

two centuries, been carried to a height of perfection which affords just grounds for exultation in the achievements of the human intellect.

In the investigation of the powers which are concerned in the phenomena of living beings, we meet with difficulties incomparably greater than those that attend the discovery of the physical forces by which the parts of inanimate matter are actuated. The elements of the inorganic world are few and simple; the combinations they present are in most cases easily unravelled; and the powers which actuate their motions, or effect their union and their changes, are reducible to a small number of general laws, of which the results may, for the most part, be anticipated, and exactly determined by calculation. What law, for instance, can be more simple than that of gravitation, to which all material bodies, whatever be their size, figure, or other properties, and whatever be their relative positions, are equally subjected; and of which the observations of modern astronomers have rendered it probable that the influence extends to the remotest regions of space? The most undeviating regularity is exhibited in the motions of those stupendous planetary masses, which continually roll onwards in the orbits prescribed by this all-pervading force. Even the slighter perturbations occasioned by their mutual influence are but direct results of the same general law, and are necessarily restrained within certain limits, which they never can exceed, and by which the permanence of the system is effectually secured. All the terrestrial changes dependent on these motions partake of the same constancy. The same periodic order governs the succession of day and night, the rise and fall of the tides, and the return of the seasons: which order, as far as we can perceive, is incapable of being disturbed by any existing cause.

Equally definite are the operations of the forces of cohesion, of elasticity, or of whatever other mechanical powers of attraction or repulsion there may be, which actuate, at insensible distances, the particles of matter. We see liquids, in obedience to these forces, collecting in spheroidal masses,