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Greetings from Uphill-----

Scorching hot day even as early as 11 AM. But it is that makes it wonderful for mimeographing the next issue of 'the Expose'.

If you haven't done it already, do what I have been doing this last weekend: Label and number all your reels of tape AND the boxes AND make out 3 x 5 cards indexing them by such numbers. Without fail! You'll get too busy and then it will be too late. I have met too many people whose collections of tapes are absolutely worthless--they can't find anything.

This is even more important for copies of somebody else's tapes or records than it is for orig. or originals. If you don't want to go to the trouble I do of painting Snopake on reels and then India ink lettering, use a special "glass-writing" crayon or pencil. It will write on most plastic and you can get big numbers on BOTH sides of each reel. I have very little faith in gummed and adhesive labels for tape and in Scotch tape to hold labels on. They come off too easily just when it makes everything untraceable.

I tuned an old wreck of a piano last week and so I had to index and number the tape, so while about it I labelled and numbered all new reels of tape, except those blank tapes which will get cut up to put on empty reels for mailing out copies.

Since I have the tuning of a good grand piano to compare it with, it is obvious how the average piano is deteriorating and going to rack and ruin. This, embodied in a copied-off comparison tape, is worth a whole book of description and argument.

Also, I have come to another conclusion: It is quite impossible for me to convey to you what it is like (a) to tune a grand piano in excellent condition, and (b) to try to tune an old wreck, the strings of which are out of tune with themselves!

Furthermore, the kinaesthetic sense has been slighted even more than the tactile sense. I have at last found a new Achilles' Heel of McLuhan--or rather, Achilles' Tendon. That is to say: He is a professor of literature--life at third-hand; he makes a big fuss about developing hearing and touch, but these are passive--the kinaesthetic sense--muscular feedback in modern engineering--is active, even athletic. When I try to describe how it is to tune a piano, I want to transmit the muscle sense involved in resisting the tendency of a tuning-pin to slip, and making it hold; the antagonistic muscles involved in loosening or tightening a tuning-pin with its string stretched to 175 lb. tension, which the skilled tuner knows how to move so slightly that the movement of the tuning-hammer cannot be seen, but the antagonistic muscle-tensions, must be held to keep the tightening or loosening from going too far.

These tuning-sensations, audible and tactile and kinaesthetic, can then be compared with those on a guitar equipped with gear tuning-pegs, an old-fashioned violin or cello equipped with plain tuning-pegs, and a modified violin or cello having metal strings and tuning-attachments (a version of the gear-tuning-peg idea). They should also be compared with the muscular feedback involved in singing.

All one's excursions into theory and mathematics and computer coding will not give even a counterfeit or simulation of the kinaesthetic experience.

Such tuning adjustments are analog, not digital. They involve feedback loops.

The pianist qua performer knows nothing of these--to him the pitches on the piano are digital. But note well: he is at the tuner's mercy, as well as the victim of the old age of the piano involved.

It is quite possible to be a composer and know absolutely nothing about the foregoing. But I don't think it is well for a composer to be thus ignorant.

I have the right to call your attention to how you are neglecting the analog aspect of music, ONLY because I have been studying about the digital aspect, and also because at this very moment I am using a digital skill of touch-system typing to get things down on paper five times as fast as handwriting, or more.

The digital nature of computers and their accessories does not prevent you from analog thinking in the composing process, since analog-to-digital and digital-to-analog converters exist, and no exacting degree of precision is required for musical composition and performance purposes. It is freely conceded that a digital representation of the analog aspect of music will be practically usable and tolerable.

What kind of guideline is possible? Probably this: How unnatural does digitally-synthesized speech sound? This should furnish some sort of rule-of-thumb.

Could you talk to any phonetics professor up there in Berkeley, about the conflict between how we hear speech and how we articulate it: i.e., the difference between auditory memory-images of a given phoneme or instance of that sound, and the kinaesthetic image of producing that sound? And discuss the "digitalizing" aspect of how we categorize all speech-sounds we hear into pigeonholes called "phonemes". Since I (1) lost some front teeth (2) had bridgework installed (3) the bridgework decayed the teeth it was attached to and therefore fell out (4) a few years later all my teeth were pulled (5) various dentures were fitted later than that, all miserable failures I am probably a good authority on how the same speech sounds can be articulated in several different ways.

Likewise, musical sounds can be produced in different ways to sound nearly the same, and can be controlled in different ways. It behooves you, right now, to study this question so you can compose instead of merely writing about others' computer compositions. While waiting for grants of computer time, you can occupy yourself with this sort of considering and deciding.

Yours