

Lagrange knew the theorem only for the case of the subgroups of the symmetric group and that even for this case he had no satisfactory proof. Abbati (in 1803) completed the proof for subgroups of the symmetric group and also proved the theorem for cyclic subgroups of any group; but it was apparently more than seventy-five years after the publication of Lagrange's memoir (in 1770-1771) before the completed theorem became current (though it had appeared earlier in a paper by Galois in 1832). In this case we have attributed to Lagrange a theorem which he probably never knew or conjectured, on the ground (it would seem) that he knew a certain special case of it. In Hardy's paper we have a theorem referred to Lagrange apparently on the ground that he first published a proof of it though it had been in the literature long before. Somewhere between these two extremes lies the golden mean of proper practice in attaching the names of mathematicians to specific theorems; and this mean, in the opinion of the reviewer, is rather far removed from each of the extremes indicated.

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Statics, including Hydrostatics and the Elements of the Theory of Elasticity. By Horace Lamb. Cambridge, University Press, 1916. xii + 341 pp.

Mathematics as ordinarily taught in our colleges and mathematics as used in this work-a-day world are birds of entirely different feather, and they do not flock together. This may perhaps be illustrated by a simple problem (No. 20, p. 178) from Lamb's *Statics*:

"Water is poured into a vessel of any shape. Prove that at the instant when the center of gravity of the vessel and the contained water is lowest it is at the level of the water surface."

Let us imagine a well trained sophomore attacking this problem. It is clearly a minimum problem involving integration. We measure h vertically upward from the bottom of the inside of the container, take the density as unity (or shall we keep it as ρ ?), and let $A(h)$ be the area of the cross-section of the vessel. Then the center of gravity of the water is at a height

$$h_1 = \int_0^h \rho h A dh \div \int_0^h \rho A dh.$$

Let the mass of the vessel be denoted by M , and let its center