law of nature, which (like the beautiful law which connects the square of the periods of revolution with the cube of the major axes) represents the above-named elements of the order of succession of the individual planetary bodies of each group in their dependence upon the distances. Although the planet which is nearest to the Sun (Mercury) is the densest, even six or eight times denser than some of the exterior planets, Jupiter, Saturn, Uranus, and Neptune, the order of succession, in the case of Venus, the Earth, and Mars, or Jupiter, Saturn, and Uranus, is very irregular. The absolute magnitudes do generally, as Kepler has already observed (*Harmonice Mundi*, vol. iv., p. 194; *Cosmos*, vol. i., p. 93–97), increase with the distances; but this does not hold good when the planets are considered individually. Mars is smaller than the Earth, Uranus smaller than Saturn, Saturn smaller than Jupiter, and succeeds immediately to a host of planets, which, on account of their smallness, are almost immeasurable. It is true the period of rotation generally increases with the distance from the Sun; but it is, in the case of Mars, slower than in that of the Earth, slower in Saturn than in Jupiter.

The external world of forms, I again repeat it, can only be represented in the enumeration of relations of space, as something actually existing in nature, and not as the subject of intellectual deductions of previously known causal relations. No universal law for the cosmical regions is here traced, any more than for terrestrial regions in the culminating points of mountain chains, or in the configuration of continents. These are natural facts which have resulted from the conflict of numerous attractive and repulsive forces, under conditions which are unknown to us. We here enter with eager and unsatisfied curiosity upon the obscure domain of *incipient formation*. It is to these phenomena that the so-frequently misused term of *natural facts* may be applied in its strictest sense, cosmical processes which have taken place during spaces of time of, to us, immeasurable extent. If the planets have been formed from revolving rings of nebulous matter, it must, after having commenced to aggregate into globes, according to the preponderating influence of individual centers of attraction, have passed through an interminable series of conditions in order to have formed sometimes simple, sometimes interwoven orbits, planets of such different magnitudes, flattening, and density, with and without moons, and even, in one case, to blend the satellites into a solid ring.