

With these true principles was mixed much error and indistinctness, even in the best writers. Euclid, and the Platonists, maintained that vision is exercised by rays proceeding *from* the eye, not *to* it; so that when we see objects, we learn their form as a blind man would do, by feeling it out with his staff. This mistake, however, though Montucla speaks severely of it, was neither very discreditable nor very injurious; for the mathematical conclusions on each supposition are necessarily the same. Another curious and false assumption is, that these visual rays are not close together, but separated by intervals, like the fingers when the hand is spread. The motive for this invention was the wish to account for the fact, that in looking for a small object, as a needle, we often cannot see it when it is under our nose; which it was conceived would be impossible if the visual rays reached to all points of the surface before us.

These errors would not have prevented the progress of the science. But the Aristotelian physics, as usual, contained speculations more essentially faulty. Aristotle's views led him to try to describe the kind of causation by which vision is produced, instead of the laws by which it is exercised; and the attempt consisted, as in other subjects, of indistinct principles, and ill-combined facts. According to him, vision must be produced by a Medium,—by something *between* the object and the eye,—for if we press the object on the eye, we do not see it; this Medium is Light, or “the transparent in action;” darkness occurs when the transparency is potential, not actual; color is not the “absolute visible,” but something which is *on* the absolute visible; color has the power of setting the transparent in action; it is not, however, all colors that are seen by means of light, but only the proper color of each object; for some things, as the heads, and scales, and eyes of fish, are seen in the dark; but then they are not seen with their proper color.”¹

In all this there is no steady adherence either to one notion, or to one class of facts. The distinction of Power and Act is introduced to modify the Idea of Transparency, according to the formula of the school; then Color is made to be something unknown in addition to Visibility; and the distinction of “proper” and “improper” colors is assumed, as sufficient to account for a phenomenon. Such classifications have in them nothing of which the mind can take steady hold; nor is it difficult to see that they do not come under those

¹ De Anim. ii. 6.