RUMINATIONS ON ROOM TUNES:

SOME NEGLECTED VARIABLES

by Francis Baumli, Ph.D.

The audiophile press has always been replete with articles about room tunes—some the cheap home-brew variety, others exotic and expensive. Every room tune has both its raving advocates and also its sneering detractors, with explanations as well as dismissals, most of them more shrill than cogent. In the fray and fervor of argument these audiophiles too seldom pay attention to what is perhaps the most important variable within the listening experience, namely, the body itself, i.e., the listener's body.

The importance of this variable first became apparent to me one April evening when my system sounded overly bright. I left the listening room to let everything warm up more, later went back in, but it was still too bright. Then I remembered that I had just that day received my spring haircut. Whereas the day before my hair had been below my ears; now, above my ears, this was causing the difference in sound. Since then I have noticed similar variables. A sweater

dampens the highs more than a T-shirt does. Even body posture can make a difference. Leaning back, hands clasped behind the head with arms akimbo, can have a combing effect on the highs as though the upper-midrange is out of phase. And I once noted a major difference in a friend's listening room when six guests, about to leave, stepped in with winter coats on. Grouped over at the right, they sucked the sound completely out of that side of the room.

The most telling, and convincing, example of the human body as a sonic variable happened in my own listening room when the owner of a high-end store, with two of his employees, came over for dinner and a demo. The demo involved four oak blocks and six Shun Mook discs. I was to sit on my listening couch with eyes closed. While they positioned the blocks and the Shun Mook discs at various places about the room, I was to report the differences I heard.

I tried, but the aural information was confusing and kept changing abruptly. At one point, with considerable alarm, I did open my eyes because the sound suddenly disappeared from the left channel. One of the fellows was standing directly behind the left speaker. (Merlin EXL I's during that sweet, though fragile and therefore brief, audio incarnation.) As he stepped away, the sound came back. That was when I realized, fully and clearly, that there was

no way I could discern any subtle differences those oak blocks and Shun Mook discs might be making when there were three human bodies moving about the room, especially since these men weighed a little over 300 pounds each, a matter they had complained about at dinner. Add to their weight my meager 150 pounds, and you have over half a ton of human flesh in that room, much of it in motion. Factor in the many square feet of absorbent material covering the considerable surface area of these four bodies, and you can not but realize that any data about the effects of oak blocks and Shun Mook discs is hopelessly contaminated by the human corpus variable.

I am not the first person to notice this human corpus variable. (HCV for short.) I once knew a British fellow who would leave his wristwatch outside the listening room. He believed that if a Shun Mook disc can affect the sound, then a small, shallow, partially hollow cylinder filled with moving parts will do the same thing even though, strictly speaking, it is supposed to be a watch instead of a room tune. He also believed that his entire body, along with his clothing, affects the sound; so when he removed his watch before going into the listening room, he removed his clothing too. Even shoes and socks. This way, he claimed, the music would always sound the same. When he reached his late 40s, he noticed that he

had recently grown more chest hair and wondered if he should shave it, given that he was sure the added hair was causing a slight thickening in the mid-bass.

Is listening in the nude going too far? Maybe not, if you prefer listening alone, as my friend did. Is the thinking behind this choice ridiculous? No. It is a variable that deserves some consideration (even if you, like me, choose against listening in the nude).

But keeping this variable in mind can make you more alert for other variables. For example, if you go to an audio store in the winter and audition a speaker while wearing a heavy sweater, this could cause you to buy a speaker which sounds too bright when you are not wearing a sweater. Or wearing a leather jacket in the store could have the opposite effect: perfect sound at the store, too dark at home.

Raising one's consciousness about the HCV could, however, cause unexpected difficulties. Imagine a husband and wife, accustomed to shared audiophilic bliss in the nude, who recently have become aware that each other's body might be having a deleterious effect on the music:

<u>Husband</u>: "Would you please start wearing a bra in here? The increasing sag of, well, you know, has caused the dispersion node

between those two tweeters to lose its horizontal axis. Now the treble is gravitating down to where it doesn't have any focus at all."

Wife: "Don't blame our sound problems on me. Ever since you gained that twenty pounds around your middle, the highs have been sucked out of our marriage—I mean, out of our music. With the highs gone, all I notice is the midrange bloat."

H: "It isn't the midrange, it's the bass. The more I live with this speaker, the more I realize its bottom end resembles yours. Maybe more extended than most, but not as tight and well defined."

W: "Could we stop bickering? Maybe we should just sell this stereo and get a better TV."

H: "I could go along with that, but only if we get good surround sound."

W: "Surround sound means a subwoofer. With subwoofers, men like loud, women want deep. There will never be a subwoofer in this house that goes deep enough to satisfy me."

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The body as a room tune—this may prove a fertile field for audiophilic experimentation and speculation. Perhaps during the next decade we will read many a report on how people have learned to

position and clothe their bodies for better music listening. And we may even encounter a few reports on how mutually harmonious listening in the music room affects conjugal harmony in the marital bed.

Meanwhile, discussion (and verbal combat) about room tunes continues apace. The topics are certainly fertile. There persist many problems yet to be solved, and many solutions yet to be explained.

Before proceeding to set forth what I believe are some viable, and novel, room tunes, certain preliminary points need to be emphasized. For example, it bears mention that different audiophiles often place very different importance on various aspects of sound reproduction. For one listener, a liquid midrange is the almighty grail; other aspects of the music be damned if this can be attained. Another wants powerful bass and is willing to sacrifice any other aspect of the music to get it. A third can not be satisfied by a turntable that sells for less than 20 grand, but is content with speaker wire and interconnects that cost less than a grand for his entire system.

I suspect that this variety of predilections is linked to dissimilar listening proclivities and even abilities. For example, I can hear if a subwoofer's time-alignment is off by more than one millisecond, while many people can not even hear a time delay of five

milliseconds. But I am not boasting. While I can certainly hear differences in CD players, I am unable to hear improvement in CD sound from any tweak, whether it be green ink, damper rings, demagnetizers, etc. Other audiophiles perceive these differences, and share common agreement as to what they are hearing. Hence, I do believe that the deficiency in discernment is mine.

I suspect that perceptions about which room tunes work best vary similarly, the result being that snake oil for one audiophile is another audiophile's pathway to musical nirvana.

My own view about room tunes is that, except for the most obvious ones, most do little to actually improve the sound of a room or a component; rather, they work because they cancel noise. With your system on idle, put your ear to the speakers and to each component. You will hear a great deal of low-level hum, buzz, whining, whooshing, and ringing—all of it acoustic information which will cancel any music directly out of phase with that noise. It also will camouflage or smear the music, and will be generally (even if minimally) irritating during listening.

In the late '80s, when placing isolation feet under components first came into vogue, I was amazed at the number of veteran audiophiles who could not explain why this treatment worked. I

experimented and quickly realized that the feet of, for example, a CD player, are affixed to its frame. The frame, because it is rigid, does not easily vibrate and make noise although the skin of the chassis does. Raising the chassis off its feet with dampening devices does not attenuate the vibration-damping capability of the rigid frame and attached feet; but with the added dampening feet (e.g., sorbothane, Vibrapods, etc.) in place, the relatively loose part of the chassis is pressed upward. The isolators beneath thus act like a brick on top, canceling vibrational noise from the chassis. Does this make the signal coming from the CD player more musical or accurate? Not likely. Rather, the music is simply less contaminated by the noise of a vibrating chassis.

In my system all components not only have a weight on top, they also have something pressing up on the chassis from beneath—whether it be the spike on the bottom of my McCormack amps, or isolation feet, or (under my tuner) three half-spheres of solid silicone which are normally glued to bathroom tile as door-stoppers. Beneath the smallest components (crossover, and tt power supply) I use shims of sorbothane.

These many attempts at canceling noise, however, scarcely help if listeners introduce extraneous noise—as happened one

evening when, auditioning at a friend's house, carry-out Chinese food was brought in. Foam containers creaked and popped while a cartridge worth the price of a good used car was being evaluated.

It bears being noted, too, that despite all my work devoted to canceling noise, there is one culprit I have never been able to tame, namely, the cooling fins on my amplifiers. Those things ring like a bell if raked by your hand. And they sometimes ring slightly during high-level listening. So far I have not found any way to silence them. Applying gobs of silicone caulk between fins, recommended by one writer, worked only slightly and cut down the fins' cooling capacity. Years ago I drove my Magneplanar MG-3's with a Dynaco Stereo 400, and after about 10 minutes of operation one could smell the dust burning off the amplifier's cooling fins. Obviously it was best to not compromise the ability of this amplifier's cooling fins for doing their job. My McCormack amplifiers (driving Dunlavy's and Janis subs) do not get that hot, but still, those fins obviously need to do their work without being impeded by silicone caulk. Placing heavy bars of lead atop a narrow "sliver" of the fins, from front to back on both sides, was a promised cure, but this did not help at all.

Which brings me to a gripe. Why do audiophiles have to even address such problems? Too often tweaking has to be done, not to

refine or personalize a piece of audio gear, but to correct a problem the manufacturer should have avoided. Ringing cooling fins are a flagrant example. Major amplifier manufacturers have known about this problem for years, yet few have done anything to even acknowledge, much less address or remedy, this problem.

Also, why did my Dunlavy speakers and Janis subwoofers come without spikes, lacking even threaded inserts? Putting the inserts in myself required time and trouble. The factory, using a jig, could have done this easily and quickly. With the Dunlavy's, spikes improved their bass considerably and their imaging somewhat. Spikes slightly improved the bass of the Janis subs, and raised them up so they did not sit directly on their speaker cables. Why do manufacturers of such wonderful equipment overlook basic details such as these?

In my ongoing attempts at canceling noise I have come across some simple, inexpensive, and very effective room treatments. Putting wheel-bearing grease in the threaded inserts for spikes (whether on my speakers, or my turntable) made for tighter coupling between the spikes and their threaded inserts, with quite audible sonic improvement. (Do <u>not</u> use Vaseline, which eventually evaporates, or regular grease, which eventually turns to liquid and

drips out; use heavy wheel-bearing grease, available at any auto parts store in a 16-ounce can for a modest price.)

Another very effective treatment was to install shelving from floor to ceiling on my back wall. These shelves hold about 5,000 LPs, all in plastic sleeves, which effectively dampen reflections. Other shelving for books and CDs is at the side walls, while damping material behind the speakers is on most of that wall and also fills its corners from floor to ceiling.

There is another variable in the room which I have paid much attention to, and which most audiophiles entirely ignore. Namely, the listening chair—or couch. It amazes me how audiophiles position their speakers proportional to room boundaries, getting them accurate down to the millimeter, then pay absolutely no attention to the seating component. Your chair or couch (whether it be a greasy five-dollar special from the Salvation Army, or a leather Levenger that matches the interior of a Ferrari or Lamborghini) has a significant effect on the sound. If a small room tune above the door affects the sound, doesn't it make sense that the material of your seat also affects the sound? I use a couch rather than a chair because the sound is more like what I hear in a concert hall where clothed bodies are seated beside me. My leather sofa of yore, even with a cloth fitted

over it, bounced the highs around too much. I switched to a velvet couch and solved the problem. To my velvet couch, I mounted forward-facing non-swivel casters to the bottom frame. This way I can roll the couch forward or back slightly since there are rare times when a recording benefits from a change in listening distance. (I do not need to move the couch sideways since I can merely move myself.)

Rather unexpected tweaks become necessary when one brings unusual items into the listening room. When I installed two fire alarms in my listening room, each with a different tone so they would be more audible, I did not realize for several days that an odd resonance I was occasionally hearing was coming from both fire alarms. The problem was easily remedied. I turned them upside down so their weight was distributed lower, and applied a piece of Dynamat to the lid of each.

The best tweak, ever, for my listening room and stereo was both simple and cheap. I installed carpet on my component rack's shelves. This small modification made for more improvement in my system than any other modification I have ever made, whether with component, cable, or room treatment. (Moreover, the lush, dark burgundy color looks quite elegant.) I use a medium-pile carpet, cut

to the size of each shelf. Absorbing vibration from components, this carpet lowered the noise floor in my room so considerably I started listening to music with the preamp's volume control at one notch lower. Should I attach carpet to the bottom of each shelf to absorb noise from the component below? Maybe. But I worry this could cause heat build-up.

There are tweaks the manufacturers should have done for us, and tweaks we can custom tailor to our own needs. But more important than any tweak is a certain capacity for mental resignation and, at some point, giving up on tweaks. Very simply this involves resigning ourselves to the fact that no matter what the shortcomings of our current playback system are, and no matter what the promised results of certain room tunes and tweaks may be, sometimes we are better off enjoying what we have instead of working for something better. Spending too much time tweaking for better sound can cause us to not have time for enjoying that better sound.

This resignation factor may sometimes even contribute to a reviewer's conclusions about audio gear. Critical listening is fatiguing. At some point during the process, what with plugging and unplugging, changing components, hefting equipment about, and note-taking, a reviewer simply reaches a point where he can not, or

chooses to not, go on. Deciding that now is the time to stop reviewing may be the main reason as to why, at this point in the reviewing process, everything suddenly sounds better. I call this the AFWI Syndrome. (For "After Fooling With It." One can substitute a different f word, if it suits.) The AFWI Syndrome means that the music now sounds better, not because a certain tweak or a different piece of gear actually improved the sound, but because instead of analyzing you are simply enjoying. You got tired of being the one fiddling around, and now you want to hear the violins playing for you. Amidst that tweaking you were not relaxed; now, finished tweaking, you are.

Last, but not least, there is the ocular tweak. This involves realigning your eyeballs so that you stop reading about tweaks and return to the music. For some audiophiles this is the most difficult tweak of all. I know a fellow with Quads, Cary tube amps and preamp, ultra-expensive wire, and a Linn CD player. But he has not used his system in over a year. His listening room got junked up during home remodeling, and even though he previously listened for several hours a day, he now has decided that he is not going to straighten up that room until after he catches up with his audiophile reading. He estimates it will take four months to do the reading, then a week to straighten up the room.

What this man prioritizes is his own business, I do concede. But being the meddlesome sort, and believing that he would be better off using his eyes less and his ears more, I opined, "I think you should straighten up your room now and catch up on your reading later."

"But what if I straighten it up, spend several weeks listening, and then when I finally catch up on my reading I find out that all along my listening was useless because I was missing something!"

Yes; he actually said this.

And isn't there a proverb—something to the effect that a man is judged by the friends he keeps? Perhaps I should spend less time with audiophiles like him and spend more time with Bach, Mozart, Schubert. Come to think of it, I have a new LP of Walter Klien playing Chopin, and even though I have not quite finished tweaking my ultra-expensive turntable (don't ask), it is time to put aside the rigors of writing about audiophilia and pleasantly face the music.

(Written: 2003.)

(Posted: Dec. 26, 2015.)