

second; and who can conceive of vibrations spreading on all sides of a luminous body with such a velocity? Take, for an example, one of the fixed stars. Astronomers have demonstrated that the distance of the nearest star cannot be less than twenty billions of miles, while stars of smaller magnitude must be situated at a distance immensely greater. Now, it has been shown by Dr. Wollaston that the light of Sirius is only one twelve thousand millionth part (11,839,530,000) as great as the light of the sun; and the light of the star Vega, of much smaller magnitude, is 180 millions of times less than that of the sun. Yet, if the eyes of the ten thousand millions of animals on the globe were all turned towards this star at the same instant, each one would have a distinct image of it formed upon the retina. And if the millions of millions of other worlds, scattered through space, are peopled as thickly as our own, and every eye there were directed to that star at the same time, each eye would see it as distinctly as if no other one were gazing upon it. What an astonishing power, then, is light! Who does not feel himself lost in attempting to comprehend its nature!

But, still further, philosophers suppose they have demonstrated that the different colors in nature are produced by a difference in the number of vibrations in the luminiferous ether, and that, in a single second of time, the eye is affected by these movements as follows:—

In red, . . .	477,000,000,000 of times ;
In orange, . . .	506,000,000,000 of times ;
In yellow, . . .	535,000,000,000 of times ;
In green, . . .	577,000,000,000 of times ;
In blue, . . .	622,000,000,000 of times ;
In indigo, . . .	658,000,000,000 of times ;
In violet, . . .	699,000,000,000 of times.