

Practicing



FOUR PUZZLERS FOR FOUR CONCEPTS

by Susanna Klein

Learning how to play in tune can seem like the neverending quest for the Holy Grail. The work in the practice room that accompanies that quest can be tedious and grueling. No wonder that intonation can be a thorny skill to teach students. To point out their flaws is often simple, but to change their habits is not. Encouraging students to practice with a tuner, although of great benefit, is often not enough to effect a permanent change. If we convince our students to embark on a more fun and stimulating approach to intonation, their pitch can improve by leaps and bounds. But first, some fundamental pillars of good intonation have to be understood, and the underlying causes of intonation problems have to be identified.

Students play out of tune for a variety of different reasons. How can we help them as teachers? We can encourage students to be meticulous in the process of intonation work and to be aware of the influences on intonation. But what exactly are those influences? When teaching, I concentrate on four foundational concepts for playing in tune. These four concepts are mental imaging, proprioception, listening, and ease.

Mental imaging is an excellent intellectual understanding of the geography of the notes and the distance between the fingers. Robert Gerle, in his highly regarded *The Art of Practicing the Violin*, explains the mental fingerboard map in great detail. He calls our imagery the “gridiron” of the fingerboard. “On such a fingerboard” he writes, “every note has its own permanent and pre-arranged slot, giving the player a mental guidance system in which not only the target of the fingers, but also the relative distances and relationships between the fingers can be instantly and positively identified and visualized (Gerle, p. 26).



Leigh Lancaon, a sophomore at Virginia Commonwealth University, tries out puzzler no. 2, "All Fingers on Deck".

In other words, in order for the brain to send the correct signals to the fingers, students must be able to imagine the distance between the fingers and the locations of positions. Occasionally, a non-musician will ask me how do I know where the notes are without frets. My standard quip is: "The fiddle doesn't need frets, the frets are in my head!" Proprioception¹ is a fancy word for having a sense of our hands in space. It describes the internal sensation of motion, finger pressure, hand shape, and speed of movement.² At the simplest level, it is that which allows babies to know how to touch their nose. At the most complex level, it allows the great gymnast Gabby Douglas to stick a landing on the balance beam. It also is one of the first elements to suffer with the onset of performance anxiety and extra adrenalin. As string players, our proprioception is highly developed. For us, proprioception includes much information from larger muscle groups that contribute to things like the feeling of balance of the body and weight and speed of the bow. But our spatial realm for proprioception also is, at times, very small—the distance of a half-step shift, the angle of a finger, or the speed of a trill. Trust in our proprioception as a string player is paramount.

Listening, at a primary level, includes the concept of auditory imagery or hearing with "the mind's ear." That is to say, we must be able to hear the pitch before we play it. From a practical standpoint, it also encompasses the essential skill of matching our inner hearing to what we are actually playing. We need to know how high or low to place a note in relation to the previous note. We also need to know what key we are in and the other instruments we are playing with. Reference pitches of any kind (Cello Drones,³ open strings, piano, etc.) are an important tool in improving pitch perception. Excellent listening is both a talent and a development, nurtured and refined over time with due diligence. Much of the refinement in my own sense of pitch came to me when I was studying with the late, great Roman Totenberg. He would spend many lessons at the piano holding three-note chords with the sustaining pedal, while I played violin. He would turn his head and say, "Can you hear that?"

Ease in the left hand equates to freedom from tension and extraneous work. It comes about through a proper and relaxed technical set up and awareness of how the technique of playing affects intonation. A great left-hand shape is instilled in the early years, but is consistently tweaked by a perceptive teacher as students develop. Cornerstones of good left-hand technique include aspects like proximity of the fingers to the fingerboard, natural angles of the finger joints in relation to the fingerboard, and a well placed, relaxed left elbow. A student may have a nice set up, but may still play out of tune (especially in performance) because of tension. It is essential that a student have a degree of relaxation and flexibility in the left hand that allows for the microadjustments that must be made during playing. Relaxing the hand is key—particularly paying attention to the left thumb and unused fingers (the fingers that are not striking the fingerboard). Elisabeth Adkins, associate concertmaster of the National Symphony and a wonderful pedagogue, explains that tension is often a "cumulative," not an isolated, problem. Put simply, one can handle a certain amount of tension in a piece, and no more. For this reason, releasing tension is not only important for the most difficult spots in a piece, but also for the less challenging parts as well.

Puzzlers: A Process for the Four Components:

How do we help students work on the four components? By pointing them in the right direction for their work at home. These exercises, or "puzzlers," that follow, are meant to both diagnose a fundamental issue and supply an effective practice tool. I call them puzzlers because they help students look at notes in a different way, just as crossword clues ask you to look at language in an indirect or nonliteral way. Puzzlers break up the monotony of intonation work; a non-linear approach increases pitch awareness in a fun way.

In all of the exercises, one or more variables is eliminated for the purpose of isolating and perfecting just one element. This is much the same sort of process that students use when practicing just open strings to perfect string crossings before adding the left hand. The puzzlers are focused on excerpts from the *Gavotte en Rondeau* from J.S. Bach's Partita in E Major, BWV 1006.⁵ I have chosen the Partita because of some of its intonation challenges: arpeggio patterns, many uncomfortable accidentals, and a thorny key for violinists.

After practicing one of the puzzler versions a few times, it is important to go back to the original version, first slowly, and then with greater speed and within a larger context.



A great set up and a feeling of ease in the left hand are essential for great intonation.

Puzzler 1 for Mental Imaging:

“One String Magic”

Directions:

For intervals that go across the strings (whether shifting or not), play all the fingerings exactly as written, but only on one string. That is to say, transpose some of the notes up or down a fifth so that all stopped notes are arranged on one string. Pick the string that dominates the measure, or, all things being equal, the lower of the strings.

For example, this passage, starting in m. 11



would become this in practice:



These bars, beginning at m.56



become in practice the following:



Finger pattern awareness tends to get hazy as string crossings, high registers, or double stops come into play. Recognizing our finger pattern even as we cross strings is crucial, and this is the focus of the the exercise.

Puzzler 2 for Proprioception:

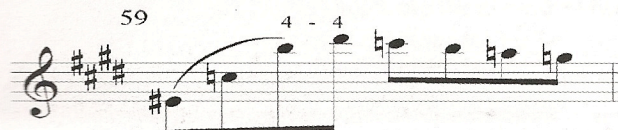
“All Fingers on Deck”

Puzzler 2 focuses on shifting, which is worthy of an entire article (or book) itself! The exercise comes from Elisabeth Adkins, who, in turn, inherited it from her teacher, the renowned violinist Oscar Shumsky.

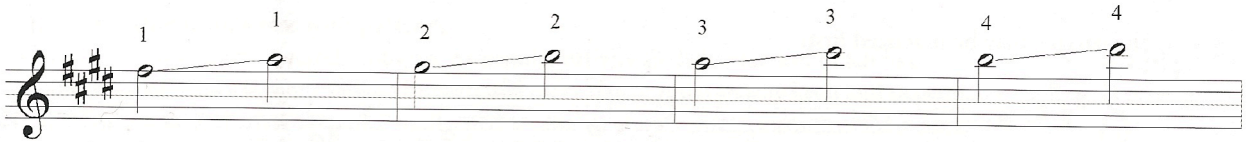
Directions:

To give a student a better feeling for position and travel, ask them to practice any troublesome shift on all four fingers of the hand.

So, the problematic shift between B and D in the following bar:



can be practiced on all fingers:



Practicing shifts on all fingers builds confidence and proper hand alignment. The notes after the shift are consequently more in tune. The new position and the travel to that position each have a proprioceptive sensation. Lower fingers are usually more stable than higher ones, so students may want to spend some extra time practicing their first finger to first finger shifts. When practicing “all fingers on deck,” try to keep pitches in the original key. There are exceptions to this rule. In the above, for example, a third finger C natural follows the D. Hence, one could practice an a to c# shift instead.

Putting their purposeful work back into original context of the original of the music is the key to these puzzlers. From here, students can add several measures together, and finally, play entire phrases.

Puzzler 3 for Listening:

“*When In Doubt,
Leave It Out*”

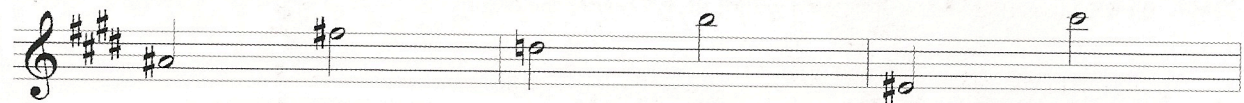
Directions:

In a slow tempo, begin by outlining the harmonic progression of a passage. Play only select pitches based on the chord changes. If the student’s understanding of harmony is limited, ask them to start by only playing two pulses of the measure.

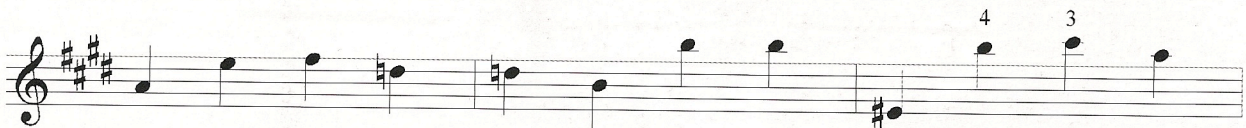
Measure 57, in its original form:



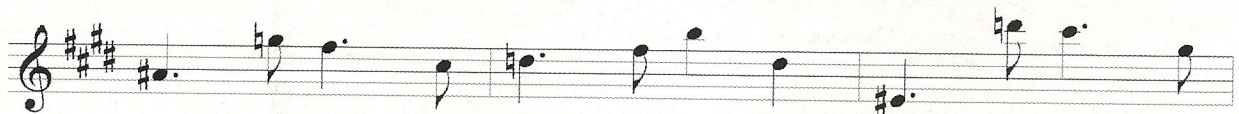
in slow practice becomes:



Next, the student can work on quarter note pulses of the bar.



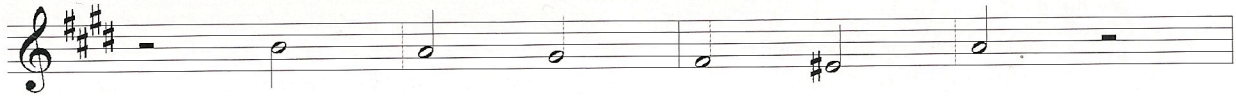
Next, practice this way:



Taking apart another sequence, let’s look at what can be done with bar 60:



The passage may be practiced first:



then:



and finally:



Remember to have your student return to the original passage in order to set the acquired skill into the hands and look for improvements.

Hearing and practicing music structurally rather than sequentially can be an effective tool to make students differentiate pitch on a more refined level. This exercise also compels students to know the exact location of the notes (which are more or less fixed, after all!). To hear pitches in a different order or context (without passing tones, for example) can be a powerful experience for a student struggling with intonation. Leaving out notes in a particular pattern means that those left standing are heard better, much like closing your eyes makes the other senses stronger.

Puzzler 4 for Ease:

“Pedal Tones”

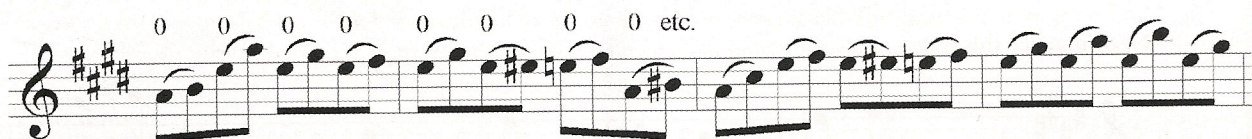
Directions:

Before each stopped note, play an open string. For each stopped note, you should strike and relax, rather than pressing the finger unnecessarily into the fingerboard. Try playing measure 51 first as written, then insert open strings. Make sure to use all your fingerings that will be used within the context of the original.

The following passage, starting in m. 51:



may be practiced with open strings in between the stopped notes, in a slur two pattern:



Using open string pedal tones can release tension and have the student understand what a flexible, relaxed hand feels like. This exercise decreases squeezing of the fingers and thumb while promoting good finger action. In addition, the puzzler reinforces finger pattern awareness and the concept of fingerboard mapping. Each note has a basic location on the fingerboard, and your proprioceptors will tell you where. This exercise should be tailored to the individual student: if a student lets his fingers fly off in random directions, then he should be reminded to keep fingers within a certain distance to the fingerboard during the open string (how close varies from teacher to teacher). If she holds fingers in tense and contorted shape, she should be told to “release completely” during the open string.

After a couple rounds of the altered version, have your student go back to the original, while aiming for the same light feeling in the left hand.

Puzzlers: Intonation work with patience

Working on intonation demands both patience and creativity in daily practice, much like working on a crossword puzzle. A good ear is like a muscle that needs to be exercised every day in order to stay keen and dependable. And for muscle memory in the fingers, the old adage "practice makes permanent" is at once an opportunity and a curse. The fact is that most students who play out of tune have practiced out of tune. They practice out of tune because they cannot hear or feel the correct way, but also because good intonation work takes patience. The puzzlers also are help with that aspect: isolating issues and enjoying the process, not one or the other. The goal of these puzzlers is to have a checking mechanism for the four components of intonation: mental imaging, proprioception, listening, and ease. If done correctly, these puzzlers can lead to new revelations in the practice room. There are many more "puzzlers" out there, a variety of creative ways to challenge our ears and our brain. Encourage your students to try these puzzlers and to come up with some of their own in order to make new discoveries. Thinking outside the box when it comes to intonation makes practicing more fun, efficient, and in tune.

References:

- ¹ Mirriam Webster defines proprioceptions as "perception of stimuli relating to position, posture, equilibrium, or internal condition. Receptors (nerve endings) in skeletal muscles and on tendons provide constant information on limb position and muscle action for coordination of limb movements." The term proprioception, or body sense, is a medical term that has worked its way into athletics and fine motor pursuits. Rather than deriving from the five senses, proprioception depends on the receptors within the muscles, tendons, and joints.
- ² "Proprioception", Mirriam-Webster.com. Mirriam-Webster, 2012. Web. 18. September, 2012.
- ³ Cello Drones for Tuning and Improvisation can be found at itunes.apple.com.
- ⁴ Gerle, Robert. *The Art of Practicing the Violin: With Useful Hints for all String Players*. New York: Schirmer, 1983.
- ⁵ Bach, J.S. *Three Sonatas and three Partitas for Solo Violin, BWV 1001 -1006*. Kassel: Barenreiter, 2001.



Susanna Klein is an assistant professor of violin and coordinator of strings at her alma mater, Virginia Commonwealth University. She serves as violinist with the Atlantic Chamber Ensemble and also Trio 826, both chamber music groups devoted to discovering creative audience interaction models. In addition, she is founder and director of the Orchestra Project, a one-week immersion string camp that is a partnership between VCU and the Richmond Symphony. She holds degrees from VCU and Boston University, where she was an assistant to Roman Totenberg. Before accepting her VCU position, she was a full-time orchestral violinist with the Memphis, Richmond, and Colorado symphonies. Many thanks to the VCU Violin Master Class students, who helped refine the puzzlers, and especially to her assistant Chanel Hurt, violinist, from the class of 2015.

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