

must therefore elevate the newly-formed deposits above their former level;—thus the bottom of an ocean may become a continent. The whole expansion, however, resulting from the altered circumstances, may not take place until *long* after the filling up of the sea; in which case its conversion into dry land will result partly from the accumulation of detritus, and partly from the elevation of the bottom. As the heat now penetrates the newly-formed strata, a different action may be induced; the beds of clay or sand may become consolidated, and instead of expanding, may contract. In this case, either large depressions will occur within the limits of the new continent, or after another interval, the new land may again subside, and form a shallow sea. This sea may be again filled up by a repetition of the same processes as before;—and thus alternations of marine and fresh-water deposits may occur, having interposed between them the productions of the dry land.*

To review the physical changes which are still taking place around the Bay of Naples would prove highly interesting, but my limits will only permit me to observe, that whole mountains have been elevated on the one hand, and temples and palaces have sunk beneath the sea on the other. In our

constructed, and the surface of congelation removed to a distance from the body, by the heat thereby accumulated beneath the new covering.

* Proceedings of the Geological Society, March 1834.