that has been rubbed, and over the balls, they quickly surrender their forces. These forces are temporary. They are called *electric forces*, and their cause *electricity*. The attractive force that draws the balls to the earth existed before the experiment. No manipulation can destroy it or increase it; it is eternal and unchangeable, and exists between all portions of matter. This force is called the *force of gravity*, and the phenomenon is called *gravitation*.

We have seen the effects of attractive and repellent forces, reaching across sensible distances. Have we any evidence that these forces exist among portions of matter, at insensible distances, *i.e.*, at distances too short to be perceived by our senses? Stretch a piece of rubber; you realize that there is a force resisting you. You reason that if the supposition be true, that the grains or molecules that compose the piece of rubber do not touch each other, then there must be a powerful attractive force reaching across the spaces between the molecules, to prevent their separation. After stretching the rubber, let go one end. It springs back to its original form. What is the cause? Compress the rubber; its volume is diminished. (Does this confirm our supposition respecting the granular structure of matter?) Remove the pressure; the rubber springs back to its original form. What is the cause?

Every body of matter, with the possible exception of the molecule, whether solid, liquid, or gaseous, may be forced into a smaller volume by pressure, — in other words, *matter is compressible*. When pressure is removed, the body expands into nearly or quite its original volume. This shows two things: first, that *the matter of which a body is formed does not really fill all the space which the body appears to occupy;* and, second, that *in the body is a force, which, acting from within outward, resists outward pressure tending to compress it, and expands the body to its original volume when pressure is removed.* This is, of course, a repellent force, and is exerted among molecules, tending to push them farther apart.