

an appropriate Idea and the other did not, though I might judge one to be true and the other to be false. For instance, in comparing the emissive and the undulatory theory of light, we see that both involve the same Idea;—the Idea of a Medium acting by certain mechanical properties. The question there is, What is the true view of the mechanism of the Medium?

It may be remarked, however, that the example of Aristotle's failure in physics, given in p. 87, namely, his attempted explanation of the round image of a square hole, is a specimen rather of *indistinct* than of inappropriate ideas.

The geometrical explanation of this phenomenon, which I have there inserted, was given by Maurolycus, and before him, by Leonardo da Vinci.

We shall, in the next Book, see the influence of the appropriate general Ideas, in the formation of various sciences. It need only be observed, before we proceed, that, in order to do full justice to the physical knowledge of the Greek Schools of philosophy, it is not necessary to study their course after the time of their founders. Their fortunes, in respect of such acquisitions as we are now considering, were not progressive. The later chiefs of the Schools followed the earlier masters; and though they varied much, they added little. The Romans adopted the philosophy of their Greek subjects; but they were always, and, indeed, acknowledged themselves to be, inferior to their teachers. They were as arbitrary and loose in their ideas as the Greeks, without possessing their invention, acuteness, and spirit of system.

In addition to the vagueness which was combined with the more elevated trains of philosophical speculation among the Greeks, the Romans introduced into their treatises a kind of declamatory rhetoric, which arose probably from their forensic and political habits, and which still further obscured the waning gleams of truth. Yet we may also trace in the Roman philosophers, to whom this charge mostly applies (Lucretius, Pliny, Seneca), the national vigor and ambition. There is something Roman in the public spirit and anticipation of universal empire which they display, as citizens of the intellectual republic. Though they speak sadly or slightly of the achievements of their own generation, they betray a more abiding and vivid belief in the dignity and destined advance of human knowledge as a whole, than is obvious among the Greeks.

We must, however, turn back, in order to describe steps of more definite value to the progress of science than those which we have hitherto noticed.