same moving power, and all without arriving at any correct idea as to the ultimate source of the force employed. But, if we were inclined to theorize farther, we might do so; and it is easy to imagine how two theorists might form very different *hypotheses* as to the origin of the power which alternately raised and depressed the piston-rod of the engine. One, for example, might maintain that the boiler (whose contents we will suppose that neither theorist has been permitted to examine) was the den of some powerful unknown animal, and he would not be without plausible analogies in the warmth, the supply of fuel and water, the breathing noises, the smoke, and above all, the mechanical power exerted. He would say (not without a show of reason), that where there is a positive and wonderful effect, and many strong analogies, such as materials consumed, and all the usual signs of life maintained, we are not to deny the existence of animal life because we know no animal that consumes such food. Nay, he might observe with truth, that the fuel actually consists of the chemical ingredients which constitute the chief food of all animals, &c.; while, on the other hand, his brother theorist, who caught a glimpse of the fire, and detected the peculiar sounds of ebullition, might acquire a better notion of the case, and form a theory more in consonance with fact.

(207.) Now, nothing is more common in physics than to find two, or even many, *theories* maintained as to the origin of a natural phenomenon. For instance, in the case of heat itself, one considers it as a really existing material fluid, of such exceeding subtlety as to penetrate all bodies, and even to be capable of combining with them chemically; while another regards it as nothing but a rapid vibratory or rotatory motion in the ultimate particles of the bodies heated; and produces a singularly ingenious train of mechanical reasoning to show, that there is nothing contradictory to sound dynamical principles in such a doctrine. Thus, again, with light: one considers it as consisting in actual particles darted forth from luminous bodies, and acted