who first came into the presence of Truth herself, were those who never entered this imagined antechamber, and those who were in the antechamber first, were the last in penetrating further. In partly the same spirit, Playfair has noted it as a service which Newton perhaps owed to Descartes, that "he had exhausted one of the most tempting forms of error." We shall see soon that this temptation had no attraction for those who looked at the problem in its true light, as the Italian and English philosophers already did. Voltaire has observed, far more truly, that Newton's edifice rested on no stone of Descartes' foundations. He illustrates this by relating that Newton only once read the work of Descartes, and, in doing so, wrote the word "*error*," repeatedly, on the first seven or eight pages; after which he read no more. This volume, Voltaire adds, was for some time in the possession of Newton's nephew.[13]

(*Gassendi.*) Even in his own country, the system of Descartes was by no means universally adopted. We have seen that though Gassendi was coupled with Descartes as one of the leaders of the new philosophy, he was far from admiring his work. Gassendi's own views of the causes of the motions of the heavenly bodies are not very clear, nor even very clearly referrible to the laws of mechanics; although he was one of those who had most share in showing that those laws apply to astronomical motions. In a chapter, headed[14] "Quæ sit motrix siderum causa," he reviews several opinions; but the one which he seems to adopt, is that which ascribes the motion of the celestial globes to certain fibres, of which the action is similar to that of the muscles of animals. It does not appear, therefore, that he had distinctly apprehended, either the continuation of the movements of the planets by the First Law of Motion, or their deflection by the Second Law;—the two main steps on the road to the discovery of the true forces by which they are made to describe their orbits.

(*Leibnitz, &c.*) Nor does it appear that in Germany mathematicians had attained this point of view. Leibnitz, as we have seen, did not assent to the opinions of Descartes, as containing the complete truth; and yet his own views of the physics of the universe do not seem to have any great advantage over these. In 1671 he published *A new physical hypothesis, by which the causes of most phenomena are deduced from a certain single universal motion supposed in our globe;—not to be despised either by the Tychonians or the Copernicans.* He supposes

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[13] *Cartesianism*, Enc. Phil.

[14] Gassendi, *Opera*, vol. i. p. 639.