

dent from his speculations respecting the nature of light and the cause of gravitation; and in the tenth proposition in the third book of the Principia, he gives the following reason for supposing, that the motions of the planets may be continued for an indefinite period of time; *si ascendatur in cœlos ubi pondus medii, in quo planetæ moventur, diminuitur in immensum, resistentia prope cessabit**.

We may perhaps make the words this note refers to, somewhat better understood by taking an imaginary case. Let us suppose a sentient being sustained in any part of our system, which is not occupied by the grosser matter of the planetary bodies, and endowed with a power of sight as great as is our own when assisted by the best telescope yet invented. To such a being, all the bodies of our system would at once become visible, and the firmament around would be seen by him, glittering with the light of many million stars. But we must remember that each of these shining points is seen only through the intervention of a beam of light sent down by it directly to the eye. There is, therefore, not a single point in the empty spaces of our system, through which millions of beams of light do not pass unceasingly, yet with a material action so subtile that one beam interferes not with another, but each passes onward, as if moving by itself—the sole messenger from the centre of light to the sentient beings of the universe.

In general considerations like these the mind seems to lose its power, and becomes almost bewildered: and if we call in the aid of calculation, though we build on demonstration and clothe our

* See also the concluding parts of Newton's Optics, especially *Queries* 18, 19, 20, and 28.