

# The 100-year mystery from Boyle to Lavoisier

In his 1660 book on experimental science, Robert Boyle made some things clear about how science is to be done: only trust an experiment, never philosophy, never try to make more of your experimental evidence than it directly says, and present your evidence as humbly and honestly as possible to give your reader the feeling they are witnessing the experiment themselves.

And then for 118 years, it was entirely ignored. Lavoisier will apply Boyle's principles in 1778.

Why so long? In 1620 Francis Bacon began speaking of the experimental way. His writing were said to be influential, but since he could give no example of those methods in use, I don't think they were in the end we minimally influential. The greater puzzle is found in Boyle. He uses the method, describes why, and generates a new law of nature, Boyle's law relating the pressure and volume of a gas sample.

So what was happening in that 118 years of relative experimental stagnation that the experimental way never caught on?

And why did Lavoisier's demonstration of the experimental way become so influential? Just 20 years later we have Dalton's Atomic Laws, after which science moves full bore.

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