

Developing the Bow Hand: Part One

by Edmund Sprunger

Violinists frequently talk about the importance of free motions in the bow arm, and goodness knows conductors are always asking for more bow. It's difficult to move the bow arm freely, however, if you're afraid you're going to drop the bow. An impulsive response is to grasp the bow tightly. But it isn't an effective solution, because the tension it creates ripples up into the shoulder, and restricts free motions in the bow arm (and probably the other arm as well, since both are part of the same physical system...but that's another story.) Without adequate assistance from their teachers, many students find themselves at a loss, and they struggle without knowing the source of the struggle. They don't understand how the fingers of the bow hand connect to the stick, and even if they do, they can't physically make the interaction happen. Often, it's both.

At some point during my college years, I heard that you should hold the bow the way you hold a bird—if you hold it too tightly, you kill it; and if you don't hold it enough, it flies away. This is excellent poetic advice, but it's not concrete enough for a six year old to be able to make use of it.

Although several noted pedagogues—Galamin and Gerle, to name just two—have written books that contain bow hand information helpful to an advanced violinist, these books don't outline a sequence for developing the skill: they don't contain information a child can use. Sigmund Freud once said that the treatment of his patients took a long time because even though he could fully describe their problems in a matter of a few moments, the patients couldn't make use of this information any more than people in the middle of a famine could make use of a menu. More recently, Fred Busch has described a similar concept as “working in the neighborhood.” This is, of course, a very similar concept to Vygotsky's ideas of “scaffolding” and “proximal positioning.”

The focus of this article is on the concepts and exercises I use to help beginning students develop the way the fingers of the bow hand interact with the bow. These skills develop over time, through repetition—practice—and not through coming up with “just the right thing to say,” no matter how accurate, cute, or imaginative. As the Chinese saying goes, “Talk doesn't cook rice.” Slogans about the bow hand don't work, but thoughtful guidance and practicing over time do. This article is not about the bow arm per se; although many bow arm problems are caused by confusion—conceptually and physically—in the way the bow hand functions. I won't be addressing tone production troubles either, although misunderstandings about the way the fingers of the bow hand contact the stick is often a major culprit.

The Rabbit Bites The Bow

The Teacher Information



Photo by Heidi Daniels

There are several challenges when it comes to helping beginning students develop their bow hand skills. One is giving them enough information so that they can soon get some musical goodies from the violin, but not so much that their minds are congested with too much to remember. Another challenge is to make the instructions clear and manageable.

Realizing that beginning students are not going to have the technical finesse of Perlman, we must also give them a functional bow hand that allows for further growth. Over emphasis of certain functions of the bow hand will militate against future finesse; and under emphasis means that the resource won't be there when the musical ideas require it. For example, take the skill of a "strong, round

pinkie." Over emphasis of this idea will inhibit a student from using the top portion of the bow and may even eject weight from the bow, causing a thinning of the tone. However, disregarding a habitually straight, disconnected, and/or stiff pinkie means that recovery bows ("circle bows") will wobble in the air and the tone on the following stroke (particularly if it's a chord) will suffer. The challenge is to provide enough instruction so that development can happen; but not so much that the student gets locked in.

Another challenge is to give the student an initial bow hand that can develop into one that is neither too strong nor too weak. Starting off with the "professional bow hold" tends to make the bow hand of a beginner tense and tight—typical offenders are an index finger that holds rigidly to the bow and a stiff pinkie; and these two are usually partners in crime. If the bow hand is like a hinge that connects a door to a wall, beginning students with the professional bow hand runs the risk of starting with a rusty hinge.

Paul Rolland's solution to this problem was to have his students hold the bow at the balance point, which makes it feel much lighter and is, as a consequence, easier to manage. Shin'ichi Suzuki's solution was to have students put the thumb on the outside of the bow, which spreads the contact with the stick over all of the fingers and, by providing a secure connection to the bow, helps to ensure that rather than just the hand, the whole arm is involved in tone production.

Since the bow hand must be strong enough to manage input from a heavy arm, and also capable of a light sensitivity--and everything in between--it's clear to me that both approaches can work. In essence, Suzuki's approach was to start with the maximum and then let go of the excess; Rolland's was to start with the minimum and then add as needed. While I find Rolland's approach compelling, I have only used Suzuki's in my own teaching.

The center of the bow hand is the middle fingers and thumb. These are the parts of the hand that are, for the most part, in-

involved in any "holding" there is of the bow. The index finger and the pinkie mainly serve to guide the bow. Mainly. The highly-developed, high-functioning bow hand is flexible and dynamic, so it's difficult to assign a single function to a single finger. In the final analysis, there isn't really a bow hand: given shifting balances, one down bow probably has 3,000 bow hands in it. Or more.

All of these concepts are contained in the rabbit bow hand.

The Work With The Student

(note: I introduce this exercise one step at a time, perhaps over the course of several lessons, depending on the readiness of the student for the next step.)

With the right hand, the student makes a rabbit. The corner of the thumb that's closest to the fingers touches the palm side of the middle fingers. More specifically, the corner of the thumb needs to contact the middle fingers between the joint closest to the tip and the next joint. The index finger and the pinkie point upwards, to create ears. I tell students that there are three things that the rabbit needs to have: 1) a chin (a bent thumb) 2) long teeth (the middle fingers) and 3) ears (fingers one and four pointing up).

Next, with the left hand, the student makes a lobster with the thumb and index finger. This lobster "bites the bow" on the screw, while the middle of the bow rests on the left shoulder (if the tip or frog of the bow is on the shoulder, the bow hand becomes distorted).

The next step is to open the rabbit's mouth and bite the bow, with the thumb half way on the metal ferrule and the bow hair; and half way across the bowhair.



Photo by Heidi Daniels



Photo by Heidi Daniels



Photo by Heidi Daniels

Before letting the lobster swim away, there are two things to check. The first is to make sure that the bow hairs are still resting on the shoulder—many students will want to hold the bow in the air, which will create unnecessary tension in the bow hand. The second crucial thing to check is that the rabbit still has a chin, long teeth, and ears. These two things—the bow resting on the shoulder and the ears up—help to develop the actual sensation when playing, which is that the bow sits on the string and the thumb, it isn't held by the first finger.

Once you've checked for these two things, the lobster can swim away.

Next “drop the ears.” Make sure that the pinkie is round and that the first finger is relaxed—it should flop over the bow like a piece of cooked spaghetti.

At this point, I have students tap their round pinkies several times and—especially if the first finger has a tendency to grab—I have the students do “spaghetti flops” with the first finger. (It's important that these moves aren't frantic, so I have them tap or flop once, then say “Mississippi hot dog” before they tap or flop again.)

The middle fingers of the bow hand need to hang over the bow the way your feet hang over when sitting by the side of a pool—not sticking straight out, not pushing on the wall of the pool, just hanging down. If the middle fingers are sticking straight out, the culprit is usually tension in the hand. And although difficult to do initially, at later levels of development it's helpful to have the student leave the index and pinkie fingers on the bow and lift both middle fingers together and then drop them on the bow, similar to the way pinkie taps and spaghetti flops were done.

The Mug

The Teacher Information

One of the biggest challenges students face is developing the ability to simply set the bow on the string the way you set a mug on a table. It's very easy to say, but growing the skill takes both constant teacher monitoring, and time.

The Work With The Student

When students are comfortable with the basic bow hand I outlined above, the next step is to give them practice wielding the bow in the air. Like most teachers I know, I have them do “bow games”—meaning things such as “opening and closing the door,” “stirring soup,” and “rockets.” The key to making these games beneficial is to constantly check that the tip remains above the hand.

When these bow games are working, I then add the violin, with students practicing placing the bow on the E string, or what I call “opening and closing the door.” Next, I add “helicopters” from the A string.

If the tip of the bow is wobbling during these exercises, the culprit is often a “sleepy” thumb—I hesitate to say “weak” thumb because overuse of the thumb can be just as problematic as under use of it.

At this stage of development, I also have students bowing in what Winifred Crock calls a “whisper tube” (e.g. an empty toilet paper roll). I'll tell students to pretend that the bow is a train and the tube is a tunnel; and the train needs to go back and forth on the track, not fly through the tunnel. This bowing in the whisper tube is very helpful for monitoring the development of free motions of the bow arm—the very motions that play a crucial role in straight bowing. I mention straight bowing here because attempts to create straight bowing by tensing the bow hand damage both the ability to make straight bows and to develop dynamic qualities of the bow hand.

I often explain putting the bow on the string the way Edward Kreitman does. I have a student hold her hand flat, palm side up, while I hold a mug in the air above her hand.

“Who's holding the cup?” I'll ask.

“You are,” she'll say.

The next step is to place the cup on the table created by her palm, saying “Don't grab the cup—if it falls, it's okay, it's a cheap mug.”

Then I'll ask her “Who's holding the cup?”

“I am,” she'll say.

I then demonstrate to her that I can hold the cup and touch her palm; or I can let the cup sit on her palm and then I can lightly touch the handle.

Finally, I'll ask the student to compare the difference in the sound between when I hold the mug and move it back and forth on an actual tabletop; and when I let the mug sit on the table and I drag it back and forth.

The upshot is that you get more sound—and a more even sound—when the table holds the mug as you drag it back and forth.

Similarly, you get more sound—and a more even sound—when the bow sits on the string and you drag it back and forth. Attempts to hold the bow and touch the string not only encourage an uneven sound, they involve too much effort. It's much easier to let the bow sit on the table. I mean string.

At a more advanced level, meaning once the thumb is on the inside of the bow—and I'm in no hurry to move it in—students can continue to develop the “mug on the table” feeling by holding the bow at the tip when playing; what Suzuki used to call “Reverse Bow.” With the bow flipped around like this, the balances are all cattywampus, and because there's so much weight at the top of the bow, it's just easier to let the bow sit on the string.



Straight Bowing

The Teacher Information

The drawing of a straight bow is intimately connected with the functioning of the bow hand. Misunderstandings of how the bow hand works—including lack of co-ordination, or “physical confusion”—complicates the development of the ability to draw a straight bow. And it works the other direction as well: lack of understanding of how straight bowing works complicates the development of the bow hand. When students attempt to get a straight bow—to keep the bow hairs in one spot on the string—by squeezing the bow, they kill the incubating flexibility and balance in the bow hand.

Although there are sometimes other components to straight bowing difficulties, physical tension is the most likely one.

The tension starts when a teacher tells the student to keep the bow hairs perpendicular to the string. “Perpendicular” is a big word for most children, so a teacher may tell the student to keep the bow hairs “square to the string” or, more simply, “straight.”

More perceptive teachers realize that it is extremely difficult for a budding violinist to actually see if the bow hairs are perpendicular to the string, no matter how the condition is described. However, something a bit more manageable for a student is seeing if the bow hairs stay in one spot—to see if the rosin is “coloring one spot on the string” instead of the entire region between the bridge and the fingerboard (and sometimes—horrors!—beyond). Many children are resistant to having a parent “fix” the straightness of their bow. I generally consider this resistance appropriate: they are entitled to knowledge that helps them know for themselves.

Telling the student to “make sure that the bow hairs color only one spot on the string,” is one way to help students know for themselves whether or not they are drawing a straight bow, but this instruction can have two tension-producing side effects. The first one is that students hold the bow tightly and use small bows in order to carry out the instruction. The second side effect is that the efforts to keep the bow hair in one spot create tension in the bow hand, which ripples up the arm and makes it difficult to use full bows, let alone straight ones. And, of course, approaching playing in this way means that the goal of producing a beautiful tone is out of the question, because the student is using the bow to push the notes into the violin instead of to caress the string and coax out a full sound.

Those of us who are proponents of starting students off with short bow strokes—as were Rolland and Suzuki—need to remember that short strokes don’t reveal whether or not the bow is traveling in a straight path. The real proof of the pudding is when the bow stroke is extended.

Although it’s important for the bow hand to function reasonably well for the student to generate long, free-flowing long bow strokes, the bow hand is actually the last place to check when diagnosing a student’s difficulties with drawing a straight bow. Most important for getting the bow hairs to stay in one spot is a “loose spaghetti arm”—which includes a loose elbow hinge, free shoulder, flexible wrist,” etc.

When those larger muscle skills are working well, it then makes sense to look at the bow hand. If, as mentioned earlier, the bow hand’s minimal “holding” functions are centralized in the

middle fingers and thumb, there is freedom for the index finger and pinkie to perform their steering functions. But they can’t steer if they’re busy grabbing the bow. During the year I spent studying in Japan with Suzuki, he was not big on having a lot of tension in the bow hand, and gave us a variety of exercises to develop freedom and flexibility, or what he used to call “delicacy.”

On rare occasions, I might mention to a student that “squeezing the bow to get a straight bow is like squeezing the handlebars of your bike instead of steering in a different direction.” I’m generally wary of offering this explanation, however, unless the student has developed a bow hand and bow arm that offer the option of steering in a different direction. Oftentimes students understand such explanations, but squeezing is the only thing they are physically equipped to do, so the explanation merely helps them feel bad.

The Work With The Student

At the earliest stages of instruction, even before the violin and bow are introduced, the student uses the bow hand to rub the “violin arm” in the rhythms of the songs to be played. This bowing/rubbing on the arm helps put the motions of the bow arm on a straight track.

At later stages, after the rabbit bow hand is introduced and the student has some skill with wielding the bow, the student’s violin hand holds a whisper tube (e.g. an empty toilet paper roll) at approximately the same place that the violin bow will go on the string. What the student previously rubbed on the arm can now be patterned in the whisper tube.

The whisper tube provides enough of a track so that—without having the responsibility of producing a beautiful tone on the instrument—the teacher, child, and parent can work together to help the child develop the kind of loose arm motions that are staple ingredients of generating the ability to track the bow in one place on the string.

Similar to the above exercises is the idea of bowing on the bow. The student prepares to play, but I hold the bow in place by using my right hand to secure the tip of the bow on the string; and my left hand to hold the screw firmly. In this set up, the student bows the rhythm of the piece on the bow, initially with just the index finger, then adding other fingers.

With simple rhythmic patterns, such as “pepperoni pizza,” it’s helpful for the student to say the rhythm out loud while using any of the above patterning exercises: even more beneficial is for the student to sing whatever is being patterned. The importance of singing and “audiation” for string students is an important topic not covered in this article, other than to say that children who do not use internal singing to drive the bow end up with a tangled mess of left and right hands that generates a wide variety of physical tension.

The previous patterning exercises are a prelude to the target practice that I consider indispensable for helping a student understand the relationship of the bow hand and straight bowing. First, I need to find something simple that allows the student to play repeated martelé strokes. The open A string or an A scale with at least two bows per pitch works, but I usually use Suzuki’s “Perpetual Motion,” since it’s more musically appealing but not too technically demanding.

Then, before the student plays I say two things. The first one is “keep your bow hand soft and let the bow go wherever it wants to.” The second is “as you bow, throw your hand towards this target.” (see photo).



At that point I usually put the target too far on the bridge end of the violin, then the student plays eight bows' worth, or so. For the next round, the target is too far on the fingerboard side of the violin. I help the student observe that with a relaxed (“soft”) bow hand, the bow hairs automatically slide over the fingerboard if the target is “too far back”; and over the bridge if the target is “too far forward.”

The next steps involve having the student imagine the target, then beginning the playing with the target too far in back, but moving it forward an inch or two every couple of notes. In other words, the student begins with the bow hairs sliding over the fingerboard and ends with them sliding over the bridge. Somewhere in the middle is a target that allows the bow hairs to color one spot on the string.

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The student is then in a position to understand that if the bow hairs slide, the target needs to move in the direction of the slide.

Finally, since staring at the bow hairs is helpful for an isolated exercise but difficult long term—especially because of the tension it produces in the student's neck—I tell the student “Now play it with your eyes closed and watch with your inside eyes.” I'm amazed at how effective this instruction is at this point.



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