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Evangelista Torricelli and the “common bond of truth” in Greek mathematics. (English)

Summary: In 1664, Evangelista Torricelli published his *Opera Geometrica*, one of the most important – yet most unheralded–publications in the history of integral calculus. In the chapter *de Dimensione Parabolae*, Torricelli uses the newfound analytic techniques of Bonaventura Cavalieri to prove, among other things, that all of the major geometrical works of Archimedes – *Quadrature of the Parabola*, *On the Sphere and the Cylinder*, *On Spirals*, and *On the Equilibrium of Planes* – are joined by a “common bond of truth.”

In this article, we show how Torricelli establishes this connection and discuss briefly the impact it had on subsequent mathematicians such as John Wallis.

MSC:

- 51-03 History of geometry
- 51M04 Elementary problems in Euclidean geometries
- 01A45 History of mathematics in the 17th century

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Biographic references:
Torricelli, Evangelista

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