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# Spreading scientific philosophies with instruments: the case of Atwood's machine

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We study how the paradigm of Newton's science, based on the organization of scientific knowledge as a series of mathematical laws, was definitively accepted in science courses - in the last decades of the XVIII century, in England as well as in the Continent - by means of the "universal" dynamical machine invented by George Atwood in late 1770s just for this purpose. The spreading of such machine, occurred well before the appearance of Atwood's treatise where he described the novel machine and the experiments to be performed with it, is a quite interesting historical case, which we consider in some detail. In particular, we focus on the "improvement" introduced by the Italian Giuseppe Saverio Poli and the subsequent "simplifications" of the machine, underlying the ongoing change of perspective after the definitive success of Newtonianism. The case studied here allows to recognize the relevant role played by a properly devised instrument in the acceptance of a new paradigm by non-erudite scholars, in addition to the traditional ways involving erudite scientists, and thus the complementary role of machine philosophy with respect to mathematical, philosophical or even physical reasoning.

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