

sea, in which organic life is almost entirely limited to the animal world. The liquid element is again covered by the atmosphere, an aërial ocean in which the mountain chains and high plains of the dry land rise like shoals, occasioning a variety of currents and changes of temperature, collecting vapor from the region of clouds, and distributing life and motion by the action of the streams of water which flow from their declivities.

While the geography of plants and animals depends on these intricate relations of the distribution of sea and land, the configuration of the surface, and the direction of isothermal lines (or zones of equal mean annual heat), we find that the case is totally different when we consider the human race—the last and noblest subject in a physical description of the globe. The characteristic differences in races, and their relative numerical distribution over the Earth's surface, are conditions affected not by natural relations alone, but at the same time and specially, by the progress of civilization, and by moral and intellectual cultivation, on which depends the political superiority that distinguishes national progress. Some few races, clinging, as it were, to the soil, are supplanted and ruined by the dangerous vicinity of others more civilized than themselves, until scarce a trace of their existence remains. Other races, again, not the strongest in numbers, traverse the liquid element, and thus become the first to acquire, although late, a geographical knowledge of at least the maritime lands of the whole surface of our globe, from pole to pole.

I have thus, before we enter on the individual characters of that portion of the delineation of nature which includes the sphere of telluric phenomena, shown generally in what manner the consideration of the form of the Earth and the incessant action of electro-magnetism and subterranean heat may enable us to embrace in one view the relations of horizontal expansion and elevation on the Earth's surface, the geognostic type of formations, the domain of the ocean (of the liquid portions of the Earth), the atmosphere with its meteorological processes, the geographical distribution of plants and animals, and, finally, the physical gradations of the human race, which is, exclusively and every where, susceptible of intellectual culture. This unity of contemplation presupposes a connection of phenomena according to their internal combination. A mere tabular arrangement of these facts would not fulfill the object I have proposed to myself, and would not satisfy that requirement for cosmical presentation awakened in me by the