

them, came the Secondary strata that constitute the greater part of the land.

But all these sedimentary deposits have passed from their original soft condition into that of solid stone. Hutton attributed this change to the action of subterranean heat. In his day, the chemistry of geology was exceedingly imperfect, though in Hutton's hands it was greatly less erroneous than in those of Werner. The solubility of silica, for instance, and its capacity for being introduced in aqueous solution into the minutest crevices and pores of a rock, were not known. It need not, therefore, surprise us to find that in the Huttonian conception the flints in chalk were injected into the rock in a molten state, and that the agate of fossil wood bore marks of igneous fusion. Hutton did not realise to what an extent mere compression could solidify the materials of sedimentary strata, nor how much may be done, by infiltration and deposition between the clastic grains, towards converting originally loose detritus into the most compact kind of stone. But there was one kind of compression which though not perhaps at first obvious, was clearly perceived by him in its geological relations. Following out ideas suggested to him by Black, he saw that the influence of heat upon rocks must be largely modified by pressure. The more volatile components, which would be speedily driven off by a high temperature at the surface of the earth, might be retained under great pressure below that surface. Hutton conceived that limestone might even be fused in this way, and yet still keep its carbonic acid. This idea was ridiculed at the time, but its truth was