Bow weight and length of string

Three principles of tone production for all string instruments:

1. Closer to the bridge, more weight.
2. The higher the fingers play up the string (the shorter the string), the nearer the bow plays to the bridge.
3. The shorter the string the less pressure it can take from the bow.

The third principle overrules the first. The bow plays *heavily* near the bridge in low positions. The bow plays *lightly* near the bridge in high positions.

In the examples below, the top E in the Wieniawski and the top B in the Kreisler must be played surprisingly *gently* near the bridge if they are to sound pure and stay in tune.

**EXERCISE**

In this exercise, always play the open strings heavily; play the stopped notes more and more lightly as they get higher.

1. Play the whole exercise *near the fingerboard*. Play all the open string notes *mf*. Begin the crotchets (quarter notes) *mf*, and play them more and more lightly as the string length shortens, reaching *ppp* at the top.

2. Play the whole exercise *midway between the fingerboard and the bridge*. Play the open strings *f*. Begin the crotchets *f* and play them more and more lightly until reaching *pp* at the top.

3. Play the whole exercise *near the bridge*. Play the open strings *ff*, moving the bow slowly and heavily. Begin the crotchets *ff* and play them more and more lightly until reaching *mp* at the top.

4. Play the whole exercise *changing the point of contact throughout*. Stay away from the bridge to play the open strings, move nearer to the bridge to play each crotchet. Play every note *sempre forte*.

Next month’s BASICS explains the method of tuning scales used by Pablo Casals and Dorothy DeLay.