

engrossed in commercial speculations, in grasping at power and opulence, or in the indulgence of sensual gratifications, to think of attending to the interests of science, and the progress of the human mind. Much, however, might be accomplished by various classes of society, without interfering with their ordinary avocations, if their attention were directed to such pursuits. Miners, in descending through the crust of the earth, might learn much of its structure and the strata through which they pass. Sailors, in traversing the ocean, and ascending the streams of the various portions of the globe, have excellent opportunities for observing the phenomena of the waters, the atmosphere, the heavens, the animals, the plants, and the inhabitants peculiar to the climates and countries which they visit. But thousands of such persons can sail "twice from Indus to the frozen pole, as ignorant as their log and stubborn as their compass," without making any scientific discovery. The observations made during one voyage across the Atlantic by a single intelligent observer—Humboldt—are of more value to the scientific world than the observations of ten thousand others, who for thousands of years, have traversed the same oceans. Yet these possessed the same sentient organs, the same intellectual powers, and the same opportunities for collecting facts as that distinguished philosopher. And did such observations make Humboldt a worse member of society? Did they make him less active, less intelligent, less virtuous, less humane, less happy? Nay, instead of disqualifying the mind for official duties, such observations would tend to invigorate it, and prevent that languor and *ennui* which result from mental inactivity, while they furnish a source of intellectual enjoyment amidst the heaviest cares of life.

Mind and matter are the subjects of all our knowledge. The observation of facts is the only true path to such knowledge. The course pursued by children is our safest guide in the study of nature, whether in the phenomena of the external creation, or in the powers and operations of the human mind. That course is the observation of fact—which is the food of thought. This does not exclude the judicious use of books containing a record of the observations and discoveries of others. They are, indeed, not the necessary but the most useful instruments to guide the steps of the student. But books can be no guide to the unexplored regions of the vast domain of God. The "Traveller's Guide" may serve us as far as the author himself has gone. But the object of our search may be the unknown and unseen, where there can be no "guide." What then is to direct us in our inquiries? It is the patient study of the works of nature—of mind and matter. What guide could Columbus find to direct his course to an unknown world? What "traveller's guide" had Cook over the widely extended waters of the Pacific? What guide had Pythagoras, Copernicus, Kepler, Galileo, and Newton in their travels through the skies? What guide directed Bacon to the true method of Philosophy? What guided Locke into the mysterious labyrinths of the human mind? What has ever guided to any new

discoveries? It was the study of nature as displayed by Infinite Wisdom, above, around and beneath us, and in that inner world in our own bosoms. Facts are the materials with which the temple of Science has been erected—not upon the sands and shoals of a purely ideal theory or hypothesis, but upon the rock of well established facts. But these facts collected from the various parts of the works of God, must be the subjects of patient thought, to ascertain their influence upon each other, their relations, and the consequences to be deduced therefrom. The purpose which food well digested serves in nourishing and expanding the corporeal system, facts *well digested* by reflection serve in invigorating and enlarging the system of science. The rude materials must be incorporated into—*assimilated to*—the old system, thus making all our symmetrical whole without destroying the identity of the system of science. Truth, like its Author suffers no change: it is "the same yesterday to-day and forever." The laws of nature are but the established means through which God manifests himself, or in other words, carries on his works; and as their Author is without "variable-ness or shadow of turning," so his laws, which are his attributes in action, are immutable. In those laws there may be variety beyond our highest powers to compute, as the Wisdom of their Author is infinite; but there is no incongruity, no want of symmetry, no jarring sound throughout the infinitude of his works; they are but the channels for the outflowing of that Divine plenitude, and the streams must partake of the nature of the fountain whence they flow. As the laws of nature so called, are but God in action, we have the highest assurance that every occurrence is a necessary part of the whole, a link in the chain, and may lead to undiscovered truth, or unascertained laws. And the part yet explored is but as the drop compared with the ocean. There are subjects of inquiry diversified enough for every variety of taste, adapted to every order of intellect, and profound enough for the most comprehensive understanding, in the infinite extent and undiscovered phenomena of the heavens, in every part of the visible creation teeming with life, in the unsolved problems of the material world, in the undeveloped and unapplied powers of the magnet, of electricity, of galvanism, of light and heat, of steam and mechanics, and, in short, in the attributes of mind, in the realm of morals, and in the deep and varied passions of the human soul. Here the most ardent thirst for knowledge may be allayed from the never failing fountains of nature. The philosopher never looks forward to the period when he is to see all that is to be seen, and know all that is to be known, and possess all that is to be acquired. He cannot, like Alexander, weep for more worlds to conquer. The realms yet unsubdued, the mysteries unconquered, enclose him on all sides, inviting him to peaceful yet delightful triumphs. As the student of nature stands at the base of the hill of science, his horizon is circumscribed, but as he ascends, the field enlarges, until the mind, in its widest excursions, can catch a glimpse of the undiscovered land, a ray from off the wished-for shore.