terminate, and capable of solution, let us survey the means of investigation placed within our power, from what sources the data are to be collected, and in what manner the methods of interpretation are to be discovered.

In existing nature, we can examine and collate, for purposes of reasoning, three orders of data ; viz. facts relating to organic beings ; facts relating to inorganic bodies ; facts concerning physical conditions, or modes of dependence of these two classes on each other, on the general laws of matter and motion, and the arrangements of the solar system. In this manner, it is seen that the radiation of light and heat from the sun ; the alternation of day and night, caused by the rotation of the earth on its axis ; the variations of seasons, depending on the position of its axis and on its revolution round the centre of the planetary system ; the existence of an ambient atmosphere ; the inequality of elevation of land ; the distribution of land and sea, and other cosmical and terrestrial conditions, have a distinct influence on all the arrangements of organic life, and on some of the phenomena of inorganic bodies. Sometimes the law of this dependence is evident ; generally the *nature* of it is discoverable, always the *fact* is capable of being satisfactorily ascertained : and thus existing nature is presented to our minds as a system of beautifully adjusted parts, which it is the highest province of the noblest intellect to contemplate in one point of view, and pourtray under the aspect of a general theory.

In geology, however, the physical conditions are *not known*, but are to be *inferred*, for any particular epoch in the history of the globe, from the facts collected concerning the organic and inorganic bodies which belonged to that era, and are indicative of the physical influences then operating : and hence arise both the difficulties and the charms of geological reasoning. The difficulties are unavoidably very great ; for, even in the acquisition of the data concerning organic and inorganic bodies, geology is often forced to be satisfied with less