of molten rock," it is easy to see that the observed mechanical phenomena of volcanos and earthquakes will result as the effect of a local excitement superadded to a general operation. Such is an outline of the explanation offered by the hypothesis of a general heat pervading the interior of the globe.

Mr. Darwin, in his summary of the phenomena attending earthquakes on the coast of Chili, in 1835, regards, very justly, the submarine outbursts, the renewed volcanic activity, and the permanent elevation of the land, as forming parts of one great action, and being effects of one great cause, modified only by local circumstances; and that, therefore, " no theory of the cause of volcanos, which is not applicable to continental elevations, can be considered as well established." This appears a just inference. He is further of opinion that the following conclusions may be drawn from the phenomena of earthquakes.

1st. That the primary shock of an earthquake is caused by a violent rending of the strata, which, on the coast of Chili and Peru, seems generally to occur at the bottom of the neighbouring sea.

2d. That this is followed by many minor fractures, which, though extending upwards, do not, except in submarine volcanos, actually reach the surface.

3d. That the area thus fissured extends parallel, or approximately parallel, to the neighbouring coast mountains.

Lastly. That the earthquake relieves the subterranean force *precisely in the same manner as an eruption through an ordinary volcano.*

Now every thing here said may be adopted, without hesitation, into the general speculation of Humboldt, of which, in fact, these inferences from observation are strongly illustrative.

Another view, which is strongly supported, is usually considered by its defenders as " the chemical hypothesis" of volcanic action. It presented itself both to Davy and Gay-Lussac, as a natural consequence of the discovery of the metallic and metalloid bases of the