

## All-State: User-Friendly Bowings: More Music with Less Work

presented by Dr. James Kjelland  
reported by Betsy Neil

Dr. James Kjelland is indeed a master teacher! His organization of bow styles and skills demonstrated his gift of taking in information, organizing it, putting it into words, and finally instruction. I have performed under many great conductors who aren't nearly as experienced with bowings and names for the styles which can cause confusion. For example, Dr. Kjelland explained that staccato is a general term that means playing notes shorter than normal. Many specific bow strokes fall under the umbrella of staccato short notes, such as: martelé, spiccato, sautillé, and the brush stroke.

Dr. Kjelland talked to us about the physics of vibrating strings: the widest part of the vibrating string is in the middle of the string, which is also the point of the fastest speed of the string. So, vice-versa, the slowest and most narrow part of the vibrating string is at either end. The frequency is the same at all parts of the string; the miles-per-hour amplitude decreases, so the string is moving slower as you approach the bridge. Since the string moves at different speeds on every part of the string, the speed of the bow must match the speed of the string regardless of pitch, dynamics and timbre. In addition, the bow pressure must match the tension in the string; therefore you must use more weight on the bow the closer you are to the bridge. The string is the master of the bow!

Other rules are applicable to this physical aspect of using the bow. You must energize the string with the bow perpendicular to the string to make the string move side to side; otherwise you will lose sound. For a given volume level, slower bows are heavier and closer to the bridge and vice versa. Where you are in the bow is also of importance as the bow is heavier at the frog. Lower strings, because of the differences in their bows from upper strings, may often be in a different part of the bow. Dr. Kjelland gave examples of exercises that allow students to experiment with bow speeds,

tension, and sounds such as sticky bow, creaky door, and a whistle sound, to help them develop more control.

Having some knowledge of some of the physics behind bowing, you can apply it to making choices of how to bow pieces or particular phrases. Performing a piece to get a specific sound can be made easier with an understanding of how the bow works. If you have two-quarter notes and a half note slurred in a measure, you can use a quarter of the bow for the quarter notes and a half of a bow for a half note and not have to change the bow speed and everything stays the same. This would be good if you want a uniform sound with no change in dynamics. Similarly, dividing the bowings to get a consistent pattern concerning bow speeds can have the same effect, and the passage will be easier to play. His advice is that you don't have to follow someone else's bowing and you don't have to always follow the down bow rule (down bow is strongest and should always be on the down beat). It is beneficial to all to have students try different ideas with their bowing to find out which bowing might be the easiest with the best results. Chances are what is easiest will produce the best sound. Besides, when bowing is a problem, it can also influence pitch, rhythm, accidentals, and phrasing.

Dr. Kjelland also clearly defined many bowing styles:

- Detaché—back and forth. (Detaché legato is what we usually use.)
- Detaché Lancé—back and forth with a slight separation but no articulation.
- Martelé—on string staccato.
- Spiccato—off the string and starting off the string.
- Brush Stroke—off the string but wider strokes, more bow than spiccato, usually below the balance point. This stroke also offers a wider dynamic range.
- Sautillé—off the string but start on

the string between the middle of the bow and its balance point. Often there is more use of the fingers and wrist for this bow stroke. This is a fast bounce.

- Portato—notes in one bow with a slight separation without stopping the bow.

It is never too early to begin teaching off the string strokes. You simply place the bow on the string in the middle of the bow with flat hair. Add a little of movement to the bow and it will bounce on the string automatically. Dr. Kjelland calls this exercise the dribble bow, which also helps in relaxing the bow hold. An important point he made is he doesn't wait for the student to have a perfect bow hold before commencing with this exercise.

The truth about bow speed and string vibration speed was evident in an exercise we did involving spiccato bowings. We performed *Eine Kleine Nacht Music*, and automatically we all bounced our bows lightly. However, we discovered that spiccato simply won't work at a slower tempo because the bow speed has to match the string speed. We played around with many examples discovering how important the relationship of bow speed and tempo are. Perhaps the message to get from that discovery is even when taking into account style from a certain time period or style based on a different genre of music, the string still rules, the bow rules, and lastly we rule. So much is determined by physics and it is best if we as musicians and teachers pay close attention. Finally, bowing should match or give you an interpretation of the music, not make the interpretation. You want to bow in the easiest way to get the best musical results!

*Betsy Neil teaches strings in the LaCrosse WI schools, and performs on fiddle with the Minneapolis-based Buffalo Gals band. ♪*