

that is to say, the mechanistic, origin of a cell is scientifically imaginable,<sup>1</sup> though all believe that once formed, cells exist as mechanisms in a mechanistic universe.<sup>2</sup> Thus the chemist puts his mind at rest regarding the existence of life, just as the physicist calms his regarding the existence of matter, simply by turning his back on the problem. Thereby he suffers nothing in his practical task as a man of science.

Returning now to fitness, we may be sure that, whatever successes science shall in future celebrate within the domain of teleology, the philosopher will never cease to perceive the wonder of a universe which moves onward from chaos to very perfect harmonies, and, quite apart from any possible mechanistic

<sup>1</sup> This is not to express an opinion concerning the problem of abiogenesis; all admit that we cannot disprove such a theory. But while biophysicists like Professor Schäfer follow Spencer in assuming a gradual evolution of the organic from the inorganic, biochemists are more than ever unable to perceive how such a process is possible, and without taking any final stand prefer to let the riddle rest. But if life has originated by an evolutionary process from dead matter, that is surely the crowning and most wonderful instance of teleology in the whole universe.

<sup>2</sup> See, for instance, F. Hofmeister, "Die Chemische Organisation der Zelle," Vieweg, Brunswick, 1901, and Alsberg, "Mechanisms of Cell Activity," *Science*, pp. 97-105, July 28, 1911.