"STOP, HEY, WHAT'S THAT SOUND?"

Buffalo Springfield's song asked that, years ago. For a piano tuner, that's a serious issue. After all, tuning in to the beats for all those intervals, and the warbling, near-unisons of the strings as they combine into one unified sound takes some serious listening, and any extraneous sounds that interfere are very unwelcome. Of course, there's often just general noise in the vicinity of the piano that really distracts me, but over the years, I've had to cope/put up with lots of surprising stuff as I attempted to complete a tuning. The worst interference comes from vacuum cleaners (which actually 'sing' notes on top of the ones I'm trying to hear), lawn mowers just outside the nearest window (they usually have to be waited out, they are so loud), clocks chiming (I always have to stop for those), dogs barking, babies crying, pots and pans getting knocked around, children yelling or fighting, and other noise makers, alive and not. Occasionally, usually inert, non-living things seem to come alive when I play the piano with them near.

A lot of problems come from the settings the pianos live in, some of which I'm surprised the piano can survive. Tuning a piano on a stage right next to the café's kitchen is a nearly impossible task. The loud clanking of dishes and silverware really can cloud everything. The worst restaurant I had to work in was a small, counter-culture-style place near the West Bank School of Music in Minneapolis. The main eating room was just on the other side of a wall with open ends. At one end was the counter where people ordered their food, while the other end led to the bathrooms and the door to the back alley where the garbage cans would whump and crash. The worst distraction, which filled the air for all the diners too, was the sound of the huge industrial dishwasher, which made lots of explosive gushing sounds and hissing like a broken steam pipe at a factory. It was a remarkably steady din that ebbed and flowed slightly, and I actually had to wait frequently for the whoosh to abate before I could go on. Luckily, the kitchen was silenced during the evening performances, which made the audience much happier and the piano much nicer to hear.

It is not uncommon for me to work in settings that most people never see. For example, the equipment room at a YMCA. This is the room where all the tumbling mats lurk, barbells and weights used in exercise classes, ropes and chains of various types and uses, special nets, traffic-type cones for creating lines of kids, and an unbelievable variety of sporting equipment, all waiting for their time in the bright lights of the gym just on the other side of the double doors. The spinet piano is confined there too, where the tuner needs to squeeze in among the obstacles to get at the piano. Of course, with the noise of basketballs thumping by the door, with sneaker squeaks, yells and rapid-fire chaos roiling around outside, I feel mildly grateful for the safety of the small, poorly lit room off the beaten track. The racket is intense sometimes, but I'm not about to poke my head out and yell, "Hey, could you keep it down? I'm trying to tune here!" Life goes on and I've learned to cope with just about anything.

In live theaters, sometimes the work crew is on duty making sets and revamping the stage. I have gotten in the habit of asking the people who set up the tunings to arrange a time when the set-building is not actually taking place. There's nothing worse than the

sudden, alarming sound of a giant electric saw buzzing through large planks of wood, just on the other side of the stage's back curtain. On occasion I have even asked the carpenters to stop for a half hour or so, in order for me to be able to accomplish anything on the piano at all. Once I had to tune for a performance of piano & vocal legend Leon Russell at a local music bar in the West Bank area (near the University of Minnesota West Bank campus) where actual frantic preparations were underway to build an enlarged stage set-up to accommodate Leon and his band. That involved probably a dozen carpenters and heavy power tools set into action pretty close to the old upright piano the bar used for shows. I tuned that piano as fast as I could within the gaps of crashing, drilling and hammering around me. It was a lot like a piano tuner's torture chamber: sawing and pounding, lumber getting dropped, and even yelling filled the air. With this remarkably colorful commotion competing with me, I could barely hear the notes being struck, but the work had to be done in time for the performance. I finally struggled through, and the piano sounded okay afterwards in spite of everything. Luckily, Leon had brought with him a portable electric piano too; the acoustic piano was only for a few of his tunes, I gather.

Sometimes, it's a huge combination of racket that many people are engaged in simultaneously. Once I had to put up with a couple of school girls chatting away freely with lots of giggles and shrieks, along with two moms doing the same thing in their own way in another nearby room, with a toddler boy playing with some drums and a musical toy that put out lots of notes that landed on the same pitches as the keys I was tuning. It was a din of drastic chaos that reminded me of being in the middle of a crowd at the state fair. It was truly impossible to hear a thing, so I had to resort to actually stopping and asking for quiet. It simply did not occur to them that I needed to hear anything at all. Everyone was ignoring me and carrying on as if I was not there. After my interruption, it finally dawned on them that I needed to hear stuff to do my job, and they felt contrite, dispersing cooperatively, with apologies from the moms.

On one occasion, I visited a huge, freshly built, elegant mansion-like home in the far west suburbs of Minneapolis. I was led through some remarkable show-place rooms that did not appear to be used much, then down a winding stairway that led to the lower level of the home where an expansive rec room had been built. This room was carefully designed for parties, and visits by friends of the teen and college-age kids who lived there. Ping pong and billiards tables dominated the space, a foosball game lurked off to one side, a well-planned and stocked bar glistening in one corner, a great sound system with tall, towering speakers framed a gigantic stone fireplace, while a pit of couches surrounded a projection TV, and an old pin ball machine (some combat-themed game). Even a fascinating, colorfully-lit juke box (not a replica) filled the L-shaped room. It was like the ideal fantasyland rec room to me, who never had any of those things in my basement when I was growing up.

The well-preserved old full-size upright piano, c1920, stood along one wall right in the midst of all this. Luckily the room was not filled at that time with people using all those entertaining things. I am often required to tell family members near me, say, in a living room, that I need to have their video game or favorite TV show muted (which is not nearly as fun for the kids watching). I'll apologize to them, and explain that I can't hear what I need to, especially when music swells up during the chase scene. They grumble and glower, while the mom of the house backs me up, and the young viewers end up with a much-less-satisfying tiny TV in some back room or bedroom upstairs. *Talking* generally does not bother me as much as music—I can tolerate conversation more easily--but I always have to put my foot (gently) down when those comical, action-backing sound effects, or CDs of R & B or Heavy Metal fill the air. Once I even had to ask the parents of a teen drummer (who was really pretty good) to insist that he stop practicing in the room right above me. Crashing cymbals and heavy bass drum thumping, even separated by a floor, just are not conducive to tuning a piano.

After showing me the ancient piano in his well-endowed rec room, and before he took off with his friends, the thirteen-year-old (the family's main piano player) told me that there was a funny sound coming from inside the piano somewhere -- and could I fix that? I always worry, when I'm told about a weird sound, that the piano's soundboard (the large resonating wood piece that makes up most of the back of the piano) could be *cracked.* It is usually a real challenge to locate where the buzzing or rattling is coming from on the piano's back. Worse yet is trying to devise a stop-gap way to pin down the crack in such a way that the piano's sound is not compromised, while the buzzing goes away. It usually means an extra twenty minutes or more of messing around with a drill and screws to attempt to push the soundboard ribs tight against the cracks so they don't move any more; the result should be the quieting of those annoying sounds. This is the only hope that some old pianos have to save the basic sound quality, and without this stop-gap work, sometimes it's the end of the road for the antique instruments. A true fullscale repair for a soundboard crack involves cutting away the split wood entirely, then carefully gluing a specially-cut wood shim into the soundboard. This is very timeconsuming and costly, inevitably, definitely not worth the expense, except on the most valuable grand pianos. It also calls for a specialist who knows more than a piano G.P. like me. I've gotten rather adept at these stop-gap repairs for cracked soundboards, but the owners always need to be reminded that these fixes will last only as long as the soundboard doesn't deteriorate further, an open question.

Anyway, I was soon left alone with the piano in the glorious game room, filled with trepidation about this mysterious, funny sound. I tentatively played a few chords and listened for whatever odd noise the instrument might be producing. Yes, there it was, plain as day, but nothing like any soundboard buzz I'd ever heard. The usual sound of a crack is something like a kazoo being played, but with much more resonance. Sometimes only certain notes activate the buzzing, and I have spent many hours (over these forty plus years) lying on the carpet under the keyboard, with the bottom board taken off, playing certain keys with one hand and poking my screwdriver onto the soundboard near likely cracks to locate the exact source of the noise. When I know where to pin down the crack, I then drill a hole or three from the back to insert thin 1-and-a-quarter-inch screws to tighten the ribs down. This usually works relatively well, but it is seldom perfect.

The rec room's upright piano was producing a sound like none I had ever heard. Normally, a soundboard crack will vibrate when I strike a chord and continue to buzz with the chord, decreasing in volume with the decay of the notes I played. But on this occasion (as my piano chord rang out), the following really odd and fascinating sound sporadically stopped and started, at first spaced a second or more apart. After that, the vibration spoke more frequently, accelerating in speed like a hapless cicada being zapped over and over, faster and faster, finally subsiding into silence.

This was really weird behavior. I looked around inside the action, and then in the bottom of the piano where the pedals reside and the lower ends of the strings are attached to their hitch-pins. As I mentioned, this is a pretty good place to look initially for soundboard cracks, but there were *none* in this piano! A crack was not causing this funny noise. I rolled the instrument away from the wall enough to inspect the back, which sometimes collects foreign objects in the narrow little wooden gutter (formed by a flat piece of wood along the base of the piano's back) that runs the length of the piano right next to the lower edge of the soundboard. Over the years, I have pulled from there numerous crayons, pencils, toy action figures, wrappers, walnuts, spilled sunflower seeds, hard candies, etc., all of which can make noise if they are in contact with the soundboard. And there IT sat, gently touching the vertical soundboard as it perched on the edge of the horizontal wood piece along the lower back: a ping pong ball. The vibration of the resonating soundboard (activated when the notes were played) would push the ball away from the board into suspended animation, causing it to hesitate on the edge of that wood piece in midair. Then it would rock back into contact with the resonating soundboard and bounce off again for just a tiny moment, like a tea kettle's spout cover reacting to the escaping steam. After a while the bouncing would speed up, with the ball eventually coming to rest lying against the soundboard as the singing notes died away. Thus the sporadically-buzzing cicada-mimicker was finally unveiled. To my relief, no repair was needed, just the retrieval of the ball. I wish I had a recording of that ball cycling in and out of contact with the soundboard. Very strange indeed.

Once, quite a while ago, after some exploration inside another old upright, I surprised the lady of the house with the news that her piano had a rattle in it (a bit worrisome for her). I hunted inside the bottom enclosed region where the pedal levers and rods live, and pulled out from the floor of the piano an actual forty-year-old plastic baby rattle, yellow, with little round beads inside it. It had fallen inside years before the piano had even become her property, and no one had previously been able to identify what was causing the odd noise. It was with some satisfaction that I was able to use that line, "your piano has a rattle in it" and then produce the actual culprit on the spot. Luckily she appreciated the humor (and even more, she especially appreciated the fact that this was not going to cost her extra to fix).

In the chapter about animals I mention other noise makers that slow me down, including an assortment of birds usually in cages making various chirps, squawks, rasps, cooing, calls or sweet singing in very high, twittery voices. Sometimes kitchen equipment and appliances fill the air with racket, and of course I have to put up with that. I can't tell the cook to stop making supper for the family, just because I'm there. The dishwasher is a frequent time bandit (slowing me down), as are the microwave and the vent fan above the stove. At a small apartment near the end of my career, I tuned a small piano for a sweet retired couple. The apartment had one bedroom, a bathroom, the kitchen, living room and dining room and that was it. They were all interconnected with air space above all the rooms except the bathroom. Walls were in place but no noise containment was possible with no lids on the top of any room. A whispered secret plan in the corner of the bedroom could be heard clearly in the farthest part of the living room. In the adjacent kitchen nearby the piano, the old guy who lived there choose to take the time I was there to clean and dust a couple of stored boxes of various glass and crystal items, serving dishes, drinking glasses, small trays and the like. Each piece clinked and tinged clearly against its neighbor very musically whenever any thing was pulled out of either box to be wiped off. Of course, those high frequencies were just the ranges that I needed to hear for my tuning of the higher strings. There was quite a competition going on within my ears for at least twenty minutes.

Lots of things make noise that the people living there do not even notice. On one visit, another kitchen was situated just on the other side of a doorway from the piano, and the home owner chose that time to move the entire contents of a huge kitchen cabinet by the floor to another cupboard nearby. This turned out to be a 45-minute process that must have involved every pot, pan and cooking vessel the house owned. I don't really feel like I should complain when people take on useful projects that the household needs. I guess it's just bad luck when that happens to be the same time I'm there trying to hear all those high overtones. I surreptitiously closed the door most of the way, so I could minimize the loud clanking and cymbal-like ringing sounds the various lids produced. When I was almost finished, she must have noticed the closed door and called from the other side, "Oh, is this bothering you?" I guess she had no idea that all that noise could be a problem. Nonetheless I called back, "Not really, it's not bad. Almost done."

In the long living room of a very pretty home in an exclusive suburb near St. Paul stood an eight-foot grandfather clock. Very ornate, with fine carving and elegant design. I could tell it was only about a hundred years old, not a real antique, but it dominated that room, especially when it chimed on the quarter hour, with deep rich tones that rivaled church cathedral bells. At the moment the big clock began its Big Ben tune to announce 3:00 PM, I was tuning the upper register of a nearly new studio upright as the homeowner stood beside me, watching and listening with curiosity as I did my work. Once the clock began its leisurely journey through the song, I had to halt my work and smile at the woman next to me. She was surprised by this, and wondered, "What's wrong?" I think she guessed that something was amiss with the piano at that moment. I glanced at the nearby grandfather clock, now about half way through the second phrase of music, and she finally realized that the chimes filling the room made my listening impossible. "Oh, the clock!" she laughed. Everyone living in that house is so familiar with that background sound that they fail to register it at all, when it starts. She absolutely did not even notice it until I reacted to it as I did. Strange but true.

The following month, I visited a place that was the exact opposite of that home: a cramped apartment in the inner city with no more than three rooms. The building was decrepit and dingy, and the residents as a whole seemed a lot more down and out. This

guy's apartment was really cluttered and out of control, but at least he owned an old wreck of an upright he told me he played every day. He was a very friendly and casual hippy type, living alone, and those were the days that his demographic was pretty common. He had long greasy hair and a stubble beard, and he admired how my own beard was a bit longer than his.

He was worried about a malady inside his piano: a few notes just above high C seemed to make a serious non-musical rasping that really distracted from the bluesy piano he liked to play for himself. After checking out the usual suspects, like the soundboard, or stuff fallen into the piano (on occasion even the hinge pins for the lid get excited when they hear certain pitches that sympathize with them), we both put our ears together to try to locate the source of that raspy noise, turning our heads this way and that, all around the piano, to try to zero in on the extraneous vibrations that popped up when those particular notes were played. The neighbors, if they had been able to see inside the third floor back windows of that old apartment building, would have wondered what the heck was happening in there, with both of us twisting our necks and pausing at unnatural angles, like flaky robins on the grass hunting for worms. A strange ritual? A new exercise regimen? A brand new street drug with unexpected side effects? Aliens making contact? What gives?

After a couple minutes of acute listening, I told him I suspected that the noise came not from the piano itself but from somewhere else in the room. Widening our search area, circling around the piano in wider arcs, we hunted deeper into the surrounding jungle, and within a minute the young man yelled, "Here it is!" He swatted at his TV's rabbit ears, flexing them around, finally crushing more tightly the small ball of *tin foil* one ear had stuck on its end to improve reception. The vibration disappeared immediately, followed by shouts of "Yahoo!" from the pianist, relieved smiles, and a release of the tension we had both built up on our quest. After that, the tuning was a snap.

One interesting feature of being a piano tuner is the fact that I actually belong to a much greater community of contract service workers that keep households everywhere running smoothly. It feels satisfying that I know that I am imparting some good in this home where music is an important creative outlet, and sometimes even a refuge. There are many other people who do the same sort of valuable maintenance, and sometimes we need to share the same air space simultaneously. By 'air space' I mean *sounds*. Each contractor has his/her own distinctive noise-makers, but the piano tuner is the only one who really cares about this, because, for more than anyone else, it affects how well I can do my job. Noises in the building can slow me down considerably, but sometimes I just have to tolerate the racket and cope as best I can.

On several occasions, I have arrived at a home where the owners have decided to double-up the contractors, since the residents are off work anyway, and there are lots of quirks and failings to fix around the place. Plumbers are very common, and their noises include loud clanking and thuds from hammers or wrenches. On occasion they bring out their heavy-duty drills, which make the whole house rattle and shake. I have to stop and wait for less immersing din around me in order to continue. It's not fun, but it's always part of the job. One day the plumbers were upstairs in the bathroom whacking away at a wall when the doorbell rang and the owner let in a pair of stalwart, brave characters with thick jackets and heavy-duty pants, gloves and boots, carrying a foot-long wire cage. These guys were the squirrel chasers, here to exorcise the furry creatures from the attic and the adjacent rafters leading to the outside. They looked like they meant business; I gather the problem had been bad for a while, and getting worse. They set to work making other unique noises upstairs, including surprised yelling, stomping and heavy lunging-around.

It all felt like an average day in the realm of contractor-life, coping with disasters that home-owners are not up to dealing with themselves. Some of the pianos I tune are disasters in their own way. It's interesting to greet other workers in passing, as my comrades carry their heavy equipment and tools everywhere, since we all feel like a part of the same company of minor super-heroes, bringing stability and wholeness to people's living spaces.

The worst sound interference I remember in a home was the furnace team directly beneath me in the cellar, where they were engaging in extreme pipe abuse, with what must have been fifteen pound sledge hammers repeatedly striking their recalcitrant radiator connections like they were Thor's anvil. It was worse than thunder; it was like rhythmic earthquakes, complete with an unnerving shaking of the very floor upon which the heavy piano and I were teetering.

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