nourishment of plants, a soil consisting chiefly of inorganic particles is still more necessary, both for sustaining their roots, and for receiving, retaining, and partly also preparing nutrition for them; for, according to accurate observations, some inorganic substances exert an influence upon the decomposition of animal and vegetable remains. These effects vary much according to differences in the aggregation and chemical nature of the inorganic parts; of which circumstances, however, the different qualities of rocks are the ultimate cause.

Two kinds of productive soil may be distinguished with regard to their origin. The soil has either originated in the place in which it now is from the subjacent rock, or it has been transported to the places in which it is now found by some power, especially by that of water. The first kind may be named *untransported*, the second *transported soil*. To the first kind of soil is to be referred a great part of the soil which covers the summits and declivities of mountains, and to the other, the soil which fills the bottoms of valleys, as well as a great part of the loose soil of extensive strata in hilly countries and plains. Untransported soil is generally thinner than the transported; and of the two the latter is that which most frequently occurs in low land. The first kind of soil, the untransported, is found to be more or less similar, in its principal constituent parts, to the rocks from which it has originated; in the other kind, the transported soil, on the contrary, the parts which were originally in connection, have been variously separated and mixed, by the agency of the powers by which its transportation was effected.

The quantity and quality of the soil derived from