Against any hypothesis which assumes a thin crust inclosing a liquid or viscous interior, weighty and, indeed, insuperable objections have been urged. It has been suggested, however, that the almost universal traces of present or former volcanic action, the evidence from the compressed strata in mountain regions that the crust of the earth must have a capacity for slipping toward certain lines, the great amount of horizontal compression of strata which can be proved to have been accomplished, and the secular changes of climate—notably the former warm climate near the north pole—furnish grounds for inquiry whether the doctrine of a fluid substratum over a rigid nucleus, which has been urged by several able writers, would not be compatible with mechanical considerations, and whether, under these circumstances, changes in latitude would not result from unequal thickening of the crust.[25] This question of the internal condition of the globe is discussed at p. 89.

§ 6. **Changes of the Earth's Centre of Gravity.**—If the centre of gravity in our planet, as pointed out by Herschel, be not coincident with the centre of figure, but lies somewhat to the south of it, any variation in its position will affect the ocean, which of course adjusts itself in relation to the earth's centre of gravity. How far any redistribution of the matter within the earth, in such a way as to affect the present equilibrium, is now possible, we cannot tell. But certain revolutions at the surface may from time to time produce changes of this kind. The accumulation of ice which, as will be immediately described (§ 8), is believed to gather round one pole during the maximum

[25] O. Fisher, Geol. Mag. 1878, p. 552, "Physics of the Earth's Crust," 1882; 2d Edition 1889.