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Greetings---

Very bad night with bad dreams undoubtedly caused by the spell of leg cramps about 10:30 last night. In turn, too much walking yesterday.

The smaler drone instruments and the 8-foot Megalyra are back here for a month while Glen is about to leqve for Las Vegas and Florida and other places--I suspect more like 5 than 4 weeks. So that means another chance to photograph them and theoretically a chance to overhaul the green Megalyra--but I doubt that I could get it dow done within that 4-week period. It would be foolhardy to strip it down just when somebody might want to borrow it during this Publicity Period. The main problem is that on the solo side the harmonic node lines do not match the real harmonic nodes, and whether to split the bridge to try to move them or to draw leave the string-lengths and bridge-position alone and repaint those lines in the actual position even though they will LOOK crooked. No other Megalyra and the other ride of this one do not have this problem--well you know what I mean--all the other harmonic node lines on everything else including the other side of the green one are correctly located.

Maybe the problem can be eased by finding the right person eventually to have the green Megalyra who doesn't care at all about the harmonic node lines.

It was very reassuring to have Scott Hackleman stop in here because then I don't have to ~~#ee~~ worry so much about Craig Hundley. He didn't even mention him so that would imply he wasn't getting co-operation either. I was rather surprised about him claiming he didn't know very much about the mathematical table side of things, that is, that he wasn't doing all the charts and calculations such as Siemen Terpstra has done. Maybe they could complement each other. Hackleman not being so far into theory also means he couldn't understand very well why I was pushing 22-tone so much and had not given up the idea of a 24-tone clavichord. So I tried to show the contrast of moods--just 17 19 22 24 31.

Mainly I put forth the idea that it would be no more trouble to build 3 or 4 clavichords at once, since then the design and welding and casemaking expenses would be shared instead of having to be assumed by one customer. Or one sponsor.

Dan Wolf wrote me from Santa Cruz -- there was one of those baroque French mass performances where the continuo harpsichord and the viols were differently tempered or something. I wonder if the thecrists should complain too much--that is how it must have been before there were tuning-devices and frequency-measuring equipment. There were no 12-tone-equal routines for tuning by ear--by guess and by gosh. There were geometrical patterns for fretting to 12 equal however, which might have placed the frets on lutes and viols.

And think what sets of gut strings must have been like 200 years ago, let alone 300 years ago. Oh yes--I forgot--he said the pitch was carefully set at A 415. A-flat minus or something. Ouch.

Now while this pitch of a semitone or more below A 440 was common from about 1750-1810, according to Ellis's history-of-pitch chart, it wasn't the only pitch in use, so making a big fuss about it is overdoing things. Ellis claimed that a' had been everything from f'# to d" in terms of the present 435-444 situation. And some of the extremely high pitches were in use at that time.

Of course, right now today: with millions of guitars continually falling in pitch as the strings go down and down and down, all kinds of low pitches are being heard all the time. So for the thousands of violins in use.

I can bring up the near-quartertone relation of the powerline hum (twice the power frequency for reasons I think I have hexplained) so the octaves 60 120 240 480 can be used for B-semiflat. ---in case you have a quartertone instrument of some kind and forgot your tuning fork, the powerline is usually handy--some motor or transsformer or amplifier-hum is almost always available within earshot.

However: the old Physical Pitch, C as powers of 2, therefore C 32 64 128 256 512 1024 --- now if just intonation be assumed, then the correct B in the scale of C major comes out as 60 120 240 480 960 because of the 15:8 interval. So the 60 Hz power line gives you a standard for tuning to the C-256 pitch! This power frequency is standard in the USA and much of Canada and Mexico. In Europe and some South American countries and in British Empire it is 50 Hz which could be taken as G# of the C-256 system assuming just intonation again--the minor third below the B abovementioned. For a quartertone equal G semisharp it would be a little off. But not seriously.

The hum of some machinery will be flat of the powerline hum for other obvious reasons--the motor does not turn as fast as the synchronous speed would be. Or those machines which have gearing will produce other pitches due to the gear-RATIOS. If you know somebody who works with electric motors and related machinery, ask him about the "slip" of an induction motor!

I am finding all kinds of variations up and down from A 440 on records. Few tape machines run at the correst speed. When I was overdubbing on two machines, and had to transfer a reel from one machine to another, I got wide differencews of pitch. Some are too fast and others are too slow. By suitable juggling it was possible to cancel out--I think you see why.

The machine on which I recorded all the te themes for IN LIMBO in 1963 ran a third-tone or more too FAST, with the result that when I copy it on standard machines now, it runs noticeably over one hour which it was intended to be. So I have to cut out a minute or two here and there if I want the copy to be within the standard one-hour reel.

Therefore: any really well-equipped recording studio MUST have at least one tape machine with variable speed a major second above and below standard speed. Cassettes run on batteries may have widely different speeds.

It is now easy to un-do the Purist and Traditionalist performances at A 400 or A 415 or A 500 if somebody whimsically so chooses.

These Historians take all the fun out of life.

Ask all the nasty mean 12-tone-equal advocates whow much they use E-flat minor or G-sharp minor or B major on their banjos and guitars. To pose the question is to answer it!

---there is another disease afflicting our Non-Twelve movement. Hysteria--or backwardness or Antiquitis or Chronic Baroquia or Tradishosis? What shall we call it to make it horrible and monstrous enough to make people turn against it?

Like for instance: Back in 1970 or such a matter, Kneifel managed to get publicity so that some 8 or 10 people came to the Winslow Drive address for my lecture-recital on non-12. I had the 31-tone and 22-tone guitars and the cello of course, and was explaining the enharmonic tetrachord so the two traditionalists and academic historians (Chalmers-types, of course!) scolded me--there weren't really any quartertones in the enharmonic tetrachord because it was only a trichord--viz. E F A B C E just like the Japanese scale I recently quoted--of course THEY didn't mention Japanese music at all, but tried to make a fool of me that I didn't know what I was talking about. One of them pouted and then left.

As though I had been Mis-branded or invited him there under False Pretences with Malice Aforethought.

About 1972 another fellow, a harpsichordist in his 30s, tried to stop his ears when I played the 31-tone guitar so that A-flat and G-sharp would not be heard at once together by him.

For this reason I am annoyed by Cris Forster bringing up the Bach-invented-12 thing in the OMNI article but with all the other people also in there and all the other reading-matter in the article it may not have done too much harm. Still it is irritating.

Lutes and viols with approximately equal 12-tone arrived at by geometrical constructions and by the 17:18 Rule from Spain or Italy, and the Pythagorean schemes which also can be warped to a fairly satisfactory 12-tone on fretted instruments, were all over the place long long before Bach was conceived or born. Meantone in proper ¼-comma systematization is much LATER than the achievement of satisfactory 12-tone ### fretting. Don't take my word for it--read the books.

Rather than waste ink and paper and lecture time to set people right about Bach and that he didn't invent 12-tone, what we can do is play the 48 Preludes and Fugues or at least the best of them in other temperaments such as 17 19 22 and 31.

There are quite a number of histories of Bach which tell that these pieces a were salvaged from other collections Bach previously wrote for other purposes, and transposed into the various other keys for the most part. He did not sit down to write things originally in C# major or B-flat minor but transposed at least half of them to other keys and reworked them. So most of the arguments can be blunted if not directly confronted and refuted.

I have here from the Brand Library Ralph Kirkpatrick's book about Scarlatti and all about the supposed 12-equal he used exclusively. But Kirkpatrick admits that the actual tuning of a harpsichord can vary. But he does not mention that the Italian harpsichord did not sustain like some modern American harpsichords. So it wouldn't matter if it were tuned by Guess and By Gosh. You couldn't count the p beats anywhere as well as you can on a good piano. I had to use an octave <u>lower</u> to tune that Clayton-Jones harpsichord. Yours