vision is strongest in the outer circle, because the periphery is greater; —thus we shall have a gradation from red, through green, to purple, in passing from the outer to the inner circle." This account would hardly have deserved much notice, if it had not been for a strange attempt to revive it, or something very like it, in modern times. The same doctrine is found in the work of De Dominis.[4] According to him, light is white: but if we mix with the light something dark, the colors arise,—first red, then green, then blue or violet. He applies this to explain the colors of the rainbow,[5] by means of the consideration that, of the rays which come to the eye from the globes of water, some go through a larger thickness of the globe than others, whence he obtains the gradation of colors just described.

Descartes came far nearer the true philosophy of the iridal colors. He found that a similar series of colors was produced by refraction of light bounded by shade, through a prism;[6] and he rightly inferred that neither the curvature of the surface of the drops of water, nor the reflection, nor the repetition of refraction, were necessary to the generation of such colors. In further examining the course of the rays, he approaches very near to the true conception of the case; and we are led to believe that he might have anticipated Newton in his discovery of the unequal refrangibility of different colors, if it had been possible for him to reason any otherwise than in the terms and notions of his preconceived hypotheses. The conclusion which he draws is,[7] that "the particles of the subtile matter which transmit the action of light, endeavor to rotate with so great a force and impetus, that they cannot move in a straight line (whence comes refraction): and that those particles which endeavor to revolve much more strongly produce a red color, those which endeavor to move only a little more strongly produce yellow." Here we have a clear perception that colors and unequal refraction are connected, though the cause of refraction is expressed by a gratuitous hypothesis. And we may add, that he applies this notion rightly, so far as he explains himself,[8] to account for the colors of the rainbow.

It appears to me that Newton and others have done Descartes injustice, in ascribing to De Dominis the true theory of the rainbow. There are two main points of this theory, namely, the showing that a *bright* circular band, of a certain definite diameter, arises from the

---

[4] Cap. iii. p. 9. See also Göthe, *Farbenl.* vol. ii. p. 251. [5] Göthe, p. 263.
[6] *Meteor.* Sect. viii. p. 190. [7] Sect. vii. p. 192. [8] *Meteor.* Sect. ix.