

propositions are represented as Realities more real than the Phenomena;—as a Natural Philosophy of a higher kind than the study of Nature itself can teach. This is no doubt an erroneous assumption: yet even in this there is a germ of truth; namely, that the mathematical laws, which prevail in the universe, involve mathematical truths; which being demonstrative, are of a higher and more cogent kind than mere experimental truths.

Notions, such as these of Plato, respecting a truth at which science is to aim, which is of an exact and demonstrative kind, and is imperfectly manifested in the phenomena of nature, may help or may mislead inquirers; they may be the impulse and the occasion to great discoveries; or they may lead to the assertion of false and the loss of true doctrines. Plato considers the phenomena which nature offers to the senses as mere suggestions and rude sketches of the objects which the philosophic mind is to contemplate. The heavenly bodies and all the splendors of the sky, though the most beautiful of visible objects, being only visible objects, are far inferior to the true objects of which they are the representatives. They are merely diagrams which may assist in the study of the higher truth; as we might study geometry by the aid of diagrams constructed by some consummate artist. Even then, the true object about which we reason is the conception which we have in the mind.

We have, I conceive, an instance of the error as well as of the truth, to which such views may lead, in the speculations of Plato concerning Harmony, contained in that part of his writings (the seventh Book of the *Republic*), in which these views are especially urged. He there, by way of illustrating the superiority of philosophical truth over such exactness as the senses can attest, speaks slightly of those who take immense pains in measuring musical notes and intervals by the ear, as the astronomers measure the heavenly motions by the eye. "They screw their pegs and pinch their strings, and dispute whether two notes are the same or not." Now, in truth, the ear *is* the final and supreme judge whether two notes are the same or not. But there is a case in which notes which are nominally the same, are different really and to the ear; and it is probably to disputes on this subject, which we know did prevail among the Greek musicians, that Plato here refers. We may ascend from a note A_1 to a note C_3 by two octaves and a third. We may also ascend from the same note A_1 to C_3 by fifths four times repeated. But the two notes C_3 thus arrived at are not the same: they differ by a small interval, which the Greeks called a Com-