

by Kyle Gann

You'll never get a New Yorker to admit it, but during the 1970s, the hotbed of avant-garde musical activity lay along Interstate 80, at the Midwestern schools where post-12-tone music was sowing its weird wild oats: Oberlin and the universities of Illinois, Michigan, Indiana, Iowa. Before the music schools got all timid and corporatized, there were some crazy faculty out there, like Sal Martirano, Ed London, Kenneth Gaburo, applying 12-tone fragmentation to materials Schoenberg never envisioned. They were making collages of pop songs, crawling out of contrabass cases, crafting text-poems from dirty words, knocking

the Kepler Quartet is undertaking the formidable task of recording his complete ten string quartets (on New World), it's becoming public that Johnston, who just turned 80, has penned the most substantial output in that medium since Shostakovich.

There's an obvious reason Johnston's music hasn't traveled quickly. Though it is tuneful, lyrical, and steeped in the Southern hymnody of his Georgia childhood, its notation is peculiar, its harmonies unfamiliar. As early as high school, Johnston became interested in Helmholtz's findings in the field of acoustics and yearned to compose in the pure overtones of the harmonic series. In an interview with the local paper at the age of 18, he opined that "with the clarification of the scale which physics has given to music there will be new instruments with new tones and overtones." A few years later, at Cincinnati Conservatory, someone handed him a copy of Harry Partch's book *Genesis of a Music*, which detailed the origins of Partch's scale of 43 pitches to the octave and the picturesque instruments he invented to play it.

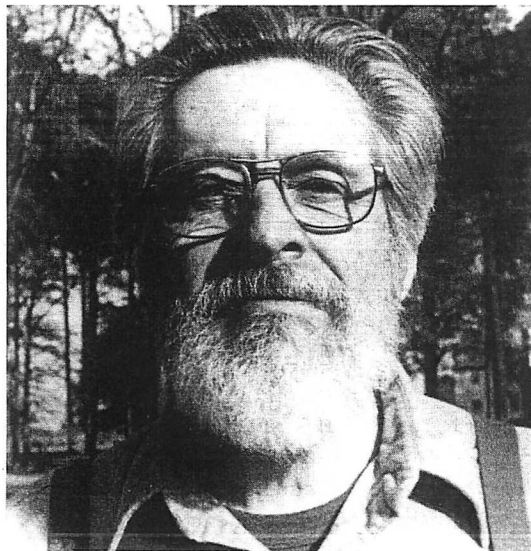
Ben

complex rhythms on the outside of a piano.

The best and most enduring of them, the passage of time seems to have proved, was Ben Johnston, author of the aforementioned knocking on the piano. His name hasn't traveled well to the East Coast, but I always considered him the great name of the Midwest, the way Lou Harrison was famous in California and John Cage in New York. And now that

Dumbstruck, Johnston wrote Partch asking to come work with him and soon made a beeline for Partch's studio in Gualala, California.

Unlike Partch, however, Johnston wasn't a carpenter and had little interest in making new instruments. What he's devoted his life to instead—mostly spent at the University of Illinois, now in retirement in North Carolina—is a new notation for pitch and teaching instrumentalists to



play, and singers to sing, new pitches. Since string players encounter the fewest obstacles in retuning, his corpus of ten string quartets so far represents the apex of his work in unconventional tuning.

One's first glimpse of a page of Johnston is disconcerting. Extending the principle of sharps and flats, he's invented a range of different accidentals to raise and lower pitches by various amounts. For instance, the seventh harmonic of the pitch C, easily findable by running your finger lightly along a low piano string, is a little flatter than the B-flat on the piano, by about a third of a half-step. So Johnston puts a little "7" in front of a note when he wants it lowered to become the seventh harmonic of another note in a chord. He puts an upside-down "7" when he wants a note raised by the same amount. The 11th harmonic of C is halfway between F and F-sharp, basically a quarter-tone. For that 50-cent difference Johnston puts a little arrow pointing upward. There are little "13s" for the 13th harmonic, upside-down numbers for sub-harmonics, and in recent works Johnston's

flat-up-arrow-plus, for instance—and most string players probably quickly close it again. But if you can get past that, the music is filled with melody and infectious momentum. It is a tribute to Johnston's appeal that one of his most hair-raising works, not only pitch-wise but in terms of pervasive polyrhythms—his fourth quartet, based on "Amazing Grace"—has been recorded by three groups, the Fine Arts, the Kronos, and now the Kepler. Considered abstractly, his pitch systems seem mystifyingly complex, but in context it is always clear what pitches should be tuned to what others; and once one has learned to distinguish by ear a seventh harmonic from a conventional minor seventh, the harmonies are elegantly transparent.

Quartet No. 1 is in conventional tuning, but numbers 2 and 3 both use the same 53-pitch scale. No. 2 is based, in fact, on a 53-tone row, but with lines in the score showing which pitches to tune exactly with which other ones. Thanks to the tuning, even Johnston's 12-tone works tend to be heavily consonant, but with the Quartet No. 4 of 1973 he made a decisive

melody in which the instruments take turns being soloists. The Seventh is reputedly so difficult it hasn't been played yet, and I've never heard the Eighth or Tenth. But the Ninth, included on the Kepler's first disc, is a jaunty neoclassical offering in four sonata movements, with thrilling cadences sliding through the quarter-tone 31st harmonic.

Daunting? Certainly. But all Johnston's really asking is that string players develop an ear for playing chords perfectly in tune, as they did a couple of centuries ago, before the 12-step piano started setting our pitch sense in cement. He says that Brahms is the first composer whose quartets implicitly require equal 12-step tuning, with their enharmonic modulations. (The violin studies that Thomas Attwood took with Mozart document a Mozartian temperament of 22 notes per octave, in which D-sharp does not equal E-flat.) And Johnston believes that some of our social ills may stem from frequent exposure to highly amplified music that really isn't in tune. That may sound far-fetched—but with music as melodic and lushly har-

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been working up as high as the 53rd step in the harmonic series—a dizzying height indeed. Most nagging are the little pluses and minuses in front of some of the notes, meant to differentiate, for instance, the E that is four perfect fifths above the cello's C-string from the flatter E that is the true fifth harmonic of that note.

So you open a score to one of those ten quartets and enter a Dr. Seuss world of pitches you've never heard of—B-seven-

return to tonality with a theme and variations on "Amazing Grace," from which the melody is rarely absent. (It's in the key of "G minus.") Each new variation adds pitches, so that from an opening in pure pentatonic scale we end up with a glorious writhing through a spectrum of 22 pitches per octave. The fifth quartet, also hymnodic, is a divagation around "Lonesome Valley," and the Sixth, once again 12-tone, is a Wagnerian endless

monic as Johnston's, making the experiment is hardly a chore.

Composer Kyle Gann is a professor at Bard College and the new music critic for The Village Voice. He is the author of The Music of Conlon Nancarrow (Cambridge University Press) and American Music in the Twentieth Century (Schirmer Books). His music is recorded on the Lovely Music, New Tone, and Monroe Street labels.