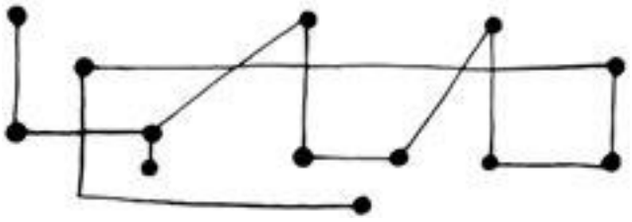
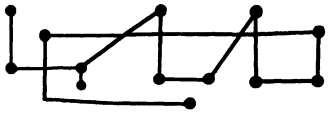


Developing an Interpretive Context: Learning Brian Ferneyhough's *Bone Alphabet*



Steven Schick

One of the first casualties of the fast pace of professional performance in contemporary music is the small but pleasurable distinction between the act of learning a piece of music and the art of performing it. So often, out of the pressure to learn music increasingly quickly, these two distinct states of mind become confused. The learning of a piece becomes the necessary expedient of performance, but is rarely savored for its own unique qualities.

Among the many admirable aspects of the music of Brian Ferneyhough is that extreme complexity and performative difficulty in his scores enforce a slower pace of learning and allow the natural growth of an interpretive context. In learning his *Bone Alphabet* (1991) for percussion solo, I had the additional advantage—although it was certainly hard to see it as an advantage at the time—of being almost wholly innocent of

the kind of rhythmical difficulty found in this score. My normally slow pace of learning and memorizing a new work became positively glacial.

The thirty-some performances of *Bone Alphabet* which I have given in the year since its premiere (on 19 February 1992) now seem to balance the eight or nine months it took to learn the piece. At this moment of reflection, I am reminded of how different my mental conception of the piece has become in the months since it emerged from the marsupium of the practice room.

Painted in broad strokes, it seems to me that the act of learning a piece is primarily one of simplification, while the art of performance is one of (re)complexifying. In the learning process, rhythms must be calculated and reduced to some potable form, the turbulence of the microforces of form must be generalized, and various kinds of inane mnemonics must be employed simply to remember what to do next. An artificial skin of practical considerations must be stretched tightly across the lumps of a living, breathing piece. Performance reinflates the piece, fine tuning its formal gyroscope, revivifying polyphonic structures, and packaging the intellectual energy of the score into meaningful physicality.

Performance, then, is a real-time explosion of the rich complexity of a work: what took months to learn takes only minutes to play. Kinetic energy, embedded in a piece during an extended practice phase, burns—like a kind of musical lignite—as the heat and light of a performance. This energy poses a danger though, especially in works of substantial compositional sophistication. If the interpretive skeleton, built up painstakingly during the learning process, is not sufficiently strong to support the weight of the complexities in the score, then the entire piece threatens to collapse into a simple and singularly unappealing mass. How then to retain and project complexity in performance?

Or, more to the point of this essay, how do decisions made during the initial phases of learning, although fundamentally different as mental activities from those of the final product, shape and make inevitable an interpretive context which steers the piece in performance? The early problems in *Bone Alphabet*, which I perceived intuitively at first, had to be solved in a logical order: first I had to choose instruments and arrange them in a "multiple percussion" setup, then learn the rhythms projecting them polyphonically, and finally make sense of the global formal issues.

What is particularly revelatory about *Bone Alphabet* is the interaction of these issues of sonority, rhythm, and form. Changes in instrumentation, for example, give the rhythms different sounds, to be sure, but by changing the metrical weighting of those sounds the rhythms in turn sound different. Likewise, physical gesture as it varies in response to different sizes and shapes of instruments changes the choreography of the piece

and with it alters the comportment of musical material. Ironically, in a score which seems so rigorously determined, certain idiosyncratic decisions on my part in the first days of practice reveal a path through the thicket of Ferneyhough's notation that inevitably gives my interpretation of *Bone Alphabet* a wholly personal and rather intuitive aura.

Instrumentation

When I first asked Brian to write a new work for solo percussion, his initial reaction was ambivalence.[1] His highly evolved rhythmic language seemed very well suited to the clean attacks of percussion sound. However, the unpredictability of the sounds themselves was another matter. Ferneyhough's compositions for other instruments, after all, featured a highly controlled exploration of sonority.

> Thinking about composing means, first of all, thinking about the specific nature of the instruments to be employed. I'm very concerned that the things I ask an instrumentalist to do be . . . instrument-specific . . . ensuring that one could not imagine any other instrument playing the same material in the same way.[2]

Specific percussion sonorities unfortunately are not easily defined by notation, nor are they easily summoned in performance. Even under the most controlled circumstances, where a composer knows a particular array of instruments played by a given percussionist with carefully specified mallets and striking areas, there can be no assurance of being able to reproduce certain sounds exactly from performance to performance. Adding to that variations in technique among different performers—not to mention what any given performer might understand by the word "gong" or "hard mallet"—one can begin to see the enormity of the task involved in specifying and notating percussive sonority. For a composer like John Cage, attracted to exactly this kind of sonic indeterminacy, percussion was a world full of the best kinds of surprises. For Brian Ferneyhough, with his meticulous timbral sensibilities, percussion was a swamp of sounds with clearly defined attacks, but poorly defined edges.

Brian's solution was to abandon the terra firma of timbral specificity and embrace—within some very clearly defined limitations—the uncertainties inherent in the spongier terrain of percussive sound. *Bone Alphabet*, therefore, is a work written for seven undefined sound sources. The exact instruments are to be chosen by the performer. In the preface to the score, Ferneyhough indicates that instruments should consist of

sounds organized consecutively from high to low where adjacent instruments may not belong to the same family. In fact, though family relationship among percussion instruments may seem a vague criterion, Ferneyhough means quite simply that adjacent instruments must be made of different materials.

My seven instruments from high to low:

1. high wood block
2. high bongo
3. small Chinese opera gong (muffled quite heavily, but with an audible glissando upwards)
4. medium conga
5. medium-low cowbell
6. low wooden tom-tom (of the sort required for Stockhausen's *Kontakte*)
7. low tom-tom (as low as possible with a faint glissando downwards).

The important considerations behind these choices dealt first of all with register. Even though pronounced differences in the spectral envelope among these instruments tend to overshadow the differences in pitch, there should be a perceivable change in register from high to low across the instrumental array in order to project the strongly vectorial nature of the melodic line.

In addition, there should be quite similar decay characteristics among the instruments. Because of the very rapid rhythmic material, sustaining instruments were inappropriate. In fact, my instrumentation has a graduated scale of durations so that the lower instruments have slightly longer decay times than the higher ones, but in general all are quite dry. Since there would be no time for mallet changes, all instruments would have to respond to a single set of four mallets (two hard and two soft) carried throughout the piece. And, strokes of equal force should produce roughly equal dynamic response across the range of instruments.

In *Bone Alphabet* the texture shifts kaleidoscopically between monophonic linearity and polyphony with as many as four lines. The question became how to choose instruments different enough from one another to be able to project clearly perceivable polyphony yet compatible enough to be melded together into a single line.

For polyphonic sections, each instrument needs at the core of its sonic personality an indelible and identifiable individuality. Instrument number

3, the gong, for example, must be identifiable as a gong in any polyphonic texture, played at any speed, and in any rhythmic context. It seems simple enough, but many instruments, even of different materials—say vibraphone and marimba—have similar enough harmonic spectra to be easily confused with one another in rapid alternation. On the other hand, in order to accommodate monophonic sections of the piece, instruments needed to knit sufficiently well together to form a single line.

This dual necessity meant that sounds on either extreme of a scale of individuality were inappropriate. Sounds of maximum identity (an array consisting of snare drums and crotales to cull an extreme example) could never be fluid enough to mesh as a single line, and highly blendable sounds like cymbals and tam-tams could never project multiple polyphonic ideas.

Eventually it became clear that freedom of choice in the instrumentation of *Bone Alphabet* was largely illusory. The number of possible instrumental configurations which satisfied the rhythmic and textural conditions of the score and which did not at the same time pose insoluble performance problems was very limited indeed.

Brian once told me in conversation that an ideal instrumentation for the work was one that was "maximally Protestant." As the son and grandson of Iowa farmers a pleasant ripple coursed through my gene pool at this comment. At the same time, however, I became preoccupied with finding and exploiting timbral nuance in my rather straight-laced instrumentation. The resources of color were later used to distinguish and project different polyphonic strands: highlighting differences between two lines by assigning different hardnesses of mallets to each, or by varying striking area, articulation, and ornamental effect. The approach of delicately coloring a basic instrumental stable was my initial solution to what I perceived as the looming challenge of the piece: how to engineer a work of more than ten minutes with only seven sound sources.

These decisions about instrumentation were made in a flurry in the first few hours of practice. Literally by the end of the first day, I had a setup which has not changed since except for minor points of the tuning of drums. The process of learning rhythms and memorizing the piece, on the other hand, was excruciatingly slow.

Rhythm

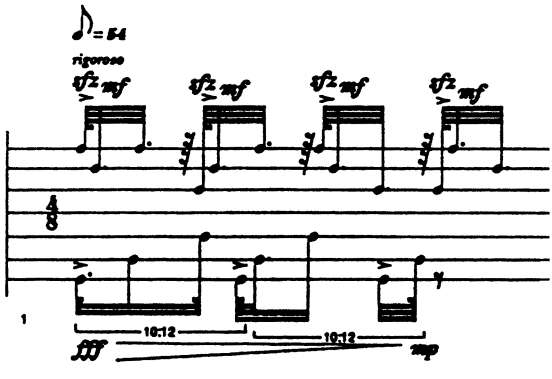
My method of actually learning the piece involved first cutting out each bar and gluing it on graph paper so that I could better calculate rhythmical relationships. Then I made all decisions regarding sticking and mallet

choice and memorized them before going on to the next measure. The advantage to this approach was that, by memorizing as the first and not the last step in the process, I could more quickly embed the material I was learning in the realm of physical gesture. As a result, from the first instant the piece became a theatrical arena where physical gesture was not the simple by-product of performance, but an integral part of a growing interpretive point of view. The instrument became a kind of stage for the enactment of, in Ferneyhough's words, "a theatre of the body."[3]

Gesture became an indispensable mechanism for memory, physical distance a calibration of rhythm, and "comportment," Brian's term for distinctions among formal sections, took on its initial meaning as behavior revealed by posture.

Eventually, several rhythmic strategies emerged: (1) solving polyrhythms by means of calculating the least common multiple of their constituent components, (2) translating rhythmic notations into indications of tempo, and, (3) casting one line of a polyrhythm as strongly foreground in nature against which other rhythmic lines act ornamentally in varying degrees of rhythmic dissonance to the original. Very often a given bar of *Bone Alphabet* would require a mixture of these techniques.

In instances where two or more rhythmic lines share both beginning and end points, a method of calculating the least common multiple of the rhythmic components works well. Bar 1 (Example 1) serves as a good example. The lines start together in clear two-part polyphony and then meet again on the second half of beat two. The upper line in thirty-second and sixty-fourth notes is quite straightforward, while the lower line divides the twelve sixty-fourth notes (one and a half beats) into ten parts. A second polyrhythmic phrase begins on the "and" of beat two and continues until beat four, also in thirty-second and sixty-fourth notes in the upper line and 10:12 in the lower line.



EXAMPLE 1: BAR 1

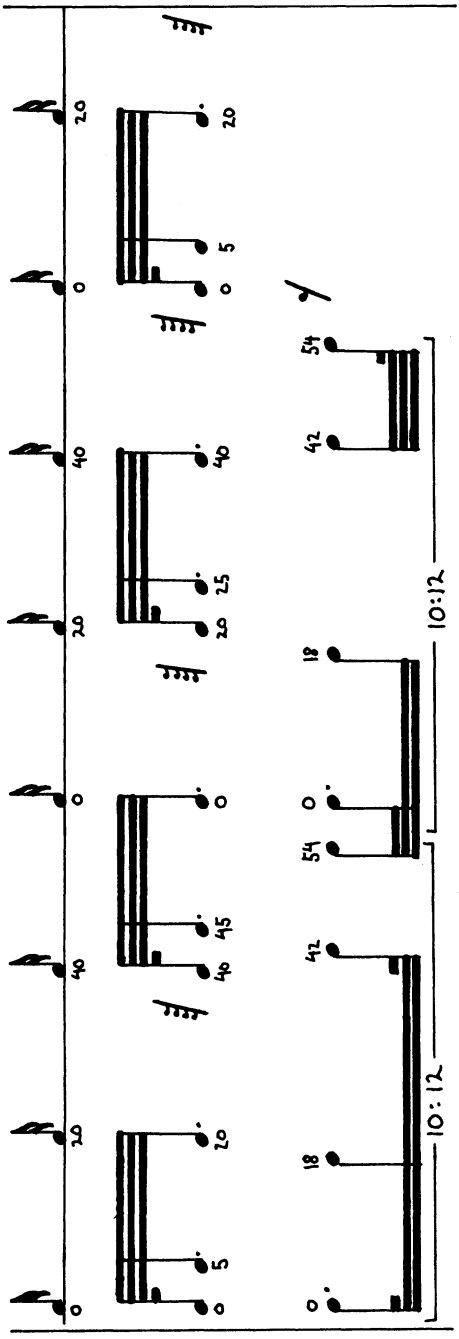
A very simple grid can be constructed for each group of one and a half beats by multiplying the denominators of the two components together. The upper voice is expressed in sixty-fourth notes, or twelve units for the beat and a half, and the lower voice is expressed in ten units. Thus a grid based on the multiple of the two rhythms contains 120 increments and will account for each note of the polyrhythm. This grid can be simplified by taking the least common multiple of two rhythms—in this case 60 (Example 2). Note that by using the least common multiple, the grid still provides an index for every note of the polyrhythm, but produces more easily countable subdivisions. To preserve the convenience of having major subdivisions of the rhythm correspond with multiples of ten one must start counting with the first note as zero.

This system works very well for instances where polyrhythms begin and end together, and where the resultant least common multiple is not so large as to render subdivision by a performer impractical. Simple two-part polyrhythms were usually solvable this way. With more difficult rhythms involving three- and four-part counterpoint I produced grids of very large common multiples. True, I could calculate the location of each note with respect to the overall polyrhythm, but I wasn't able to subdivide each eighth note into several thousand parts in performance as was required in some instances.

The very second bar of the piece (Example 3) in fact seems to defy the least-common-multiple approach. There are just two lines, but the rhythms do not have common beginning and ending points. The 6:7 rhythm starts its second cycle between the last triplet of the second beat in the right hand and before the beginning of the third beat. Exactly where between those two beats is of course the question. This particular passage is compounded by the difficulty of deciphering the nested polyrhythm in the lower line.

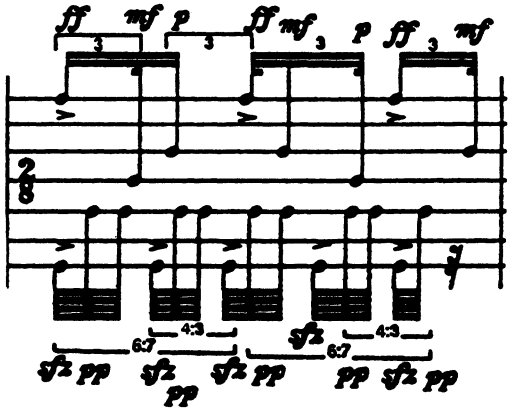
The indication of 6:7 means that the first seven sixty-fourth notes of the bar are to be divided into six parts, the internal 4:3 indication further means that the last three of the 6:7 notes are to be divided into four parts. How does one simultaneously think six in the time of seven and four in the time of three? The answer occurred to me in a flash: one does not!

Instead, I translated the 6:7 rhythmic indication into a tempo change. I conceived of a basic tempo which was $\frac{6}{7}$ as fast as the given tempo of MM ♪ = 54. By removing the rhythmic marking of 6:7 I could replace it with the "new tempo" of MM 46.3. The "new rhythm" then, a simple four against three, is much more manageable. In rehearsal Ferneyhough clearly expressed his desire that the performer not translate polyrhythmic composites into shifting tempi. He felt that polyrhythms seen as shifting tempi imply a reorientation of the overall metrical point of view. And, of



EXAMPLE 2: BAR 1 GRID

course, there is a big difference between changing meters and changing speeds. Nevertheless, as a stage in the learning process, this technique can be very valuable. Eventually such passages should be heard by the performer in the original tempo.



EXAMPLE 3: BAR 2

In bar 2, the least-common-multiple method used in bar 1 produced a grid of subdivisions which was far too large to be practical. I was left with the situation of being sure of one of the two lines and having to approximate the rhythm of the other. As in every polyrhythm, one of the lines must act as the primary voice into which secondary and tertiary lines are incorporated. How does one know which line should act as the primary voice?

In bar 2, the left hand became the primary line into which the triplets of the right hand were folded. The left hand, with the greater amount of rhythmic information in this case, was going to be more obviously right or wrong to a listener. And, I felt that the simplicity of the upper line—only sixteenth note triplets—was something I could approximate fairly accurately.

I learned the left hand precisely at MM 46.3 and then, thinking that line as the primary rhythmic voice, I guessed where the upper triplets would fall. I then taped myself playing the lower line on my leg or on some other surface which made very little sound and played the right hand on instruments, effectively recording only the secondary line. By listening to the tape I could easily tell how accurate my triplets were, and I simply fine-tuned them by playing slightly earlier or later as the situation required.

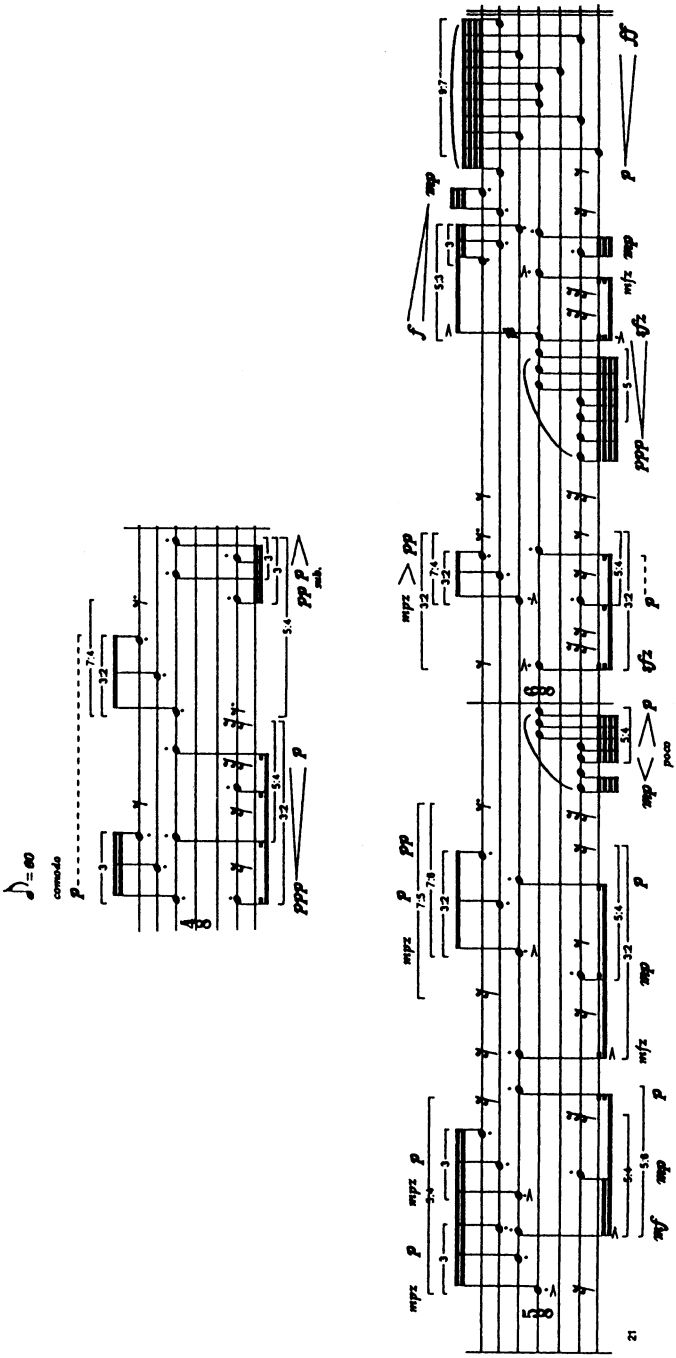
I suppose the idea of approximation implies "guesswork" and therefore the acceptance of rhythmic inaccuracy. I certainly do not mean it in this way; "guessing" is another way of saying that the ultimate judge of rhythmic accuracy is the ear. And, by extension, the ear, the traditional means of learning, hearing, and ascertaining the accuracy of rhythms, was still of primary importance in learning even very complex rhythms. I could generate polyrhythmic graphs of least common multiples or use computer models if I wanted (I didn't), but, in the end, human ears would judge the performance, so human ears should guide the learning process.

Form in *Bone Alphabet* is articulated not only by the juxtaposition of textures and rhythms, but by the interplay of musical behaviors as well. Sections of the work—marked off by double bars in the score—are personalized first by the number of polyrhythmic layers and secondly by the presence or absence of certain ornamental figurations such as tremoli or mordants. The various combinations of rhythm and texture script the "comportment" of a given formal unit and imply a particular manner of interaction between performer and instrumentarium. The peculiar dynamic of a given mode of interaction frequently colored the method by which the rhythms of a section were learned.

For example, in bars 20–22 (Example 4) Ferneyhough composes a "practicing" motive. Here very similar rhythmic material, in this case the triplet material in the upper voice, is repeated at varying speeds in much the same way someone might practice a passage, first slowly then faster, slower again to fix some "problems" and, at the end, in its entirety at tempo. Since different tempi were the sense of this section, the translation of the various nested polyrhythms into changing tempi seemed a suitable aesthetic as well as a practical choice.

The first triplet is very easy, of course, a simple sixteenth-note triplet at MM ♪ = 60. At the end of the bar, however, the rhythm becomes more difficult. The last four sixteenth notes are divided in seven parts and then a triplet is played over the first four of the seven. The arithmetic for calculating the speed of the new triplet is not difficult. The notation indicates that the triplet is to be played over the first $\frac{4}{7}$ of the final quarter note (with the tempo at MM ♩ = 30). The quarter-note tempo of thirty divided by $\frac{4}{7}$ (or multiplied by $\frac{7}{4}$) gives a new basic tempo to the nested triplet of MM 52.5. It was far simpler for me to simply change tempo from MM 60 to MM 52.5 than to try to negotiate the nested polyrhythm.

Similar calculations for subsequent triplets reveal tempi of MM = 75, MM = 44, and MM = 79, respectively. This kind of wedge of temporal proportions, starting from a value serving as a central axis and proceeding to longest and shortest extremes (60, 52.5, 75, 44, and 79) is an

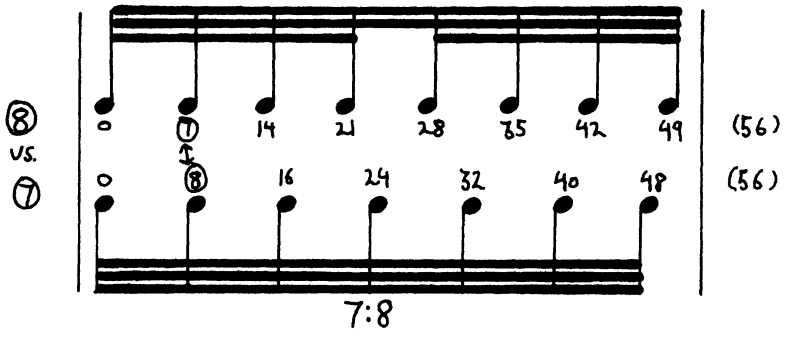


EXAMPLE 4: BARS 20–22

operating principle in macrostructural proportions also. As in bar 2, one voice can be carefully controlled (here the triplets in the upper line) and rhythms of the other line must be folded in and fine-tuned.

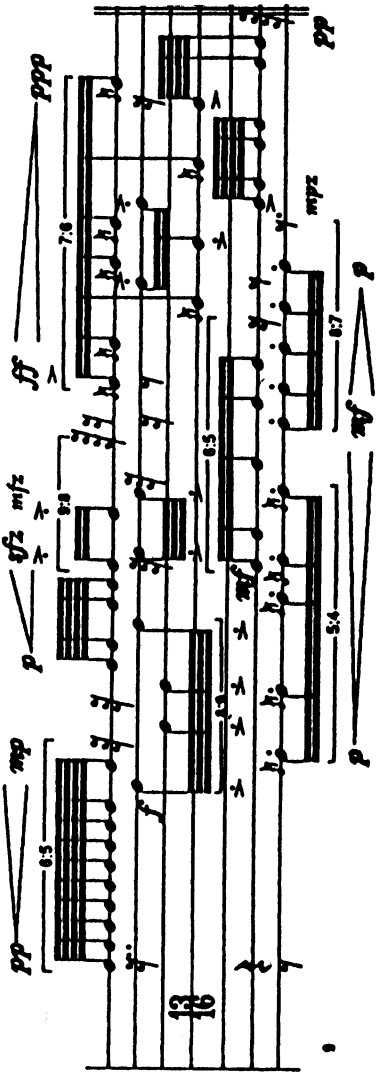
In some instances where the number of coexistent polyphonic lines and the complexity of each line produced an enormous quantity of subdivisions in the least-common-multiple approach or a quicksand of tempo shifts, a third technique was employed. This third method involves "flattening" a polyrhythmic structure into a single line by reading an entire polyrhythmic passage as a filtered version of a primary subdivision. This is essentially an extreme version of the approximation technique used above.

The primary subdivision usually was simply the most abundant kind of subdivision in a given bar. Opposing rhythms were then represented as grace notes of different breadths against a primary pulse. In the polyrhythm 7:8, for example, the second eight could be heard as a grace note to the second seven, appearing at the distance of one-seventh of the initial subdivision (or one-fifty-sixth of the entire polyrhythm) before the eight.



EXAMPLE 5: 7:8 POLYRHYTHM

In bar 9 (Example 6), a difficult four-part structure, my solution involved expressing all rhythms in some relationship to a primary duple value, in this case 128th notes. In this way the 7:6 figure which starts exactly on the eighth sixteenth note of the $\frac{13}{16}$ bar must be "flattened" and heard as some version of the 128th note subdivision of the pulse. The second note of the 7:6 figure arrives, for example, at 6.88 128th notes of beat eight, the second 7:6 note comes at 5.714 128th notes of beat nine, and so on. (Of course, given that my calculations are correct, it might be reassuring to know where each note falls, but I personally



EXAMPLE 6: BAR 9

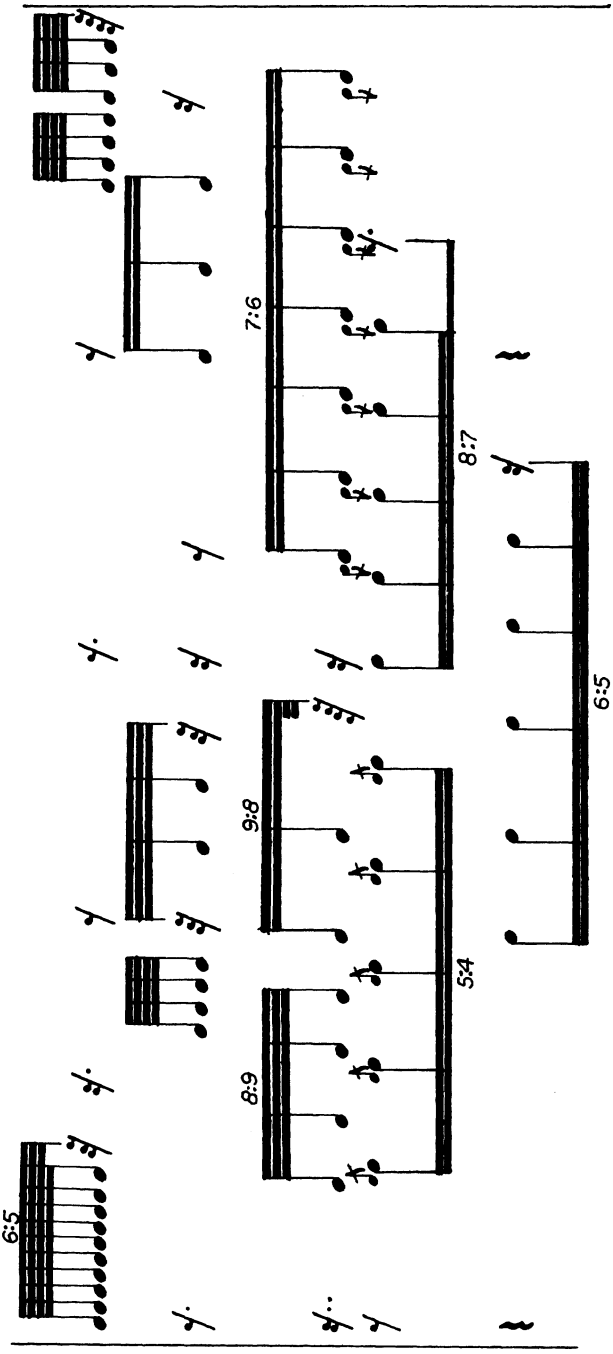
cannot hear subdivisions of a thousandth of a 128th note.) This kind of grid is executed to obtain a maximally accurate graphic representation of the rhythm, and the 7:6 notes are simply played as grace notes of varying speeds against the ongoing duple subdivision. (See Example 7.)

The danger in this method is that the result could easily sound like a flat rhythmic composite—a series of unrelated points—and not a living polyphonic structure. Indeed, different speeds and subdivisions seem to have different rhythmic auras. Hearing everything as a version of a sixteenth note pulse (or any single primary pulse) can dilute a rich rhythmic structure into a monochromatic blob. To avoid this, separate lines must be colored quite carefully by the use of different mallets and striking techniques and projected as clearly as possible from the predominant subdivision by means of different articulations. What is clear from a cursory look at the score is the strongly deliberate rhythmic structures within a single bar. Less clear perhaps are rhythmic processes seen in a broader view. There are many instances where rhythmic continuity or discontinuity across bar lines provides for functions of tension and repose not unlike the functions of tonal harmony in older music.

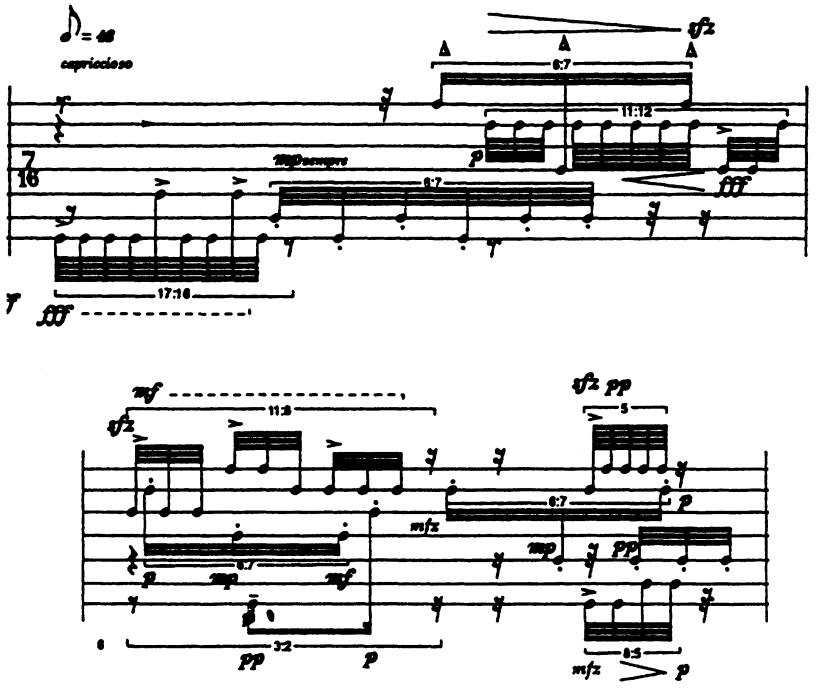
In bars 5 and 6, the thread of continuity supplied by the 6:7 rhythmic passage both in thirty-second-note and sixteenth-note values constitutes a rhythmic plane of activity not unlike that of a tonic chord or perhaps pedal point in tonal music. It is the static value against which the 11:12 and the 11:8 can sound as rhythmic dissonances and which eventually becomes answered by a three-part contrapuntal structure of 5:4, 8:4, and 8:5 at the end of the bar. Harmonic rhythm is supplanted by "rhythmic harmony," to use Ferneyhough's term.[4] (See Example 8.)

Form

It seems clear to me that formal concerns at the microlevel often mirror those at the macrolevel. This is to say that I have never worried much about projecting large-scale form. I believe—and this usually works out—that if I am very careful to render the extreme microlevel of rhythm and texture with fully fleshed-out structure and personality, the larger issues take care of themselves. The "kaleidoscopic" qualities of the formal distribution of comportmental materials which Ferneyhough discusses in the preface to *Bone Alphabet* are, in my mind, the inevitable result of careful work in the details of sonority, rhythm, and style, and I do not conceive of them as constituting a preordained guiding principle.



EXAMPLE 7

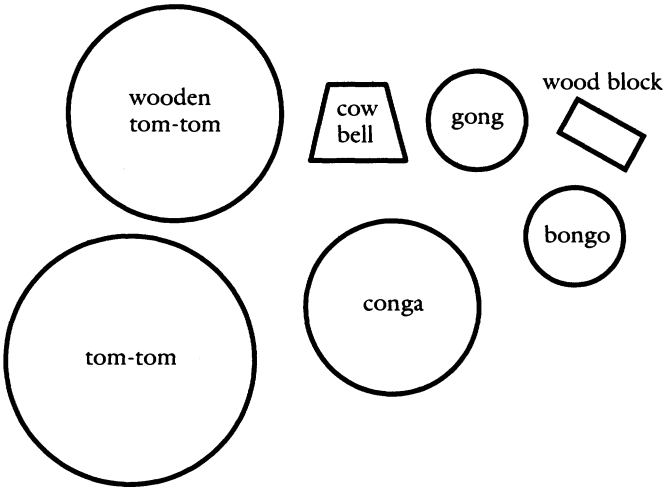


EXAMPLE 8: BARS 5–6

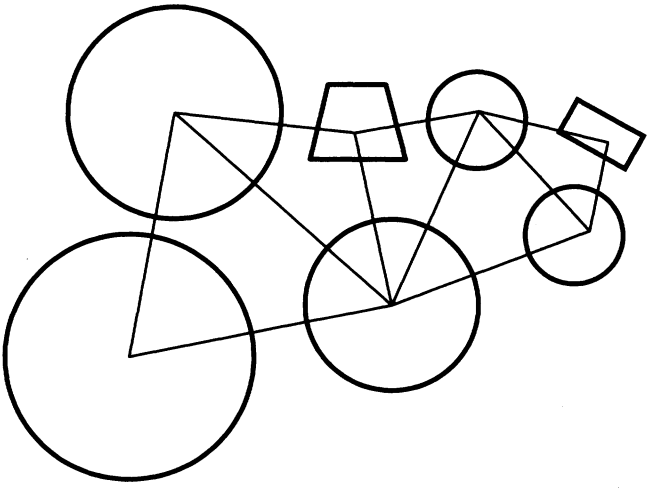
The idea of musical form as it is projected on the template of the form of the human figure of the performer is, however, for me a matter of great interest. The "form" of the work, then, means exactly that: the confluence of bodily movements, extruding limbs, sudden muscularity or the silent tableaux of a freeze frame, and the way, ultimately, that intelligence is packaged and expressed in the form of the human body. When I started work on *Bone Alphabet*, this kind of physicality was the last thing I expected to find. I had thought of the so-called "complexity composers" as cerebral in the extreme. However, even the score of *Bone Alphabet* itself is possessed of a kind of physicality. Score study prompts in me a wish to move in concert with the musical ideas.

Of course, the nature of physicality in *Bone Alphabet* is ultimately determined by the size and shape of the chosen instruments. With these movements comes the inevitable quality of ritual and drama in performance.

I arrange my array of instruments in a quasi-keyboard fashion (Example 9a) which compresses the overall distance from high to low. This is a practice which I use for most works of multiple percussion; the arrangement is designed to minimize the breadth of the setup and thereby to facilitate rapid horizontal movements. The series of interlocking "soft" triangular shapes (Example 9b) are more easily negotiated by the rotating ball and socket joints of the shoulder and hip than those involving more straight lines.



EXAMPLE 9a



EXAMPLE 9b

Aside from the keyboard-style setup, *Bone Alphabet* is a departure from conventional percussion arrangements in practically all respects. The "classic" percussion works from the late 1950s and early 1960s—and here I'm thinking of the percussion parts in pieces like Stockhausen's *Kontakte* or Berio's *Circles*—feature very large setups which catalog a maximal diversity of sonorities, attack characteristics, and durations. *Bone Alphabet* does not pretend to create a microcosm of the percussive universe. Instead it takes a distinct sonic (and therefore sculptural) point of view.

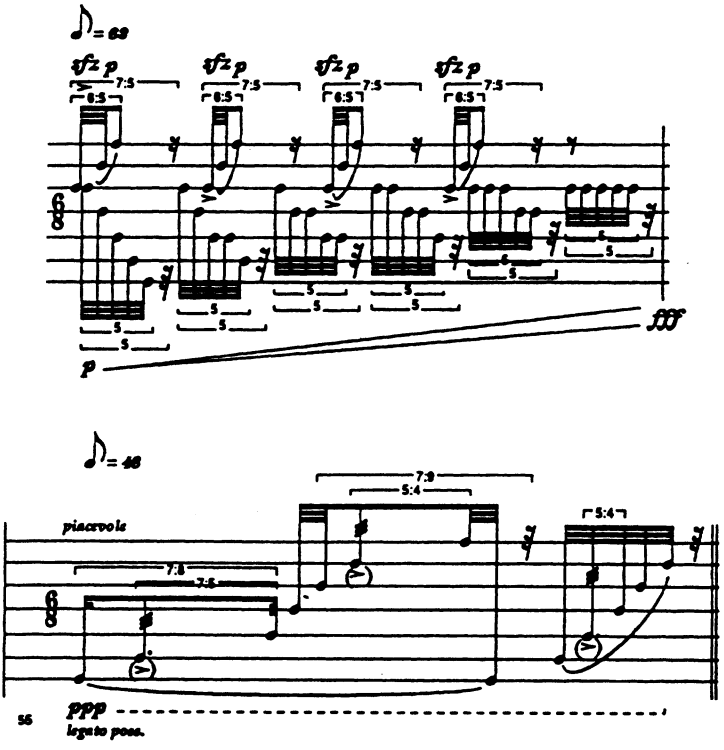
Since the bare-bones setup (hence the "bone" of *Bone Alphabet*) includes no sustaining instruments, every sound must be activated by a discrete physical action. There are no moments of repose while a gong sounds or a tympano decays. This one-to-one relationship of movement to sound creates a visual piece which exactly parallels the textures and formal elements of the acoustical work. A physical language exists which encodes musical meaning and telegraphs by gesture the fundamental properties of the piece.[5]

This linguistic function of physical gesture in *Bone Alphabet* operates in a very different fashion from the role of gesture in earlier percussion pieces. These larger works are certainly "dramatic" at least from the standpoint of the number of percussion instruments involved. There is a kind of grandeur, I suppose, about a stage filled with percussion instruments. The human performer, however, is often dwarfed by the sheer amount of stuff, and is frequently tempted to exaggerate movement simply to feel present amongst all of the instruments. The result is frequently something like enacting *King Lear* in a stadium: in such a large arena even epic rage is likely to seem rather puny.

Bone Alphabet establishes parity between the ambit of the performer's gestural world and the size of the instrumental stage it occupies. In the context of a work for seven small instruments even the movement of the mallets may have dramatic significance. Shifting body weight from leg to leg or the sudden torque of the torso then is positively balletic. So if the gestural unit of meaning is conceived much more finely in *Bone Alphabet* than in most other percussion works, how then is it emblematic of the acoustical component of the work?

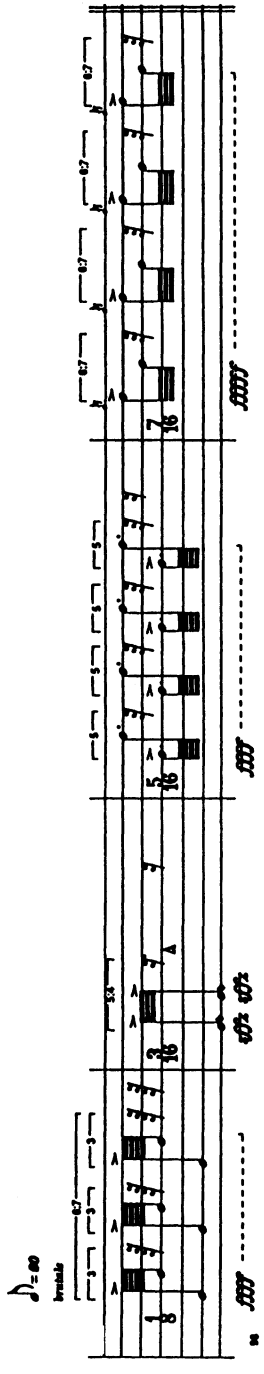
Because of the very rapid rhythmic material, the motions of the performer are generally isolated in the mallets, hands and wrists; the rest of the body serves to position the hands and sticks over the correct instrument, but is not usually involved in generating the striking motions. The overall visual effect is one of the performer pegged out over the setup by the need to be in almost constant contact with every instrument in every bar. There is rapid-fire movement in the hands and arms of the player, but a strangely static stance in the legs and torso.

When, in rare instances, an entire bar features a clear melodic trajectory such as those in Example 10, the trunk of the body is liberated from the necessity to stand guard over the center of the setup. This engenders an interesting musical/physical correspondence: the more strongly vectorial the melodic line becomes, the more the entire body becomes involved in its execution. The sudden involvement of the entire body in these phrases provides a visual signal of their importance.



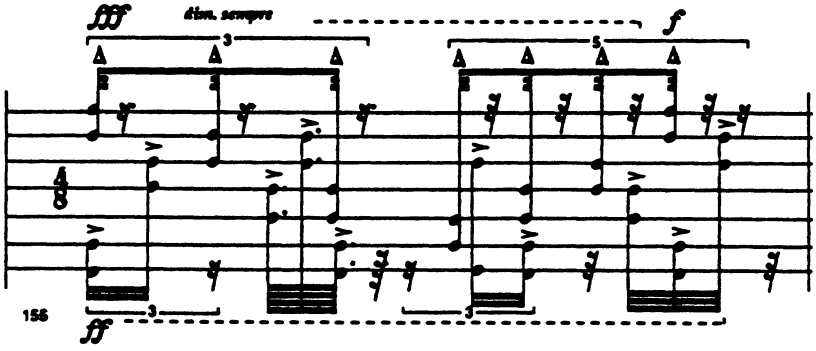
EXAMPLE 10: BARS 25 AND 55

Two significant points of arrival in the piece are marked by similar gestural structures. In Example 11 there is a sudden radical filtering of the musical texture which produces explosive punctuations of silence. Conversely, in Example 12 rapid chords, sometimes involving all four mallets, saturate the acoustical space. In each case the trunk of the body is released from its central position in the setup and becomes involved in



EXAMPLE 11: BARS 98–101

the genesis of the striking motion. For these brief moments the figure of the player looms larger in the physical universe of the piece—a point of choreographic as well as musical arrival.



EXAMPLE 12: BAR 155

It is important to note that in no case are these movements simple afterthoughts. An accurate performance of *Bone Alphabet* leaves no unused strength or concentration which can be spent for choreographic affectation. Meaningful gesture is the ultimate measure of a committed performance, a kind of Richter Scale of the musical tectonic forces underlying the composition.

By all accounts I should be finished tinkering with *Bone Alphabet.* I've learned it, performed it widely, recorded it, talked and written about it. The disorderly universe of learning should long ago have settled into the comfortable steady-state of repertoire. But, often I feel compelled to think of the piece as I did in the first weeks of practice—to return to the genuineness of uncertainty and to the cragginess of problems too formidable to be leapt with a single bound. With any luck *Bone Alphabet* will settle into a kind of prolonged adolescence where the malleability of learning coexists with mature manifestations of performance.

Finally, I would like to use this public forum to thank Brian for *Bone Alphabet*: for its invitation to reevaluate the basic tenets of the percussive art, and for providing at least this one performer with a wild ride.

Notes

1. Brian Ferneyhough and James Boros, "Composing a Viable (if Transitory) Self," in this issue.
2. Brian Ferneyhough and James Boros "Shattering the Vessels of Received Wisdom," *Perspectives of New Music* 28, no. 2 (Summer 1990): 11.
3. From an unpublished interview with Brian Ferneyhough by Arun Bharali (November 1992).
4. "Shattering the Vessels of Received Wisdom," 15
5. An audio recording of *Bone Alphabet* is only a partial representation of the work. A recording on Compact Disc will be released by Newport Classics in early 1994 and a video documentation of the performance is in preparation.