

that effect, in the production and continued existence of which they equally, simultaneously, and of necessity participate.

It is, perhaps, not to be wondered at, that the ancient, and especially the Grecian, philosophers, who were such masters of the more abstract sciences—logic, metaphysics, geometry—should have made but little progress in physics, in the practical part of which our senses are our chief guides, and in which any practical difficulty that can be solved, is to be solved by experiment. In the former, the practical part is not so much in the world without us, as in our own minds, and among our own ideas; the mind, having already abstracted in great measure what it requires from external nature, now closes the eye upon it. In physical sciences, man is the observer of what passes without, and he tries as much as possible to separate his ideas from the external objects under observation; considering, for instance, light, heat and sound, as bodies or qualities in contradistinction to the sensations which they produce; drawing conclusions as if light were not luminous, but a subtle matter; and heat, a peculiar motion among the minute parts of bodies; and sound, as if not audible, but a vibration. Men, imbued with a metaphysical spirit, would—while a true method of experimenting was unknown—from the force of habit, look for the same sort of evidence, and search for truth in the same channels to which they had