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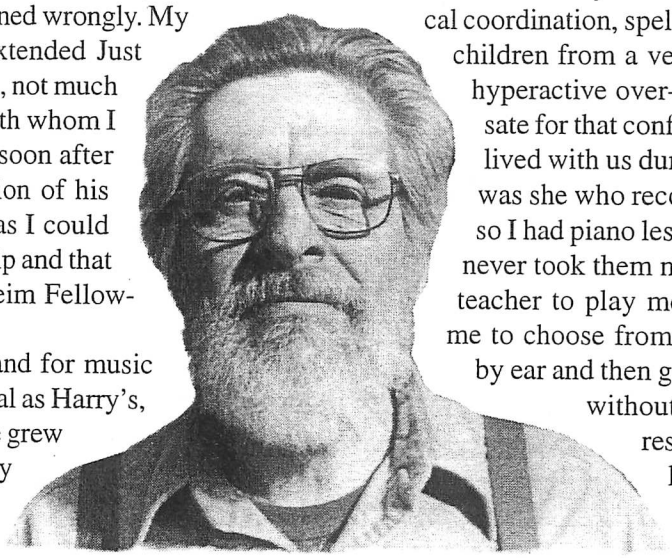
by Ben Johnston

Who am I and why am I here? Fair questions. Take the first in its obvious relevant meaning. I am a composer of microtonal music who has been convinced since my early teen years, when I became seriously interested in music, that it was being tuned wrongly. My approach to what I call "extended Just Intonation" is, in many ways, not much like that of Harry Partch, with whom I worked as an apprentice as soon after I encountered the first edition of his book, *Genesis of a Music*, as I could arrange it, with his active help and that of his sharer in a Guggenheim Fellowship, Lauriston Marshall.



My preparation for life and for music was almost as unconventional as Harry's, but utterly different, since he grew up in southern Arizona very near to Mexico and I grew up in Macon, Georgia. His parents were apostate missionaries to China while my father was managing editor of the Macon Telegraph. My mother taught Sunday school and during the harsh depression years went to work as a stenographer, while my father was a free-thinker who championed underdogs to the point of more than once endangering his journalistic career, but who shunned formal religious ties. I learned a great deal from both of them and much of it was not easy to reconcile.

I learned to talk before I could walk with any efficiency at all. I had my father's intellect and my mother's emotional intensity. This combination, plus poor physical coordination, spelled trouble with neighborhood children from a very young age and I became a hyperactive over-achiever at school to compensate for that conflict. My maternal grandmother lived with us during my childhood years and it was she who recognized a musical talent in me, so I had piano lessons during my childhood, but never took them much to heart. I used to get the teacher to play me teaching pieces she wanted me to choose from and I would memorize them by ear and then go home and learn to play them without really using the score. As a result, I never, during those years, learned how to read music. I understood all the theory of notation, but not how to use it. At school, where the only music offered was group singing, I was thought to have a very poor ear because the tunes we sang were much too high for me to sing, yet not high enough for me to sing an octave lower. My sister, who later became a teacher of mathematics, was five years younger than I, so we were not close. This changed during our adult years, but we

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"Just Intonation is the Best Intonation" ——Lou Harrison

Glimpses of a Musical Future in Ben Johnston's *Fourth Quartet*

by Kyle Gann

I have to open with a mild protest against John Rockwell's comment, used in the PR for this symposium, that Ben Johnston is "one of our best *nonfamous* composers." I studied with Ben partly because he *was* famous. Henry Cowell said that there were two kinds of American music, "that which is played and not talked about, and that which is talked about and not played." Ben's music may not be often played, because it requires techniques and pitches, couched in an unfamiliar notation, that most performers still find terribly difficult; or, at best, because it necessitates a strange retuning of the piano. But his music has always been very much talked about, as we are talking about it today, and it will continue to be talked about—though perhaps not at the *New York Times*, which I regard as one of our best nonrelevant newspapers.

I went to study with Ben Johnston late in 1983, and continued seeing him for four years. I did so because I loved his music, but I told myself in advance that I wasn't going to get involved with microtonality, because it was a tremendous amount of work for very little effect. Ben never encouraged his students to try out microtonality. But at my very first lesson with him, he simply made a passing comment about one of my harmonies, noting how beautiful it would sound if tuned a certain way. I believe he spelled out the fractions. He passed on to other matters, but my mind was already elsewhere, for in that instant, I realized with a sinking feeling that microtonality had set its mark on me, and I wasn't going to escape. The possibilities for achieving originality were too intriguing; the promised beauty was too exotic; and the math involved, as I saw instantly, was exactly the kind for which I possessed a native talent. Without any intention of doing so, Ben set me on my life's path with a casual remark whose exact details I soon forgot.

It is a daunting project to try to sufficiently honor one's teacher, especially a teacher who had as much impact on me as Ben did. He was not the first microtonal composer, nor the most innovative, nor the most famous, nor the most eccentric. In a way, he was the most "normal" microtonalist, the most traditional, "radical without being avant-garde," as I once called him, and that may be exactly why he hooked me. Even though he gravitated toward Just Intonation, he continued writing twelve-tone music. His tonal music is often quite conventional in its underlying harmony. But just because of that, he made microtonality seem, not like an exotic departure, but a historical inevitability with roots that extended back hundreds of years. He had been able to retune traditional idioms so that they kept a continuity with the past. Embarking on Ben's path wasn't a leap into outer space, but a resumption of music's original direction after a long detour. The traditional skills I had learned did not need to be thrown away.

Not the least of Ben's influence was the impact of the pitch notation he had invented. (Extending the world of sharps and flats, he added little sevens to lower pitches for seventh harmonics, upside-down sevens for subharmonics, arrows for the eleventh harmonic, pluses and minuses to correct for discrepancies between intervals based on perfect fifths and those on major thirds.) Some composers less attached to tonality than Ben and myself have found fault with his notation and pushed for a variant of it that I, personally, find inconvenient. But Ben's notation provides an easily learnable way to think about new harmonies, in a notation that preserves the harmonic meaning and tendency of each pitch. Unlike so many mid–twentieth century composers, Ben did not think that the old harmonies of the tonal system should be thrown away; neither did I, and I had come to that decision before studying with him. But with Ben's notation I realized that one could easily start making chord progressions that made their own skewed tonal logic, and that one could presume had never been written before. For years I had undergone the young composer's continual struggle between the Scylla of harmonic banality and the Charybdis of undifferentiated ambiguity. Ben's pitch notation offered a speedboat to zip between those pitfalls.

In fact, one effect of Ben's music took me so long to figure out that, in retrospect, I'm embarrassed to recall it. When I'd have a lesson at his house, he'd frequently want to play me the new piece he was working on. He'd

start playing the piano—*The Demon Lover's Double* was one new piece I remember him trying on me—and everything would sound fine. But as the music would begin to change key, there would be jarringly out-of-tune chords, and I remember thinking, "Gee, you'd think a composer as good as Ben would get his piano tuned." As the music would return to the original key, the music would once again sound harmonically normal, and I'd find myself nonplussed. It took me a few months, I'm ashamed to say, to start to expect that phenomenon and figure out why it happened.

But I have to say that, for all Ben's emphasis on pitch and harmony, I was equally struck by something he is less well-known for, his rhythmic fearlessness, especially in works such as *Knocking Piece* and the Fourth String Quartet. If his pitch notation opened up new territories I'd never heard before, his casual and always playable rhythmic complexity quietly showed that music could go a lot further in tempo variety than most composers assumed.

Henry Cowell, in his book *New Musical Resources*, published in 1930, set out a new theory of rhythm that has had a tremendous impact on many American and even European composers, Conlon Nancarrow most of all. Cowell theorized that rhythm could be written with the same freedom, and following the same numerical principles, as pitch and harmony. Taking the harmonic series as his model, he created a notation whereby any rational division of a whole note could become a beat unit, so that one had not only eighth-notes and quarter-notes, but fifth-notes, sixth-notes, eleventh-notes, thirteenth-notes, and so on. He explored this new rhythmic conception in a handful of works: the piano piece *Fabric*, the *Quartet Romantic* (which remained unperformable until 1978), and his Rhythmicon Concerto, written for an obsolete instrument invented for him in 1931.

Today, given sequencing software and computerized instruments, it is rather simple to realize Cowell's rhythmic ideas electronically. But between Cowell's tantalizing theories of the 1920s and the electronic realizations of today stand the works of Ben Johnston, which pursued Cowell's ideas in live performance and brought them alive on the concert stage at a time when Cowell's most rhythmically radical works couldn't be performed yet. In the 1970s, the first of Ben's works that a student would encounter were *Knocking Piece* and the Fourth Quartet: *Knocking Piece* because every young percussionist learned to play it, and the Fourth Quartet because there was a lovely recording by the Fine Arts Quartet. *Knocking Piece*, as many here doubtless know, is a series of pulses beat on the outside of a piano at conflicting tempos derived from the pitches of a song called "Sea Dirge." Following the ideas of Henry Cowell, and in a much simpler and more perceptible way than Stockhausen's *Gruppen* for three orchestras, which was probably also inspired by Cowell's book, *Knocking Piece* translated pitch relationships into the area of rhythm. It was a tremendous tour de force for percussionists, requiring immense concentration, and I remember hearing and seeing it done several times in the Midwest during my college years.

If the charm of *Knocking Piece* remained a little conceptual, the fleshing out of the technique in the Fourth Quartet was breathtaking. The piece starts out playing the hymn "Amazing Grace" in a Pythagorean pentatonic scale, rustically tuned to nothing but pure perfect fifths. A perfect fifth, as most of you know, is a pair of pitches whose frequencies are tuned to the ratio 3:2. And in the first variation the strings play against each other at five different tempos, each related to the next by a ratio of 3:2. The rhythmic relationships in the variation are a slowed-down version of the pitch relationships in the original tune.

In the next variation, pitch ratios based on the number 5 are introduced, and also quintuplets in the rhythm. The next variation is in 7/8 meter, and the music begins to include harmonies based on the seventh harmonic. There's even a long section in which two of the players somehow have to negotiate a rhythm of 35 against 36. The ratio 35:36 is the difference between a normal, European minor seventh and the exotic seventh harmonic, the same ratio that was being introduced into the harmonies. In short, every change in the harmony is accompanied by an analogous change in the rhythm. Henry Cowell had theorized that rhythms and tempos could be governed by the same rules that governed pitch. Ben's Fourth Quartet went him one better, expressing the same pitch relationships and rhythmic relationships in each new variation. And yet, the Fourth Quartet is no arid exercise, but one of the best-loved works of the 1960s. The popular hymn "Amazing Grace" is kept constantly at the center, developed in a crescendo of harmonic and rhythmic complexity that quickly, and impressively, subsides in the final measures for a lovely, heartfelt ending.

As far as I know, Ben never again attempted the same level of rhythmic complexity and freedom he did in

(text continued on page 31)

onstration of the comprehensiveness of the intonational theory. By this time Johnston had enlarged his practice to accommodate pure intervals based on higher and higher intervals within the overtone system, allowing for evermore "pure" sevenths, ninths, and so on. The piece starts in Pythagorean tuning, which gives pure fifths, moves to [five-limit] Just Intonation, which adds pure thirds, then moves into ever more "dissonant" intervals, which paradoxically aren't anywhere as dissonant as a result of their tuning. Its uniting of a common folk source with a profoundly radical practice makes it a deeply American and spiritual piece.

The ninth dates from 1988, and is a far more "neoclassical" work, in that it follows a standard path of four movements with distinct characters. The first movement is "reverse-virtuosic," in that it all works with a simple C-major scale, but again with "bent" just intervals; the playful sound is a little like a medieval dance. For me the other standout is the slow third movement, which is a hymn that goes through a harmonic progression that sounds as though it's sinking in quicksand until the last moment, when everything suddenly emerges into a radiant, simple cadence. Above all, the piece shows an enormous confidence that isn't afraid of traditional tropes, as the composer knows that he is rendering them fresh with personal practice.

At this point honor must be paid to the Kepler Quartet (Sharan Leventhal and Eric Segnitz, violins; Brek Renzelman,viola; Karl Lavine, cello). They have mastered Johnston's tunings and play them as though they were the most natural thing a performer can do. As a result, the music sounds completely musical, and the intonation sounds fresh, not self-consciously "experimental." With this sort of advocacy, the music has more than just a chance of survival; instead, it seems that it *must* survive.

The sound overall is great, though there's one moment in the more textural section of the fourth quartet where the sound seems a little too reverberant, as though post-production got a little too elaborate. But that's a tiny quibble, as this is a triumph, and a joy to know the remaining quartets are already in the pipeline. **1/1**

——*Robert Carl*

*(**Sonnets**, continued from page 23)*

this work was more difficult than any piece I can remember, probably because its moment-to-moment timing evokes for me the ordinary events of daily life rather than its exceptional moments."

*(**Quartet**, continued from page 25)*

the Fourth Quartet, but throughout his work there are casual expansions of rhythmic periodicity that offer to expand our rhythmic horizon: the thirteen-beat ostinato in the "Blues" movement of the Suite for Microtonal Piano, continual 5 against 6 rhythms in the following movement, his elegant Trio of 1982 all in subtly disguised 11/16 meter. Ben did not have a reputation as one of the rhythmic complexity people, yet all through his music I found rhythmic effects I had been curious about employed with disarming ease.

And unlike the composers one thought of as the lions of daunting rhythmic difficulty—Elliott Carter, Milton Babbitt, Charles Wuorinen—Ben's rhythms were always related to a steady beat, an articulated tempo, which made them sound simpler than they look on the page, and enabled the listener to develop an ear for certain kinds of cross-rhythms and odd periodicities. Ben's rhythm, with its thirteen-beat ostinatos and 4-against-6-against-9 tempo complexes, was exactly the kind that came back among young composers of the 1990s and came to be called totalism. One of the ideals of totalism was the achievement of a kind of "unified field theory" of pitch and rhythm, a way to make them go hand in hand more naturally than the artificial devices of serialism. Henry Cowell conceptualized that idea, but Ben's Fourth Quartet was its first ambitious and theoretically powerful realization. I have often returned to Ben's scores with a shock of recognition that he was using, in the 1960s, '70s, and '80s, the same rhythmic devices that composers of my generation explored in the late '80s and '90s. And since so many composers associated with the totalism movement, including Larry Polansky, Ben Neill, Mikel Rouse, and myself, were educated in the Midwest during the years when Ben's music was so often heard there, it is difficult to avoid the conclusion that Ben had a quiet influence on New York music of the 1990s that he has never yet received credit for. Let us begin giving him that credit today.

Also in his own quiet way, Ben was as eccentric a teacher as any American experimentalist could wish for. When we didn't meet at his house in Urbana, I had my lessons at a Zen temple in Chicago. Ben's priest had recommended that he try Zen meditation, and so I started showing up early to attend the meditation services with him, and *that* was an education. Heidi Von Gunden would come too, and serve us green tea at those lessons. I once asked Ben why, since he had embraced Just Intonation, he kept on writing twelve-tone music.

He replied that he had learned all that technique and didn't want to throw it away. Once I pointed out a passage in his Sixth Quartet where the upper three strings were playing a long contrapuntal passage, and suddenly the cello snaps a few loud, percussive pizzicatos. I asked him where those pizzicatos came from, and he said, "Oh, those are to keep the audience's attention while I work out this contrapuntal problem." That taught me that the composer and the audience might want different things from a piece, and that both could get what they want. That, too, later became one of the premises of totalism.

Ben taught me a tremendous amount without trying to teach me, and he had a widespread impact on the music that came after him without many people noticing. Now that the ideology of twentieth-century music is being cleared away, I think it will become apparent that he was one of our best *major* composers, no matter who realized he was famous and who didn't. And towards that end I wish him a very happy eightieth birthday. 1/1

*(**Salute**, continued from page 25)*

the greatest Johnston influence for me lies in the tunings of the Yamaha DX7 II synthesizer, later realized with computers: I constructed tunings like twelfth root of 1.9560685, which gives 5:4 and 7:4 from each pitch up and down with a deviation of less than one cent, and a sweet 11:8 with a nine-cent deviation up (Figure 2).

Another example of the Johnston influence on my work is my *Partota 2 for Disklavier and Synthesizer*, (see Figure 3). At "0" the Disklavier plays in equal temperament. All the other pitches come from the microtonally tunable synthesizer (or sampler). A computer distributes the pitches to the keys, sometimes with enormous differences between key and sounding pitch. The reason is the texture of the written text for the pianist: completely unheard-of figures and chords are playable with this tuning system.

Maybe I especially love Ben's approach to composition: He wrote about his "*Sonata for Microtonal Piano/Grindlemusic,*" "The *Sonata*, whether presented as beauty or as the beast, is a monstrous parody-enigma, allusive, referential, sometimes derisive, distorted, a tissue of familiarity in radically strange garb..."

All the best, dear Ben, on your eightieth birthday 1/1

Notes:

1. New World Records NW80203. Performed by Robert Miller.

*(**Keynote**, continued from page 15)*

The main difference between me and a lot of composers that I know and admire is that I don't really feel that recognition should play as big a part as they seem to feel; and if your aim is to be recognized—fame and all that—then, you get one type of result. If your aim is something else, as I feel my basic aim is, then fame is almost a liability because it tends to mean that people expect a certain thing of you, and if you don't continue to deliver that thing, they say, "Oh, he's slipping," or something like that and it may not be that at all. I've changed my direction often enough and with just that kind of criticism to know very well what I'm saying, but I don't care because my basic aim is not to use music in that way, as a build-up for *me*, for my ego. What I want is to use music to learn how to live better—and so I'm using music symbolically to teach myself something that I may be able to apply as a person and that, it seems to me, is a better way to arrange things, from a human standpoint, than the other way.

Bill Alves: Thank you so much for appearing here today. It has been a tremendous pleasure for us to have you here. I'd like to have everyone join me in thanking you for appearing today.

Ben: Thank you.

(applause, entire audience sings "Happy Birthday.") 1/1

Transcribed by: Donna Walker

Notes:

1. 1987, Electra Nonesuch 9 79163-2.

Ben Johnston—late 1960s, from *Source* magazine