

clear and lively at its outset ; but, instead of reaching the great ocean of the general truths of science, it is gradually spread abroad among sands and deserts till its course can be traced no longer.

Hitherto, therefore, we must consider that we have had to tell the story of the *failures* of physiological speculation. But of late there have come into view and use among physiologists certain principles which may be considered as peculiar to organized subjects ; and of which the introduction forms a real advance in organical science. Though these have hitherto been very imperfectly developed, we must endeavor to exhibit, in some measure, their history and bearing.

[2nd Ed.] [In order to show that I am not unaware how imperfect the sketch given in this work is, as a History of Physiology, I may refer to the further discussions on these subjects contained in the *Philosophy of the Inductive Sciences*, Book ix. I have there (Chap. ii.) noticed the successive *Biological Hypotheses* of the Mystical, the Iatrochemical, and Iatromathematical Schools, the Vital-Fluid School, and the Psychical School. I have (Chaps. iii., iv., v.) examined several of the attempts which have been made to analyze the Idea of Life, to classify Vital Functions, and to form Ideas of Separate Vital Forces. I have considered in particular, the attempts to form a distinct conception of Assimilation and Secretion, of Generation, and of Voluntary Motion ; and I have (Chap. vi.) further discussed the Idea of Final Causes as employed in Biology.]

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## CHAPTER VI.

### INTRODUCTION OF THE PRINCIPLE OF DEVELOPED AND METAMORPHOSED SYMMETRY.

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*Sect. 1.—Vegetable Morphology. Götke. De Candolle.*

**B**EFORE we proceed to consider the progress of principles which belong to animal and human life, such as have just been pointed at, we must look round for such doctrines, if any such there be, as apply alike to all organized beings, conscious or unconscious, fixed or locomotive ;—to the laws which regulate vegetable as well as animal forms and functions. Though we are very far from being able to present a