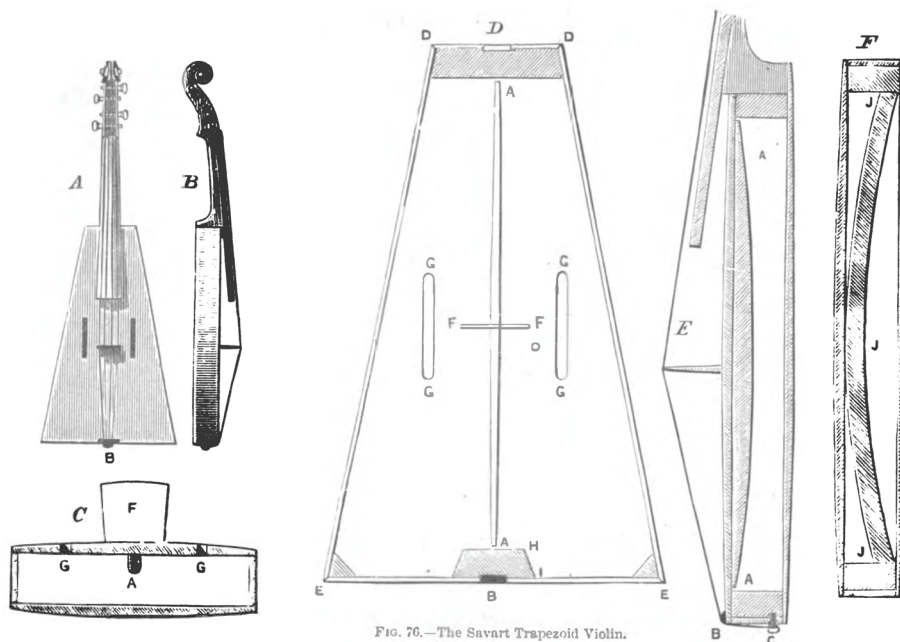


## More accounts of mingling art and science

**T**oni Feder's excellent story "Mingling art and science opens minds" (PHYSICS TODAY, April 2021, page 24) is of special interest to me as someone who has had both a career in physics and a second career in art. Feder describes many instances where an artifact of science or of art inspires work in the other's field, and she also talks of improving dialog between those fields. But I would have liked to see stronger emphasis on the motive that drives many, if not most, scientists and artists—namely, the joy of discovery.

I was an undergraduate teacher and grant-supported physicist at Williams College for 32 years, then a sculptor for 21 years (for some examples, see [www.fieldingbrown.com](http://www.fieldingbrown.com)). The nexus between those two careers was the satisfaction I received when I actually found or did something new. When I was doing physics, that might be from a trifling bit of experimental technique or, more broadly, something publishable. When doing sculpture, it was from completing a new piece and finding it artistically pleasing.

When asked about the Nobel Prize in an interview for the BBC show *Horizon*, Richard Feynman replied, "I've already got the prize. The prize is the pleasure of finding the thing out, the kick in the discovery, the observation that other people use it [my work]—those are the real things."<sup>1,2</sup> So I find myself in good company regarding the



**TRAPEZOIDAL VIOLIN** by Félix Savart. (Adapted from E. Heron-Allen, *Violin-Making, As It Was and Is*, E. Howe, 1914, p. 117.)

joy of discovery: It must be an important part of the "mingling" of art and science.

### References

1. R. Feynman, *The Pleasure of Finding Things Out: The Best Short Works of Richard B. Feynman*, J. Robbins, ed., Perseus Books (1999), p. 12.
2. A. Lightman, *Probable Impossibilities: Musings on Beginnings and Endings*, Pantheon Books (2021), p. 77.

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In her article "Mingling art and science opens minds" (PHYSICS TODAY, April 2021, page 24), Toni Feder mentions many interesting intersections between visual art and science. In 1819 physicist Félix Savart (1791–1841) said, "The efforts of scientists and those of artists are going to unite to bring to perfection an art that, for so long, has been limited to blind routine."<sup>1</sup>

Savart is best known to physicists through the Biot–Savart law in electromagnetism. He is, however, also known for studying the acoustics of violins.<sup>2</sup> His friendship with luthier Jean-Baptiste Vuillaume (1798–1875) provided Savart with opportunities to investigate instruments made by Antonio Stradivari (ca. 1644–1737). Savart started asking how we could understand the performance of a violin from the plates before they are assembled.<sup>3</sup> He even made a trapezoidal violin (see the sketches above) whose acoustics proved that the instrument's characteristic shape serves only aesthetic purposes. For him the art is about the violin.

### References

1. F. Savart, *Mémoire sur la construction des instrumens à cordes et à archets* (Dissertation on the Construction of String and Bow Instruments), Librairie Encyclopédique de Roret (1819), p. 77. See also F. Savart, *Ann. Chim. Phys.* **12**, 225 (1819).
2. V. A. McKusick, H. K. Wiskind, *J. Hist. Med. Allied Sci.* **14**, 411 (1959).

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