

Practicing – Dr. Hans Sturm

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A Few Opening Remarks

There are numerous books, articles and web sites devoted to musicians and practicing - so much advice, some of it conflicting.

The 5 Elements and the 3 I's

My high school band director used to say:

Practice makes permanent. Perfect practice makes perfect.

A perfect axiom, but of course this begs the question - just what is 'perfect practice'?

Perfect practice is not the same for everyone. There is no single formula that will guarantee a perfect performance - in fact it could be argued that there is no such thing as a perfect performance, only a performance that perfectly reflects the performer's inspired interpretive intention (the three I's). Accepting this perspective, then perfect practice must help the performer master each step along the way to creating and refining their personal interpretation for success in a live performance setting while avoiding the pitfalls and distractions common to the bulldozer method of practice.

The bulldozer method of practicing is the least efficient. Starting in the upper left hand corner of the piece, a student reads down the page until a mistake is made. The offending measure is repeated a few times until the mistake is considered 'fixed' and then the student goes back to the beginning again and plays a bit further until another mistake is made, 'fixed' and the process is repeated until the student can make their way through the entire work without making a glaring mistake. In addition to being incredibly inefficient -

the beginning of the piece is repeated dozens of times - more dangerously, the student is also practicing stopping each time a mistake is made.

To create a tailored perfect practice regime, I believe that it is important to begin by considering the five basic elements involved in creating music first. Each element contributes to making each moment of a live performance successful and all of the elements overlap and intertwine.

1. Senses - we experience the world through our five senses. The act of performing music primarily engages three - hearing, touching, and seeing. Since performing music is a multi-sensory activity, it engages the brain on many simultaneous levels.

2. Memory - whether or not you perform with the music in front of you, memory plays a significant role in everything you do both in preparation for performance and in each performing moment. The human memory is like the most advanced recording device imaginable, it recalls and links all of our sensory data together, continuously. This is done at both conscious and subconscious levels. Consequently we have memories stored that we are not even aware of and cannot access unless something triggers them into our consciousness.

3. Emotions - the name we give to our powerful, intangible, internal feelings. The ability to communicate or evoke feelings in others is a fundamental attribute of any great work of art. Music is an intangible art with a profound potential to engage our emotions, subjective though the response to any given performance may be. Music is heard, not capable of being seen or touched. And, like all performance arts, music is also temporal, existing only in the present moment. Music communicates like a transcendent language, whose meaning is beyond words, linked to emotions.

For more in-depth thoughts on the relationship between emotion and music, see Leonard Meyer's illuminating book Emotion and Meaning In Music (University of Chicago Press, 1961)

4. Imagination - each person is unique and has the ability to form images in their minds of things that they have never seen, heard, or directly experienced. This includes discoveries of an innovative solution to a problem, or a wholly new invention.

5. Experience - the combination of all we have done, felt, thought, and remembered. Experience is the sum total of what a musician brings to a performance - our technical abilities, musical vocabulary, imagination, knowledge, passion, commitment and intention.

Upon reflection, it is easy to see that the relationships between these five elements are complex and interconnected at very deep levels. Since each person is unique and has had different life and musical experiences, a 'perfect practice' regime is one that is specifically tailored and reflects the needs of the individual. However, given an understanding of the five elements, several basic strategies can be employed to enhance practice for performance.

Learning A New Piece

Most students, upon being given a new piece, dive right into sight-reading the work without much preparation or forethought. This is a bad idea for many reasons (unless the idea is to practice sight-reading). The principle issue is that your memory is always recording and, as you are more likely to make mistakes in the first reading, the mistakes you make will become associated strongly with the crucial first impression of the work. These early mistakes are often easily avoided with a little preparation, but now need to be unlearned. Because we use several senses simultaneously in music making, the memory of the first impression of the piece is very deep and often will rise to the surface when playing under stress even after all of the mistakes have been corrected later.

Fortunately there are ways to help avoid sending a faulty impression of a new piece into our memory. Here is one step-by-step strategy. Each step must be completed at least once, but the process is much more effective if you repeat each step a few times before moving to the next step.

1. Listen to a good recording or two of the piece.

Ask your teacher if you need help finding one. Go to a quiet place with no distractions, close your eyes, and listen intently. The purpose is to internalize the piece. As you become more familiar with the work, try singing along with the recording.

2. Listen the piece with the music in hand.

Hear how the performer approaches the piece while reading the score. Begin to visualize yourself playing the work and consider some of the technical issues idiomatic to your instrument or voice (fingerings, bowings, breathing, etc.)

3. Review the piece without listening.

Look at the music, sing it internally and imagine the technical physical requirements. Begin to pencil in markings to help assist you. Note the places and solutions where the technical demands require attention.

4. Now you are ready to begin playing the piece!

You have a clear template of how the piece goes in your mind so you will likely not perform a rhythm incorrectly and you will notice immediately if you play a wrong note.

Practicing for Performance

Practice sessions have different purposes. For instance, a practice session may be devoted to a specific technical issue that needs refining, working to improve sight-reading or develop ear-training skills. Practicing for performance however, requires using the five elements in such a manner that one can reach the level of the three I's - inspired interpretive intention.

As mentioned earlier, one of the most significant issues inexperienced musicians have is stopping every time a mistake is made during a practice session. The habit of stopping in this manner will carry over into a performance. A performer will experience the sensation of wanting to stop and start over if a mistake is made in public, a mistake that might well

appear as the result of having created an incorrect first impression of the piece in early readings. To avoid these pitfalls and enjoy a more seamless performance, a musician needs to prepare the piece from the outset with care and then make each moment in practice a mini performance - always performing the work with a performance mentality, whether it is only two beats or four movements.

Frames

The central process to practice for performance is to use frames. Choose a frame size, a predetermined starting and ending place, and do not stop playing until you have completed the frame. Once you have completed the frame, then reflect on what you just played. How successful was the performance of that frame, was there an issue within the frame that needs work, if so, then the frame can be resized to focus on that particular issue. If one note is in tune and the next is out of tune, then the ideal working frame would be only two notes long to refine the interval in question. As the piece develops, frames can be phrases, movements, or eventually the entire work. The key is not to stop - to complete the task.

The strength of frames is the ability to create a performance of any size portion of the piece without distraction. One of the most efficient uses of frames is to choose a particular issue to focus on within a frame. By choosing to isolate a limited section of the piece and then focus on only one attribute, a musician can hone in and refine issues in great detail, all the while practicing performing.

One of the core issues for performers, and the main reason for stopping in mid-performance, is the ongoing internal dialog that goes through a performer's mind during a performance. For most performers their internal judge is very critical, at the very least a distracting nuisance and in some cases capable of sabotaging a performance. (For more on judges, see Eloise Ristad's wonderful book [A Soprano On Her Head](#)). Practicing using frames can help to quiet the internal judge over time. The idea is to give your internal judge a positive and specific task. The judge inside each of us must be given something to judge, after all as musicians we are supposed to make critical decisions regarding our interpretations and critical usually means negative. However, it is possible to assign your judge a positive role that will work to help strengthen your performance, a process that requires patience and practice. Ask your judge be a silent observer during the performance of a frame. After you have completed the frame, ask your judge share a specific observation to help the level of performance improve. This gives the judge a positive role and helps to limit unproductive negative opinion. You are slowly changing the internal dialog to work for you rather than against you. One shortcut that works well for starting this process is to choose a relatively short frame that you can repeat quickly without much thought, one or two measures at most, focusing on a single performance element. Have your judge rate the performance on a scale from 1 to 5 without allowing time for further reflection before repeating the frame again. Over time your judge will evolve into a role more like a working partner and you will find that you will begin to have more control over the internal dialog. This is not to say that the overtly negative voice of the judge won't ever return to haunt you, but you will have begun to engage the voice and it's power to disturb your focus will be diminished.

Practice Tools

I had an elementary teacher once tell us, "Even if you're building a chicken coop, you need a plan." As silly as it sounds, practicing for performance is not so different from building a chicken coop. You have a certain series of tasks that have to be completed in a particular order to complete your creation successfully. You have to decide on a design, taking into account the purpose of the creation and your current level of skill (acknowledging that your skills will improve through the process of creation). You need to identify the materials and tools you need. And once you have gathered all this information, then you need to map all the steps in a logical order and then allocate time for each task. In short, you need to prepare.

A practice log is a very effective tool for organizing your practice time. The degree of detail you choose to use in creating a log will be determined in part by your temperament, how organized you are, and the kinds of things you wish to keep track of. A basic log will contain a daily list of the material practiced and the amount of time that was spent on each task. Many teachers ask students to keep such a log in tandem with a practice schedule. Simply by keeping track of what you have worked on and by holding to regularly scheduled starting times and lengths of time, a practice routine becomes established. A glance at this kind of record can help you see established patterns in your work and serve as a guide to balance the time you have more efficiently.

A practice log is made more effective if you take the time to establish and note specific goals prior to each session, creating a daily stepwise blueprint. The more specific you are in identifying your goals for each session (for instance, work with the metronome to get bars 12-14 in the second movement to mm=120), the more tangible the evidence will be that you are making progress and you can begin to track your progress in a much more engaged fashion.

Since the hugely popular Sony Walkman cassette recorders arrived on the marketplace in 1980, technology for recording music at a reasonable quality has been cheap and readily available. Now most musicians own a laptop or even a cell phone that has the ability to record audio and video at decent sonic resolutions. Listening to yourself for the first time on a recording can be a very 'ear-opening' experience. Many musicians are reluctant to listen to recordings of themselves, but this experience is our real mirror to hear if we actually sound the way we believe we sound. Once you get past the initial shock and quiet the judge enough to listen closely with a minimum of negative criticism, a recording can help to inspire positive changes in the way you approach a piece. Videotaping yourself is also very effective for seeing how you appear to the public and noticing any physical issues that you might not otherwise be aware of.

The reasons for keeping a record of your practicing and taping yourself are ultimately to engage in a practice routine, one that enables three-stage cycle of creation, reflection, and refinement.

Disassociation

Disassociation is the term that François Rabbath, the legendary international artist-teacher of double bass, aptly uses to describe the technique of isolating elements in a practice session. For instance, if you are having trouble executing a series of pitches while working on a passage, by stripping out the rhythm from the passage you can apply a variety of different rhythms to the sequence of pitches. The application of different rhythms and tempi will give you greater insight into the motion of moving from pitch to pitch and ultimately greater understanding and control. The most frequently used pattern is the dotted eighth - sixteenth note rhythm and its inversion. By practicing a passage with both patterns, each pitch is performed both as a sixteenth (fast) and as a dotted eighth (slow). A hesitation in the performance of a passage will show exactly where the problem area lies, between which specific notes.

The great violin pedagogue Ivan Galamian uses this technique very effectively as the core concept in his highly influential method, *Contemporary Violin Technique*. One portion of Galamian's method is divided in two sections, bowing and rhythm patterns. Each section is organized by number of rhythmic attacks or pitches. For instance, you may wish to focus on a frame with four pitches. The rhythm pattern section will give you a great variety of rhythmic variations with four attacks you can apply to the passage. The bowing section can then be used to further modify the passage by choosing from the variety of articulation and phrasing patterns. Of course, you do not need to use Galamian's method to practice disassociation, you can invent your own rhythmic and articulation patterns.

Inventory

Inventory is a complimentary practice technique to disassociation. While disassociation applies a variety of rhythms and articulations to a sequence of pitches, the inventory technique reorders the series of pitches to uncover the meaning behind the sequence. Pitches may be added to the inventory to help fill out the analysis. The central meaning of the passage can then be described as scalar (diatonic, modal, etc.), chordal (arpeggios), a combination or pan-tonal (chromatic). Once the analysis is complete, then the pitches of the passage can be reordered in a variety of ways to help familiarize and establish the inventory and expose issues related to range and intonation. Rhythmic and articulation patterns can be then applied to these new sequences of pitches derived from the inventory. For an even deeper exploration, the entire inventory can be transposed to different key centers and registers.

Improvisation

Disassociation and inventory allow you to use your imagination to create miniature variations of the musical score. Varying the elements of a score helps reveal a deeper understanding of how the music is constructed, helps to address core issues of executing a passage, and is ultimately a kind of improvisation. The techniques of reordering pitches and playing with different rhythms and articulations are the tools of an improviser. As you become more aware of the components that the composer used to construct the piece and begin to manipulate them, you will become more aware of the choices that the composer made and how these decisions might inform your interpretation. And, perhaps most importantly, improvisatory practice is playful. Mistakes can take on new meaning,

and as the jazz pianist Ben Sidran is fond of noting, "There are no mistakes in improvisation, only new opportunities." The experience of being playing with the elements of music, like toys, can be very freeing and inspiring.

Traditional Practice Techniques - Long Hours

Two of the most often repeated practice tips are: practice long and practice slowly. In the 2008 book Outliers: The Story of Success, Malcolm Gladwell studied common factors among people who have achieved a high level of success in a variety of fields. He cites what he calls the "10,000-hour rule." Gladwell contends that to succeed in any field of endeavor that you need to practice that specific task for a total of 10,000 hours. This has been broadly interpreted in mean that if you engage in an activity daily for 10 years, that you will become an expert. This breaks down to about 3 hours a day, every day, for 10 years.

But is practicing long hours going to make you successful? Are there strategies for more efficient practicing methods? There have been numerous studies done on the subject dating from the mid-1990s and more than a dozen recent texts. Some of the more interesting texts include:

The Musician's Way: A Guide to Practice, Performance, and Wellness (Klickstein, 2009; see also the rich resources on the companion site: musiciansway.com)

Psychology for Musicians: Understanding and Acquiring the Skills (Lehmann, Sloboda & Woody, 2007)

Musical Excellence: Strategies and Techniques to Enhance Performance (Williamon, 2004)

The Science and Psychology of Music Performance: Creative Strategies for Teaching and Learning (Parncutt & McPherson, 2002)

As one would expect, the summary of opinion is that success depends not just on putting in the number of hours, but utilizing strategies that make the most of the time you have. Intensive practice sessions should only as long as you can maintain a clear focus - mindful practicing. Once mind ceases to be engaged, then you are no longer focused on the task at hand and as a result progress comes to a standstill. Studies on attention spans (1976; Johnstone, Percival) have shown that for most adults a span of fifteen to twenty minutes is the maximum attention span for a single task.

However, this doesn't mean that a practice session couldn't last for a long period of time, but rather that you need to practice varied tasks so you avoid becoming mentally stagnant. Using a practice log to plan a variety of activities helps to refresh the mind and keeps you engaged so that you gain the maximum benefit from your time. Once you begin to feel your mind drift or lose focus, then it is time to consider consulting your list and changing to a new task.

Traditional Practice Techniques - Slow Practice

Perhaps the most common advice heard by music students around the world is to 'practice slowly.' The primary benefits include being able to get through difficult passages at a

consistent tempo and to have plenty of time to think clearly and prepare for each note. The advice often then follows that you should speed up the tempo of your practice incrementally using a metronome, not moving the tempo faster until you can play each passage precisely and easily. Taken at face value, this is excellent advice and makes perfect sense. Many students often rush through difficult passages and have not taken the time to familiarize themselves with the details of the movements involved. Furthermore, using slow practice helps to bring musical events deeper into the long-term memory.

There are, however, some caveats to using slow practice. In psychology the term 'chunking' refers to a way of making short-term memory more efficient by grouping events together. In other words, it is more efficient to remember fewer complex structures high information content items, than many more low information content items. For instance, it is easier to memorize the text of a poem by recalling the meaning of the poem, than by trying to memorize the sequence of the letters of each word.

To perform music we have to master control of several different senses at the same time. To physically perform a passage often requires a simultaneous group of movements to take place - breathing, fingering, and the like. When we slow down our practice at the outset of learning a fast complex passage we are not able to chunk the musical material and instead are learning the piece letter-by-letter. This will inhibit progressively faster practice with the metronome. Portions of a fast passage need to be linked together into a high content group for a more efficient meaning to be understood. Once a connection to a complex passage has been made at a fluid or natural tempo, then the passage can be slowed down to make refinements.

Furthermore, when practicing slowly there are two important musical attributes that need to be considered - how the physical motions will change as the tempo increases and engaging with the emotional content. Take, for example, learning a fast passage that requires an off-the-string stroke for a violinist. As a matter of physics, the bow will not bounce off the string at a slower tempo. Consequently, while practicing with a slow tempo will help the violinist's fingers of the left hand arrive in their correct places (although also slow the chunking process), slow practice will not pair the bow stroke with the movement of the fingers. For this to be successful the violinist must be mindful of the desired final result, taking into consideration the physical changes that will take place as the tempo increases and the correct motion of the bow is used. Secondly, practicing slowly changes the interpretive meaning of the piece. Again, the desired result needs to be taken into consideration so that the emotional impact is not lost or distorted from slow practice.

Teflon and Velcro

Two of the greatest inventions of the 20th Century are among my favorite practice analogies. You know the feeling when you are working on a passage or technique and seem to have it almost within your grasp, and then it slips away. It's like Teflon, the magical slick non-stick coating used on pots and pans since the 1960s. Or you finally believe you finally have a passage completely under your control and then the next day it's slipped away, like grasping at clouds. This frustrating feeling is common to any

musician who has had to work to master a new, unfamiliar technique. However when a passage or technique finally sticks and you are in complete control, free to shape it in any nuanced way you desire, then you have arrived at Velcro, the instant fastener - simply push the two sides together and it sticks - easily, perfectly, every time.

To achieve the Velcro feeling for an entire piece is the goal to which we all aspire. Walking onto a stage knowing you have all of the elements under at your command elicits a tremendous feeling of confidence. Knowing you have exceeded every technical challenge in the work, that you have control over your musical intentions for every passage, and that you have a great desire to share your interpretation with an audience is empowering. Having been fully engaged in the creation, reflection and refinement cycle and focused with great attention to each detail enables you to share exactly what you wish to say to an audience. In this state of mind fear and worry recede and the act of performing becomes more about your role as a master storyteller, sharing your unique version of a sonic tale, either familiar or new. The audience is rooting for you; they want you to succeed, they want to enjoy what they hear. If you convey confidence, then they will accept your story more readily, even forgiving mistakes.

Building an Interpretation

Learning a work well enough to complete a performance without making any major mistakes is a worthy accomplishment. Creating a compelling performance that will connect and excite your audience, building an inspired interpretation, this is the essence of live music making.

To build an interpretation you need to have intention, commitment. You must learn the piece thoroughly; master the technical challenges, have a conception of how you want each phrase should be shaped, and understand how each phrase relates to the structure and overall design of the work. Although you know the piece intimately, you must find a way to perform it in a fresh manner. Although it may be a familiar work, the audience needs to experience the piece in your way. You are the audience's guide - it is your role to show us the beauty hidden within the work, to communicate its meaning. Each phrase must seem as if its presence and shape was inevitable - the piece could go no other way. Since each musician is an individual, each musician will have a unique perspective. You must commit yourself to developing a way to share what you believe are the composer's wishes with your voice. Building an interpretation requires being fully engaged in the reflection and refinement cycle. Use available recording technology to find if your intentions are clear to an audience. Get feedback from colleagues. Perform the work in different settings, in different rooms with different acoustics. Once you have focused on your interpretation in such great detail, then you will feel that Velcro connection to the piece. With the confidence that such preparation instills and the adrenaline that the presence of the public provides, you will have the possibility to reach an inspired interpretation. You will have connected with your audience. You will have had a success no matter how expert your musical level.

Imagination

When we think of practicing more often than not we think of ourselves in a small room toiling the hours away with our instrument, metronome, and practice log. One of our most effective tools to help us practice is our imagination:

To create or deepen an interpretation

To find solutions to technical challenges without the instrument in our hands

To experience the performance before we walk out on stage

To make believe we are the greatest artist or that we are playing for our friends at home

To visualize success

To picture scenes or stories to inspire music making

Since the imagination is so vital to our art, it must be fed by experiences. Getting out of the practice room and experiencing art that inspires in its myriad of forms helps to feed your creative spirit and stimulate your imagination to inspire new ideas. Go to a play, visit a museum, see a concert and then write on how your observations might inspire your work. (For more on this technique, read [The Artist's Way](#), 2009, Cameron).

A Few Final Words

There is a notion that we should progress from piece to piece of ever increasing difficulty, a sense that we are only as good as the difficulty of the piece we are currently working on. This is the attraction of virtuosity - the more technical the piece, the more exciting it will be for you and the audience. Ultimately though, while fireworks are impressive, people tend to relate more closely to compelling stories, stories that resonate with their life experiences. You do not need to master the next challenging virtuosic work on your list to measure your progress, you can easily see how much you've grown by revisiting a piece you played sometime ago. The ease with which you now approach the previously difficult passages will reassure you that you are growing.

We live in the present - or as the great jazz saxophonist James Moody is fond of calling it, "God's gift." In this way, music is much like life, it is temporal. We hear music only in the present, while at the same time we are aware of the past and anticipate what is to come. To perform successfully we must prepare for each moment and then when that moment comes give all that we can to

Links

Dozens of websites devoted to music and inspiration exist. Here are a few to get you started.

<http://www.howtopractice.com/>

<http://musiciansway.com>

<http://www.musicalperspectives.com/Site/Research.html>

<http://www.theartistsway.com/>

<http://www.innergameofmusic.com/>

<http://ifeelunmotivated.com/>