

Intonation

In expressive intonation sharps are played slightly higher and flats slightly flatter than they are on a keyboard. The cellist Pablo Casals is often credited with the coining of the term. He would describe sharps as having a 'gravitational attraction' upwards into the natural half a tone above, and flats a pull downwards towards the natural half a tone below. In 1926 Leopold Auer, teacher of Jascha Heifetz, described the same thing:

"Chromatic half-steps such as A \sharp -B \flat , D \sharp -E \flat , G \sharp -A \flat , E \sharp -F, are also known as 'enharmonic intervals'. On the piano their keyboard position and sound is identical but on stringed instruments and brass instruments like the trombone, their actual pitch is not the same but subject to finger distinction in accordance with the higher and lower tonal character of sharp and flat keys. This 'enharmonic' relationship exists throughout the entire system of established musical notation."

It depends on the exact passage and context as to whether accidentals are tuned 'in the middle' or tuned expressively. When playing with the piano it is often not possible to play high sharps and low flats. It may sound very out of tune if you sit firmly on a sustained C \sharp against an A major chord on the piano. But the same high C \sharp may sound colourful and expressive if it is a moving or passing note.

Wide and narrow semitones

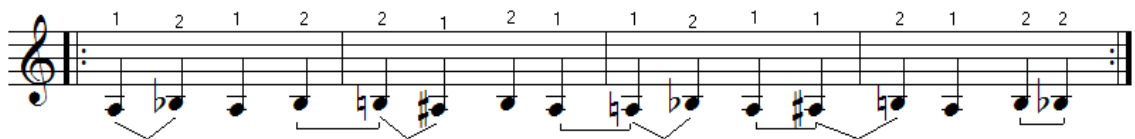
In expressive intonation semitones are wider or narrower depending on the spelling of the two notes. The principle is simple and there are two ways to think of it:

- The semitone is wide whenever the letter names are the same, e.g. C-C \sharp , D-D \sharp . The semitone is narrow whenever the letter names are different, e.g. E-F, C \sharp -D.
- The semitone is wide when the two note heads of the semitone are on the same ledger line or in the same space. It is narrow when one note is on a line and the other in a space.

Magnets provide an interesting analogy. The opposite poles, or different note-names, attract and pull each other closer together; the same poles, or letter names, repulse and want to keep a distance from each other. However, in many parts of Europe in the eighteenth century the opposite tuning scheme was used: G \sharp was nearer to G, and A \flat nearer to A. Today's baroque players can still use the magnet analogy if one pole represents an accidental and the other a natural.

Tuning exercise

For the purpose of the exercise play the sharps as high and the flats as low as acceptably possible. Feel the sharps 'leading up' to the natural above, and the flats 'leading down' to the natural below. A-A \sharp (fingered 1-1), feels much further apart than A-B \flat (1-2).



One argument against apparently 'dry' technical exercises is that they are by definition unmusical, and that in the end all fine technique comes firstly from being a sensitive musician and knowing what colour or expression you want to create; and then all the 'how to do it' comes purely from good listening and the thousand unconscious, instantaneous adjustments that take place every second to make the fact match the mental image.

There is an easy counter to this, even if in the final analysis it is of course correct. First, even the driest, most conscious technical considerations and adjustments are appropriate at the right time and for the right reason. Second, as a rule technical exercises should not be played unmusically but with expression and musical imagination. Even tone exercises on one note can be played musically. All you have to do is imagine that those same repeated notes are in a quartet or symphony, and immediately a new quality of technical control enters the playing.

There is plenty of ‘music’ to be found in this semitone exercise. In the first bar, imagine the second note of the Tchaikovsky violin concerto, or the second note of the Bruch G minor, and then find the same dark quality in the Bb. In the second bar the feeling of the A#'s inclination upwards is palpable.

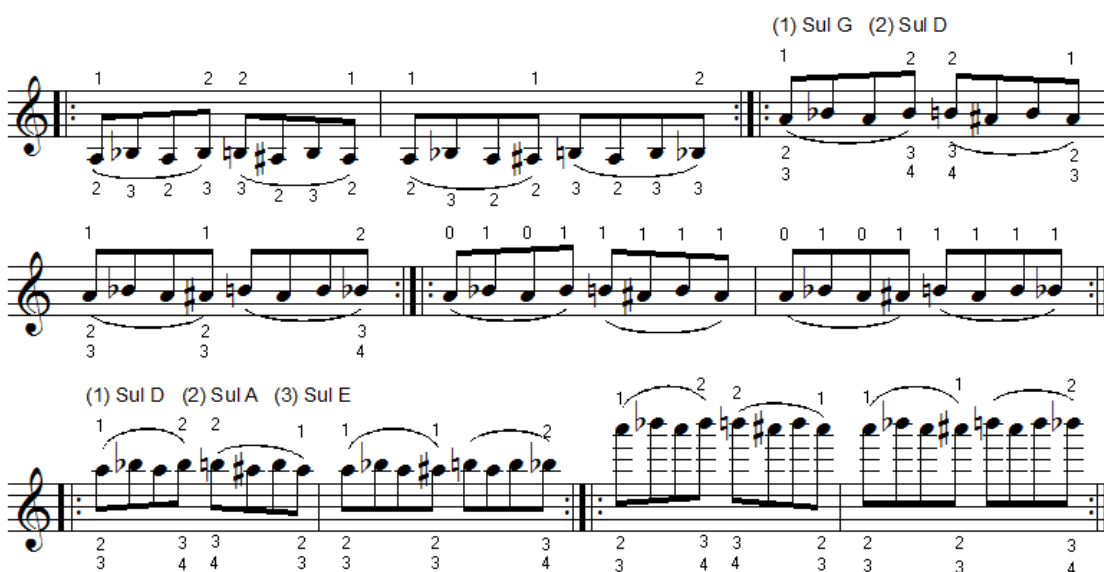
Then play the same notes one octave higher. As Leopold Auer would tell you, when you play first-finger Ab, Eb, Bb and F in first position, feel the finger very close to the nut. (See III. 1.) Keep the hand still and move only the finger, its shape changing from squarer to play the Bb to more extended to play the A#s. (See III. 2.)



From third position upwards, play the same notes with all three possible fingerings:



Repeat the same pattern in every possible octave on the fingerboard. Here is the complete exercise:



Apply the same pattern, in every place on the fingerboard, to all the other semitone possibilities:



- First play without vibrato, and then with vibrato.

Exercises like this save much more time than they take to practise, because afterwards there is much less to correct when you are working on your repertoire. As the American President Abraham Lincoln said, ‘Give me six hours to cut down a tree and I’ll spend the first four sharpening the axe.’