and the well-known references to mathematical ideas in the schools of Pythagoras and Plato indicate. An ancient fragment[1] which enumerates briefly the Grecian mathematicians, says of Pythagoras, "He changed the occupation with this branch of knowledge into a real science, inasmuch as he contemplated its foundation from a higher point of view, and investigated the theorems less materially and more intellectually;"[2] and of Plato it says that "He filled his writings with mathematical discussions, showing everywhere how much of geometry attaches itself to philosophy."[3]

This twofold connection of mathematical with other pursuits has, after the lapse of many centuries, come prominently forward again in the nineteenth century. We have already had to record a powerful stimulus to mathematical thought in almost every chapter in which we dealt with the fruitful ideas which governed scientific work, and we have now no less to draw attention to the philosophical treatment which has been bestowed upon the foundations of science and the inroad of mathemati-

changes radically. Whilst among the earlier civilised nations we only meet with routine and practice, with empirical rules which served practical purposes in an isolated manner, the Grecian mind on the other side recognised, from the first moment when it became acquainted with this matter, that it contained something which transcended all those practical ends, but which was worthy of special attention, and which could be expressed in a general form, being, in fact, an object of science. This is the high merit of the Greek mathematicians; nor need one fear that this merit should be diminished by admitting that they borrowed the new material from the ancient Egyptian civilisation."

[1] The fragment referred to is preserved by Proclus, and is given in full in Cantor's work (vol. i. p. 124 *sqq.*) He calls it an ancient catalogue of mathematicians. It is generally attributed to Eudemus of Rhodes, who belonged to the peripatetic school of philosophy, and was the author of several historical treatises on geometry and astronomy (Cantor, vol. i. p. 108).

[2] Cantor, vol. i. p. 137.

[3] Ibid., p. 213.