

representative of an endless host of applicable and actually existent truths. For the objects of both sciences you must have inductive or observational evidence; but by a moral light in the one science, and a mathematical light in the other, we arrive at the ethics of the first science, at the mathematics of the second, without the aid of the inductive philosophy.

12. It is interesting to note if aught may have fallen from Lord Bacon himself upon this subject. In his English treatise on "the advancement of learning," he says, "that in mathematics I can report no deficiency." So that this great author of the experimental method by which to arrive at a true philosophy of facts, had no improvement to propose on the methods of mathematical investigation. And in his more extended Latin treatise on the same subject, entitled, "*De augmentis scientiarum*," where he takes so comprehensive a view of all the possible objects of human knowledge, he says, speaking of geometry and arithmetic, "*Quæ duo artes, magno certe cum acumine, et industria, inquisitæ et tractatæ sunt: veruntamen et Euclidis laboribus in geometricis nihil additum est a sequentibus quod intervallo tot seculorum dignum sit;*" or "which two arts have certainly been investigated and handled with much acuteness and industry; notwithstanding which, however, nothing has been added to the labours of Euclid in geometry by those who have followed him, that is worthy of so long a series of ages."

13. The proper discrimination then to be made in natural philosophy, is between the facts or data of the science, and the relations that by means of