edge a plurality of Mechanical principles; and in the most recent analytical treatises on the subject, all the doctrines are deduced from the single Law of Inertia. Indeed, if we identify Forces with the Velocities which produce them, and allow the Composition of Forces to be applicable to force *so understood*, it is easy to see that we can reduce the Laws of Motion to the Principles of Statics; and this conjunction, though it may not be considered as philosophically just, is verbally correct. If we thus multiply or extend the meanings of the term Force, we make our elementary principles simpler and fewer than before; and those persons, therefore, who are willing to assent to such a use of words, can thus obtain an additional generalization of dynamical principles; and this, as I have stated, has been adopted in several recent treatises. I shall not further discuss here how far this is a real advance in science.

Having thus rapidly gone through the history of Force and Attraction in the abstract, we return to the attempt to interpret the phenomena of the universe by the aid of these abstractions thus established.

But before we do so, we may make one remark on the history of this part of science. In consequence of the vast career into which the Doctrine of Motion has been drawn by the splendid problems proposed to it by Astronomy, the origin and starting-point of Mechanics, namely Machines, had almost been lost out of sight. *Machines* had become the smallest part of *Mechanics*, as *Land-measuring* had become the smallest part of *Geometry*. Yet the application of Mathematics to the doctrine of Machines has led, at all periods of the Science, and especially in our own time, to curious and valuable results. Some of these will be noticed in the *Additions* to this volume.