That belongs to mechanics, and we must take it for granted. But in order to understand how it is possible to pass from this familiar case that we see every day before our eyes, to that of a vast globe like the earth revolving in an orbit about the sun, it will be necessary to enlarge the scale of our ideas of magnitude. We must try to conceive a similar degree of command and control exercised over such a mass as our globe, and over the much greater masses of the remote planets, by the sun as a central body; hardly moved from its place, while as it were swinging all the others round it. And for this purpose it is necessary to possess some distinct conception of what sort of a body the sun really is—of its size—of its distance from us—of its weight or mass—and of the proportion it bears to the other bodies, the earth included, which circulate round it.

(5.) It is strange what crude ideas people in general have about the size of very distant objects. I was reading only the other day a letter to the *Times* giving an account of a magnificent meteor. The writer described it as *round, about the size of a cricket-ball, and apparently about* 100 *yards off.* Many persons spoke of the tail of the great comet of 1858 as being several yards long, without at all seeming aware of the absurdity of such a way of talking. The sun or the moon may be covered by a three-penny piece held at arm's length: but it takes a house, or a church, or a great tree to cover it on a near horizon, and a hill or a mountain on a distant one; so that it must be at least as large as any of these objects. Among