

chemical methods of analysis and synthesis follow the former way, and they generally arrive at satisfactory explanations of isolated parts of the actually existing phenomena, or of special and simple cases. Notably, they create the artificial world of manufactured things, such as instruments, machines, chemical and mechanical compounds. They may at times make it appear as if this process of putting together, continued indefinitely, would ultimately reach the real things which we behold in inorganic, organised, and even in animated nature. At all events no other way, it might seem, is open to science, and the only thing that delays our progress is the bewildering intricacy and complexity of things natural. At the beginning of our century, when, through Laplace and his school, many seemingly complicated phenomena of nature, notably those of physical astronomy, yielded to the processes of analysis just described, there seemed for the moment a possibility of building up a complete philosophy of nature on such a groundwork. Laplace himself indulged in a frequently quoted prophetic vision of this kind. When, in the middle of the century, some molecular phenomena, notably those of light, had likewise yielded to the calculus, and when correcter views as to the nature of forces had further brought another and different world of phenomena into a calculable form, it seemed likely that even the mysterious processes of living organisms might be subjected to similar reasoning. It seemed time to abandon the familiar conception of a special vital force, and to hand over physiological problems likewise to the physicist, the chemist, and the microscopist. A regular