

IVOR DARREG

1280 Exposition boulevard
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Mr. Joel Mandelbaum
144-34 Village Road
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Dear Sir:

Recently I have had the opportunity to hear a tape recording of your examples in the 19-tone system and the brief illustrations of other tunings. This proves that there is just no substitute for actual examples--written notation and talking about something without actually demonstrating it are of little avail.

Mr. Tillman Schafer, through whose courtesy I was provided with a copy of your tape, informed me that you had written a thesis on temperament. I have been interested in the theory of tuning since my teens, and read Yasser's book recommending the 19-tone system almost that long ago.

In 1937 and thereabout, I wrote some pieces for ~~vib~~oncello in the quartertone system. In 1943 I tuned a reed organ to the "Harmonical" tuning as given by Ellis. Several times before and since I have tuned instruments to meantone temperament. At the present time I have loaned to me an instrument in the 31-tone system. Thus I have some background from which to make comparisons.

I am primarily a composer, and after playing in orchestras and having the usual piano and organ experiences a composer would have, decided that the future lay in electronic music and instruments, both manually and automatically played.

The keyboard problems connected with non-twelve-tone systems do not trouble me very much, because I plan to write in non-twelve-tone systems for automatic instruments, in which case the player-roll will be both "keyboard" and "notation". It is possible to conceive automatic electronic instruments which could change easily from one tuning system to another, including just intonation, and even something deliberately inharmonic.

On first hearing your examples in the 19-tone system,

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I get an impression of "restlessness" and "greater tension" as compared with the 31-tone system. This, of course, would suit certain types of music very well. The size of the unit interval, $1/19$ octave, is certainly ideal for melodic purposes—in my attempts to play some of my themes composed for the 24 system in the 31 system, I found myself quite disturbed by having to use smaller intervals than the themes were, shall we say, designed for.

From one point of view--the properties of wood and other materials used to make piano keyboards and action-parts, I can well understand why you chose the piano for the embodiment of the 19-tone system. Quartertone pianos are "double-deckers"--so far as I have been able to find out, at least. But the timbre of the piano has evolved to such a state that it deliberately and designedly favors the 12-tone system, such partials as the 7th and 11th being de-emphasized. The clavichord and harpsichord have timbres rich in higher harmonics (too much so, say those who are piano-conditioned all their lives), and it just could be that they would be more suitable for the 19-, 24-, 31-tone, and other such systems.

I have thought of building a special electronic organ that could be retuned easily to several systems. The cost problem becomes serious over 24 notes per octave, so I suppose I will never have the opportunity of trying out the 53 system.

Of my 60 compositions, two are in the quartertone system, and there is also a little prelude intended for a justly-intoned organ. Of the "backlog" of 726 themes (that is, themes noted down from 1938 to date) perhaps 80 or so are in some non-12-tone system. So I have a sort of "investment" in microtones--although it is my general practice, when playing these themes, not to reveal that they contain smaller intervals until AFTER I have played them!

At the present time I am not tied down, committed to, or prejudiced about any tuning system as against another system. I have had more experience playing in and listening to some systems than others, that is all.

Other than the Stockhausen $\sqrt[25]{5}$ system you illustrated on your tape, do you know of any interesting systems that temper the octave? The widespread practice of stretching octaves in tuning pianos would indicate that it was not really necessary to hold the octave sacred and inviolate after all.

Sincerely yours,

Ivor Darreg.

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