Rowtotham, Samuel Birley, 1816-1885.

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ZETETIC ASTRONOMY.

A DESCRIPTION
OF
SEVERAL EXPERIMENTS
WHICH PROVE THAT
THE SURFACE OF THE SEA
IS A
Perfect Plane,
AND THAT THE
EARTH IS NOT A GLOBE!

BEING THE SUBSTANCE OF A PAPER READ BEFORE THE
ROYAL ASTRONOMICAL SOCIETY ON THE
EVENING OF DEC. 8, 1846.

By "Parallax."

"Einer neuen Wahrheit ist nichts schädlicher als ein alter
Irrthum."—Goethe's Wilhelm Meister.

To a new truth nothing is more embarrassing than an old error.

BIRMINGHAM:
Published by W. Cornish, Bookseller, 109 New-street,
Opposite Cannon-street.

1849.
The author respectfully challenges the whole scientific world to discuss the proposition, "That the earth is not a globe, but a perfect plane!" before an public assembly, or in the pages of any public Journal. Address "Parallax," care of Mr. Cornish, the Publisher.
If the Earth is a Globe, 25,000 miles in circumference, any portion of its surface is an arc of a circle; from the centre of which there will be a fall of 8 inches in the first mile. In every succeeding mile the fall will increase as the square of the distance; as explained by the following diagram:

Let an arc of the Earth's circumference be represented by A. B. Then, if from C. (the centre), to fig. 4 be one mile, the line 1–4, will be 8 inches; but if from C. to fig. 5, be two miles, the line 2–5, will be 32 inches; or the square of 2 (the distance) multiplied by 8 (the fall in the first mile): as

\[ 2^2 \times 8 = 32. \]

Again, if from C. to fig 6 be three miles, the line 3–6, will be 72 inches; as

\[ 3^2 \times 8 = 72. \]

Remembering that the first mile would curvate 8 inches, and every succeeding mile as the square of the distance, we may readily ascertain whether any convexity exists or not, by the following experiments:
EXPLANATION OF DIAGRAMS.

On the Sea coast, close to the water, a Theodolite was placed, perfectly level, or at right angles to the plumb line. At the several distances of 2, 4, 6, and 8 miles, rods were so placed that the bottom of each, fixed in the sand, touched the water, and the top just escaped the line of sight, A. B., fig. 1.

The Theodolite was 5 feet high, and on measuring the rods from the top to the water, they were all found to be 5 feet also, and no more! from which it is evident that the surface of the water was parallel to the line of sight, and therefore a perfect plane!!

A Globular form of the Earth would have caused each rod to increase in length by a definite quantity: the last in the series would have been 47 feet 8 inches! as represented in fig. 2.
A Theodolite perfectly level, or square to the plumb line; and at an elevation of 12 feet above the water, was directed towards a vessel miles distant. The line of sight fell upon a point exactly 12 feet above the surface of the Sea! Hence the line of sight and the water were parallel to each other!

As shown by fig. 3.

If the Earth is a Globe, the surface of the Sea at the distance of 20 miles, would be 286 feet 8 inches below the line of sight!!

As represented in fig. 4.
In the centre of the Bristol Channel is a rock called the "Flat Holm;" from which to the opposite shores of South Wales and Somersetshire, is about 10 miles. A Theodolite was placed on this rock, and a flag staff on each coast. From where the line of sight fell upon the flag staves to the surface of the water was then measured, and found to correspond with the altitude of the Theodolite in the centre! as in fig. 5: again proving the water to be level!

The Earth's supposed convexity would have caused the line of sight to pass over the flag staves at the distance of 66 feet above the water!!

As represented in fig. 6.
Figure 7 represents a contracted section of the Railway from London to Liverpool—through Birmingham. The line A. B. is the surface, and C. D. the base, or datum line, which is an absolute or practical level, continued from the surface of the river Thames. The Birmingham station is 240 feet above this line.

But if the Earth is a Globe, the datum line is a conditional or theoretical level!—an arc of a circle! the altitude of which, at Birmingham, above the practical level E. F. will be 5400 feet! this added to 240 will make the total altitude of the Birmingham Station above Trinity high water mark at London bridge, 5640 feet!!!

As represented at fig. 8.
Between the Counties of Huntingdon and Norfolk, across the Fens of Cambridgeshire, there is an artificial river called the "New Bedford;" it is upwards of 20 miles in length, nearly a straight line, and without a lock or other interruption to its continuity: nor is there a current except at the ebb tides of the German Ocean. So that if the Earth is a Globe, the water in this canal is an arc of a circle. A small boat was sent out 6 miles from the Theodolite—as represented in fig. 9, but no convexity whatever could be detected! the surface of the water was perfectly level!!

In 6 miles there should have been a fall of 24 feet from the line of sight!!

As represented in fig. 10.

Irish Channel: 70 Miles across.

Fig. 11.

Douglas

10 Feet above the water.

Fig. 12.
A Theodolite was fixed at an elevation of 10 feet above the water in Douglas Bay, Isle-of-Man: and when directed across the Irish Channel, a distance of 70 miles, to the mountains in North Wales, an upward angle was required, of more than 2 minutes of a degree. As shewn in fig. 11.

But if the Earth is a Globe there would have been a dip or angle downwards to the horizon of 3 minutes and 1 second: and even then the line of sight would have been 2904 feet above the water on the opposite shore!!

As represented in fig. 12.
REMARKS.

In every practical application of Geodesy, on a large scale, it is found necessary to reject the doctrine that the Earth is a Globe.

Railway operations are now conducted by our leading Engineers, on the principle that the Earth is a Plane. Every elevation and inclination is referred to a datum line which is practically and absolutely level; and no allowance is made for the Earth's rotundity.

The recently completed Ordnance Survey of England was made on the same principle.

The gradual disappearance of a Ship at Sea; the "Circumnavigation" of the Earth; the cause of day and night, the seasons and other phenomena, can all be explained in the most simple and perfect manner without supposing the Earth a Globe. [For which see part 2.

END.
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