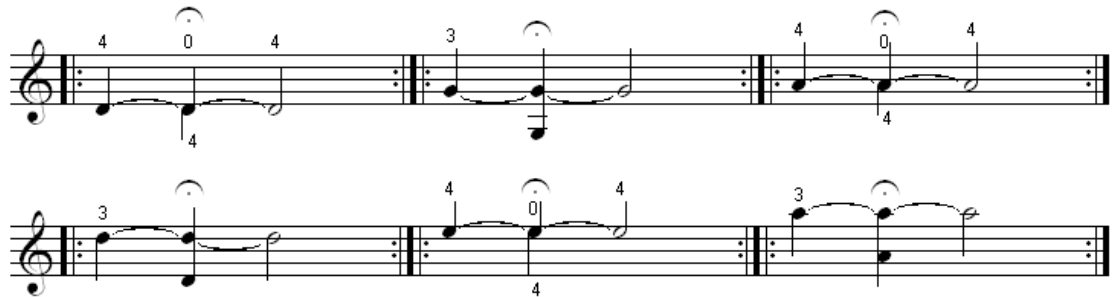

BASICS

Intonation

One of the first steps for an elementary violinist is to check all the open-string notes with the open strings. The same applies if you are an advanced violinist: keep checking open string notes with the open strings as a matter of course, just as much as if you were a beginner.

One way to test these notes is to play unisons or octaves:



Another way is to play only the stopped note, and watch the open string vibrate in sympathy. Leopold Mozart mentions sympathetic vibrations in his *Violin School*:¹

It is irrefutable that a string, when struck or bowed, sets in motion another string tuned in unison with it...this was already known to the Ancients...Hang a stringed-instrument, the strings of which are not stretched too tightly, near an organ, and if the notes to which the open strings of the string-instrument are tuned be touched on the organ, those strings will immediately, although not touched, sound also, or will at least show a strong movement. Or on a violin, not too thickly strung and tuned rather low, play the G with the third finger on the D string, and the open G string will at once vibrate of its own accord.

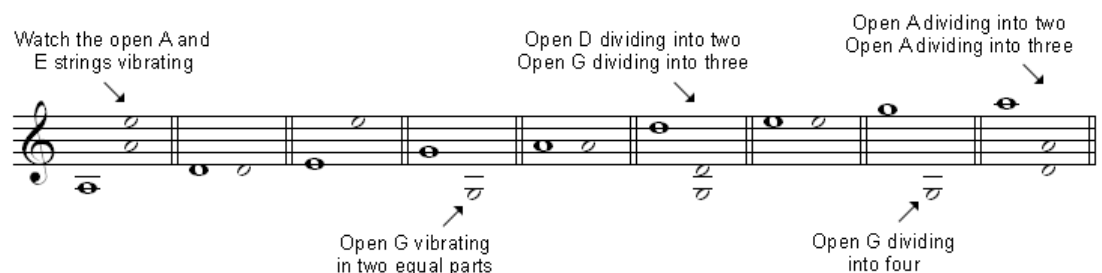
A fascinating point that Leopold does not mention is that sometimes the sympathetically-vibrating string divides into sections. When the vibrating open string is *above* the stopped note (i.e. you play first finger A on the G string and the open A string vibrates), the open string vibrates in one piece from the nut to the bridge.

When the sympathetically-vibrating open string is *below* the stopped note, the open string divides into distinct sections.

Playing third-finger G on the D string, the open G vibrates in two halves: it vibrates separately from the bridge to the centre point (the place where you would play a G harmonic), and again from the centre point to the nut.

It is often easy to see the blur of the vibrating string in the lower octave; and another blur in the upper octave; and no blur whatsoever at the exact midpoint of the string between the nut and the bridge.

The bold notes represent the stopped notes; the light notes represent the vibrating open strings:



¹ Leopold Mozart: *A Treatise On The Fundamental Principles Of Violin Playing* (Augsburg, 1756; Eng. Trans. Editha Knocker, Oxford, 1948), 163

BASICS

If you cannot see the two halves of the string vibrating separately, it does not matter or make any difference. After all, you are not going to be looking at the width of the vibrating string when you are playing music. Instead, listen to the timbre of the stopped third finger G on the D string.

What is the 'timbre' of a note?

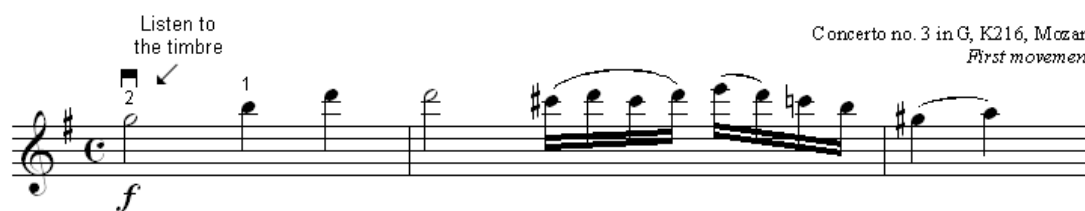
The timbre is the distinct quality of tone that makes a note sound different from other notes of the same pitch and volume.

When the third finger is exactly in the centre of the note G in 1st position on the D string, and the open G string is vibrating the widest, there is a soft and open quality in the stopped note.

When the finger is sharp or flat to the smallest degree, a tight, hard-edged quality comes into the stopped note.

Adjust the finger by rolling slightly up and down on the string: a fraction higher, a fraction lower (like tuning a radio to exactly the right frequency by moving fractionally either side of it), until you are certain you are right in the middle of the note and the open G string vibrates widely.

When you play second finger G on the E string, the open G vibrates in four distinct sections. On some instruments you can see this easily; on others you cannot see the division of the string. But either way you can easily hear the hardness or softness in the tone, according to whether the second finger is in tune or not:



While pausing on one, long, held G, roll the second finger a fraction higher, a fraction lower, and find the exact centre of the note. Notice the hard edge in the sound when the finger is a fraction sharp or flat, and the soft centre to the note when the finger is exactly in the middle of the note.

One occasion when you should ignore the resonance

Suppose your violin is in tune with itself, but tuned flat.

You hear an A on the piano, notice that it is higher than yours, and decide to retune the violin.

You move the peg of the A string down and up, looking for the right A. Finally you decide on what you think is a new, correct A that is the same as the piano.

So you begin to tune the violin to that new A, but as soon as you play a perfect fifth with the D string, you realise that this A is exactly the same as the one you had before, and the fifth is perfectly in tune.

This happens because while adjusting the A string up and down, you were listening for the sound of the greatest resonance. When the A string is in tune with the D and E strings, there is a more soft-centred and resonant tone to the open string; when the open string is slightly sharp or flat to the open D and E strings, the open A gains a hard-edged tone.

So when you had moved it back to where it had been before, the A sounded the most resonant; but when you tuned it higher, into its correct pitch, it sounded hard-edged and strained.

In that situation the A sounds wrong when it is right, and right when it is wrong. When the violin needs a radical retuning, the best thing is to tune it twice: first, quickly get all the strings approximately in tune. Then tune again, this time getting them exactly in tune.

Keep checking

Working on intonation in a scale, study or piece, check every G, D, A and E with the open string. If you check, say, an A with the open A in one bar, and then in the next bar there is another A, check that A with the open string as well. Then, suppose two bars later there is another A: check it with the open string as though it were for the first time, and so on through the whole piece.