

Two Clocks, One Student

Why teachers ask for a sound the bow cannot give.

Walk into almost any string class today and you will hear the same request: more sound, a rounder tone, let the string ring. Look at the bow in the student's hand and you will usually find a tool chosen for something else: control, a reliable stroke, the absence of surprises. Nobody notices the mismatch, because it has been in place for a hundred years. It is not an accident. It is the result of one reflex, splitting a single problem between separate trades, played out twice on two clocks set a century apart.

One clock, around 1800

At the end of the eighteenth century, everyone involved with the violin was looking in the same direction. Instrument makers such as Nicolas Lupot were adapting the violin to the power the new style demanded. François Xavier Tourte gave the bow its modern form in close dialogue with Giovanni Battista Viotti, whose broad, singing style called for more power and sustain than earlier bows could give. Rode, Viotti's pupil, then wrote with Baillot and Kreutzer the *Méthode de violon* of the new Paris Conservatoire (1803). Violin, bow and teaching answered the same question: what sound do we want, and what does it take to produce it? Today the luthier does one thing, the bow maker another, the player a third. Around 1800, they were working on a single problem.

Teaching: a detour through gesture, then a partial return

During the nineteenth century, teaching codified movement. Delphin Alard, professor at the same Conservatoire, describes in his *École du violon* (1844) how arm, wrist and fingers should be placed and moved. Correct gesture becomes the curriculum. Sound is expected to follow.

By the early twentieth century, the great teachers were saying the opposite. In *Violin Playing As I Teach It* (1921), Leopold Auer notes that Joachim, Ysaÿe and Sarasate each held the bow in their own way, and each produced a superb tone. There is no single correct gesture, only a correct result. In Frederick Martens's interviews, *Violin Mastery* (1919), Ysaÿe complains that too many technicians "no longer sing". The young Heifetz, Auer's pupil, puts it most sharply: music lives in the player's inner self, and "his body is like his violin, nothing but a tool."

At the top, teaching had found its way back: sound first, gesture in its service. But only at the top. In most classrooms the nineteenth-century order survived, and much teaching today still runs on it: gesture first, sound expected to follow.

Bow making: the same detour, a much later return

Bow making took the same detour and stayed there far longer. As production moved into larger workshops and bows were made in volume, the criteria that could be standardised were mechanical: weight, balance, camber, stiffness, a dependable stroke. These are also what a player perceives first and can put into words: "I can do my strokes with it." Sound is harder to name, slower to judge and nearly invisible in a short trial. Without a method to bring it to the

surface, it dropped out of the specification.

Distribution reinforced the drift. Some of the distributors we sold through asked for bows as identical as possible, so that selling one would not require them to get involved in the player's choice. A uniform product needs no conversation. Sound, which varies from stick to stick and from player to player, does.

I know this from the inside. Until about fifteen years ago, our workshop made around a thousand good, consistent bows a year, from wood selected within controlled density ranges. Distributors were satisfied. Mechanically, the bows worked. Acoustically, they were unremarkable. It took daily blind testing, and a classification of wood by its acoustic behaviour rather than its density alone, before sound could become the first criterion again. A few other workshops have made a similar move. It is still not the norm.

The same reflex, twice

Set the two stories side by side and the pattern is plain. In both trades the problem was split: gesture separated from sound in teaching, mechanics separated from sound in making. In both, the split felt like progress, because it produced something measurable, teachable and easy to sell. In both, sound, the only thing the listener actually receives, became a by-product. Teaching corrected itself at the top between 1900 and 1921. In bow making, the correction began in a handful of workshops around 2010. Same reflex, two clocks, a century apart.

What the gap costs

The two clocks still disagree in today's classrooms. The student holds a bow specified by the logic of the manufacture: stable, predictable, mechanically correct, acoustically poor. Asked for a sound the bow cannot easily give, the student does what any body does. It compensates: more pressure, a stroke started early, notes changed in a hurry. The compensation is learnt, automated, and carried into the next stage of training, often into a whole career.

Many teachers have given up the fight over the bow. A new student bow costs around fifty euros; a proper rehair costs a hundred or more. Some rental companies simply throw worn bows away rather than repair them. Swapping one such bow for another changes little. So the teacher does the only thing still within reach: works on gesture, in the hope that a better movement will draw a better sound from a poor tool. This is how the slow clock drags the fast one back. Teaching returned to sound a century ago; a tool that cannot deliver sound pushes it back towards gesture, lesson after lesson.

Heifetz added a sentence that is usually left out: the great master "must have the tools that suit him best." His generation brought sound back to the centre of teaching, but treated the tool as something a player is supplied with, not as a variable to examine. That is what left the second clock running slow.

An open question

Around 1800, makers, players and teachers were part of the same conversation. Resetting the two clocks does not mean returning to that world. It means putting the conversation back together: teachers who ask what a bow allows, bow makers and luthiers who specify by sound,

and a shared vocabulary between them. That is the purpose of Isophonia.

Sources

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