

# Oregon Musician

Sharing ideas about music and the teaching of music

## Music and Healing

The Editor's Comments



### About the Editor

Diane Baxter, pianist, educator and consultant, is the new editor of *Oregon Musician*. She is currently Professor of Music at Western Oregon University where she has received the *Faculty Honors Award for Outstanding Creativity* and the *Pastega Award for Excellence in Teaching*. Diane teaches studio piano and courses in Ethnomusicology, Performance Anxiety, and Research Methods. Off campus Diane consults and performs far and wide, often giving workshops on doing our best under pressure. "The Science of Artistry: The Fourth String" was published in *Clavier Companion* in Nov/Dec 2013. She lives, writes, plays and thinks in Brownsville, Oregon.

I am often stunned into silence by music. I don't mean the beauty of music, its power, or its inherent goodness; I mean by its effects on us and its ability to change us for the better. We don't have to be looking for it, we don't have to invite its effects, we only have to be present and to receive it. As a professor of university students I am privileged to watch people become profoundly engaged with music in ways that change them and their lives. In some cases it may even save their lives. Quite often, I have students come through the door of my studio looking pale, wan, dejected and clearly distracted by personal problems. I listen, then suggest that we spend an hour together just focusing on music at the piano. "Take time out from the issues," I tell them, "and when we are finished you will be better, more able to cope with the next things you must do." And it's true. When they get up to leave, facial color has returned, stress lines on the forehead are gone, breathing is more even and deeper, posture is more balanced. I point out that they've been to the Piano Hospital and that they are better! And the thing is, this is not nonsense—it's deeply true and the students know it too. They often say "Oh, I feel so much better." Years ago we had a Holocaust survivor, Itka Zygmuntovicz, come to the university to speak to the students and faculty. We listened to her share the excruciating, mind-boggling experiences of her life, we looked at her tattoo, we sat in a large quiet group, we wondered how she could voice the horrors she had experienced. We choked up, some of us cried. And then she did the most amazing thing. She sang. Her low resonant voice filled the space . . . and we all sang with her. It was her way of healing us after having shared things too terrible to hear.

I invite you to savor the articles presented here. Jill Timmons opens with an essay that centers on how music holds us. "Each ecstasy and disappointment serves to weave

one's life tapestry. All the while, we know that music can sustain us," she writes. "How do we name loss, grief, anger, or sadness of such magnitude that our world comes to a grinding halt? In the face of calamity, what can possibly carry us forward so that we are able to care for ourselves, for those we love, and for the world around us? Music can provide us with a non-verbal salve." Lauren Buck Fraley's moving autobiographical story will leave you in awe of her courage and her strength. Even though I was aware of the events as they happened, I read this now and think I've never known anyone as brave or as dedicated to the piano as she. "I am living a joyful life filled with music," Lauren tells us. Steve Emerson has contributed a wonderful essay on performance anxiety, filled with compassion, insights, and tools. "I believe that healing from PA (performance anxiety) is possible and that mastery of ourselves and our self stories goes hand in hand with mastery of musical expression and vice versa." Working through the approaches he mentions can "be an extremely important component of fulfilling our potential not only as musicians but as human beings." Music therapist Angie Kopshy works with autistic children in a private clinical practice. "I work in the world of autism with families who are constantly searching for ways to create greater connectivity and engagement with their children. Many families discover that their child is particularly responsive to music." She describes one child who depends on a personalized recording to calm her in times of pain, stress and fear. Angie's work with these children is nothing short of miraculous. The healing is not a one-time event, it is an on-going daily endeavor. Philosopher Mark Perlman speaks of healing in times of sorrow. "Music can unite in our consciousness both universal and unique emotions" he writes. "Music heals by not only providing company in our sorrow, but by extending our understanding of the fragile human condition."

Susan Kline will once again teach us, this time by demonstrating how the piano must be mended, fixed, healed, so to speak. "Getting our lives in order and in balance isn't really so different from regulating and voicing a piano . . . and both are ongoing processes," she reminds us. On Baxter's Bookshelf you will find a gem of a book called *The Family Piano* by Anita Sullivan. For *The Poet Speaks*, I have included Anita's essay "Vintage Imperfection." While not a poem, it comes from the pen of a wonderful poet and fits beautifully with the human connections expressed by all of the authors.

I welcome your comments, questions, and observations.

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# Artsmentor: The Musician's Journey

by Dr. Jill Timmons



## About the Author

Jill Timmons, professor emerita at Linfield College, performs internationally as a solo and ensemble artist and has recorded on the Laurel, Centaur, and Capstone labels. She is the author of: *The Musician's Journey: Crafting Your Vision and Plan* (Oxford University Press, March 2013). You can find her in her Lake Oswego studio teaching, practicing, or writing her next book!

The healing power of music is well known to those of us in the profession. Defining it becomes a slippery slope, however, somewhat akin to Aaron Copland's iconic statement: "Is there a meaning to music? My answer would be 'Yes.' Can you state in so many words what the meaning is? My answer to that would be, No." Music brings us into this phenomenological world. But if we are willing to dig deeper beyond our own subjective experiences, we find a vast reservoir of scientific research available to support the efficacy of music's healing capacity. Whether it's neuroplasticity, whole brain functioning, stress management, non-verbal realms, increased functionality for patients with dementia, or the causal link between music and spatial intelligence, it's all better with music—and we have the science to prove it. You may even want to cite some of this scholarship in support of the ubiquitous music lesson. Yes, some people need a verifiable reason to study music. At the very least, give Oliver Sacks a try. His groundbreaking book, *Musophilia*, is a great place to begin.

So while I am captivated by the research regarding "your brain on music," I am also interested in exploring more abstract topics regarding the healing power of music. We know that through this art form we serve something far greater than ourselves and that our presence serves to link the past with the present, preparing fertile ground for the future. Over time, we learn to navigate rocky shoals and to ride the wave of change, accepting a wide range of possibilities. Over the course of a long musical career, most musicians encounter extraordinary highs and painful lows. Nevertheless, they

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are inspired to carry on, regardless of outcomes. Each ecstasy and disappointment serves to weave one's life tapestry. All the while, we know that music can sustain us.

But every so often we are stopped in our tracks. Life dishes out something awful. Not to put too fine a point on this, but by middle age most of us have had some sort of seismic tremor in our lives significant enough to derail even the most carefully charted course. Cast adrift, we may cling to old habits and coping mechanisms, but these patterns often simply fall short of what we really need. This is where I believe music, and the larger world of the arts, can provide that healing power. How do we name loss, grief, anger, or sadness of such magnitude that our world comes to a grinding halt? In the face of calamity, what can possibly carry us forward so that we are able to care for ourselves, for those we love, and for the world around us? Music can provide us with a non-verbal salve. From the world of archetypes and symbols, we are able to connect with larger cosmic forces. Music can give us that much needed *gestalt* to somehow make sense of life's crushing events. Music can offer hope, inspiration, courage, and the wisdom to understand the larger fabric of life. We can find our way into calmer waters and new ways of being, hopefully becoming better, stronger, kinder. At the very least, we *can* endure.

I have experienced the healing power of music as a performing artist, as a teacher, through recordings, and by attending live performances. All have their use and power. Nevertheless, I have my favorite places to go when I need that healing balm: Beethoven's *Les Adieux* Sonata (Op. 81a) or his last string quartet, Op. 135; Messiaen's *Préludes*; Mozart's *Magic Flute* (light does triumph over darkness!), Patsy Cline's *Crazy* (you sing it, girl!), Willie Nelson's *Stardust*, Natalie Cole's *Unforgettable*, and so many more from every corner of our profession. Long ago, when I was consumed with grief so palpable that you could cut it with a knife, I found myself turning to Bach's Well-Tempered Clavier. Every day I played through something from the "Forty-Eight," and this process of self-reclamation continued for six months. It was the only music I could bear to play. Bach was with me each day. The beauty and order of the WTC served to remind me that all would be well and that eventually I would find my way. I was in Bach's world—a safe and orderly universe, a place of healing.

I have also witnessed music's healing power through teaching. Many years ago I encountered a jazz pianist who had decided to take a hiatus from his fast-paced high-end touring life. He approached me for lessons. The project he proposed was a curious one. He wanted to study a number of Bach's solo keyboard works, and for one year—no other repertoire, just Bach. I accepted him as a student and we launched our year-long "Bach Safari:" French and English Suites, Toccatas, Partitas, and of course the complete WTC. We explored what scholars had to say about performance practice and how great

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pianists offer a dizzying array of interpretations. Some works he mastered, others were for a cursory examination. I will never forget that year. When we celebrated the conclusion of our Bach co-pilgrimage, my student then told me about his recent recovery from drug addiction. He had taken a year out of his life to return to the piano as a means of healing, and Bach was the music he chose. I was just the messenger.

As we move through the summer months, I'd like to offer a suggestion. In addition to the important services we provide as educators, writers, composers, scholars, arts entrepreneurs, and performers, let's all of us keep a sharp eye out for those who are suffering. We are singularly equipped to offer the healing power of music and make a difference in our world.



# My Healing Strength

by Lauren Buck Fraley



## About the Author

Originally from the Pacific Northwest, Lauren Fraley is a keyboardist and educator living in Norman, Oklahoma. She enjoys performing works for piano and harpsichord with all types and sizes of ensembles and recently completed a doctorate in Keyboard Collaborative Arts from the University of Southern California under the direction of Dr. Alan Smith. She currently spends her days mothering her two young daughters, ages 5 and 1, while running a private music studio in her home, where she teaches private piano and group music ensemble classes for young children.

I am grateful every single day for the privilege of having been raised in a family where music was important, and where I had the opportunity to develop such an amazing and valuable talent. I began piano lessons at six years old, following in my older sister's footsteps, always wanting to do what she did. By the time I reached high school, I knew I wanted to study music in higher education, it was a given. It was something I was confident in, and I wanted to teach it to others.

I received my undergraduate degree from Western Oregon University. With a lot of thought and some of the best advisement I have ever received, I knew I should continue studying music in graduate school. From Oregon I went on to a master's degree in Piano Performance at the University of Oklahoma. During this program I worked as a graduate assistant doing a lot of collaborative work along with my studies in solo piano performance. I worked in the string department studios and with vocalists in the opera and musical theatre programs. By the end of that degree I decided to focus on collaborative arts for a doctorate.

I pursued a second master's degree in Keyboard Collaborative Arts at the University of Southern California to prepare for the doctoral program there. It is a



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very specific degree in keyboard performance that focuses on collaborating with all types of ensembles. As a student or graduate assistant, the pianists at USC accompany conducting classes, large choral ensembles, have one-on-one coachings with vocal performance majors, are assistant musical directors of University Opera, and play in all private instrumental and vocal studios. Focusing on collaborative arts was a difficult switch from solo performance. I spent a great deal of time and energy building my repertoire list to be able to audition for the doctoral degree program in the same area.

Happily, I also spent the last year of my second master's degree pregnant with my first child, a baby girl. The timing seemed perfect; her due date was to be June third, a few weeks after graduation and close to three months before the doctoral program would start. The pregnancy went absolutely smoothly and I was able to do my doctoral audition and final master's recital with no problems. I ended the semester in May and waited out my final weeks until my baby was born, ready to spend the summer tending to her and preparing to begin classes again at the end of August.

As often happens with a first child, the baby's due date came and went and I entered the hospital for the birth to be induced two weeks later. She was born via cesarean section, but nothing triggered an emergency and everything went okay. We went home after three days in the hospital together. I seemed to be okay, although my body was holding a lot of water in my legs, wrists, and hands, causing extreme swelling. Two days after returning home, I began to have serious headaches, like nothing I had ever experienced before, caused by extremely elevated blood pressure. I ended up going to the emergency room to be evaluated. The doctors there ordered a spinal tap and CT scan, both of which turned up no results that indicated any serious issues. I was hospitalized to keep my blood pressure under control and to be monitored.

After spending over 24 hours in that situation, and exactly a week after my baby was born, an alarm woke me up in the early morning. One of my leg compression devices had come undone while I was sleeping, causing the alarm. I reached across my body with my right hand to grab my eyeglasses, but was unable to grasp them. I didn't think much of it; I was still slightly groggy from sleep and medication. I reached with my left hand and was able to grab them easily to put them on. I rang for the nurse, but when I went to speak over the intercom, I wasn't able to form words, my tongue felt numb and big in my mouth. I screamed for my husband, who was sleeping in a cot at the end of my bed.

After being rushed here and there, a neurologist came and told me I had suffered a hemorrhagic stroke in the left hemisphere of my brain, which controls the right side of the body, among other things. I spent four days in the Intensive Care Unit, and another six days where my new baby could come and visit while I did some rehabilitation. I saw all the normally prescribed therapists: physical, occupational, and speech. My right hand is my dominant hand. I was barely able to sign my name. I worked a little on writing and larger arm movements with my occupational therapist. There were many instances during the



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hospital stay where the therapists and doctors asked me what my occupation was. I always let out a small chuckle and said, "I'm a pianist." There were many responses of, "Ohhhh . . ." and "Well . . . that will be a great therapy for your hand."

My large motor skills that were affected seemed to improve quickly. I attempted walking a few days into my hospital stay and fortunately the effects seemed minor, only a slight right side weakness. The doctors and therapists were happy with the progress I made while I was there and felt there was not much else they could work on with me. I was sent home with a few assignments to work on with my handwriting and general exercises. I was excited to get back home to my new baby, but I was terrified about what was going to happen when I got home and tried to practice the piano.

The first time I sat down at my piano after returning home, I lifted my affected hand to the keys and was devastated. All my muscle memory was lost. I knew how an octave felt in my hand, and how a scale passage felt, or at least how it *should* feel, but I could not execute anything. That first time I tried to play again I was scared. I was scared that all of the countless hours of practicing up to then were for nothing, I was scared I wouldn't be able to finish my final degree program which I had worked for my entire college career, and I was scared that I wouldn't be able to share my music again. I look back at the day now and think about how ridiculous those fears seem, but they were my fears nonetheless.

Within that first week home, I was forced to make a crucial decision. One of those days I was sitting at my piano. I realized how much work I had lost and how much I would have to do to get my hand back into working order. I started to cry. My mother was there with me and we discussed how I needed to decide if I wanted to put in the amount of work needed to return to school in two months or take some time off and possibly start the doctorate at a later date. Even though I was upset, I knew that I was already making a little progress and I decided that I wouldn't give up. There were still more days of tears after that one, but my hand was slowly regaining function at the keyboard.

There is something special about a musician's brain, a special way it grows and develops while learning an instrument and the musical language that goes along with it. There is also something unique about therapy using music. It has the ability to make certain connections in the brain through its use of fine motor activity and combined audio feedback. By the time the summer ended, I was almost miraculously ready to begin the doctoral program with only small physical effects. That's not to say it wasn't difficult; I spent that entire two months practicing hard—scales, Hanon, you name it—anything to get my fingers moving the right way again and to regain my muscle memory.

After returning to school I discovered many mental effects as well: a new type of performance anxiety, and some loss of ability to focus during a test, among others. During my first studio class performance, a violist and I performed the first movement of the Sonata for Clarinet and Piano in E Flat, Opus 120, No. 2 by Johannes Brahms. We had prepared well together but the newfound performance anxiety affected everything. I had a dialogue in

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my head that made me aware of every little thing I was doing wrong. I wasn't able to let go of the technical aspects of the piece and just make music like I used to do. I was not able to focus on the ensemble. We made it through the piece but after that performance I lost confidence in my playing. My willingness to tackle any difficult composition for piano dropped significantly during that first two months of school. There are so many unseen effects that stroke survivors deal with on a daily basis, and I was only just beginning to learn about them and how to deal with them.

I can't remember what playing felt like before the stroke. I have forced my brain and body to re-learn many things. With the help and counsel of my two piano professors at USC, and enormous support from my family and friends, I overcame the obstacles I faced. The obstacles changed week to week. Sometimes I was focusing on finger action, other times arm tension, and other times letting go of all the little things that I had become so aware of. My professors never gave up on me and were constantly hard on me. There were times I wanted to yell at them and say, "Don't you remember I had a stroke?!" It was understandable if they had forgotten; I didn't have the large physical effects that many stroke survivors do. But they did remember I had a stroke and continued to push me to prevail over the issues I had.

I gave four chamber recitals and one solo recital during my doctoral work. I am able to share my playing again, which heals me in other ways than just the physical ones. It has been five years now, and as I look back I am evermore grateful for my ability to play the piano. It shaped my brain to be able to heal the effects of a stroke. My performance anxiety has improved, I practice in more effective ways, and my listening skills have greatly developed. When my right hand "acts up" every now and then, I am still able to express my innermost emotions through my playing, and it continues to be my healing strength. A year and a half ago I finished my doctoral degree, have had a second baby with no complications afterward, and am living a joyful life filled with music.



# The Paradox of Performance

by Steve Emerson



## About the Author

Stephen Emerson, cellist and psychotherapist, holds a B.A. degree in music, a Master of Music degree in cello performance, and a Master of Social Work degree. He was Associate Principal cellist with the Utah Symphony for 27 years and appeared as soloist with the Utah Symphony and the Long Beach Bach Festival. Mr. Emerson is Adjunct Professor Emeritus of the University of Utah's School of Music and was a member of the adjunct faculty from 1988 to 2013. In his role as a Licensed Clinical Social Worker (LCSW) he maintains a private psychotherapy practice in southwest Portland helping people deal with a variety of challenging life issues including performance anxiety.

Performance anxiety (PA) or “stage fright” is very common among performing musicians. While some musicians feel excited at performing and say they perform better on stage, most musicians experience some degree of PA at various times throughout their performing lives. Even with the best of training, deep dedication, and diligent preparation, the physical, psychological, and behavioral manifestations of PA can intrude on the quality of our performances, affecting how we feel about them, and how we feel about ourselves. The intensity of PA can run the gamut from hardly noticeable to debilitating.

Why then do we choose to engage in music performance despite the challenges PA can engender? The question is complex, but I'd like to offer a perspective as a musician and psychotherapist. I believe two main factors beckon us toward performance: one aesthetic, one psychological.

Most everyone enjoys music. Our attraction to it seems to be inherently human and quite universal. For some of us, not only do we enjoy it but we are drawn irresistibly towards it. We find it fascinating, beautiful, expressive, and deeply touching. We seem to have a mysterious aesthetic predilection for it which demands engagement. Whether because of nature or nurture or some unseen spiritual force, we choose music as a strong avocation or as a profession.

We are drawn to music, yet paradoxically we can find ourselves experiencing stress and even fear when performing for

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others. I believe this is related to our personal psychology (and possibly to a genetic predisposition). There are unconscious processes that go on as we grow from infancy to adulthood that result in beliefs about ourselves and emotions we habitually experience. I call this combination of thoughts and feelings “self stories”. These self stories are rooted in what we think and what we believe we need, whether we feel valuable and competent to negotiate the world safely. Some of these stories tell us that our worth as a human being is based on accomplishment, that what is important is perfection or at least being evaluated as “outstanding” or the “best.” We may feel that we probably don’t measure up since we constantly need to be better than we are so as to deserve being noticed. We need validation from authoritative sources outside ourselves to prove we’re worthy of value. Messages that we aren’t enough can feel very unsafe. These self stories can be very convincing, can create internal conflicts, and can trigger the fight, flight, or freeze response (FFF). They can drive us to try to convince ourselves and others that we are good, accomplished, strong, worthy, and lovable. To address this, we unconsciously seek a vehicle for mastery and resolution of these internal conflicts. The vehicle can take many forms but if music is something for which we already have a predilection, it can easily become the vehicle of choice for us to prove ourselves. Viewed from this perspective, it’s easy to see that there’s a lot on the line when we put ourselves out there in a musical performance.

I believe healing from PA is possible and that mastery of ourselves and our self stories goes hand in hand with mastery of musical expression and vice versa. (I use the word mastery to mean doing the best we can according to our individual potential). The healing process can result in increased ability to see our self stories differently and not fall prey to them, as well as to manage symptoms which undermine our performances. Conversely, learning to manage anxiety symptoms helps free us from the negative impacts of our self stories. We can experience a freeing up of our ability to express ourselves and greater satisfaction in making music and in living life. This involves what I might call mindful performing in addition to inner psychological work. Following are some of the ways this healing can happen.

Recognizing the underlying sources of our beliefs about ourselves (making the unconscious conscious) and learning to see them for what they are (ways our brain tries to make sense of things) is an important part of healing from PA. This involves realizing that our self stories, kept alive by mostly negative thought streams which affect us physically and emotionally, are indeed just fictional stories. To develop the capacity to observe our experience, while not identifying with the stories, is an effective approach called *mindfulness*. This helps to diminish the frequency and intensity of negative mind streams, to realize our intrinsic worthiness apart from accomplishment, to free us from the tyranny of criticism from inside and out, to realize that we are competent, and to value our own authority.

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The symptoms that musicians experience during PA are manifestations of the fight, flight, or freeze response (FFF). This response played a major role in the survival of our species but is problematic when we are trying to complete a complex task. When the FFF is triggered, we feel threatened even though we are not. The response impacts us physically, psychologically, and behaviorally. This is because mind and body are connected. Physical symptoms may include elevated heart rate, breathing rate, and blood pressure, tension, palpitations, tremors, feelings of weakness, and GI tract discomfort. Psychological symptoms often include confusion, blanking/memory difficulties, hyper-vigilance, embarrassment, irritability, rumination, negative self-talk, and thoughts of low self-worth. Avoidance of various performance situations is the main behavioral symptom. Healing is most effective if these three areas are addressed together. In addition to *mindfulness* work to understand and manage how our minds and bodies hold and deal with things, other techniques can be valuable. Some of these are: relaxation, abdominal breathing, visualization, concentration/focus training, "Inner Game" techniques, meditation, and systematic desensitization. There's not enough space in this article to describe them all but here are a few. All the techniques tend to overlap in addressing physical, psychological, and behavioral issues.

Abdominal breathing is probably the most basic relaxation and centering technique. Typically, especially when we're anxious, we breath quickly, shallowly, and at our chest. Abdominal or diaphragmatic breathing is the practice of breathing deeper into our lower abdomen allowing our belly to expand on the in breath and contract on the out breath. This is how babies automatically breathe. As we ask our bodies to do this, our breathing tends to slow down and remain deeper. The exhalation breath is especially relaxing.

There are several other ways to relax or release tension held in the body. Examples are progressive muscle relaxation, relaxation without tension (body scan), cue controlled relaxation, and visualizing a calm place. I'll describe the relaxation without tension or body scan (as contrasted to progressive muscle relaxation which involves tensing and releasing muscles). For the body scan, seat yourself in a comfortable position, close your eyes and begin to notice your breathing at your belly (abdominal breathing). Then place your attention on the top of your head just noticing whatever physical sensations are present. Let your attention dwell there for a few moments then move your attention downward to your face, then to your neck, shoulders etc. dwelling momentarily at each area before moving on. If thoughts enter your awareness, briefly note them and return to attending to each area of your body. Continue until you reach your toes. Then feel your feet grounded in the floor as you open your eyes. You can use smaller areas of your body or larger ones depending on how much time you have to spend.

There are many ways to use visualization (getting a visual picture in your mind): visualizing a calm place, visualizing a barrier around yourself on stage, visualizing audience members (especially critical ones) in humorous or compromising situations, visualizing

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those critics floating away in a bubble etc. This is best done in a comfortable sitting position in a quiet place beginning with a relaxation technique and/or abdominal breathing. It can easily be used just before going onstage.

Another technique, systematic desensitization, consists of thinking of or remembering challenging performance situations and placing them in a hierarchy from the least threatening to the most challenging. You then work with them first in your imagination and then in real life. To begin, engage in one of the relaxation techniques. Once relaxed, imagine yourself performing in each of the situations starting with the least threatening. Move to the next higher (more challenging) situation only when you can remain relaxed as you see yourself in the situation. Move up to the most challenging situation. If you can remain relaxed, it is time to tackle the situations in reality starting again with the least difficult and working up to the most challenging, while maintaining a relaxed state and performing at or near a realistically competent level.

Addressing PA through the above approaches can be an extremely important component of fulfilling our potential not only as musicians but as human beings. This healing work can be of enormous benefit for the student, amateur, or professional along with, of course, plenty of "practice, practice, practice."



# Music Therapy with Autism

by Angie Kopshy



## About the Author

Angie Kopshy, MM, MT-BC, is the founder and director of Music Therapy Services of Portland. Angie received her Bachelor of Arts in Music from Western University and her Master of Music in Piano from Boise State University. Angie returned to Portland to study music therapy at Marylhurst University and opened Music Therapy Services of Portland in January, 2009. The clinic specializes in children diagnosed on the autism spectrum and also coaches people diagnosed with Parkinson's Disease and their families on how to enhance movement with neurologic music therapy techniques. Angie is also lead singer/songwriter for the band, Stoneface Honey.

For musicians and music lovers, knowledge of its healing powers go unquestioned. Thanks to modern technology, we can finally provide evidence-based research like never before that absolutely solidifies the power of music.

I work in the world of autism with families who are constantly searching for ways to create greater connectivity and engagement with their children. Many families discover that their child is particularly responsive to music. A girl who appears locked in her own private world may raise her head, look in the direction of the music, move her body or even vocalize in response to what she hears. A boy may walk over to the piano and start plinking out the melody of a familiar song even though he never played the piano before. These children often end up in our clinic with parents eager to explore the possibility of music therapy.

A recent study published in *Autism Research* shows that frontal connectivity is preserved when someone is singing rather than speaking to a child on the spectrum. Although the spectrum is vast and this discovery may not apply to every child who walks through



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the doors of our clinic, we have seen numerous families transformed by this information. Most of our time is spent in individual sessions where we teach children songs using language that can be generalized into situations outside of our music therapy sessions. We coach families on how to literally make their lives a musical. We get to help families feel comfortable replacing lyrics to popular songs or writing their own songs in order to enhance neural connectivity.

For example, you can change the lyrics of *Happy Birthday* to, "I have to go to the bathroom." I like to get parents started and encourage them to practice spontaneously creating phrases that describe exactly what is happening in that moment. So if a family is at an unfamiliar restaurant and their child is anxious about going the bathroom, *Happy Birthday* would turn into, "I have to go to the bathroom. Let's go find a bathroom. It's right down the hall just past the kitchen." They could continue with a second verse that says something like, "It might be noisy. There might be bright lights. But I'll be right next to you and you'll be alright."

In our clinical work, we do the exact opposite of what we practiced during our hours and hours in practice rooms. The idea of a metronome is tossed aside as we strive to match the breathing patterns and entrain with our clients. We provide dramatic pauses at the end of phrases and patiently await the final word to be sung by *them* rather than us. We speed songs up when little bodies get restless. We spontaneously change the lyrics in order to match the actions of our clients and let them know that we are watching them, supporting them, and helping them find the language that has been locked inside of them.

One of my favorite experiences was with a four-year-old named Tymme, who was clearly in pain and profoundly frustrated with her inability to tell us what was wrong. I began to vocalize over a haunting chord progression typically preserved for progressive muscle relaxation facilitation. Her body melted into the floor like butter, she stopped screaming, her breathing slowed, and her sweaty forehead eventually dried as she gazed over at the guitar and me. Tears of relief by her weary parent were shed. We made a recording and put it on YouTube. The family requested that I make it longer so they wouldn't have to keep pressing play again. When this little girl burned herself on the fireplace a few months later, she held the phone tightly to her cheek for hours as her song played over and over. She has used it at the dentist's office, in the car, and when she can't sleep at night. This little girl taught herself the art of self-soothing and taught me to trust in the power of music even when someone on the other end may not be able to verbally articulate the impact.





# Music Therapy with Autism

Another way in which we coach children to self-soothe is by finding one of their favorite songs and using it during moments of distress. Jay was a six-year-old who was so sensitive to sound that he would actually try to run away from his own voice. When I encouraged him to sing during our initial sessions, his loud voice startled him so much that he would jump up and bury his face in a corner while covering his ears and moaning loudly. He eventually learned how to sing softer and we started using *Twinkle, Twinkle* as the song he would sing when distressed. By simply starting the song, singing softly and slowly while loudly exaggerating my breath intake in between each phrase, he eventually joined me and became adept at singing softly, breathing deeply, and grounding himself without assistance.

With all of the children diagnosed on the autism spectrum with whom I work, one of the greatest gifts I am able to provide is a foundation of patience, acknowledgment that they know much more than they are currently capable of verbally articulating, and a safe container in which they can practice, make mistakes, and try again without judgment or disappointment. Music is the tool that I use to captivate their attention, create structure with the assistance of predictable chord progressions and steady tempo, and elicit an emotional response by catering each session plan to the preferences of the child in front of me. My private practice provides me with the flexibility to drop the session plan I carefully created for this particular client when he walks in crying because there was construction on the drive and they had to take a different route or he lost his favorite toy at the grocery store that morning. The families and music therapists with whom I work trust that every experience, whether bad or good, can be turned into a teachable moment. We trust that the goals and objectives will still be waiting, the strategies that we intend to use to reach these goals will still be there, and that the unique strengths and challenges of each child will eventually be unveiled through the support of music.

My work as a music therapist is incredibly rewarding, exciting, and challenging. As the field expands, we will continue to hear more and more stories about families using music to enhance their lives. The day is near when we will change the way people think about music. Everyone will know why music therapy reduces the amount of time preemies spend in the hospital, why someone with Parkinson's is able to stand taller and take larger steps when the music begins, and why someone with dementia opens her eyes and starts to sing when we play a favorite song from her early twenties.

Music therapy is a growing field. And for every music therapy position that opens up, another musician who practiced their primary instrument for many years is able to take that hard work and turn it into something that intentionally addresses the specific goals and objectives of a client. I wouldn't be able to focus on my clients if I didn't already have musician-ship under my belt. I wouldn't be able to gaze into the eyes of a little girl if I hadn't learned how to play the piano without looking at my hands. I wouldn't be able to live this dream if it wasn't for the patience and support of my family and piano teachers. I abound with copious waterfalls of gratitude for all of those who helped to guide me to my perfect niche.



# Music and Healing the Sorrow of Death

by Mark Perlman



## About the Author

Dr. Mark Perlman is a Professor of Philosophy at Western Oregon University and an author of books and articles about philosophy of mind, biology, law, and music. He attended Ohio State University and received his Ph.D. in Philosophy from the University of Arizona. As a musician, Mark began string bass lessons at 13 and has played in many orchestras, most recently the Salem Chamber Orchestra since 1998. Currently an orchestral conductor, he is Music Director of the Tualatin Valley Symphony, Music Director of the Willamette Falls Symphony, and Associate Conductor of the Hillsboro Symphony Orchestra. His conducting mentor at Arizona was Dr. Leonard Pearlman. Orchestras in Oregon, Ohio, Arizona, Nevada, and California, as well as internationally in Germany, Russia, Romania and Bulgaria have performed under his baton. He is currently writing a book on the philosophical exploration of conducting.

On June 26, 2015, President Barack Obama gave the eulogy for the Charleston church shooting victim Rev. Clementa Pinckney. For thirty-five minutes, he spoke profound words about loss, and love, and justice, and the changes in society we would like to see, about the sources of hate and how to remove them, a “roadway to a better world,” and the need for God’s grace. All this in a predominantly African-American church where the congregation calls out after each sentence in affirmation. And then he did something totally unexpected from a politician or government official—he began to sing. He sang *Amazing Grace*, at first by himself, then joined by the attendees, then by the band—and his song said more than all the words he’d spoken. He sang it slowly and solemnly, but with some gospel-inspired flourishes. As I watched the video on my computer, chills went down my spine and a tear came to my eye. It was as if he gave a musical hug to an arena full of people, indeed perhaps to an entire nation. I won’t remember the details of his speech, but forever in my mind will be etched the scene of a President singing to help heal the wounds of sorrow and tragedy.

# Music and Healing the Sorrow of Death

Even before this vivid instance, when I would think of the link between music and healing, the first thing I would think of is how we use music on occasions related to death. From tragic songs to hymns, from the blues to requiems, when we have lost a loved one to death, we often play or listen to music. Certain pieces have indeed become emblematic of mourning, such as Beethoven's Funeral March from his Third Symphony, Barber's *Adagio for Strings*, or Mahler *Adagietto* from his Fifth Symphony (which Leonard Bernstein led for the memorial of President John F. Kennedy). But what exactly is it that the music is doing on these kinds of mournful occasions? There are many possible simple answers, all of which are implausible or just wrong. And the trouble is that this question hinges on larger and difficult questions, such as what is the function of art (including, but not restricted to, music), and what gives art (including music) its meaning.

One popular view is that art is about displaying or conveying the artist's or performer's emotion to the audience. This is surely on some occasions what art does, but it is implausible in many cases. Surely for a painting that took a year to paint, a novel or play that took a year to write, or a requiem that took a year to compose, the artist/writer/composer wasn't in the throes of sorrow and suffering the whole time (one hopes). (Mozart wrote some remarkably ebullient music while he was broke and miserable.) Indeed, they might well feel joy at their successful completion of a work with deliciously tragic content. Moreover, this kind of display—what we could call 'venting'—seems a little primitive and needy, making the production of art merely a kind of psychotherapy. Art and music can be indeed be therapeutic, but are much more than that most of the time. Especially in the case of sorrowful music, one wonders why we should want to listen to the musical sobs of a stranger. It seems self-indulgent to create sad music just to show the world how sad you are—sort of like expecting a 'pity-party' from everyone around you. This just doesn't ring true to the usual ways in which we use sad music. It is deeper than just displaying one's mood to the world through art.

Another popular view is that art (including music) is designed to make the audience/viewer/listener feel a certain emotion (whether or not it is precisely the emotion felt by the artist). So happy music is for making people happy, excited music is for making people experience excitement, and tragic sad music is for making people feel sorrow and sadness. On some occasions, this generation of emotion may indeed be what happens, but as a general theory it is oversimplified and is certainly not what usually occurs. Moreover, philosopher R.G. Collingwood criticizes this kind of function of art, the simple "arousal" of emotion, as the sign of mere "amusement art", a cheap and low realm of material (e.g. comic books, sit-coms, rom-coms, action flicks, horror movies, porn, pop songs, easy listening, and disco) that doesn't rise to the high level of "art proper". Elitist though this attitude is, there is something to it. Great art does more than merely arouse emotions in the audience.

## Music and Healing the Sorrow of Death

Another purported goal of some art is Aristotle's notion of *catharsis*—we get pleasure from tragic art by having our fear and pity aroused and then resolved and safely released by the end, leaving us in some way cleansed or purified. This seems more applicable to works that have a duration through time, such as plays, films, dance, and music than to objects like statues and paintings, but some have tried to extend it to the process of viewing static objects. It is also plausible in some ways, but seems incomplete, and it is still focused on the arousal of various emotions in the audience, now a transformation from negative to positive emotions.

R. G. Collingwood (*Principles of Art*, 1938) proposes his own theory of the *expressive function* of art—art serves not merely to display emotion or arouse emotion or release emotion, but to “express” emotion; that is, to allow us to become conscious of a previously unconscious or subconscious emotion, to recognize the individual character of that particular emotion, and then to comprehend it. By grasping the emotion better, the mind is “lightened and eased”, and an oppressive murkiness is replaced by the consolation of understanding. This complex and psychologically sophisticated function is what he thinks is done by real art (“art proper”). It allows a unique, particular, nuanced emotional experience to be something one can know, and which others can also know. This view helps clarify and explain the use of music in healing the sorrow of death.

Sad music doesn't necessarily make one feel sad. When one is happy, one can listen to sad music and feel aesthetic appreciation of the beauty of that sad music. One might feel an aesthetic exaltation at a wonderfully sad moment in a piece of music done especially well. But when one is feeling sad, it is often annoying to listen to happy music—It seems banal, trite, even insulting to one's mood. When one is experiencing the sadness that comes from the loss of a loved one, this is even more the case. Cheerful music often makes grieving people feel worse, not better. Music is often played at funerals and memorial services (except for traditional Jewish funerals, because in that tradition music is associated with joyous occasions). But *why* play music at funerals? What kind of music is appropriate for a funeral or memorial?

Do we play cheerful music, so we can cheer up these crying people? Typically not, because that would cheapen the occasion and would not fit with the solemnity of the ceremony. So we play sad or mournful or bittersweet music that fits with the emotions of the grieving. Does a musician or someone choosing the music select that sad music to show everyone that they're sad (the 'display' model)? Surely not—for everyone probably already knows that the person is sad, and beyond that it would seem wrong for a mourner to so obviously and calculatedly call attention to themselves and their own mood in such a context. It would in fact make their emotion seem falsified or counterfeit if they feel such a need to conspicuously announce to everyone that they feel sad. Do we play somber music to arouse emotion in the attendees (the 'arousal' view)? Also surely not, for we expect they are already feeling sad at the loss, and it would be strange to play sad music to, as it were, guarantee that everyone feel sad. Don't we trust them to feel the

## Music and Healing the Sorrow of Death

right emotion? They probably feel bad enough already, without pouring musical gasoline on the flame of sorrow.

Is it catharsis? Do we want to play music that will make them all feel better? Make them feel the pain, and then bring them out of it? That is an extremely ambitious expectation from music. After a lifetime of connection to a loved one, their loss will not be alleviated by a few minutes of music. And people probably don't really want to let go of their sorrow. Funerals and memorials are not to forget the departed one, or to get over being sorry they're gone. They are to respect and remember the departed one.

So what does music do at a funeral? When we feel sorrow for a good reason, what can make it better while still allowing it to be felt? Collingwood's expressive theory may help us come to an answer—music allows understanding. Music has a way of letting us perceive not just a generic emotion, but a specific individualized emotion, and understand it, and know it together as a human community. It helps to know that others feel the same way—not just generically the same mood, but that they understand and feel the unique particular emotion from that exact circumstance. Not only that it is 'sad', but the singular distinctive emotions such as, say, the feeling of betrayal at a child murdered by a trusted family member, or accusation at the recklessness of a daredevil accidentally killed doing the dangerous thing they loved and leaving behind a family, or disappointment that an artist taken in their prime by cancer can never fully achieve their artistic potential, or anger and outrage at a racist fanatic shooting nine people in their Charleston church. Sure, these details can be explained in words, but somehow music allows us all to sense and know the exact contours of the emotions more than words ever could. Music can unite in our consciousness both universal and unique emotions. Music helps us to think about what it is to have someone we care about die and leave us, and understanding that death is inevitable for everyone, and that we all will lose loved ones and then ourselves die. It is not that we want to forget all that, or be 'cheered up' about it, but rather we want to come together and feel a social communion around both these common human feelings and the very distinct emotions of the particular circumstance. We don't want to get over being sad, we want to get through it to the other side, to the lingering sadness tempered by time, and to the consolation that we are all in the same boat of human frailty and mortality.

Music has a unique ability to bring us together, to have us all conscious of the same very particular grief (or, in other contexts, the same joy or love or contentment), and feel comforted by people who feel as we do. It doesn't necessarily have to be 'sad' music that serves this role in tragic cases. I'm reminded of a scene in the 80s film *The Big Chill*—the opening scene at a funeral, where the deceased's favorite song, "You can't Always Get What You Want" (made famous by the Rolling Stones) is played on a church organ. It is so incongruous to play that song on an organ (so much mellower than the original), but in that context it brings a poignant smile to everyone's face, and to the film audience as well. Music that is not-so-tragic can remind us that in the midst of tragedy

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there is beauty in the world. In playing someone's favorite music at their funeral, we have not merely a generic feeling from the song, but the mental image of that particular person's pleasure at that exact music, and we remember them as they were, alive, not as they are, gone from us.

Music heals by not only providing company in our sorrow, but by extending our understanding of the fragile human condition. Even if one is alone, or perhaps especially if one is alone, listening to music can show you that someone else knows what you are going through, and can create in sound something that expresses and epitomizes that unique and particular emotion that you now feel. In being joined in the emotion, in having spiritual company of someone who knows that pain, one can better deal with it, and be pulled up by the psychic strength of that fellow human being who knows the same feeling. Music has an amazing ability to give us glimpses of infinity, and show us that whatever is happening now will eventually fade, and that the misfortune will subside or be replaced by something else. In the end, tragedy can be supplanted by beauty, and music can show us this in a unique way. And that is enough to help heal the deepest wounds.



# The Unseen Artist

## The Unseen Revealed, Part 2

by Susan Kline, Registered Piano Technician



### About the Author

Susan Kline, a piano technician living near Corvallis, studied at Oberlin and at UT/Austin. She has a Masters degree in applied cello. She played in the Hamilton Philharmonic (Ontario), then did two sabbatical replacement jobs on the Canadian prairies. In 1978, she attended George Brown College's Piano Technology course in Toronto. After 12 years of sweaty piano work in Stockton, California, she happily moved to Philomath, Oregon. She tunes for most concerts and festivals in the area. She has written a series of articles for *Piano Technicians Journal*.

How are we to relate the chosen theme of Healing and Music with the ongoing task of Grand Anatomy 101? We have reached the action stack, where magic happens.

What do people mean by linking healing and music? Usually, they mean that music can assist healing, by affecting our states of mind, and reducing stress. This gives us a counterbalance to the ills and irritations of the world. But if our lives are out of regulation, music could even be an irritant, instead of a source of joy and peace. That is, if we tie music up with ego demands, it is a stress more than a support. And if a piano is out of regulation? Will that produce the same thing, irritation instead of security and assurance? A piano out of kilter nags and disappoints, even if we don't know why. Getting our lives in order and in balance isn't really so different from regulating and voicing a piano ... and both are ongoing processes. If we put in some real effort to get a piano into the sweet spot, then minor ongoing work will usually keep it there. Understanding what a particular instrument is capable of, and not demanding more of it than it can deliver saves a lot of grief and expense. We should do that more with our assessments of ourselves, too. We are who we are, and we can only do what we can do, which is especially true as we get older.

## The Unseen Revealed, Part 2

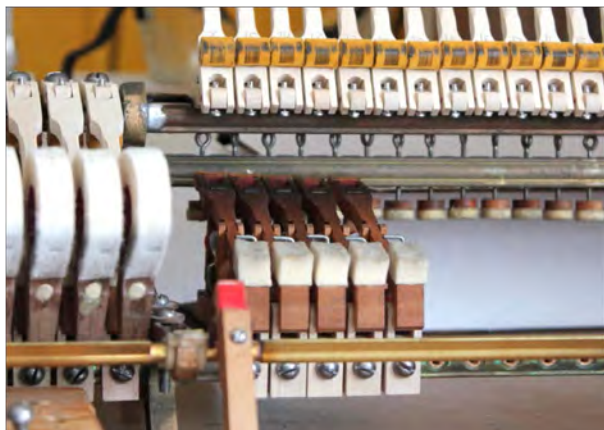


Photo 1



Photo 2

### Photo 1: Steinway stack

An action stack is a collection of rails which are attached to metal brackets. The metal brackets are screwed down onto the keyframe. We saw the location for that in the previous article. The rails are usually made of wood, though Steinway rails are wooden dowels clad in metal, which gives the unique Steinway shape to the flanges. What you are seeing in the photograph is the Steinway sostenuto rail for the middle pedal, which is mounted on the action; then you can see three rails: the hammer rail at the top, the wippen rail with the new parts being installed, and the letoff rail, at the front of the action. Don't worry, all these parts will be explained.

Some Asian pianos like Yama-

has have big aluminum rails, and the parts are held on them by machine screws instead of wood screws. One has to be very careful not to cross thread them!

### Photo 2: Hammer anatomy

The hammer has white or cream felt and usually dark colored underfelt. The curved wooden lower end is called the hammer tail. The lower part of the curve is where the hammer tail is caught by the back check, which we met in the last article. The inside of the hammer tail is coved. This means it has had wood removed to lighten the hammer.

The hammer shank, on which the hammer is glued, is held to the hammer flange by a center pin, with a little red woolen bushing around it. The bushing looks dark in this photo because it has been treated with graphite to reduce friction. The center pin, made of brass or nickel, revolves in the bushing, but is held firm in the wood flange. Notice the shape of the hammer flange in the photo, with little curves like a rosette. This means that it is a Steinway flange, shaped to match the metal clad Steinway rails. No one else uses this shape.

Just below the center pin is a little domed metal screw, which is called the drop screw.

The cylindrical piece covered with leather is called the knuckle. The distance between the knuckle and the center pin is crucial for leverage. A millimeter makes a big difference in how heavy the action feels.



## The Unseen Revealed, Part 2

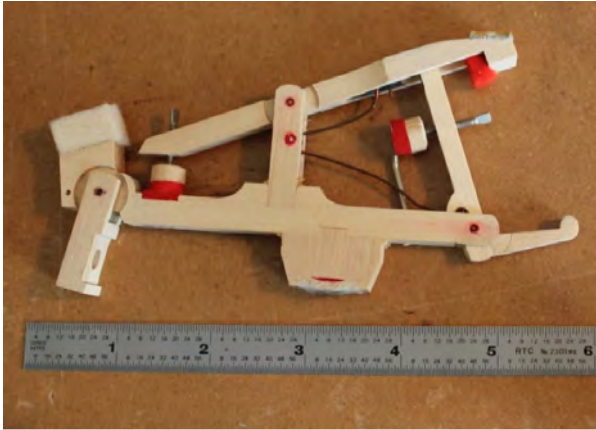


Photo 3

### Photo 3: A grand wippen

The magic of double escapement resides mainly in the wippens. People like to call them “whippens” but I am assured that is not correct.

The slanted upper part is called the repetition lever. It is kept up by the repetition spring underneath it, which is double ended. Notice that one end goes into a slot on the underside of the repetition lever, and the other goes

through a hole in the jack. This style is called a “butterfly spring”. Some brands have other arrangements, but the butterfly spring is quite common.

The jack is that part on the right side, with the right angled shorter piece (“the jack tender”) with a little bulb on the end. The jack is the part which pushes up the hammer knuckle to move the hammer toward the string, and it trips out just before the hammer plays the note. This is so that the hammer is thrown instead of pressed into the string. The jack can trip out because the little round end of the tender contacts the letoff button, as the wippen is pushed upward by the capstan on the key. You can see the row of very old Steinway letoff buttons, dark wood with white action cloth glued to them, in the Steinway stack photo above. This contact can be felt when playing a note slowly. It is the “bump” that pianists talk about. This is escapement. “Letoff” is the distance from the string when the jack escapes. It should be very small, to give more power and control, but if it gets too small the hammer can block on the string. After letoff, the key still has a little distance further down to go. This segment of the stroke is called “aftertouch.”

The flange is on the left side of the photograph. It holds the wippen to its own rail. This screw can only be reached when the action and keys are out of the piano. Notice that the wippen in the photo is not a Steinway wippen, because the flange does not have the Steinway shape.

The large wooden piece under the base of the wippen, with white action cloth under it (and a little red liner) is called the heel, and the cloth is called the cushion. It’s where the capstan (the brass piece mounted on the key) presses. The cloth can get packed hard and is sometimes noisy. The little red liner helps prevent that.

Above the flange is a cube of fluffy white felt (seen in Steinways and some other brands). Other pianos have a long rail with thick and fluffy action cloth on it, usually dark green. This is called the hammer rest rail. The white felt is called the rest felt, but the hammers do not rest on either it or the rest rail. They are designed to float a small distance above it. The felt is there to cushion the hammer shank when it rebounds quickly from

## The Unseen Revealed, Part 2

the string, so it doesn't make a noise, and to keep the hammer from getting so far below its rest position that it could jam.

Some pianos have "bad geometry" so that if the other adjustments work right the shanks are too far above the rest felt at rest. This leads to the possibility that a rebounding hammer could descend too far, and jam on the way back up. Someone named this "catastrophic action failure" which has always struck me as funny. It's not really dire—it's a jammed note. Well, sometimes I guess that could be a catastrophe, even if the hammer will go right back where it belongs as soon as the key comes back up.

You can see the side of a little piece of leather at the front of the repetition lever. This is where the front of the repetition lever meets the drop screw. Let's view the window in the repetition lever from above.

### Photo 4: Repetition lever window

You can see in this photo that spacing in piano actions is not always as meticulous as one might wish. They work anyway, for the most part, though it is pleasing when one can take the time to get them just right.

The green color is from Teflon spray on the tops of the repetition levers and the ends of the jacks. This is recent. Traditionally they would be shiny black from graphite.

When the jack lets off, it will move forward in the window. The piece of red felt at

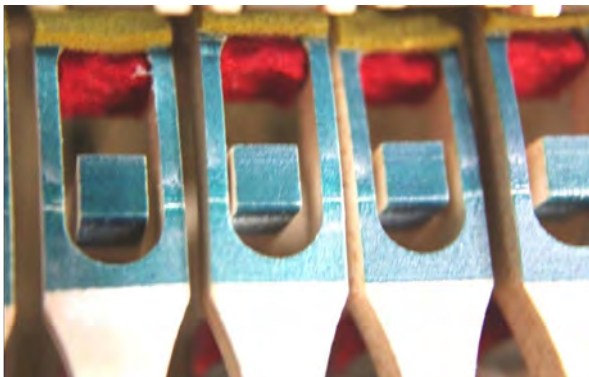


Photo 4

the front end of the window is to keep it quiet and to limit how far it can go. These pieces of felt in the photo are chewed up because they were trimmed. The jacks were jamming into them, due to bad geometry.

### Photo 5: Knuckle alignment

The small lines in the green part of the repetition lever are reference marks for the placement of the jack under the knuckle. The rule is that looking from the side, the back of the jack should line up with the back edge of the dark spline holding the knuckle to the hammer shank. Minor variations are possible. If the jack is too far under the knuckle, the touch can feel kind of clunky. If it isn't far enough the jack



Photo 5

## The Unseen Revealed, Part 2

can sometimes “cheat” on a heavy blow. You play the note heavily and get only a thud, because the jack slides forward without pushing up on the knuckle.

### Adjustments:

The button with red felt on it which goes through the jack decides how far under the knuckle the jack at rest stays. The other similar button going through the back of the repetition lever determines its height. The drop screw is adjusted from the top of the shank, where it has either a very tiny slot (which needs a very small screwdriver) or it has a small spade foot, which another tool can turn. You can get a good look at drop screws in the Steinway stack photograph, and to the left you can see how they are the highest part of the action, ready to scratch the unwary. The letoff is adjusted by turning the letoff buttons up and down, which can be done when the action is in the piano. The letoff buttons live on their own rail, toward the front of the action stack, as seen in the Steinway stack photograph. The wippens in some pianos have a small screw which adjusts the spring tension, but usually this is done by taking the spring out of its slot and bending it open or closed from the central coil. Then one needs to be EXTREMELY sure that the spring is put back into its slot, because it can sit on the wood beside the slot for years, and then slip all the way out, which stops the note dead in its tracks.

### Evaluating grand regulation with the action in the piano:

Press a key slowly. The hammer rises toward the string, but falls back just before touching it. The letoff distance is very small in the treble, but wider in the deep bass, to allow for the “excursion” of the string—how widely the string swings as it vibrates. After letting off, the hammer will drop just a little bit. This is called the “drop”, of course. This is to prevent the still-rising repetition lever from pressing the hammer back into the string during the aftertouch. Then after it drops the hammer sits there pretty close to the string, supported by the repetition lever until the key is released.

But press a key harder and more quickly, holding the key down, and if all goes well the hammer will strike the string, and then rebound. The knuckle will force the repetition lever downward, compressing the spring. The back check, still high because the key is still pressed down, will catch the hammer as it descends, sometimes with a little noise. The hammer will sit there, caught, till the key is released. Then comes the magic of double escapement. When the key is released the compressed spring will expand, which will raise the repetition lever and therefore the hammer (now released from the now-descending back check) and simultaneously the other end of the spring will pull the jack back under the knuckle. This is double-escapement. The hammer is already rising back toward the string to play another note while the jack is being reset by sliding back under the knuckle.

So what can go wrong?

## The Unseen Revealed, Part 2



Photo 6

### Photo 6: Hammer in check

What one wishes is for the hammer to be firmly caught no more than a half inch from the string, as in the “hammer in check” photograph. If it checks too high, which is kind of hard to achieve, the fast loud repetition won’t be loud because the hammer isn’t able to travel far enough for the repeated notes. However, if the check distance is too wide, the hammer will tend to jam and not repeat at all (as in the next photo.) This hammer has wedged itself into the back check while attempting to rise. You can see that the jack is trapped in front of the knuckle.



Photo 7

### Photo 7: A jammed hammer

So, we like a secure hammer check at the right distance from the string. What will prevent it? If the back check is at the wrong angle; if the back check is poorly regulated; if the hammer tail has too flat a curve or is a poor shape; if the spring is extremely strong; if the hammer center pinning is very free; if the shank is too far above the rest

cushion so that a rebound will bring it below its rest level; —all these reasons may give trouble with secure checking, and therefore with fast repetition.

### What else can go wrong?

The center pin friction can be too high, sometimes from verdigris in old Steinway parts, sometimes from nickel-plated center pin failure in modern Asian pianos, especially Korean ones. The parts will be sluggish and sometimes entirely paralyzed.

The center pin friction can be too low, mostly from wear. The hammers feel flyaway and difficult to control, and the noise of the action increases.

## The Unseen Revealed, Part 2

If the repetition lever height is set too low, the jack will not have clearance to get back under the knuckle. If it is set too high, the jack will have too far to go to reach the knuckle. Either will hamper fast repetition, though having the jacks sticking their tongues out is far worse than having them too far under the window edge. It's a nit-picking adjustment. An eighth turn on the adjusting button can fix or destroy the fast repetition.

If the hammer flange friction is extremely low, while the letoff and drop are set extremely narrow, while the aftertouch is very small, and the springs are strong, the hammers often will double-strike because the strong springs and low friction cause the hammers to jump back out of check. Hammer tails worn smooth and worn back check leather can make this worse, but mostly it's from what I would describe as aggressive and ambitious regulation.

If the drop is set monstrously wide, one can feel a sort of thunk in the key as the hammer drops through the whole distance and lands on the repetition lever. Also, the action is slow because of the distance the hammer must travel to get back to the string.

If there is little or no drop and the aftertouch is set very shallow, the hammers are more likely to block just slightly, which gives a sort of brittle "double bump" feeling when the hammer hits the string. Even if double striking and blocking are avoided, a piano set up like this feels sort of tight and nervous. On the other hand, if the letoff and drop are wide and the aftertouch is overly generous, the action feels kind of sloppy.

If the leather on the knuckles gets a glaze where the jack slides along them, slow soft playing will be difficult, and there can be little squealing scraping noises. This can be fixed by rubbing Teflon powder into the knuckles. The wippen cushions, and the key-bushings, can also get a glaze, but not as easily as the knuckles. Even the drop leathers can get a glaze, though it is rare.

The springs are often out of regulation. Ideally, one wishes a hammer to rise after being released from check quickly but not with a nervous jerk. One can feel too strong a spring as a trembling in the key. It's easy for grand springs to be too strong, relatively, because the hammer center pin friction is constantly decreasing as the parts wear.

Finally, the regulation can start out all right, but with time and use the wippen cushions, the letoff buttons, and the knuckles can compress. When the knuckles get very flat, the letoff gets very abrupt and the action feels kind of balky. As the hammers get worn and filed they get lighter and shorter, while at the same time the center pins, especially the hammer flange centers, get too free. Then regulation becomes more difficult because one must adjust for the shorter hammers.

When actions are refurbished with new parts, or when action cloth is replaced, the replaced material will compress with use. The regulation should be tidied up after the new parts have been played in.

And that is probably more than most people want to know about what is inside their grand pianos. But if certain hammers keep hitting the string two or three times, or if there are little squeaky noises when one tries to play softly, maybe it's not such a bad thing to understand why, and how easy it is to fix.

## The Unseen Revealed, Part 2

### Bonus section: "Steinway speak"

Steinway, as the North American industry leader for many years, has a bit of an attitude toward nomenclature. Many technicians will talk about jacks and rep levers and knuckles, though Brits will call knuckles "rollers" and jacks "flies." But a few technicians will call Steinway parts by the company names. The wippens are called "repetitions", though the wippen flanges are still called "wippen support flanges." A jack is a "fly", like the Brits. The repetition lever is called the "balancier." (I love saying that one . . .)

Next time: Plate, strings, pinblock, bridges, agraffes, all that good stuff.



# The Poet Speaks

by Anita Sullivan



## About the Author

Anita Sullivan is a poet, essayist and novelist whose book about the philosophy of piano tuning *The Seventh Dragon: The Riddle of Equal Temperament* won the Western States Book Award for creative nonfiction. Music and the natural world figure strongly in all her writing. Anita has published essays and poems both on and offline, writes regularly for the blog Weekly Hubris ([www.weeklyhubris.com](http://www.weeklyhubris.com)), and has recently published a literary fantasy novel. More information about her books can be found on her website [www.seventhdragon.com](http://www.seventhdragon.com).

## Vintage Imperfection

I'm a piano tuner. Perfection is my game, my daily game—so much so, that I have come to cherish certain imperfections in musical performances with all the ardour of a connoisseur of vintage wines. Let me explain.

A good friend, who is also a piano tuner, has a degree in piano performance. "How do you stand to play a piano that's out of tune?" I asked him about two days after we met. He shrugged. "When I play the piano I'm listening in a different way than when I'm tuning," he said. "So, if it's out of tune, I really don't give a rip."

As a tuner, he's an intonation perfectionist. As a musician, he's not. Like most people, he has a limited capacity for perfection.

Another example: I discovered, years ago in Santa Fe, New Mexico, that the rehearsals of the Santa Fe Chamber Music Festival were fully as satisfying and exciting to me as the performances themselves. For one thing, I got to hear favorite passages played over and over again, to linger on them, to hear them discussed. But more than that—I was able to hear different versions of these passages—some better than others. In a rehearsal by professional musicians, flaws—if you will—are almost welcomed like old friends, back into the music, from which they are so cruelly exiled during final performances. They are like flavors, or spices, which the cook has a weakness for, but isn't allowed to put into a dish fit for the king.

I have a friendly disagreement with another piano tuner about the ideal piano sound. He says there is such a thing, I insist there is not. He is holding out for a Platonic ideal, the One Perfect Sound, which he can hear in his head, distant and sublime, but which he rarely comes close to hearing on a real piano. I am allowing for a different kind of high standard—excellence instead of perfection.

Is it the same with musical performances? Is “flawless” the same as “excellent”? Last year I walked out of an adjudicated performance of piano students in a regional music festival because the kids were playing like mechanical zombies. Not that they weren't making mistakes, yes, they were. But they played as if their goal was to hurry through as quickly as possible before the mistake-vultures, which were hunched impatiently on the music rack, took the notion to spread their wings and attack. If you put your mind on automatic pilot, you might get through one performance, playing all the notes precisely as written, without waking up those awful birds. And what higher goal could there be than that—a mistake-free performance? My throat went dry at the prospect of receiving so much perfection, and I hurried away.

Beethoven is reputed to have complained, upon receiving one of the many brand new pianos he was always trying out, that on this latest one he didn't have a chance any more to make his “own kind of Sound,” because it was perfect already.

If we had our choice, would we eradicate the individual, the idiosyncratic, all-too-human musicians and hear our music performed by angels—not by machines—but by angels, who would, indeed, give us music most perfect and sublime?

Probably such music would be worth keeping around as an alternate choice, and I would certainly push the angel button from time to time if I had the option.



However, I find that my capacity for perfection is limited, as is my capacity to tolerate sloppy, wimpy, or sterile performances. My own idea of excellence, of beauty even, in musical performance seems to allow for a little purgatory of forgiveness, on the down side of the ideal. And here, inside this margin, this little-tempered no-man's land between heaven and earth, stalks *attitude*, human passion with its imprecise, its mawkish energy. Here do our musical souls move, grow, and stay alive.

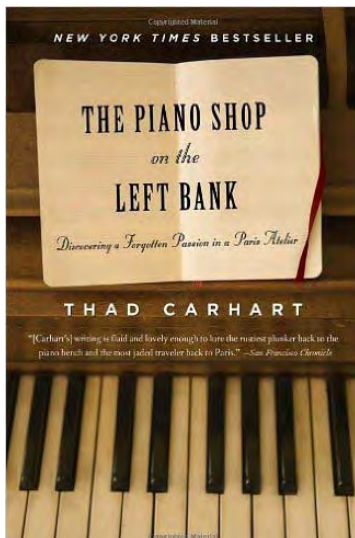
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# Baxter's Bookshelf



*The Family Piano: Essays from "Performance Today"* by Anita Sullivan is a collection of essays that was broadcast on NPR between 1989–1998. The book is moving, informative, funny, engaging and inviting. Anita was invited to write some pieces about piano tuning, which first struck her as a limited topic, but these 40 essays will indeed demonstrate that in the hands of a creative person it is anything but limited! You will enjoy this collection.



*The Piano Shop on the Left Bank: Discovering a Forgotten Passion in a Paris Atelier* by Thad Carhart is a beautiful memoir. Published by Random House in New York, 2001, this is a wonderfully written book about pianos, what they mean to us, and the people who love them. I agree with these brief, excellent endorsements by various newspapers. The *San Francisco Chronicle* published: [Carhart's] "writing is fluid and lovely enough to lure the rustiest plunker back to the piano bench and the most jaded traveler back to Paris." The *New York Times* wrote "Captivating . . . [Carhart] joins the tiny company of foreigners who have written of the French as verbs . . . What he tries to capture is not the sight of them, but what they see." And *The Washington Post* says "Thoroughly engaging . . . In part it is a book about that most unpredictable and pleasurable of human experiences, serendipity . . . The book is also about something more difficult to pin down, friendship and community." *The Washington Post* named it one of the Best Books of the Year.