hence, each particle is a centre, and there is no reason to believe, that the parts which surround the centre are more dense than those which are about any other point. Besides, if one considerable part of the globe were denser than another, the axis of rotation would be found near the dense parts, and an inequality would ensue in the diurnal revolution; we should remark an inequality in the apparent motion of the fixed stars; they would appear to move more quickly or slowly in the zenith, or horizon, according as we should be placed on the denser or lighter parts of the earth; and the axis of the globe no longer passing through the centre of gravity, would also very sensibly change its position : but nothing like this ever happens; on the contrary, the diurnal motion of the earth is equal and uniform. At all parts of the Earth's surface, the stars appear to move with the same velocity, at all heights, and if there be any rotation in its axis, it is so trifling as to have escaped observation; it must therefore be concluded, that the globe is homogeneous, or nearly so in all its parts.

If the earth were a hollow and void globe, and the crust, for example, not more than two or three miles thick; it would produce vol. 1. P these

1

105