

column, turned back to the wall, and adhered to it in the intervening space. The splendid remains of Palmyra, Balbec, Petra, exhibit endless examples of this kind of perverse inventiveness; and show us, very instructively, how the decay of art and of science alike accompany this indistinctness of ideas which we are now endeavoring to illustrate.

4. *Indistinctness of Ideas in Astronomy.*—Returning to the sciences, it may be supposed, at first sight, that, with regard to astronomy, we have not the same ground for charging the stationary period with indistinctness of ideas on that subject, since they were able to acquire and verify, and, in some measure, to apply, the doctrines previously established. And, undoubtedly, it must be confessed that men's notions of the relations of space and number are never very indistinct. It appears to be impossible for these chains of elementary perception ever to be much entangled. The later Greeks, the Arabians, and the earliest modern astronomers, must have conceived the hypotheses of the Ptolemaic system with tolerable completeness. And yet, we may assert, that during the stationary period, men did not possess the notions, even of space and number, in that vivid and vigorous manner which enables them to discover new truths. If they had perceived distinctly that the astronomical theorist had merely to do with *relative* motions, they must have been led to see the possibility, at least, of the Copernican system; as the Greeks, at an earlier period, had already perceived it. We find no trace of this. Indeed, the mode in which the Arabian mathematicians present the solutions of their problems, does not indicate that clear apprehension of the relations of space, and that delight in the contemplation of them, which the Greek geometrical speculations imply. The Arabs are in the habit of giving conclusions without demonstrations, precepts without the investigations by which they are obtained; as if their main object were practical rather than speculative,—the calculation of results rather than the exposition of theory. Delambre<sup>3</sup> has been obliged to exercise great ingenuity, in order to discover the method by which Ibn Iounis proved his solution of certain difficult problems.

5. *Indistinctness of Ideas shown by Skeptics.*—The same unsteadiness of ideas which prevents men from obtaining clear views, and steady and just convictions, on special subjects, may lead them to despair of or deny the possibility of acquiring certainty at all, and may thus make them skeptics with regard to all knowledge. Such skeptics

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<sup>3</sup> Delamb. *M. A.* p. 125-S.