

natural cannot be understood by separating, dissecting, or arranging them in artificial order, that they exist only in company with others of similar or different nature, and that their reality is complex and manifold, and not simple or detached; that this applies to their together in space as much as to their succession in time. The scientific movement which has given the greatest impetus to this tendency is that which centres in Darwin. From this centre it has spread not only into all the natural sciences, but likewise into those regions of thought which profess to deal with the phenomena of mind. Here a great array of novel terms

provinces of thought is shown by the fact that it took a long time before they were understood and recognised in their importance and fruitfulness. Both sprang up about the same time. One of these is the synthetic geometry which started with geometrical, *i.e.*, visible structures, such as lines and planes, and did not generate them through points and equations in the analytical fashion, but operated with them as wholes, moving them about, projecting them, and bringing them into various relations. Allied to this was the study of the mathematics of Order which may be termed "tactics" in contradistinction from "quantics." The enormous development of mathematical science through the later combination of the analytical and what was termed "synthetical" methods has been dwelt on at length in the last chapter of the first section of this History (notably pp. 441 *sqq.*) The second instance I single out is that of Faraday's method of observation and experimenting, resting on the conviction that electrical and magnetic phenomena cannot be studied

exclusively by the point method adopted by Continental mathematicians, but that the whole of space must be considered as being filled with lines and tubes of force. How this introduction of the field instead of the point of action was slowly appreciated and led to the great modern development of electrical science, has been shown in chapters ii. and iii. (notably pp. 201, 266) of the first section. That the "synoptic" view leads to the discovery of new relations which can again be studied in their isolation, and, in consequence, always stimulates the analytical methods, making them more fruitful by leading them into new channels of research, is shown clearly everywhere, notably also in the influence of the Darwinian conception of the continuity of organic forms. The more we study Continuity in nature the more the existence of Discontinuities is forced upon us. The discontinuous may disappear and be smoothed down at one point, but only to reappear again in a more mysterious manner at other points.