

CHAPTER VII.

ON THE PHYSICAL VIEW OF NATURE.

I HAVE already remarked that none of the three great generalisations which we have so far reviewed have been creations of the philosophers of the nineteenth century. Their first enunciation belongs to antiquity, though they have only within the last three hundred years been expressed in sufficiently precise terms to permit of practical measurements and mathematical deductions. The first step towards a scientifically comprehensive employment of the familiar but vague terms of attraction, of atoms, and of undulations came, as we have seen, in each case from some solitary thinker of this country: from Newton, from Dalton, from Thomas Young. The systematic elaboration belongs to the combined scientific exertions of all the civilised nations of the world. In books on astronomy, physics, and chemistry, up to the middle of the century, we can hardly find any theoretical expositions which are not based upon one or more of these three ideas. Indeed they govern the entire science of inanimate nature during the first half of the century. None of these three principles, however, appeared suf-

1.
Recapitulation.