

till at length, by continuing the process, we arrive at *axioms* of the highest degree of generality of which science is capable.

(95.) This process is what we mean by induction; and, from what has been said, it appears that induction may be carried on in two different ways,—either by the simple juxta-position and comparison of ascertained classes, and marking their agreements and disagreements; or by considering the individuals of a class, and casting about, as it were, to find in what particular they all agree, besides that which serves as their principle of classification. Either of these methods may be put in practice, as one or the other may afford facilities in any case; but it will naturally happen that, where facts are numerous, well observed, and methodically arranged, the former will be more applicable than in the contrary case: the one is better adapted to the maturity, the other to the infancy of science: the one employs, as an engine, the division of labor; the other mainly relies on individual penetration, and requires a union of many branches of knowledge in one person.

CHAP. III.

OF THE STATE OF PHYSICAL SCIENCE IN GENERAL, PREVIOUS TO THE AGE OF GALILEO AND BACON.

(96.) It is to our immortal countryman Bacon that we owe the broad announcement of this grand and fertile principle; and the developement of the idea, that the whole of natural philosophy consists entirely of a series of inductive generalizations, commencing with the most circumstantially stated particulars, and carried up to universal laws, or axioms, which comprehend in their statements every subordinate degree of generality, and of a corresponding series of inverted reasoning from gen-