

manence and happiness of the great system of the universe. This is certainly the case in regard to volcanoes. We have strong reason to believe that they are essential to the preservation of the globe; and of how much higher consequence is this than the comparatively small amount of property and life which they destroy! If we can only rise to these higher views, and not suffer our judgment to be warped by the immediate terrors of the earthquake and the volcano, we shall see the smile of infinite benevolence where most men see only the wrath of an offended Deity.

*My seventh geological argument for the divine benevolence is derived from the manner in which coal, rock-salt, marble, gypsum, and other valuable materials were prepared for the use of man, long before his existence.*

If a created and intelligent being from some other sphere had alighted on this globe during that remote period when the vegetation now dug out of the coal formation covered the surface with its gigantic growth, he might have felt as if there was a waste of creative power. Vast forests of sigillaria, lepidodendra, coniferæ, cycadeæ, and tree ferns would have waved over his head, with their imposing though sombre foliage, while the lesser tribes of calamites and equisetaceæ would have filled the intervening spaces; but no vertebral animal would have been there to enjoy and enliven the almost universal solitude. Why, then, he must have inquired, is there such a profusion of vegetable forms, and such a colossal development of individual plants? To what use can such vast forests be applied? But let ages roll by, and that same being revisit our world at the present time. Let him traverse the little Island of Britain, and see there fifteen thousand steam engines moved by coal dug out of the earth, and produced by these same ancient forests. Let him see these engines performing the work of two millions of men, and moving machinery which accomplishes what would require the unaided labours of three or four hundred millions of men, and he could not doubt but such a result was one of the objects of that rank vegetation which covered the earth ere it was fit for the residence of such natures as now dwell upon it. Let him go to the coal fields of other countries, and especially those of the United States, stretching over one hundred and fifty thousand square miles, containing a quantity absolutely inexhaustible, and