

I wish to know why an atom is where it is, I must look to its physical surroundings and history for the explanation. This is as true for organisms as for the solar system. If I move my arm it is not due to my volition, but to the contraction of a muscle; and this in turn is due to the contractibility of muscular fibre under nervous influence. The nervous action, again, is due to an explosion in some ganglion or ganglia, whereby molecular energy is liberated, and this is due to other facts of the same kind. Nowhere do we find anything but physical consequents of physical antecedents. Hence the physical series goes along by itself. As advanced thinkers we are shut up to this view. The earlier notion that physical energy becomes thought or feeling has long been abandoned as involving complete ignorance of physical science. The notion still lingers in the writings of some rhetoricians, but has no credit with those who know. Prof. Clifford dismisses it summarily as "nonsense." There is nothing to do then, but to declare that the physical series goes along by itself, and that thoughts and volitions, if they exist, simply attend the series as a shadow attends its substance. As such they are absolutely dependent upon their physical ground, yet as such they involve no expenditure of energy. This remains always on its own side of the house, and is expended in working the nerves. The vulgar materialist supposes that the brain produces thoughts which detach themselves from the physical cause and thereafter proceed on mental principles and with a measure of independence. For him the brain has the function of producing mind, and mind when produced has the same functions of guiding and controlling life as it has in the spiritual view; but the scientific materialist knows that thoughts have no ground of existence or movement in themselves. They come and go or combine just as the nerves determine, while the nerves belong to the physical series and go along by themselves. This is the advanced view. When Prof. Huxley wrote his lecture on "The Physical Basis of Life" he thought our volitions do count for something in the course of events; but at a later period in his lecture, on the