

ancient literature would no more exist for us, than the works, if any there were, published before the catastrophe that annihilated that highly scientific nation, which, according to Bailly, existed in remote ages in the centre of Tartary, or at the roots of Caucasus. In the sciences we should have had all to create ; and at the moment when the human mind should have emerged from its stupor and shaken off its slumbers, we should have been no more advanced than the Greeks were after the taking of Troy." He adds, that this consideration inspires feelings towards the religious orders very different from those which, when he wrote, were prevalent among his countrymen.

Except so far as their religious opinions interfered, it was natural that men who lived a life of quiet and study, and were necessarily in a great measure removed from the absorbing and blinding interests with which practical life occupies the thoughts, should cultivate science more successfully than others, precisely because their ideas on speculative subjects had time and opportunity to become clear and steady. The studies which were cultivated under the name of the Seven Liberal Arts, necessarily tended to favor this effect. The *Trivium*,<sup>18</sup> indeed, which consisted of Grammar, Logic, and Rhetoric, had no direct bearing upon those ideas with which physical science is concerned ; but the *Quadrivium*, Music, Arithmetic, Geometry, Astronomy, could not be pursued with any attention, without a corresponding improvement of the mind for the purposes of sound knowledge.<sup>19</sup>

9. *Popular Opinions*.—That, even in the best intellects, something was wanting to fit them for scientific progress and discovery, is obvious from the fact that science was so long absolutely stationary. And I have endeavored to show that one part of this deficiency was the want of the requisite clearness and vigor of the fundamental scientific ideas. If these were wanting, even in the most powerful and most cultivated minds, we may easily conceive that still greater confusion and obscurity prevailed in the common class of mankind. They actually adopted the belief, however crude and inconsistent, that the form of the earth and heavens really is what at any place it appears to be ; that the earth is flat, and the waters of the sky sustained above a material floor, through which in showers they descend. Yet the true doctrines of

<sup>18</sup> Bruck. iii. 597.

<sup>19</sup> Roger Bacon, in his *Specula Mathematica*, cap. i. says, "Harum scientiarum porta et clavis est mathematica, quam sancti a principio mundi invenerunt, etc. Cujus negligentia jam per triginta vel quadraginta annos destruxit totum studium Latinorum." I do not know on what occasion this neglect took place.