

however, would not always be preserved. In spite of their differences of density, these three atmospheric layers would often become mixed, producing formidable storms and violent ebullitions; frequently throwing down, rending, upheaving, and confounding these incandescent zones.

As to the globe itself, without being so much agitated as its hot and shifting atmosphere, it would be no less subject to perpetual tempests, occasioned by the thousand chemical actions which took place in its molten mass. On the other hand, the electricity resulting from these powerful chemical actions, operating on such a vast scale, would induce frightful electric detonations, thunder adding to the horror of this primitive scene, which no imagination, no human pencil could trace, and which constitutes that gloomy and disastrous chaos of which the legendary history of every ancient race has transmitted the tradition. In this manner would our globe circulate in space, carrying in its train the flaming streaks of its multiple atmosphere, unfitted, as yet, for living beings, and impenetrable to the rays of the sun, around which it described its vast orbit.

The temperature of the planetary regions is infinitely low; according to Laplace it cannot be estimated at less than 100° below zero. The glacial regions traversed in its course by the incandescent globe would necessarily cool it, at first superficially, when it would assume a pasty consistence. It must not be forgotten that the earth, on account of its liquid state, would be obedient in all its mass to the action of flux and reflux, which proceeds from the attraction of the sun and moon, but to which the sea alone is now subject. This action, to which all its liquid and movable particles were subject, would singularly accelerate the commencement of the solidification of the terrestrial mass. It would thus gradually assume that sort of consistence which iron attains, when it is first withdrawn from the furnace, in the process of puddling.

As the earth cooled, beds of concrete substances would necessarily be formed, which, floating at first in isolated masses on the surface of the semi-fluid matter, would in course of time come together, consolidate, and form continuous banks; just as we see with the ice of the present Polar Seas, which, when brought in contact by the agitation of the waves, coalesces and forms icebergs, more or less movable. By extending this phenomenon to the whole surface of the globe, the solidification of its entire surface would be produced. A solid, but still thin and fragile crust, would thus envelop the whole earth, enclosing entirely its still fluid interior.