

While Sir J. Norman Lockyer, F.R.S., F.R.A.S., Professor of Astronomical Physics in the Royal College of Science, writes—

"Again the roundness of the Earth has been proved by navigators, who, sailing in one direction, either east or west (as nearly as the different bodies of land would permit), have returned to the place from which they set out."⁸

And Professor H. N. Robinson, A.M., Late Professor of Mathematics in the U.S. Navy, in his *Treatise on Astronomy*, says—

"Common intelligence must convince even the child, that the Earth must be a large ball, of a regular, or an irregular shape; for everyone knows the fact, that the Earth has been *many times* circumnavigated; which settles the question."⁹

Other authorities might be quoted, but the foregoing will suffice. In striking contrast to this testimony stands the statement of Professor Johnson; and the correctness of his views may be fully demonstrated.

Let us look further into the matter. But to do this intelligently, our minds should be clear on two points involved in the discussion. First, we must be careful in our use of the term *round*. A circle is round, and a sphere is also popularly styled round. Now a circle may be described on any one of a number of kinds of surfaces, as, for example, on a cone, a cylinder, a sphere, or, on a flat surface. The knowledge, therefore, that a course, or path, on any surface is round, or circular, does not disclose the character of the surface upon which such a course is traced.—Secondly, we must have a clear understanding of the meaning of the terms *East* and *West*. Perhaps not one person in a hundred holds any really clear conception of what direction East or West is. The popular idea seems to be that derived from the weather vane finial, with its cardinal points indicated by the letters, N.S.E.W. Thus East and West are frequently thought to be direction, one way or the other, on a long straight line at right angles to direction North and South. Whereas, East and West are directions on circles concentric

⁸ *Elements of Astronomy*. New York, 1870, p. 83.

⁹ *Treatise on Astronomy*, Cincinnati, 1855, p. 52.