

We believe our universe was once a nebula.¹ There is even now what may be called "an invisible veil of nebula over the whole sky." (Prof. Turner, Modern astronomy). In parts thereof the photographic plate reveals to us enormous aggregations of feebly luminous gas. The stars of the Pleiades are enwrapped in mists which extend in wisps from one to another; the great Dumb-bell nebula has a broad ring of nebulosity surrounding its globular mass; Orion has in his sword a nebula which to the eye is huge, but the sensitised plate, by long exposure, shows the whole giant constellation to be wreathed in filmy ribbons and scarfs. We think the stars were formed by the concentration of nebulous matter into spherical forms by the attraction of gravitation, but of the nature and cause of this force we know nothing yet, though we have learned that it acts in the same way throughout the universe. This so-called universe may be limited, and is possibly globular, but we suppose it would require at least 10,000 years for light, which travels nearly 200,000 miles a second, to traverse the assemblage of stars it contains. While stars are being formed, some of the coalescing matter is either left behind or thrown off by the rotation of the principal body and forms planets.

We believe the stars are all in movement, possibly around their common centre of gravity, and that our sun, which is one of them, is rushing towards a point in the heavens where the others seem to be opening out before him, while behind him they are closing in. We see with our telescopes, within many nebulae, luminous patches which we think are stars in process of formation, and we have observed many stars kindle where previously there were none to be seen. We have ascertained that they are composed of similar materials to those we have under our feet, and we have sorted them out into classes according to their different luminosities, which are thought to indicate their various stages of development. We think that as one star differs from another in glory, some emitting more light than others, so there are probably multitudes of dark stars, and that all stars have a regulated life-history of birth, growth, decay and death. Outside our universe of stars, in which the sun is not central, there may be others, also globular, and so on, throughout space, *ad infinitum*. The universe, we think, is bathed in ether, of the nature of which we as yet know very little. Ether, matter, electricity, seem to merge, and to be the Ur-stoff or protyle from which atoms grow.

¹ Herschell used to call it Fire-Mist; it was then thought to be attenuated hydrogen. It is material, for it gives to the spectroscope a peculiar green line (nebulium) and it is now thought by Sir Wm. Crookes to be matter in a fourth state, that of radiance.