

**Listening by number: Albert von Thimus and the Pythagorean sublime**  
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While serving as judge and member of the Berlin Reichstag, the mathematician Albert von Thimus (1806-1878) published a 900-page discourse on the harmonic symbolism of the ancients (*Die Harmonikale Symbolik des Altertums*, 1868). Inspired by Helmholtz's writings in 'mathematical physiology', it sits at the intersection of a Pythagorean inheritance with a culture of empiricism, and took as its central object an inaudible music of the spheres as the object of sonic-mathematical enquiry. His work was ignored by intellectuals until c. 1933, when Hans Kayser (1891-1964), a Schoenberg student, who rejected what he called the 'haptic tyranny' of the common view of vibrations, i.e. that things are true based on sensory perception, followed by cognitive evaluation. Thimus' test case for listeners in the 1860s is the interrelation of overtones with their reciprocal fractions in undertones. This reciprocity had a Pythagorean origin, he explains, and allowed him to compose a four-bar melody that defied normative definitions of consonance and dissonance, but whose harmonic poles become the means of explaining the inaudible but naturally occurring (mathematically sound) relation between the augmented and diminished triads.

By reading Thimus writings against the grain, and by not heeding the undistinguished reception history of his work, this paper posits his writings as a case study in the collision of a lingering mathematical worldview with a modern physiological aesthetics. It asks what role attentive listening played in a context of experimentation in which human ears cannot actually hear the sonic 'reality' posted by number series putatively structuring the world.