

and if a person walk round it, he will become the antipodes to himself, and the direction which is *up* at one time will be *down* at another."

The notion of *antipodes*, the inhabitants of the part of the globe of the earth opposite to ourselves, was very familiar. Thus in Cicero's *Academic Questions* (ii. 39) one of the speakers says, "Etiam dicitis esse e regione nobis, e contraria parte terræ, qui adversis vestigiis stant contra nostra vestigia, quos Antipodas vocatis." See also *Tusc. Disp.* i. 28 and v. 24.

The Heliocentric System among the Ancients.

As the more clear-sighted of the ancients had overcome the natural prejudice of believing that there is an absolute *up* and *down*, so had they also overcome the natural prejudice of believing that the earth is at rest. Cicero says (*Acad. Quest.* ii. 39), "Hicetas of Syracuse, as Theophrastus tells us, thinks that the heavens, the sun, the moon, the stars do not move; and that nothing does move but the earth. The earth revolves about her axis with immense velocity; and thus the same effect is produced as if the earth were at rest and the heavens moved; and this, he says, Plato teaches in the *Timæus*; though somewhat obscurely." Of course the assertion that the moon and planets do not move, was meant of the diurnal motion only. The passage referred to in the *Timæus* seems to be this (40, c)—"As to the Earth, which is our nurse, and which *clings to* the axis which stretches through the universe, God made her the producer and preserver of day and night." The word *εἰλλομένην*, which I have translated *clings to*, some translate *revolves*; and an extensive controversy has prevailed, both in ancient and modern times (beginning with Aristotle), whether Plato did or did not believe in the rotation of the earth on her axis. (See M. Cousin's Note on the *Timæus*, and M. Henri Martin's Dissertation, Note xxxvii., in his *Études sur le Timée*.) The result of this discussion seems to be that, in the *Timæus*, the Earth is supposed to be at rest. It is however related by Plutarch (*Platonic Questions*, viii. 1), that Plato in his old age repented of having given to the Earth the place in the centre of the universe which did not belong to it.

In describing the Prelude to the Epoch of Copernicus (Book v. Chap. i.), I have spoken of Philolaus, one of the followers of Pythagoras, who lived at the time of Socrates, as having held the doctrine that the earth revolves about the sun. This has been a current opin-