

which is that her phenomena have, or have at some time had, a definite place and position in space. Here, then, the phenomena of lower and higher life and the new creations of human culture, art and industry, open out a great department of reality which is accessible to external observation and study. Without committing ourselves to any theory on the subject, we have in this department to deal with the phenomena of apparent or real design and purpose. How has the century dealt with these phenomena? The answer to this question, the history of nineteenth century thought as directed towards the phenomena of life and of mind as natural phenomena, will be dealt with in two further chapters, which will respectively deal with the vitalistic¹ and the psycho-

¹ It would have been in some respects preferable to use the word "biological" instead of vitalistic. In fact, in the original draft of this passage I used the former term. The reasons which made me alter it are the following: The term biology was first used in 1801 by Lamarck in his 'Hydrogéologie.' "About the same time it occurred to Treviranus that all those sciences which deal with living matter are essentially and fundamentally one, and ought to be treated as a whole; and in the year 1802 he published the first volume of what he also called 'Biologie.' Treviranus's great merit lies in this, that he worked out his idea, and wrote the very remarkable book to which I refer. It consists of six volumes, and occupied its author for twenty years—from 1802 to 1822. That is the origin of the term 'biology'; and that is how it has come about that all clear thinkers and lovers of consistent nomenclature have substituted for the old confusing name of

'natural history,' which has conveyed so many meanings, the term 'biology,' which denotes the whole of the sciences which deal with living things, whether they be animals or whether they be plants." This extract from Huxley's "Lecture on the Study of Biology" (South Kensington, Dec. 1876, reprinted in 'American Addresses,' &c., 1886, p. 129, &c.), has induced me to adopt the term "vitalistic" to denote those doctrines and chapters in biology which deal specially with the principle and phenomena of life. A very large portion of biology deals with such phenomena of living things as can be studied without any reference to a doctrine or theory of life in particular, they being either mere facts of distribution or that very large and increasing class of biological processes which admit of purely mechanical, physical, or chemical description and explanation. The very fact, however, that the question whether the principle of life is purely mechanical