

later he published in the three volumes of his famous "Mikrokosmos," (1856-64). Thus his materialism was of an idealistic and refined sort. Altogether I warn you not to scoff at materialism as pulpits do and not to consider it a system or a dogma, but a principle only which may be evolved out of the great modern discoveries in chemistry, physics and physiology. According to their results, we know of no force or function which is independent of matter. For the naturalist, the separation between function and organ does not exist. We have no dealings with those who will force orthodox religious disputes into our studies and laboratories. For theology and science may travel their separate roads, and toil in their special fields. They do not necessarily exclude or always antagonize one another. Indeed, in the German Association of Naturalists and Physicians at Innsbruck, in 1869, I met Carl Vogt, the iconoclast, and a number of Catholic priests who were proficient entomologists and botanists, working at the same table. It is from that point of view that Huxley declares "atheism untenable. When we know nothing, we can neither affirm nor deny with propriety." That is why he invented the appropriate term "agnosticism" and "agnostic." The question how much we or our successors may know about the intricate question of the existence of a mind or soul independent of the brain and body, or one that is absolutely connected with, or rather dependent on organic anatomy, are moot questions we may safely leave to posterity to answer. Indeed, the world is filled with many more problems half solved or unsolved, and every new truth opens a vista of things unknown. Surely when a physiologist like Emil du Bois Reymond in his discussion on such topics declared before his peers of the great meeting of Leipzig in 1872, "ignorabimus"—we shall not know—"and here are the boundaries of the knowledge of nature," it looked like theological boldness coupled with senile indolence. At all events, modern psychology is not afraid of studying with biologic methods the questions connected with the organs of thinking. Psychophysics is part of psychology. Gustav Theodor Fechner (1801-1887) of Leipzig should be considered its founder, but Wilhelm Wundt born (1832) is now recognized as the most exact investigator of cerebral—so-called mental—functions, and the recognized head of the laboratory school of psychologists all over the world. They do no longer fear to apply their intellect to the *study* of their intellect. They are not even afraid of attacking problems left untouched by Julius Robert von Mayer (1814-1878), the author of the theory of the preservation of force. This theory, or rather this "law of the preservation of force," which is generally recognized, has become indispensable for biological research. It has finally annihilated the vitalistic theory, that is, the assumption of a special vital force; and has proven the sufficiency of chemistry