

# Cocks Crow, Dogs Bark: New Compositional Intentions

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*Cocks crow  
Dogs bark  
This all men know.  
Even the wisest cannot tell,  
Whence these voices come  
Or explain  
Why cocks crow  
Dogs bark  
When they do.*

—Thomas Merton, *The Way of Chuang Tzu*

## NEW INTENTIONS

Composers and musicians everywhere and always have sought to move music out of themselves. Across history and geography, musical creativity has been transduced by compositional and performance procedures—formal, spiritual, inspirational, philosophical and mathematical. “Composers” have always made art that is collaborative; communal; channeled from above; derived from nature, speech, or scientific principles; or spontaneously received from some unknowable source: in short, music they understood as coming from some other, higher place than our own. From the isorhythmic hermeticism of late Medieval music to the Baroque’s saturated fugal and contrapuntal complexity—and even to the use of the triad as a found melodic object in the symphonic work of Beethoven, Brahms and Mozart—things outside the inspired, intuitive next choice have been proven useful in musical expression.

Much of twentieth-century music can be generally characterized as a multifaceted evolution toward the integration of emotion, spirituality and intellect. Many of the ideas embodied by the music on this CD are in fact synergistic and reconciliatory steps towards the disintegration of perceived distinctions between these domains.

Some recent trends in the creation of new intentional compositional ideas have involved the use of mathematical techniques; computer-aided composition; chance (or indeterminacy); strategic and improvisational structures; open musical forms and notations; formal procedures derived from acoustical and/or cognitive precepts; macrostructures derived from sonic microstructure; process-oriented music; environmental and participatory musical structures; quotation and recontextualization; and even the rigorous application of serial and atonal set theory techniques. Some of the (great many) composers who have pioneered these ideas include Ames, Barlo, Braxton, Brün, Brown, Cage, Coleman, Hiller, Koenig, Lucier, Oliveros, Oswald, Schoenberg and the second Viennese school (and its international descendants), Tenney, the American “minimalists” (Reich, Corner, Goode,

Riley, Maxfield, Glass and others), Wolff, Xenakis and Zorn. The list, of course, is nearly endless, as is the list of varieties of compositional and performance intentions represented by even this small group of composers.

Cage’s *Music of Changes* (1951) is often identified as a convenient beginning for the radical reinterpretation of compositional intent. In this primary and early work, Cage began to explore chance operations to reorient his relationship with the score. Similar procedures, such as Schwitters’s *merz-kunst* (garbage art), had been around for some time. But Cage’s musical and personal eloquence, as well as the strength and vision of his ideas, established his music as a cornerstone for this century’s exploration of compositional intent. Not so coincidentally, around the same time, American jazz musicians such as Lennie Tristano were working with “free improvisation” in a kind of parallel attempt at liberation from prevailing creative paradigms. Many musicians and artists from diverse genres sought liberation from standard dramatic, narrative, creative and intentional techniques.

Twentieth-century composers have often dealt with their immense and exponentially growing historical legacy by recognizing its existence while shunning its burden. Concentrating compositional intentions, ideas and craft on specific musical ideas, they happily ignore others. According to this way of thinking, if one is interested in melody, then perhaps melody is *all* that should be in the piece. Nancarrow’s music, for example (or even Chopin’s) could be said to intentionally *avoid sound* in its adherence to an explicitly limited timbral vocabulary, even as it exhaustively explores that vocabulary. By omitting the possibility of certain choices—or seeking new ways of making them—composers have found ways to isolate and develop extraordinary new musical worlds. *Not* writing for an orchestra is as significant a decision as writing for one; not allowing oneself the luxury of finding the “perfect chord” is often more difficult than searching for it.

Conventional composing techniques have become, to different degrees and in different ways, unsatisfactory to many composers to such a degree that composers who use more neo-intentional methods have been known to jokingly refer to conventional composition as “little black dot” or “smoking jacket” music. Selecting “that next right note” and inscribing it on the page has become, in some of its postmodern manifestations, quotation, recontextualization, fraud, homage, parody, folly, self-indulgence or, in one of its more extreme forms, a self-reflexive commentary on the act itself. Perhaps because of simply how *much* history now exists, the musical,

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visual, dramatic and literary art of the twentieth century has focused on work that describes itself—its own methods, motivations and intentions.

In this way, rather than *inscribe* (or perhaps *exscribe*), some of the composers on this CD prefer to “describe” mathematical, social or natural processes in a sort of meta-programmatic music.

I believe that music is too important to be relegated to one’s own “expressivity” in any way that this has been previously understood. Emotion, life, love, daily experience and the common narrative are reinterpreted in some extreme forms of twentieth-century composition (exemplified by the much of the work on this CD) to exclude the possibility of their sonic expression. Some composers have attempted to liberate music from conventional drama and narrativity by basing it on the mundane, generating an important compositional controversy. Cage’s use of “noise” (both sonically and in terms of chance operations), silence and the incorporation of the sonic ordinary led Xenakis (whose musical ideas are importantly continued by composers such as Ames and Feldman) to make the comment that follows in this excerpt of a conversation with Bernard Teyssède and Olivier Revault D’Allones Teyssède:

Teyssède: These preliminary choices no longer let us incorporate some listener’s cough or a flying [sic] buzzing around the hall into the realm of possible sounds and thereby integrating the fly as part of the music, as John Cage would. This brings up another musical principle, different from yours.

Xenakis: Fine, and I’ll tell you why. Very simply because we all have fortuitous sounds in our daily life. They are completely banal and boring. I’m not interested in reproducing banalities. . . . Silence is banal [1].

Both Cage and Xenakis, however, seem to agree about the importance of evolving the compositional process itself.

Like religious mystics or a carpenter sensing the inclinations of the wood itself, musicians escape the pedestrian by seeking musical sources for which they are only partially responsible. Performers often describe themselves as “channeling” music and many improvisers seek a kind of spontaneously ecstatic state free from licks, clichés and precompositional design. Some composers, such as Stravinsky, have seen themselves as vehicles through which music flows from an ineffable source. Others more deliberately alter the prevailing modes of intention.

## THE PIECES AND THE COMPOSERS

Nick Didkovsky’s work embodies many of the themes of this CD. A prolific composer, programmer and performer, he has incorporated advanced notions of computer-aided composition with the evolutionary-strategy music of Christian Wolff. Some excellent examples of the way he uses these ideas are his *Lottery Piece* [2], his deconstruction pieces for improvisational conductor and ensemble (such as his *Melt* series or his version of *The Rite of Spring* for rock band and string quartet) and his computer-composed music for his band Dr. Nerve. Didkovsky’s music, like Wolff’s, lets everybody in on the game, with new intentions and new performers mediating the compositional process. Didkovsky’s music is idea-driven, but fun, challenging and enlightening to play. It maintains, in its own peculiar way, a firm (if odd) relationship to those “little black dots.” *Metamusic/Metatext* (on this CD) illustrates how Didkovsky works, incorporating the ensemble into the compositional process.

To several of the composers on this CD, sound, nature and musical form are not clearly distinct. Gordon Monro, a mathematician and computer-music composer from Sydney, Australia, is one of the more exciting new composers whose work I have heard. Having begun composing only recently after a career as a mathematician, Monro creates music that is uncompromising and free from compositional artifice in much the way that Joseph Conrad’s prose is free from the burden of “writerly” constructs. Monro brings a certain serenity from his maturity as a mathematician to his work, discovering music from sound and sound from mathematics. Listening to his music makes me imagine what it would be like to “listen” directly to a microphone transducer. Unlike David Feldman, Charles Ames, Tom Johnson and Warren Burt, whose mathematical, enumerative and selection processes are corporealized on the page by notes, Monro’s pieces have no intermediary between the conceptual and the auditory, but flow directly from concept to digital sample.

James Tenney’s *Septet for Six Electric Guitars and Electric Bass* [3], like many of Tenney’s works, uses the harmonic series as a perceptual found object and formal archetype. For Tenney, the harmonic series is a physical, psycho-physical, cognitive and philosophical univer-

sal of sound, much like the critical band (on which he has also constructed an important work, *Critical Band*). In the spirit of Henry Cowell’s *Rhythmicana* and other pieces that equate simple integer durational ratios with harmonic ones, Tenney’s works (such as the Chromatic Canons, *Chorales for Orchestra* and *Spectral CANON for CONLON Nancarrow*) have become their own precedents. Tenney is a post- (or pre-) Romantic craftsman of the acoustical, cognitive and phenomenological, crafting the harmonic series as Ames crafts prototypical probability distributions. Both of these composers work with music much as a luthier works with the grain of wood. Tenney’s model is the discoverer—some new synthesis of poet, sonic carpenter and scientist—and not the “hero.”

The *Septet* emanates from the harmonic series. The open strings of the guitars and electric bass are tuned to the first 11 harmonics of A and E, a perfect fifth apart. In the first section, the low A enters in all of the guitars in harmonic rhythmic ratios. Gradually, this note expands upward, becoming the first 11 harmonics of itself in rhythmic ratios analogous to harmonic series numbers. The sixth page of the score (Fig. 1) shows the sixth and twelfth harmonic in guitar I, the fifth and tenth in guitar II, the eleventh in guitar III, the ninth and third in guitar IV, the second, fourth and eighth in guitar V and the seventh in guitar VI. The bass steadily ascends through the series and the fundamental (first harmonic) is implied as the low A in the bass clef (which has been present until this point in the bass). Once the series is complete, the notes drop out quickly until only the twelfth harmonic remains in guitar I. In a metric modulation solo (produced by switching meter and accent), this becomes the third octave (eighth harmonic) of the fundamental on the E, a perfect fifth from the original A. Finally, a kind of reversal of the original process occurs: the E harmonic series is constructed from the top down, again in harmonic series-based rhythms, simplifying to the unison low E at the end.

For Tenney, the detour of compositional intentions is via the cognitive or the acoustical. In the *Septet*, the harmonic series structures his aesthetic design much as the sinusoid functions for Gordon Monro. As do the pieces on this CD by Warren Burt, David Feldman and Charles Ames, Tenney’s work uses the electric guitar in innovative ways. Other



III

107 112

117 123

(A<sup>4</sup>) (A<sup>3</sup>) (A<sup>4</sup>) (A<sup>5</sup>)

Fig. 1. James Tenney, sixth page of the score for *Septet*. From *New Music for Plucked Strings* (Lebanon, NH: Frog Peak Music, 1986).

## I

The image displays a handwritten musical score for a piece titled "Rational Melodies" by Tom Johnson. The score is written on 12 staves of music, all in G major (one sharp) and 4/4 time. The notation is characterized by a rhythmic pattern of eighth and sixteenth notes, often with beams connecting them. The melody is primarily composed of eighth notes, with some sixteenth-note passages. The piece is marked with a Roman numeral "I" at the top center. The handwriting is clear and legible, typical of a composer's manuscript.

Fig. 2. Tom Johnson, score for *Rational Melodies*, passage from the first melody. © Tom Johnson 1982. Published by Two Eighteen Press, New York.



artists, including symphonist Glen Branca and the band Sonic Youth, have made extraordinary uses of the tuning possibilities of this instrument and, like Tenney, exploited these uses formally. The potential and flexibility of this instrument, which has now been explored by several generations of young, skillful and open-minded performers, have centralized its role as an important vehicle for new compositional exploration.

Tom Johnson's compositions have consistently and methodically explored the use of completely explicable—in his word, “rational”—compositional processes. Johnson selects the mathematical—or more typically, counting—algorithm to use, then lets the music express that as simply and transparently as possible. More or less everything is negotiable but the grafted (or “translated”) mathematical idea. Articulate both as a composer and a writer, Johnson provides explanations that enrich the dimensionality of the music for both performer and listener, but are not necessary to hear the music well. Even if the listener is unable to guess the specific process used, he or she can sense the coherence of a process at work and follow it in some personal cognitive or formal translation (which, Johnson acknowledges, may be just as valid as the composer's). Johnson's notes on the *Rational Melodies* also describe, in part, the music of David Feldman and Christian Wolff on this CD, in that only *that which is specified* (usually, the notes themselves and some form of rhythm) is the composer's: the rest is up to the performer. Johnson's introduction to his notes on the *Rational Melodies* state that

The *Rational Melodies* may be played by any instrument, in any octave or transposition. It is not necessary to play the whole set, and performers are welcome to group selected melodies into suites however they like. The pieces are intended primarily for soloists, though they may also be performed by groups of instruments, playing in unison or alternating in simple antiphonal patterns.

Since this music is primarily concerned with logical melodic progressions in a rather abstract sense, rather than with specific sounds, it seemed preferable to notate them in a rather abstract way, without specifying dynamics, phrasings, and tempos. Performers will find their own ways to present the sequences effectively, and their interpretative decisions, based on actual performance situations, will normally be more appropriate to the particular circumstances than any generalized decisions I might make here [4].

On this recording, three of Johnson's rational melodies are played by an unusually experienced and sympathetic performer, New York clarinetist and composer Daniel Goode, whose own unique contribution to minimalist and process music is extraordinary. Goode has been performing these pieces as part of his “Interesting Melodies” project, which also includes pieces by Howard Skempton and Johanna Magdalena Beyer.

It is worth quoting in full Johnson's explanations for the three pieces included here (*Rational Melodies I, II, and XVII*) (Figs 2–4):

#### I

A 37-note rhythm (the 7-bar pattern) resolves around a 6-note melody. Six into 37 leaves a remainder of one, so we shift to a new starting note each time around. This is the medieval principle of isorhythm, though composers like Guillaume de Machaut would generally work with a rather long rhythm (tala) and a rather complicated melody (color), repeating each only a few times. For them isorhythmic organization seems to have been a sort of secret or sacred element, to be vaguely sensed rather than to be directly perceived, as here.

#### II

The “dragon” pattern, as explained in visual terms in several of Martin Gardner's *Scientific American* columns in 1967, provides the basic sequence here. The “dragon” pattern was derived by folding a piece of paper in half, over and over, always in the same direction, and analyzing the sequences of right and left folds that resulted. If we begin with a right fold (dividing the paper in half), then fold it again (forming three creases that divide the paper into four sections) and continue in this way, the sequence goes:

one fold                    R                    R  
two folds                 R            R            L  
three folds    R    R    L    R    R    L    L  
four folds    R R L R R L L R R L L L L L  
etc.

The new folds are always a simple alternation of right and left, but the pattern as a whole takes turns that still amaze me sometimes, though I have been studying, playing, drawing, and humming it for a couple of years.

My usual method of translating the folds into music is simply to read “right” as “up” and “left” as “down” and move melodic lines up and down a scale accordingly. In this case I finished by folding the paper in three parts, instead of in half, so that the melody came out in triplets, with two ups and two downs preceding the ups and downs produced by the folds I already had, giving this melody of 384 ( $3 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$ ) notes. It is written

out on the scale of alternating half and whole tones, with cadences inserted whenever the melody descends back to the keynote A.

[...]

#### XVII

Another isorhythmic structure, as in No. 1. Here the music moves around a cycle of 16 pitches with a rhythm 13 notes long. By the time the pitches have gone around 13 times, the rhythm has gone around 16 times, and we are back where we started [5].

Where Johnson's compositional methods tend to be numerical and enumerative, those of Charles Ames and David Feldman are more purely mathematical. For the past 20 years, Ames has been a leading thinker in the use of probabilistic and statistical methods in composition and in computer-composed music in general. He has contributed a series of important articles to *Leonardo Music Journal* and to *Leonardo*, but his music has seldom been performed or heard and remains almost completely unrecorded. Because of his complex compositional approach and uncompromising aesthetic (which, as in the music of Johnson and Feldman, involves an unmediated translation of idea into notation), Ames's music is often thought to be too difficult to perform. Yet *Artifacts* shows, I believe, that Ames's music requires a special performer (here virtuoso guitarist Doug Hensley, who has made a career of performing challenging contemporary music) with a willingness to address the score on its own terms. Hensley's attention to the intricate, introspective details of *Artifacts* brings new insight into Ames's music.

This is a *guitar* piece above all, in which Ames explores the ability to sustain certain notes through fingering position changes to create a degree of introspection reminiscent of the great classical guitar studies of Fernando Sor. Unlike the Feldman or Burt guitar pieces, this piece *is* idiomatic for the instrument. Its unusual time signature (2/4) creates a complex rhythmic notation in which double dots and a lot of flags are the norm. But as a kind of Stravinskian march, it makes a great deal of sense for the listener and performer (Fig. 5).

Ames may be characterized perhaps as a “neo-algorithmic-baroque” composer in his use of homogenous polyphonic textures, terraced dynamics and strict adherence to the working out of musical forms. It may not be any more difficult to understand Ames's composi-



## II

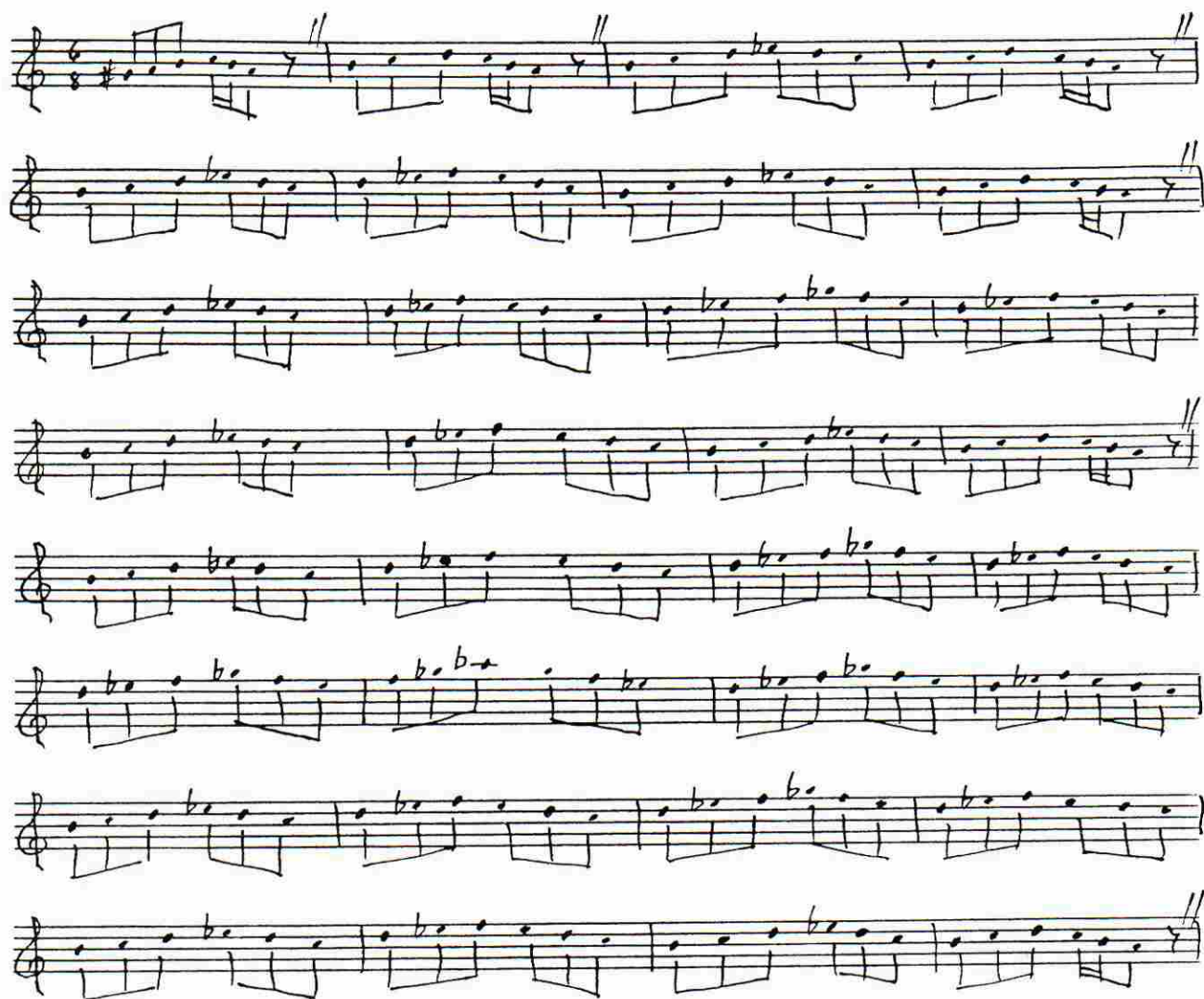


Fig. 3. Tom Johnson, score for *Rational Melodies*, passage from the second melody. © Tom Johnson 1982. Published by Two Eighteen Press, New York.

tional uses of statistical feedback and heterogeneity than it is to chase down the fugal and canonic intricacies of Bach's *The Art of Fugue*—Ames's ideas are just newer.

David Feldman, like Gordon Monro, is a mathematician/composer. Unlike Monro, Feldman has severed his own relationship to sound almost completely by radically deemphasizing the sonic realization of his works. His earlier works were usually realized with pulse waves, which are simple and inexpensive (but accurate) synthetic sounds. His music is about what it is about and is clearly *not* about what it is not. Feldman's work questions the relationships of music and sound, asking what "sounds good" and is "good sound," and what we (could possibly) mean by these common phrases.

In ". . . *still plenty of good music* . . ." Feldman is interested in new ways of creating rhythmic phenomena. He confounds the natural rhythmic inclinations of the performer/interpreter by his use of space. Composing the piece and "dumping" the score directly to musical notation using a computer graphics language (Postscript), he eliminates the possibility of conventional rhythmic intentionality. In Feldman's software, time is equal to horizontal space, and his program knows nothing about standard musical notation—it just places the next note in its mathematically determined position. The performer's task is to redirect his or her own rhythmic reflexes. What fits on the guitar may or may not be expressed on this wondrously uncarving page, creating a tense, happy an-

tagonism between the player's licks and the computer's picks. In *New Musical Resources*, Henry Cowell points out that "composers who innovate rhythms often pass unnoticed; and their music, particularly if it contains consonant harmonies"—or, in this case, a direct quotation of an anachronistic serialist style—"may be branded as imitative" [6].

Feldman produces *raw* scores, or, in Laurie Spiegel's terms, "pure information." The score for ". . . *still plenty of good music* . . ." is a list of notes without dynamics, phrasings, any indication of how the notes should sound or even tempo (Fig. 6). My goal as a performer has been to play it fast, at a tempo of about 5 seconds per line of music. The score requires the performer to interpret the piece (as do all scores), but

## XVII

Fig. 4. Tom Johnson, score for *Rational Melodies*, passage from the seventeenth melody. © Tom Johnson 1982. Published by Two Eighteen Press, New York.



Amplified Guitar

# Artifacts

For Michael Zak

Charles Ames

Metronomic ♩ = 80  
Hold durations to full value

pp

11

16

21

26

31

36

41

46

51

56

mf

Fig. 5. Charles Ames, page from the score for *Artifacts* (Lebanon, New Hampshire: Frog Peak Music, 1984) © Charles Ames 1984.



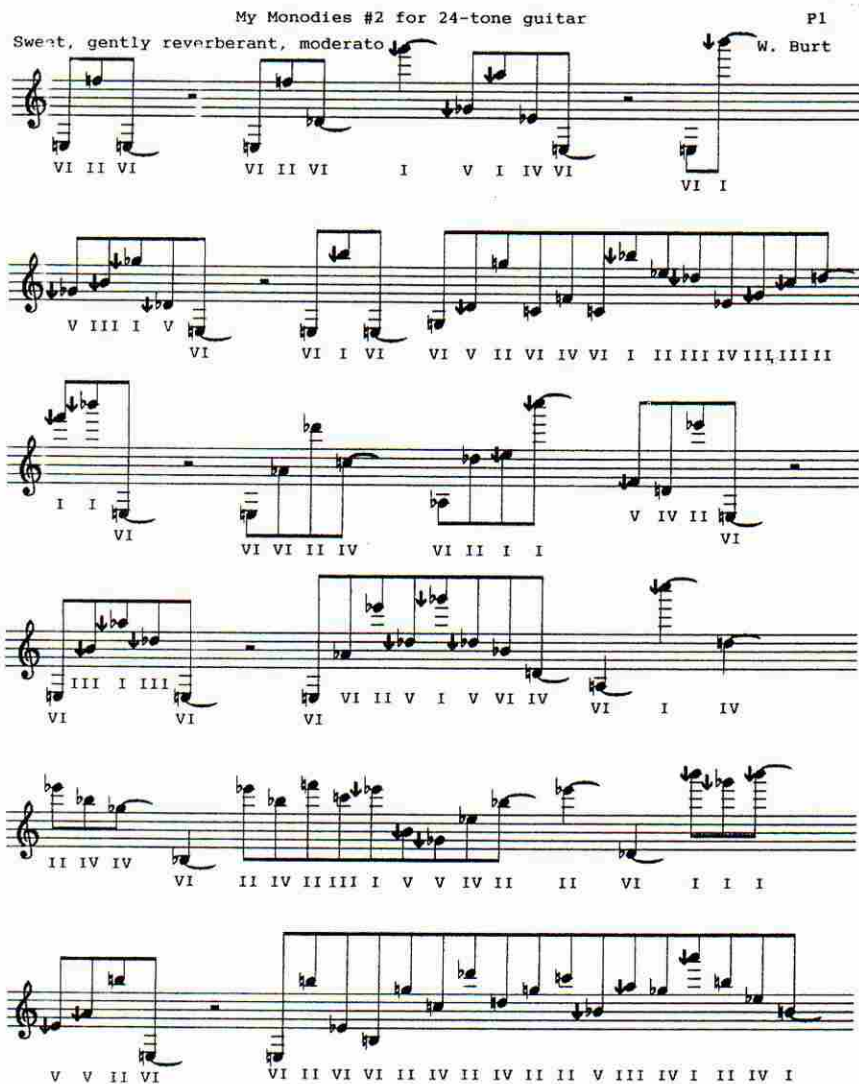
Fig. 6. David Feldman, score for "*... still plenty of good music ...*" © David Feldman 1994. Published by Material Press, Frankfurt-am-Main, Germany.





Fig. 7. David Feldman, excerpt from the score for "... still plenty of good music..." showing the 120-note repeating pattern that dominates the score (passage shown here begins at top of page 4). Phrase beamings added by Larry Polansky. © David Feldman 1994. Published by Material Press, Frankfurt-am-Main, Germany.

Fig. 8. Warren Burt, first page of score for *My Monodies II* for 24-tone guitar.



leaves much to the guitarist's sonic imagination. The performer must compose his or her *own* work from the instructions (notes in space). After the first few measures, the piece becomes a 120-note repeating pattern consisting of just a few transposable intervallic "licks" (Fig. 7) [7]. For this recording, I have reinvented the repeating note patterns with different fingerings and articulations (such as bends, slides and staccatos). A simple guitaristic approach would be to finger the patterns orthogonally, transposing them up and down the neck. I have spread the fingerings over the neck and strings to create timbral groupings that are out of phase with the intervallic patterns.

"... still plenty of good music..." is not, at first glance, about the guitar. But ultimately it becomes recomposed on the instrument, perhaps more intimately than a composition conventionally "intended" for the guitar may have been composed to begin with. The musician's freedom results from the composer's intentions and non-intentions. By omitting something, something (and someone) else is included. Composers such as Didkovsky, Wolff and Feldman leave breathing space for the intentions of others.

For several of the composers on this CD, text is the vehicle for new intentions. They follow a tradition that includes Schwitters, Jackson MacLow, Cage and the rich history of sound poetry and text-sound composition. In her elegant and romantic *Eulogy*, Mary Simoni uses computer-aided compositional ideas to accompany a more conventional and direct foreground. A young researcher, teacher and composer of computer music, Simoni is a good example of how composers today are free to combine aesthetic worlds—in the case of *Eulogy*, the austere world of algorithmic music and a more purely lyrical environment.

Daniel Goode, a protean minimalist, works with the disembodied and explicitly artificial computer voice in much the same way that Burt, Feldman and Johnson work with notes as distinct from music. Chopping and decontextualizing the words of Mark Fuhrman—just as he manipulated quotes from Catherine MacKinnon in an earlier work—Goode exploits the inaccuracies of MIDI, pitch tracking and computer speech and the incredible absurdities of culture in the United States (which is more odd—Fuhrman's reference to beer, or the synthesizer's misapprehension of the voice melody?) to craft works that pre-



clude too much analysis, too much pondering. Direct, "low-tech" and transparently crafted, Goode's works are good-natured reminders to examine our own inherited intentions.

Laurie Spiegel, one of the major pioneers of computer-composed music and computer music in general, is represented on this CD by a characteristically delicate and thoughtful piano work, *The Unquestioned Answer*. One of the few recordings of her music available, it is also a document of her involvement with the GROOVE system, a computer-aided performance environment with which she has long been associated. Spiegel's uncompromising music and enormous contribution to the field (via software, composition and philosophical commentary) is only beginning to be documented in the way that it should be. Hopefully, more and more high quality recordings of her work are forthcoming.

Warren Burt, an enormously prolific and inventive Australian composer, has continually redefined his creative process. Working with virtually every performance medium and conceivable technology, his variety of means reflects one of his stated fundamental principles: "No taste." Burt not only accepts what comes out of his computer, mechanical, or compositional processes, he accepts a lot of what comes out. His recent set of piano etudes show that to Burt, craft is idea is process is product [8]. To choose one note over another or one sound over another once the basic set of procedures has been initiated would be as

alien to Burt's recent method of working as the use of an Ames-style distribution function would be to a neo-tonal composer (both of these situations, however, are wonderful to imagine). Burt's instrumental music (like Feldman's) is paradoxical: how should a human performer, with all of his or her own intentionality, interpret these works?

In the two guitar pieces *My Monodies I and II*, Burt's (non-)intention is to let the tunings sound without expressive interference. These tunings resemble gamuts more than scales—collections of notes with a relatively unweighted set of relationships. As with Feldman's "... still plenty of good music..." and other "open" works, the performer's responsibility is to decide what to do with all these notes. By re-fingering many of the passages so that both right and left hands are used on the neck and in plucking the strings, phrases with huge registral leaps (Burt's program "knows" very little about guitar fingerings) may be sustained (Fig. 8). Technology engenders technique. Over the course of a year of performing and recording these two pieces, my own expressive intentionality naturally emerged, and I made no effort to inhibit it.

The works by the eleven composers on this CD represent a diverse but small fraction of some of this century's innovative musical intentions. Composers and musicians will continue to question, explore and revolutionize the way that music is made. The old arguments—about humans and computers, process versus product, sound and meaning and the dif-

ferences between compositional intent and listener experience—will continue. From Machaut's isorhythmic structures to Ames's probabilistic procedures, the history of composition is the history of composers redefining themselves in relationship to their world and deciding how to sonify that world. Because composition is questions and not answers, no single technique, idea or new intention will keep more than a few of us busy for very long. For all our passionate arguments, this CD shows that, most importantly, even the most radical neo-intentioned composers must agree with Xenakis when he asks, "Isn't the best way to dive into it precisely by making music?" [9].

## References and Notes

1. Iannis Xenakis, *Arts/Sciences: Alloys*, Sharon Kanach, trans. (Pendragon Press, 1985) p. 42.
2. *Leonardo Music Journal* 2, No. 1, 3-12 (1992).
3. An earlier, live concert recording of *Septet* was released on the audio cassette magazine *Tellus* No. 14 (1986).
4. Tom Johnson, *Rational Melodies* (New York: Two Eighteen Press, 1982).
5. Johnson [4].
6. Henry Cowell, *New Musical Resources* (New York: Alfred A. Knopf, 1930).
7. Feldman informed me that the repeating pattern is, in fact, the result of a bug in the Postscript random number generator and not "intentionally" part of his program.
8. Warren Burt, *39 dissonant etudes (1993)*, Tall Poppies CD TP093 (1996).
9. Xenakis [1] pp. 94-95.

Manuscript received 14 July 1997.



