cover truths, they felt also a persuasion of a right and a growing will so to do.

Thus the revived clearness of ideas, which made its appearance at the revival of letters, brought on a struggle with the authority, intellectual and civil, of the established schools of philosophy. This clearness of idea showed itself, in the first instance, in Astronomy, and was embodied in the system of Copernicus; but the contest did not come to a crisis till a century later, in the time of Galileo and other disciples of the new doctrine. It is our present business to trace the principles of this series of events in the history of philosophy.

I do not profess to write a history of Astronomy, any further than is necessary in order to exhibit the principles on which the progression of science proceeds; and, therefore, I neglect subordinate persons and occurrences, in order to bring into view the leading features of great changes. Now in the introduction of the Copernican system into general acceptation, two leading views operated upon men's minds; the consideration of the system as exhibiting the apparent motions of the universe, and the consideration of this system with reference to its causes;—the *formal* and the *physical* aspect of the Theory;—the relations of Space and Time, and the relations of Force and Matter. These two divisions of the subject were at first not clearly separated; the second was long mixed, in a manner very dim and obscure, with the first, without appearing as a distinct subject of attention; but at last it was extricated and treated in a manner suitable to its nature. The views of Copernicus rested mainly on the formal condition of the universe, the relations of space and time; but Kepler, Galileo, and others, were led, by controversies and other causes, to give a gradually increasing attention to the physical relations of the heavenly bodies; an impulse was given to the study of Mechanics (the Doctrine of Motion), which became very soon an important and extensive science; and in no long period, the discoveries of Kepler, suggested by a vague but intense belief in the physical connection of the parts of the universe, led to the decisive and sublime generalizations of Newton.

The distinction of *formal* and *physical* Astronomy thus becomes necessary, in order to treat clearly of the discussions which the propounding of the Copernican theory occasioned. But it may be observed that, besides this great change, Astronomy made very great advances in the same path which we have already been tracing, namely, the determination of the quantities and laws of the celestial motions, in so far as they were exhibited by the ancient theories, or