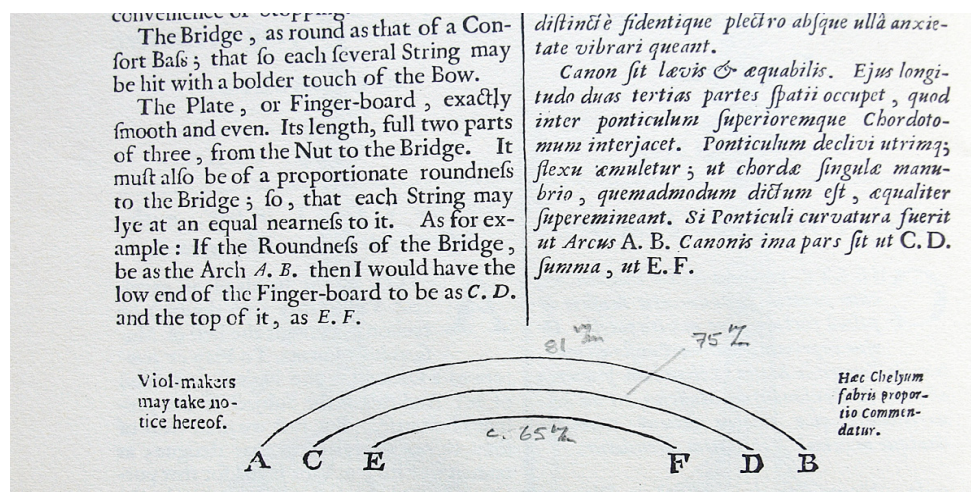


## Viol fingerboards: a response to Comm 2153

I am very grateful to David van Edwards for questioning (comm 2153) my evidence regarding the shape of early English viol fingerboards (raised in Comm 2143). He asks on what basis I made my point about Jacobean viol fingerboards being shaped like a segment of an inverted cone, with the nut having a larger curvature-radius (relatively more flat) than the bridge, and the fingerboard therefore requiring careful scooping to achieve a comfortable and even action especially on the outer strings. He asks whether that observation is based on the Henry Jaye bass viol (1619) in the RCM in London. I should have made that clear: yes, the Jaye does indeed match my description. But as we both recognise, fingerboards and necks can fairly easily be altered, even if they appear to be original. And since most other seventeenth-century viols no longer have their original neck, and none have an original bridge, drawing general conclusions is difficult.

As David van Edwards notes, Christopher Simpson made uniquely explicit observations on this subject, both in his first edition of 1659, and in more detail in the second edition of 1665. The two versions of his own diagram are not the same: in the first, the fingerboard curvature remains constant (cylindrical), but in the second version it becomes a cone with a tighter radius at the nut. Assuming the second was a corrected version, we might examine it more closely.



Both diagrams suggest that Simpson was recommending a bridge, fingerboard and nut geometry contrary to that which I described, and his 1665 version more so than the first. I have pencilled in the radii of each of the curves in the 1665 diagram (measured from my facsimile copy), showing that Simpson's recommended bridge would have a curvature radius of c.81 mm, the end of his fingerboard c.75mm, and the top of the fingerboard under the nut c.65mm (and so probably around 66.5 mm for the string-band passing over the nut) - that is, his fingerboard would describe a segment of a cone converging to a point above the scroll. That kind of geometry might not require much scooping to work reasonably well. However, one might also note that his curve CD, representing the lower end of the fingerboard, will be located two thirds of the distance from nut to bridge; yet for the string-band itself to have sufficient and consistent clearance there, the end of the

fingerboard CD would actually have to have a slightly tighter radius than the string-band above - something his diagram appears not to allow for.

Whatever you make of either of Simpson's two different diagrams, he was clearly recommending a fingerboard-geometry which is at odds with the Jaye viol of 1619. Perhaps he just didn't like the rather flatter nut of the Jacobean viol; or perhaps he had long enough fingers to reach round all the strings for the chords he writes in his divisions - often in precisely the area of the fingerboard nearest the nut, where his geometry would make clean fingering more difficult. My own explanation is different, however, and that is why I did not cite Simpson's diagram in my original piece.

There is no evidence that Simpson was himself a viol maker, and his remark next to his diagram, that "viol-makers may take notice thereof", suggests that he was not. Equally revealing is his oft-quoted comment on the previous page, that viols shaped like a violin, with bellies carved from a "plank" rather than made from heat-bent staves, commonly render a sound which is "quick and sprightly, like a violin": a statement which many makers and players nowadays would regard as questionable. In any case Simpson was writing forty years after the Jaye viol, and as I mentioned later in my comm, may well have written for a readership adapting to the newer styles of playing around 1660.

However, one might also question whether his observations, as represented in the diagram, were accurate in the first place. If you look down a viol fingerboard from above the scroll, you might readily assume it is a cone widening towards the bridge, and hence jump to the conclusion of concentric curvatures roughly similar to Simpson's. Accurately measuring the changing radii of the fingerboard, all the way from the nut to the end, is time-consuming: you have to take all the strings off, and then check the fingerboard against a set of templates each, cut accurately to a specific radius. Any scooping will be so fine that it will not be readily visible to the naked eye, so you also have to remove the frets and place a straight-edge along the line where each string would be. Measuring the curvature of the nut itself, and the bridge, is of course much easier. But without making such detailed measurements, any observer may at a glance make the same assumptions as Simpson - at most perhaps noting that the bridge might appear slightly lower under the upper strings than under the bass strings (so not quite matching the radius of the end of the fingerboard), in order to compensate for the wider amplitude of bass string vibrations.

Arguing that Simpson simply had not measured his fingerboard accurately may seem rather high-handed. But if he was not a maker, himself, he would not have had to consider the practical implications in sufficient detail. His statement that the fingerboard must be "exactly smooth and even" is a wording that would fit any good fingerboard, whatever design was used. And if he himself played a well-made instrument, there would have been no particular reason for him to acquire the extra skills in geometry and fine measurement needed to give an accurate description of how the best viol fingerboards were really shaped. Indeed, the person who made his viol might not have consciously thought of the fingerboard in theoretical or mathematical terms at all: more likely, he would have learnt from empirical experience what kind of refinements in shape could help create the best action.

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