

the country round Caracas we found gneiss, and mica-slate containing beds of primitive limestone. The strata are scarcely more fractured or irregularly inclined than near Freyburg in Saxony, or wherever mountains of primitive formation rise abruptly to great heights. I found at Caracas neither basalt nor dolomite, nor even trachytes or trap-porphyrines; nor in general any trace of an extinguished volcano, unless we choose to regard the diabases of primitive grünstein, contained in gneiss, as masses of lava, which have filled up fissures. These diabases are the same as those of Bohemia, Saxony, and Franconia;\* and whatever opinion may be entertained respecting the ancient causes of the oxidation of the globe at its surface, all those primitive mountains, which contain a mixture of hornblende and feldspar, either in veins or in balls with concentric layers, will not, I presume, be called volcanic formations. Mont Blanc and Mont d'Or will not be ranged in one and the same class. Even the partisans of the Huttonian or volcanic theory make a distinction between the lavas melted under the mere pressure of the atmosphere at the surface of the globe, and those layers formed by fire beneath the immense weight of the ocean and superincumbent rocks. They would not confound Auvergne and the granitic valley of Caracas in the same denomination; that of a country of extinct volcanos.

I never could have pronounced the opinion, that the Silla and the Cerro de Avila, mountains of gneiss and mica-slate, were in dangerous proximity to the city of Caracas because they contained a great quantity of pyrites in subordinate beds of primitive limestone. But I remember having said, during my stay at Caracas, that the eastern extremity of Terra Firma appeared, since the great earthquake of Quito, in a state of agitation, which warranted apprehension that the province of Venezuela would gradually be exposed to violent commotions. I added, that when a country had been long subject to frequent shocks, new subterranean communications seemed to open with neighbouring countries; and that the volcanos of the West India Islands,

\* These grünsteins are found in Bohemia, near Pilsen, in granite; in Saxony, in the mica-slates of Scheenberg; in Franconia, between Steeben and Lauenstein, in transition-slates.