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Greetings from Down South---

Enclosed is the "program" from the Art & Technology Exhibit. From this, or from the big book of 300-odd pages, one would expect something impressive; instead, it was anticlimactic. The Young Artists' Exhibit in the main museum building some 400 feet away, showed much more originality and imagination, so it is obvious--when the artists were thrown at the business firms and a collaboration resulted in spite of this forced confrontation, the middle-management and associated personnel got busy and watered everything down--you can almost hear them: "We can't do that, it wouldn't be safe" and "But what would people think?" etc.

An affair of red and green lights, produced by laser beams and mirrors and auxiliary light sources, will undoubtedly be rented by some local department store for next Xmas.

What I said a year ago about the USC EAT exhibit still goes: this kind of collaboration uses only the factors the parties have in common, not the integration of both their creative abilities. The Venn diagrams for this should be obvious.

On the way over to the Museum I was taken to a sort of ** gift-shop where they had all manner of booklets and supplies for amateur witches and warlocks and occultists and astrologers. Now I see what you mean by phoney mysticism--incense, perfumes, candles, rituals, etc. Ironically, these characters can't realize that conformity to ritual and blind acceptance of fatalistic determinism are the most antithetical-to-creativity things they could possibly indulge in.

One of the pests I told you about some time ago, insisted that the 12-tone scale was foreordained by the 12 signs of the Zodiac, in such wise that I had better not compose anything outside of the key of B-flat major, lest I fall ill or worse.

Which, I suppose, is but a rehashed, garbled version of the Hindu religious prohibitions of certain ragas save at the appropriate times of year, day, moon phase, etc. And that statement in Chan-lar's book about certain musicians who never leave a certain key and tuning for their entire lives.

---You were commenting on the obscurity of some of Peter Yates' views. I suspect he is projecting. In this wise: He is taking the exact calculations of theorists such as Ellis and mapping them onto the situation obtaining when Bach was a teenager. He is thoughtlessly assuming that if piano-tuners today go through a certain routine to set the 12-tone equal temperament, that Ol' Man Herckmeister and his first-generation pupils possessed that routine to perfection and applied it. Ellis gives a tuning-rule for 12-tone substantially the same as is used today by the average tuner, but does not say when this rule was first formulated nor how it was first taught by its inventor.

We do have a clue, however, that some scholar should follow up: the German term "gleichschwebende Temperatur" implies this tuning-rule, not the truly equal tuning in which the beating-rates gradually rise within the temperament-octave. It should be possible to get the date of first use of this term in German.

Wesley Kuhnle, the music-teacher and builder of clavichords and harpsichords, whom Yates followed as disciple, demonstrated meantone at a piano-tuner's convention some 20 years ago, and H. Paul Hegley, who may still be alive and whom I last heard from ~~in~~ when he had a piano shop in Palo Alto--you might try the "Peninsula" phone book to see if he is still listed--Hegley was a member of the Acoustical Society and got introduced to meantone and tuned a piano to it that was used at that convention, ---they were alleging that the various keys had "character" in meantone because of the wolves in the remote keys, and this should be retained in performing music of the period--which to me is at least liverwurst or salami thought not quite lunacy.

Again, this projection or unwarranted assumption of mapping--that during the meantone-keyboard-instrument period, people actually counted all the beats accurately, and stoically ascetically/aesthetically resisted all temptation to compromise when they reached the $3\frac{1}{2}$ point where the circle of 12 fifths does not close. As you well know, this is pure horsefeathers-malarkey. On a conventional clavichord or harpsichord, where the tone dies away quickly, you couldn't adjust the beats that closely, and would have to proceed by guess and by gosh.

Furthermore: 12-tone equal goes way back when---to be more exact---when the 18/17 fretting rule was first applied to lutes, lutes, citterns, viols, and whitnot. (What is the 12th part of 18/17?) Am I seriously to imagine that every major-third-lover was fiercely loyal to 4-comma meantone when viols, lutes, guitars, or other fretted instruments were in the same house as the keyboard instrument? And all these primitive shawms, clarinet-ancestors, fifes, recorders, flutes, serpents, etc.?

History has Yatest in its grip so tight that he can't be objective about all this, and he has had to fight so many, unreasonably fanatic 12-toners in music conservatories, that he has to overplead his case and I don't blame him--I remember how it was in 1940 or 1933 when I first became interested in the quartertone question.

Rather, we should congratulate ourselves on the success of a miracle---that interest in 19, 22, 31, etc. exists after the pessimistic sabotage of Yasser, Barbour, et al. The harm they have done is incalculable. (In referring to Yasser I am fully taking into account the effect of Yasser's preface to this new book on diatonic theory which relegates 19 to the extremely remote future.)

I forgot to mention that it would be very unwise to discard 19 in favor of 31 for this reason: I have experimented in introducing people to xenharmonics by first presenting them with 19, then with 31, and first presenting others with 31, then with 19. The latter order works much better. We need both, and

several other systems to boot, but also we need to do experiments of this kind and find out what is the best order of presentation. The coarser melodic steps of 19 (or 17 will do also) jog people out of their inertial acquiescence to 12, whereas if 31 be presented first, it cannot be appreciated by the average listener, because it is heard as mistuned 12, or as imitation meantone by a select few, and the jump from halftones to fifhtones is just too much for the uninitiated. I base this on two years of experience. Quartertones do not get off the ground because the 12 are still there. 22 is more pleasing to listeners than to performers-- it simply ~~ex~~ croggles those who try to play the 22-tone guiar first.

It is also obvious from my experiments and trials on so many people (at least a hundred persons in the last two years) that the inharmonic scales such as 13, 15, 23, etc. have their place also--this might derail the narrow-gauge minds from the 12-tone-track.

If somebody completely abandons 19 and substitutes 31, they are not going to get as many converts. But approaching 31 via 19 should work very well.

Unfortunately, the theorists, especially those who write and never play anything and never have instruments handy, completely ignore the existence of the K-system--by this I mean the out-of-tune piano, the out-of-whack electric organ, the violinists and cellists who are shamelessly careless of their intonation, the wobbling singers, the people who play guitars with leather mittens on and who never try the open strings before beginning, and others of that sort.

This has always existed--the non-toners and the out-of-tune instruments and voices. But this is ignored. Alas and a lack. Nevertheless this out-of-tune playing has an enormous effect on all listeners and has to be taken into account even if it is impossible to mathematize it. And never mind how much this offends the perfectionist.

I'm not going to stop playing musical instruments just because I hit wrong notes or play out of tune a few times in each performance. Any more than a resistor manufacturer goes out of business because he can't make everything to one-tenth percent tolerance, but has to be content with ten percent.

So we have to ascertain just how much tolerance there is in tuning each system, 17, 19, 22, 24, 31, etc. Otherwise, if we insist on perfection, nobody can afford an instrument. Also, don't procrastinate because you don't own the perfect instrument. I don't either. I couldn't afford it if they were available.

After seeing the A&T exhibit yesterday, and all the money and time that went down the drain, as compared with the success of the young artists in the other building, the pursuit of absolute perfection seems mighty empty as well as masochistic.

Yours