

these and other difficulties, that this theory of the universe is no stronger than its weakest link. Let it be conceded that at the beginning of motion, of life, of mind, or at any other point, it requires to be supplemented by a feather's weight of aid from outside, and it is no longer an adequate theory of the universe. It has gone to pieces, and become nothing more than a very interesting and valuable series of observations in physics and physiology. I have stated these among the difficulties that beset the theory of evolution, over against the mass of scientific facts that are alleged in favor of it, as being essential to a just statement of the subject. Let me once more remind you that I am not now controverting the theory of evolution, but only setting it forth with a view to some of the inferences to be drawn from it. For the purposes of the argument, we waive all these difficulties. For the time being, we accept the theory of evolution. We suppose the volume of matter, vast but not infinite, and the quantum of motion eternally constant in amount, beginning its plastic work before all calculated ages. We will try to suppose (as Mr. Spencer demands, see "First Principles," sec. 82,) that motion is transformed into life, and into mental action, just as into heat, and light and electricity; that "motion, heat, light, chemical affinity, etc., are alike transformable into each other, and into sensation, emotion, thought—these, in their turn being directly or indirectly retransformable into the original shapes." "How this metamorphosis takes place—how a force existing as motion, heat or light, can become a mode of consciousness; how it is possible for aërial vibrations to generate the sensations we call sound, or for the forces liberated by chemical change in the brain to give rise to emotion, these are mysteries which it is impossible to fathom. But they are not profounder mysteries than the transformations of the physical forces into each other." (Sec. 82, *ad fin.*) The statements of this representative philosopher leave nothing to be desired in point of distinctness and perspicuity.

Those actions which we are accustomed to speak of as mental—thought, emotion, volition—are, according to him, simply