The Music of CSIRAC: Australia’s First Computer Music presents a fuller account of Mr. Doornbusch’s research into the music-making capabilities of the CSIRAC computer in Sydney and Melbourne and his efforts to reconstruct the sounds that had been produced there more than 50 years ago. Although a few of the recorded sound examples were included on the CMJ DVD Vol. 28, this publication comes
with a CD-ROM containing a larger collection of the music produced on the CSIRAC.

As Paul Berg points out in his introduction to the book, “the path that led to computer music is the result of many very small steps. Steps that were neither coordinated nor goal-oriented. Steps that were not labeled merely scientific, consumer-oriented, or artistic” (p. ix). At Bell Labs they were researching the transmission of speech signals for telecommunications systems; Lejaren Hiller was a researcher in chemistry with access to the ILLIAC computer at the University of Illinois, Urbana-Champaign; Iannis Xenakis was trained as a civil engineer. There was no research agenda for developing the field of computer music, and little direct communication between the people carrying out pioneering work in different places (between Illinois and New Jersey, let alone between Australia and the USA). In Australia, the innovative work on creating programs to produce music was done by mathematicians, physicists, and engineers.

The Council for Scientific and Industrial Research (CSIR) developed one of the world’s first stored-program electronic digital computers. The CSIR Mk1 ran its first program in November 1949. In 1955, the computer was moved to the University of Melbourne, renamed the CSIRAC, and held in service until 1964. The computer has been preserved relatively intact (although not operational) at the Museum Victoria, where Mr. Doornbusch was able to access it (along with much related materials, such as program tapes, documentation, etc.) in order to reconstruct the historical procedures and technology developed by the early Australian researchers for producing sound. One of his aims was to reproduce the instructions for the music programs through the same process as would have been carried out originally, output through the same loudspeaker driver that was installed as part of the computer. This work involved much effort trying to decode the sometimes ad hoc instructions, and trying to understand how the programs were run and how the sounds were created.

The CSIRAC did not contain a digital-to-analog converter; such technology was nonexistent when the computer was built in 1948–1949. Instead, program instructions could be routed to the loudspeaker on the data bus as a series of pulses, channeled through an amplifier. Initially, the loudspeaker was intended to provide an audible signal that the computer was functioning correctly (or incorrectly). But, it quickly became apparent that by sending multiple pulse instructions or by looping them a continuous tone could be produced. From there, the engineers worked to develop methods for generating different frequencies, and by extension, melodies. The computer was never able to produce more than one pitch at a time, and the waveform was fixed, as a by-product of the pulse-signal process. But, durations, frequencies, and overall amplitudes were controllable.

Mr. Doornbusch’s dedication to this project and the thoroughness with which he pursued the explanation of this historic computer music technology, along with his determination to reproduce the sounds of the CSIRAC, are admirable. The history of computer music is one to be constructed from a great variety of sources, and this hitherto little-known Australian contribution from the very early days represents a valuable addition to our knowledge of the field.

A few words about the book itself. The main part of the text is organized in 11 short sections. We are given an introduction to the CSIRAC and to the computer [and music] technology current at that time, including discussion of the Ferranti Mark I computer in Manchester, which apparently produced musical tones in a similar fashion. We then learn about the “huuter” speaker and how it could be driven by pulse signals. Mr. Doornbusch documents the evidence surrounding the chronology of music produced on the CSIRAC over the period of its operation, and includes many references to interviews with a number of the principle people involved. He goes on to describe the process of reconstructing the music (none of it had been recorded to any audio storage format). Some of the tapes of the computer programs used to produce music do still exist, so a tape reader was fashioned in order to capture the data, and logic circuitry was built to recreate the pulse signals that were sent to the hooter. A valve amplifier and original speaker driver were used to create the actual sounds.
All of this is illustrated with numerous photographs of the technology, both original and as reconstructed. From there, the author devotes considerable attention to analysis of the sounds, and explication of the limitations of the particular technology that created problems for achieving consistent tuning and tone quality (relating to the serial architecture and cycle speed of the computer). The appendices provide examples of newspaper reports on the CSIRAC, further details of the pulse curves and circuitry used to produce them, and a listing of the contents on the CD-ROM (in addition to recorded examples, there is a slideshow of photographs, diagrams, etc., and a video of an interview with one of the main CSIRAC programmers). The Sources section includes a bibliography (print resources as well as relevant Web sites) as well as details of all the interviews conducted by the author for his research.

The Music of CSIRAC presents good solid work on an aspect of computer music history that deserves to be better known. Paul Doornbusch is to be lauded for his dedication to this project. His book is an important, crucial addition to the body of references documenting our field.

### Recordings

**Paul Doornbusch: Corrosion: Music for Instruments, Computers and Electronics**

Compact disc, EMF CD 043, 2002; available from CDeMUSIC/Electronic Music Foundation, 116 North Lake Avenue, Albany, New York 12206, USA; telephone (+1) 887-749-9998 or (+1) 518-434-4110; fax (+1) 518-434-0308; electronic mail cde@emf.org; Web www.cdemusic.org/.

**Reviewed by Richard Barrett**

**Berlin, Germany**

Paul Doornbusch, born in Melbourne, Australia, in 1959, produced the pieces on this CD in The Netherlands, where he was resident during the 1990s and where he had the opportunity to engage in extended and fruitful collaborations with all of the gifted musicians featured there. The five works of this collection are representative of Mr. Doornbusch’s output in combining acoustic instrumental parts of challenging intricacy with either live electronic processing or prerecorded materials. 

*Continuity 3* (2002) for percussion and computer uses transformations both of performing technique and of the sound itself to explore relationships between continuous and discontinuous textures and structures. The use of only three metallic sound-sources does indeed create a sense of continuity and coherence, whose converse is to be found in the constantly changing electronic refractions to which the sounds are subjected. The overall effect is of an extension of the idea of resonance, so that as the metallic bodies are struck and resonate, they in turn serve to “excite” the virtual resonating body in the computer, one which is no longer tied to rigid physical objects and natural decays. Both in its adherence to a carefully selected vocabulary of sounds produced by bodies in motion and in its sense of dramatic timing, *Continuity 3* seems to continue the musique concrète tradition exemplified most memorably in the work of composers like Pierre Henry, Bernard Parmegiani, and François Bayle. The fact that it is performed in real time by a percussionist and a computer running Max/MSP is a measure of how profoundly the practice of electronic music has changed as a result of the accelerating development of digital technology. At the same time, the lessons it draws from musique concrète, a music composed with magnetic tape and razor blades, is witness to the fact that the best of that music was in no way restricted by what we can now view as rudimentary and fearsomely time-consuming methods, but has, and will no doubt continue to have, many subtle and sophisticated things to tell us about the art of sound-composition. The percussionist Timothy Phillips plays with and against the distorted images of his own sounds as if engaged in the almost subliminal interactions of chamber music.

Unfortunately, the Malle Symen recorder quartet has now disbanded. This Amsterdam-based ensemble was unique in its commitment to expanding the musical and technical potential of the recorder, including explorations of microtonality, theatrical modes of presentation, combining recorders with electronics, and commissioning new works from a wide variety of composers. Mr. Doornbusch’s *Continuity 2* (1999) shows them at their most virtuosic, containing as it does virtually no “traditional” means of sound-
production, instead disengaging from one another the various physical components of playing and using a multilayered system of notation to encode the resulting complex textures. These notational devices are derived, as the composer acknowledges, from the recorder notation developed by Luciano Berio for his solo piece Gesti. This “discontinuity” between the actions of lungs, embouchure, and fingers is complemented by a “continuity” between the instruments, in so far as the individual players (who all play bass recorders) are very rarely perceptible as such, fusing instead into a single “sound-object” which sounds as if actuated by four mouths. This “instrument” is confronted by an electronic part that combines sampled and processed concrete sounds (principally but not exclusively bass recorder sounds) with synthetic materials generated by an implementation of Iannis Xenakis’s dynamic stochastic synthesis technique. The combination of the recorder ensemble’s dense twitterings and keenings with this often even denser “wall of sound” is for this listener the least successful aspect of Continuity 2, which sounds sometimes as if two self-sufficient pieces are running simultaneously and canceling rather than complementing one another’s musical impact. (The electronic part does in fact have a separate existence as Continuity 1.) This is not, however, to detract from Mr. Doornbusch’s achievement in eliciting a raw kind of musical energy from these seemingly innocuous instruments, to parallel Xenakis’s definitive denial of the harpsichord’s baroque quaintness in Khoai and Naama.

The theatrical component of Act 5 (1998) for bassoon and electronics always threatens to overshadow everything else in the audience’s perception: three large objects (a cluster of pots and pans, a xylophone and a kettledrum), hanging precariously over a large darkened stage, are released in turn by the soloist to fall noisily to the floor. The performer therefore has not only to execute an increasingly “athletic” bassoon part but also repeatedly to sprint back and forth to where these objects are suspended. The palpably heroic efforts of Hamish McKeich, not only a talented and imaginative bassoonist but also New Zealand’s leading conductor of contemporary music, cannot altogether dispel the idea that the music appears sometimes to be there more to fill out the overall musical process of the composition (whose pitch range, beginning in a restricted low register, gradually opens outwards and upwards) than to breathe life into that process. After a striking start, a little too much time is spent meandering around modal pitch-collections which themselves seem dangerously close to being arbitrary. The music wears its algorithms on its sleeve, so to speak, in distinction to the other works on the disc which embody a much more distinctive sense of imaginative freedom. This may seem an odd thing to say about a piece which involves dropping heavy items onto the stage from a height of several meters, but of course the comparatively neutrality of much of the bassoon’s material is not necessarily a miscalculation or a disadvantage when placed in the context of a staged performance.

The electronic composition g4 (1997) was composed exclusively using dynamic stochastic synthesis, and its form also is reminiscent of the abrupt, unpredictable, and aggressive beginnings and endings of layers of sound materials in Xenakis’s Gendy3. There, however, the resemblance ends, although there are obvious family resemblances between some of the sounds in that piece and those heard in g4. In comparison with Xenakis’s use of these techniques, the layers in g4 are less static and more complex in themselves, and are also assembled into denser conglom- erate textures. The result is a remarkable individual and absorbing composition, which forms a worthy tribute to the work of Xenakis while simultaneously striking out in a direction of its own, giving the impression that there is indeed a future in developing and personalizing this method of synthesis, even though it is hardly as “general” as its name would imply.

The final work on the disc, Strepidus Somnus (1996), for vocal quartet and electronic sounds, is, at 27 minutes, considerably longer than any of the others. The four vocalists perform with earpieces, upon which each hears and reproduces a track of precomposed vocal material, ranging from coital gasps to whispering in an algorithmically fractured English, reminiscent (as such things always are) of the teasing impenetrability of James Joyce’s Finnegans Wake. This kind of “audible score” has been used by several composers previously, notably in the stage works of Robert Ashley, but seldom with such chaotic abandon as in Mr. Doornbusch’s piece. Indeed, the composer’s intention here is to give the impression of parallel streams of quasi-improvisatory consciousness, whose occasional synchronized or coordinated moments engender a floridly surrealistic sense of dislocation. The use of shortwave-radio-derived electronic sounds, together with vocal acrobatics which occasionally congeal into operatic parody or “realistic” weeping or laughing, is often reminiscent of Michael Vetter’s tour de force recording of Karlheinz Stockhausen’s Spiral, and the combinations of vocal hysteria with “pure” electronic sounds bring us close to
some of Luigi Nono’s works for similar resources such as Contrapunto dialettico alla mente. Here, however, the emphasis is neither on absorbing, incorporating, and transcending the detritus of global communication as in Stockhausen, nor on using radical musical means to articulate radical socialist politics as in Nono, but on the creation of a nightmarish sonic landscape whose inhabitants leer and convulse like Bosch’s demons. Strepidus Somnus forms a disturbing conclusion to a program which is never less than thought-provoking, and which deserves to bring Mr. Doornbusch’s work to the attention of a wider audience. There are not so many composers at work, even in the 21st century, even after the example of Xenakis, whose commitment to contemporary technology is so closely matched by a compulsion to exploit to the full the expressive potential unleashed thereby.

Nicholas Collins, Curator: A Call for Silence

Compact disc, 2004; Sonic Arts Network, The Jerwood Space, 171 Union Street, London SE1 0LN, UK; telephone (+44) 20-7928-7337; fax (+44) 20-7928-7338; electronic mail david@sonicartsnetwork.org, Web www.sonicartsnetwork.org/.

Reviewed by James Bohn
New Bedford, Massachusetts, USA

A Call for Silence (released in February of 2004 by the Sonic Arts Network), curated by Nicholas Collins (Chair of the Department of Sound at the Art Institute of Chicago) is a collection containing 34 tracks that range from conceptual pieces to sound documents (unmanipulated sounds meant to document a time and location), to performance-based compositions, to tape-based compositions. As one might expect, much of the inspiration for the collection is John Cage’s infamous work, 4’33” (1952). The project also includes extensive notes, including no less than three essays.

The introductory essay by Mr. Collins speaks to the ever-increasing preciousness of silence. It also speaks to current interest in lo-fi fidelity music production techniques, which may be seen as somewhat of a backlash to the quasi-fetishistic nature of the world of hi-fidelity. On a more humorous level, Mr. Collins relates the project to an old lecher’s quip: “a drink before and a cigarette after are the three best things in life.” Several of the works in this collection focus on the drink and the cigarette, editing out what had been the central material.

Daniel Levitin’s essay, “The Rose Mary Woods/Nixon Tapes,” is compelling in that he makes the case for the eighteen-and-a-half-minute gap in a reel-to-reel tape recorded in the White House during the Nixon administration as the second most famous silence of recent time. He then goes on to attribute the most famous silence to the essential part of a Jack Benny joke. Here Mr. Levitin identifies (intentionally or unintentionally) a functional approach to silence. This approach is a technique which I refer to as “nothing is funny.” It is the silences in Benny’s delivery which instill hilarity. It is the silence that follows the trombone solo in Aaron Copland’s Rodeo that renders the melody humorous. It is the “nothing” that Andy Kaufman performs during his infamous ‘Mighty Mouse” routine [lip-synching to a recording of the “Mighty Mouse Theme,” but only on the line “Here I come to save the day”].

The closing essay of the liner notes, “The Sounds of Silence: John Cage and 4’33”," by Larry Solomon, is somewhat expected. However, the author explores the genesis of Cage’s piece. In particular, he focuses on an excerpt from “The Art of Noises” by Luigi Russolo [1913], as well as Cage’s mention of this work in a 1948 lecture at Vassar College. Many writings on this landmark piece deal with the impact of the work on society after its premiere. Mr. Solomon’s essay is refreshing in the way that it looks back to the ideas that led Cage to frame silence in the manner that he did.

Another trend of the collection is the number of pieces that reference Alvin Lucier’s landmark work I am sitting in a room. Included are How Many People Are In This Room? by Kapital Band 1, and Richard Beard’s I Am Not Sitting In A Room. Such references serve to trivialize the works, casting them as being derivative, and not being able to stand on their own. Mr. Lucier himself contributes a subtle work entitled Quiet Coffee, where ambient sounds are recorded from within Turkish coffee pot.

Credited to Matt Rogalsky and George W. Bush, Two Minutes Fifty Seconds Silence for the USA utilizes the President’s address of 17 March 2003, where he gave a 48-hour ultimatum to Saddam Hussein.
Initially some 13 minutes in length, Mr. Rogalsky edited the words out, leaving reverberation and mouth sounds. The reverberation has a very pitched, percussive flavor that is almost melodic.

Thomas Joyce uses a similar technique in his work Unspoken Conversations. Having edited the words out of a recorded conversation, Mr. Joyce creates a landscape of vocal percussive sounds. The use of different genders of voice lend the sound a greater sense of variety.

A third piece that uses the same technique of cutting out content while leaving the detritus between sounds intact is Michael J. Schumacher’s The Other Boulez. The victim of this editing is an unnamed selection of Mr. Boulez’s piano music. This piece has some very nice harmonies, but of course that is due to the original composer. Mr. Schumacher’s work doesn’t seem to add anything, and in fact, it seems to detract from the work.

Yet a fourth work that uses a similar technique follows Mr. Schumacher’s. Cage Silenced, by Vicki Bennett, utilizes an interview with John Cage about his mesostic poetry where only the interviewer’s voice is audible. Having four pieces in this collection that use such similar techniques seems tiresome and uncreative. This is particularly unfortunate in a collection that seems to want to present creative approaches to sound. Furthermore, this piece, like Mr. Schumacher’s work, and the two works that reference I am Sitting in a Room, is guilty of the sin of invocation. The sin of invocation often functions to connect the invoker’s name with the name of the more famous, better renowned invoked. This is a dangerous process, as it often begs the audience to compare the invoker’s work with that of the invoked, and this may ultimately diminish the value of the invoker’s work, rather than give it more credence. Cage himself was aware of this truth, which is evident in the titling of his work Cheap Imitation, that utilizes the rhythmic structure of Eric Satie’s two-piano version of his composition Socrates.

Track 1 of the collection, Daniel Levitin’s Anticipation, is a sound collage consisting of various count-offs of rock ‘n roll songs by a variety of artists. Also included are various sounds of vocalists breathing. The work comes off more like a catalog than a composition. Although the idea behind the piece is a fitting opening track to the collection, it has little interest beyond enabling the listener to play “name that countoff.”

One of the more compelling tracks is S.B.D. by Paul Davis. The work is a “scratch collage” comprised of quiet sounds from a capella cuts on 12-in. singles including pieces by Michael Jackson, Bobby Brown, Ginuwine, and Lil Kim. The sounds included are not easily attributed, and consist of “quiet noises—sniffles or throat clears, bleed from the singer’s headphones of the instrumental, click tracks, reverb.”

Another interesting track is an excerpt from a performance of Hum-bucket: aka ’60 Cycles of Jubilation’ by Dan Evans Farkas. The piece consists of holding a ¼-in. patch cord which has been modified so both tip and ground are “hot.” This signal is then fed through a variety of guitar effects boxes. The work itself is an effective homage to distortion and ground hum.

The liner notes include some conceptual pieces to frame the collection. Christian Marclay’s contribution “Unused Space” doesn’t really necessitate any further attention. John Bowers’ Do It Yourself Silence, however, is clever and humorous, and is perhaps one of the best, most suitable selections in the collection. Mr. Bowers includes two approaches to creating silence: a traditional method, and an alternative method for computer users. Due to the nature of the concept piece, I won’t be a spoiler in the review, but suffice it to say that it is very enjoyable.

I would be remiss in my duties if I didn’t mention the sound documents included in the collection. The collection includes Pastoral Pause by John Levack Drever, A Minutes [sic] Silence for the Queen Mum, 2002 by David Hoyland, Apple (Windfall/Fallob) by Valerian Maly, The Quiet Room by Peter Cusack, Bird Hide by Adrian Newton, Silence/Silent Landscape by Jens Brand, Bird Song by Lori Talley, Lobby and Lebeg by David Lloyd, Erster Berliner by Eric Leonardson, and Lullaby by Ted Collins. These works fit well into the goal of the collection, which is essentially an appreciation of silence. Each highlights a different location or object.

The sound document that was most interesting to me is Lobby and Lebeg, which was recorded in the fourth-level north lobby of the Washington State Trade and Convention Center. The recording was made near a hanging sculpture by Ann Gardner. The soft mechanical sounds of the sculpture, and the outside traffic are readily audible. Following this contribution was the collection’s most vainglorious contribution, Erster Berliner by Eric Leonardson [a colleague of Mr. Collins at the Art Institute of Chicago], a recording of an audience waiting for Mr. Leonardson to perform.

Ultimately, A Call for Silence includes some great contributions, and many sound documents [which are comparatively rare in the marketplace]. However, in a collection that is outwardly nostalgic of the creative contributions of composers like John...
Cage and Alvin Lucier, it is somewhat depressing in terms of the number of works that lack originality, some of which are self-consciously derivative. I would like to think that silence has more to offer.

Multimedia

People Like Us: Story Without End (and Three Other Films)

DVD (NTSC), 2005, Sonic Arts Network, The Jerwood Space, 171 Union Street, London SE1 0LN, UK; telephone (+44) 20-7928-7337; fax (+44) 20-7928-7338; electronic mail david@sonicartsnetwork.org; Web www.sonicartsnetwork.org/.

Reviewed by Kevin Hamilton Urbana, Illinois, USA

Music videos for mash-ups are rarely as enjoyable as the audio originals—the pleasure of the sound collage is the simultaneity of clashing spaces, where visual montage makes us choose between one space or another through sequence. The Web is awash in video cut-ups today; giddy editors take advantage of bountiful source material in online archives, easy desktop editing software, and mostly free distribution through video.google or youtube.com. Surrealist film technique is the stuff of late-night television comedy, as each day’s presidential speeches are cut up and rearranged for comedic effect.

This explosion of montage only highlights the differences between sound collage and video pastiche. Multi-track recorders, turntables, samplers, and sequencers give us densities no film editor could dream of. Yet sometimes film collage carries a more obviously political impact: visual juxtapositions seem to jar more directly.

Into this dynamic steps the singular art of People Like Us. At the controls is artist Vicki Bennett, a masterful and prolific sound-collagist whose works in video have been recently released by the Sonic Arts Network on DVD. Where traditional montage makes us choose between one cut or another, Ms. Bennett’s meticulous work relies on compositing, masks, and mattes to create a visual simultaneity every bit as dense as what we hear in her music.

Through four works, completed between 2002 and 2005, Ms. Bennett has extracted various subjects from their backgrounds, and backgrounds from their contexts. Recombined, these artifacts occasionally grow synchronous with sound, but always stand out in contrast to each other. As in some of the more jarring mash-ups one might encounter on Ms. Bennett’s radio shows for WFMU, the seams are far from hidden. A boy sets a toy house down upon a giant circuit board; later, we see him again laying out his little town on a pumpkin patch.

Opacities and edges blur to give way to various cohabiting characters: a man peers into a screen to reveal another composited world, even as he’s oblivious to the third one above him, or the beetles crawling over the screen on yet a fourth layer. Narrators stand above it all, promising all sorts of things to come. Ms. Bennett introduces each new element as she would a new loop in her sonic compositions, and lets us hold it all in our head for a moment (or sometimes far longer—she loves repetition) before moving on to something else. It’s a happy marriage of pastiche in sound and video that helps demonstrate the musicality of vision—the work is more Dziga Vertov than Sergei Eisenstein.

All of this makes Story Without End a welcome and rare addition to the lively world of the cut-up. Ms. Bennett’s films offer much more than this, however. After all, as the narrator of The Remote Controller tells us, “mixing is so simple, a child could do it.”

Directing the artist’s debt and patient hand at the mouse is a very specific sort of curiosity, and a particular approach to human creation and action. These films are the result of countless hours of sifting through the archives of various digital and physical collections. Specifically named in the credits are the collections of Rick Prelinger at The Internet Archive [www.archive.org], Skip Elsheimer’s avgeeks.com, and London’s Lux collection of avant-garde film. Except for some footage of Ms. Bennett’s own screen desktop in We Edit Life, none of her source material appears to be self-generated. She even borrows from herself, recycling audio or video from old works in new.

The result is a very specific kind of collection. Though individual elements within a frame are composites to remain estranged from one another, the ingredients add up to a whole that’s from a particular palette, a specific time and place. In all four of these works, we see and hear hopeful proponents of techno-marvels from modernity’s golden age. Men and women hunch over vintage screens and typewriters, monitoring, tweaking, and enjoying new-found power through perfect analog connections. Telephone operators, orchestra conductors, audio engineers, and city planners listen to the spaces on the other side of an edit, command our attention, or carry out plans through remote operation.

We see an artist and an engineer negotiate a new collaboration; we are transferred by a series of attractive switchboard operators from Chicago
Ms. Bennett tells a yield rich results, how-

Computer Music Journal
Bennett's generous and labored mar-

examination of the works of

analysis might seem absurd. Close

so much so that perhaps this act of

this artist's work in sound and video,

be one's first and lasting reaction to

stutter, the scratch, or the pause to

flexivity, Ms. Bennett relies on the

stump - like us, twiddling knobs at a remote,

operators and technicians are people

unfound materials Ms. Bennett lacks

empathy to produce skepticism with-

speak connections. These hopeful

subjects, who, according to their nar-

adorned, distance. By revealing

her own hand, the artist identifies

herself with the films' optimistic

subjects, who, according to their nar-

“merely push a button and let

something else do the work.” Another

narrator adds, “the result is

breathtaking beauty, and lasting good taste.”

Like Craig Baldwin in Spectres of the Spectrum, Ms. Bennett tells a

story of hope about technology, using

the artifacts of a more hopeful age. Her films marry medium to message
to reveal the folly of such hope, yet

without resorting to irony. Refresh-
ingly gentle and humble, the work

relied on humor, awkwardness, and

empathy to produce skepticism with-

out cynicism. If through her reliance

on found materials Ms. Bennett lacks

the faith of scientist-magicians who

create something from nothing, she

shares their joy at seeing push-

buttons produce results.

In the tradition of modernist ref-
x vividness, Ms. Bennett relies on the

stutter, the scratch, or the pause to
call attention to her own hand. Im-

portantly though, she reminds us

that stutters and burps are also hu-

man, and funny. Laughter is likely to

be one’s first and lasting reaction to

this artist’s work in sound and video,

so much so that perhaps this act of

analysis might seem absurd. Close

examination of the works of Story

Without End yield rich results, how-

ever, and make me grateful for Ms.

Bennett’s generous and labored mar-

riage of humor and criticism.

Products

Composers’ Desktop Project
Version 5.0.1

Composers’ Desktop Project 5.0.1, from U$ 300 [various options are

available, depending on platform, GUI choices, and site licensing], available from Composers’ Desktop Project, 12

Goodwood Way, Cepen Park South, Chippenden, Wiltshire SN14 0SY, UK; telephone (+44) 124-946-1361; electronic mail archer@trans4um

demon.co.uk; Web www.bath.ac.uk/~masjpl/CDP/CDP.htm.

Reviewed by Jon Forshee

Paris, France

We make only the music we are able
to make. As we choose our music-
making environments it is often the case that we seek an environment

that imposes the least restrictions

upon our music-making activity; or,

expressed another way, we may seek

an environment that enables us as

agents of our self-determined compos-
tional guidelines.

The release of version 5.0.1 of

Composers’ Desktop Project (CDP)

realizes the latest installment of just

such a music-making environment. Initiated in 1986, the Composers’

Desktop Project is a cooperatively de-

developed software system, based in the

UK, “designed specifically to trans-

form existing sound samples for mu-

sical purposes, mostly via off-line

processing.” Sound sample transform-

ation is achieved through a broad

diversity of more than 500 command-

line programs, and CDP includes two

Graphic User Interfaces (GUIs):

Sound Loom and Soundshaper.

Version 5.0.1 provides powerful ad-

options and utilities, including more than 40

new programs for soundfile transfor-
mation and speech processing, sup-

port for the 24-bit/96-kHz sampling rate (DVD quality), expanded docu-

mentation, and revision of the iconic Sound Loom interface. Notably (and

finally!), CDP and Sound Loom now exist in a port for Mac OS X. In this

review, I demonstrate some of the advan-
tages of this new version from an actu-

al work session; I shall also men-
tion a few peculiarities unique to

CDP. I am assuming the reader has

some familiarity with CDP and the

Sound Loom interface, as a detailed
discussion of each procedure used

would be prohibitive in the present

context.

I am using the new Mac OS X port

of Composers’ Desktop Project, with

the Sound Loom interface, version

9.2b, with the new color scheme by

Dale Perkins of Leeds University.

[Note: during the writing of this re-

view Sound Loom version 9.7.3 was

released by Trevor Wishart, and is

available from his Web site (www

trevorwishart.co.uk/)]. My current

musical work concerns an electro-

acoustic composition, in four chan-

nels, which uses recordings of

readings by poet Charles Stein as

source material. I have a general out-

line, sketched beforehand, of the mu-

sical terrain of this composition,

including some of the ways in which

the piece will highlight unique prop-

erties of Mr. Stein’s voice.

The Soundfile Editor

My source samples exist as large files

containing entire readings; I intend to

work with smaller portions of the

sources, so I select one of the record-

ings and set the target directory con-

taining the file in Sound Loom. Once

Sound Loom has loaded the directory,

I “grab” the file and add it to the

workspace portion of the interface.

When the file is listed in the work-
space window, I invoke Sound Loom’s new Soundfile Editor by clicking on the file. Sound Loom’s Soundfile Editor offers all the basic functions of a graphic soundfile editor, plus features for superimposing and editing amplitude and pan breakpoints. I quickly locate the passage I want to trim and select the area by shift-selecting the region with the mouse. Selecting regions draws a solid block around the region, obscuring the graphic representation of the soundfile behind it. Saving the trim involves giving the file a new name and pressing “Savesnd.”

Throughout this process some differences between the Windows- and Macintosh-platform versions of Sound Loom become evident. For example, the layout of the Soundfile Editor is the same, but to accommodate the familiar feel and style of the Macintosh OS, the button text is abbreviated: where the PC Sound Loom reads “Save Sound,” the text in the Macintosh-platform Sound Loom is abbreviated to “Savesnd.” Similar abbreviations appear throughout the Mac interface, and for those who are familiar with Sound Loom on the PC it may take a moment to re-orient to the Macintosh version, even though the layout is identical in all other respects.

Before I can proceed, my trimmed sample should be normalized, accomplished quickly enough by entering “Chosen Files” mode in the Sound Loom Workspace, moving the file I created to the “Chosen Files” window, hitting “Process,” choosing the group LOUDNESS, and selecting Normalize from the menu. I save the file, return to the workspace, and am now ready to audition the sample.

*Speech Processing*

One of Mr. Stein’s unique vocal abilities is what he refers to as “Sound-Text Poetry,” which, at first hearing, sounds a little like speaking in tongues, or riffing in what may sound like Italian or Hindi. My first sample is a terrific instance of “sound-text-speech” in “Italian,” and features the poet peppering his speech with rolled r’s. I intend to isolate Mr. Stein’s r’s, and dramatically extend the rolling while preserving the flow of his sound-text speech.

Among the many new features of version 5.0.1 are a host of programs geared toward speech processing; one of these, R_EXTEND, in the GRAIN group, is designed for extending iterative sounds. Specifically, R_EXTEND can pick out iterative sounds in a sample and extend the iteration. The iteration, in this case Mr. Stein’s rolled r’s, can either be slightly extended within the sample, thereby drawing more attention to them, or the rolling can be extended beyond recognizability, perhaps creating an occasion for morphing with another sample later on.

**R_EXTEND, ASSESS** The R_EXTEND function is invoked in the GRAIN group, and comes in two flavors, one for manually specifying the location of iteration, and one which finds iterative locations based upon user-adjusted parameters. I start with the first flavor because I have a particular sound in mind, and do not wish to be led too far afield by interesting accidents just yet.

As with all the programs included in CDP, the parameters for R_EXTEND are comprehensive, and may not seem intuitive at first; however, what the parameters do becomes evident with use, and I find that a little fiddling with parameters I don’t understand is revealing. To simplify my first attempt, I re-trim the soundfile to include just one instance of rolled r’s. I set, by estimate, the start and end of the iterative section with the first two parameters, and I set the length of time-stretching (that is, the “extending”), in the third parameter. Additionally, I set the anticipated number of iterative segments, the range, in octaves, of the segments to be found, as well as the maximum number of adjacent occurrences (overlap!) of any segment. In a spirit of play, I adjust, but don’t think too much about, the last two parameters, amplitude scatter and pitch scatter. The final option in the list offers the possibility of keeping the extended iteration only. I opt to keep the extended iteration within the flow of Mr. Stein’s speech.

I execute the function and, as I expected, am a little off in my guesswork. The extended iteration and time-stretching occur just a little after the actual rolled r’s in the sample, so I return to the parameters page and, after a few more attempts, nail the rolled r’s, producing the desired metalinguistic speech sequence. During the guesswork, if I enter a value for a parameter that contradicts another parameter’s setting, I will receive an error message in the Run window, telling me which parameter needs adjusting.

A useful function in conjunction with R_EXTEND is another new addition to the GRAIN group, ASSESS, or as it appears in the menu, “assess max. number of grains.” This handy utility scans the soundfile and reports amplitude and window size that will result in the greatest number of grains. This is a useful feature when using any of CDP’s granular synthesis functions, and I also use this utility with good results when searching soundfiles for suggestive regions amenable to morphing.

After experimenting back and forth with these two utilities I am able to achieve one segment of a larger gesture which, overall, was suggested by the content of the
sample and which fit in with my pre-compositional sketches. There is more work to be done with these new functions, yet my personal work habits engender a degree of play, so I proceed with shorter experiments with a few other additions to this version of CDP.

**SHUDDER, SPACEFORM, ENVEL TIMEGRID** SHUDDER applies a time-variable amplitude modulation to a soundfile, creating a “shaking” effect. I found good use of this utility by sculpting an accelerando in the modulation which “leads” to an outburst of thickly layered timbral polyphony, a section which includes several layers of Mr. Stein’s speech styles.

Similarly, SPACEFORM provides parameters for a “sinusoidal distribution” within the stereo field, in which a soundfile or portion of a soundfile may be swung between two channels. A first run of this function reminds me of a “spatial” form of amplitude modulation, so I engineer an accelerando between left and right channels similar to what I achieved with SHUDDER, and this particular realization is put aside for later use.

ENVEL TIMEGRID parses a soundfile into sections separated by slices of silence; the space between chunks is variable, as are chunk lengths. An immediate application in the present piece might involve cutting a longish phrase by Mr. Stein into 8, 12, or 16 parts, each of which is later assigned to one of the four channels, possibly affording the perception of a single, connected utterance dispersed throughout the quadraphonic space.

**Assessment**

I have used CDP throughout as an environment in which to reify my imagined musical profiles, and I have had success with the functions I chose; moreover, in my trial and error approach to these new functions I have encountered possibilities I did not envision, which may yet prove fertile ground for further development. There are many more new functions in version 5.0.1 than I have discussed. In particular, the new joining and sequencing programs, JOINSEQ, JOINDYN, SEQUENCE, and SEQUENCE2 deserve attention for those who have used CDP’s non-track-based assembly routines.

With respect to the functions I did use, a little poking around was in order to achieve what I wanted, and despite the revisions [and port to Mac OS X], the Sound Loom interface remains a little obtuse at first use. Additionally, it is apparent that with CDP and Sound Loom I work best on small sections, creating for me a micro-to-macro method of developing the material. So much is this the case that I choose to sequence sculpted passages created in CDP in a third-party track-based software sequencer, as opposed to CDP’s in-house sound object assembly sequencer. This is only a personal preference, however, and one needs only to listen to recent compositions of Trevor Wishart to hear just how flexible CDP’s non-track-based sequencer is.

Through the cooperative effort of Composers’ Desktop Project, CDP and Sound Loom are developing quickly; a glance at the “Potential Project Page” of the CDP Web site reveals enticing possibilities for the near future. However, the Mac OS X port still takes a little effort to install. In order to successfully install Composers’ Desktop Project and Sound Loom on a Macintosh computer, it is vital to read Mr. Wishart’s installation instructions [found at www.trevorwishart.co.uk/slfull.html].

As the present context does not allow for a full anatomization of CDP’s many new [and upcoming] features, visit the Composers’ Desktop Project home page [www.bath.ac.uk/~masjpf/CDP/index.html], where much more is offered, including new tutorials and, most important, information on how to purchase the system.