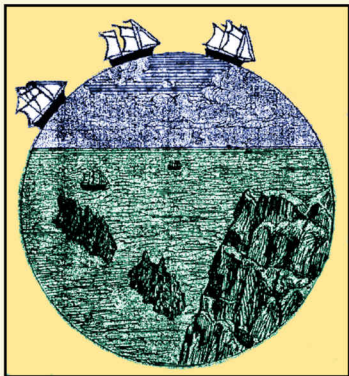


THE TERRESTRIAL PLANE

THE TRUE FIGURE OF THE EARTH



ACCURATELY AND SCIENTIFICALLY
DEMONSTRATED BY
FREDK. H. COOK, 1908

INTRODUCTION.

The desire of the author of this small treatise is, not so much to explain in harmony with a plane earth, all the wonderful phenomena in Nature, as to incite a more critical investigation into Natural Science. Individuality of observation is a sure method of ascertaining the truth, therefore, he desires to help beginners over the threshold of this particular branch of science. His object is to contribute towards helping thoughtful and truth-seeking men to solve the problem that true science and true religion are not antagonistic; but that the God of the Bible, the Creator of all things, is harmonious in all His works and words.

"I have made the earth and created man upon it. I, even my hands, have stretched out the heavens, and all their host have I commanded . . . I am God, there is none else."

Such a Being is worthy of our reverence and worship.

Astronomy took its rise in the East. Since those days when the earth was young, many, indeed, have been the various "world systems." In spite of opposition, the Newtonian-Copernican system has prevailed. "But a reasonable motion of the sun through space, discovered and established by Sir W. Herschel, and others, tends to deprive 'the system' of those pretty pictures in concentric circles." On many sides one hears rumours of a proposed change, in fact, some scientists have already changed. Sir Richard Phillips goes so far as to call Sir I. Newton's ideas "execrable superstitions," and he also says: "Woe to him who for another century shall oppose them." Well, from the great interest taken in the author's lectures upon this subject he feels sure that this book will meet with a good reception. It is a large and interesting subject. The study of it can do nothing but good.

The following words from a work on "Liberty," by John Stuart Mill, should secure an impartial reading of the work.

"If there are any persons who contest a received opinion, or will do so if law or opinion will let them, let us thank them for it, open our minds to listen to them, and rejoice that there is someone to do for us what we otherwise ought, if we have any regard for either the certainty or vitality of our convictions, to do with much greater labour for ourselves."

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May, 1908.

NEBULA PHILOSOPHY AND GRAVITY.

Professor Haeckel informs us that "the world is nothing else than an eternal 'evolution of substance,'" and that this "periodical process of evolution" is really caused by "the inherent primitive properties of substance—feeling and inclination"—which he says, are "active causes"—What does he mean? He tells us in plain and unmistakable language in the edition of the "Riddle of the Universe" of 1902, page 92, therein he says:—

"No philosopher has done more than Immanuel Kant in defining the profound distinction between efficient and final causes, with relation to the interpretation of the whole Cosmos. In his well known earlier work on 'The General Natural History and Theory of the Heavens' he made a bold attempt 'to treat the constitution and the mechanical origin of the entire fabric of the universe according to the Newtonian laws.' This 'cosmological nebular theory' was based entirely on the mechanical phenomena of gravitation. It was expanded and mathematically established later on by La-Place. When the famous French astronomer was asked by Napoleon I. where God, the Creator and sustainer of all things, came in in his system, he clearly and honestly replied: 'SIRE, I HAVE MANAGED WITHOUT THAT HYPOTHESIS.' That indicated the atheistic character which this mechanical cosmogony shares with all other inorganic sciences. This is the more noteworthy because the theory of Kant and La-Place is now almost universally accepted; every attempt to supersede it has failed. When atheism is denounced as a grave reproach, as it often is, it is well to remember that the reproach extends to the whole of modern science, in so far as it gives a purely mechanical interpretation of the inorganic world."

Haeckel, in common with others of his school of thought, denies the existence of the Creator, in fact, he goes further, and says that the notion has gone for ever, and that the "eternal iron laws of nature" have taken the place of God; and Haeckel arrives at this conclusion though—philosophy. He candidly admits that "the greatest triumphs of modern science—the cellular theory, the dynamic theory of heat, the theory of evolution, and the law of substance—are PHILOSOPHIC ACHIEVEMENTS." The Apostle Paul says:

"Beware lest any man spoil you through PHILOSOPHY." He also says: "Keep that which is committed to thy trust . . . avoiding the oppositions of science falsely so called."

Where should we look for Truth? In the Holy Scriptures that are "able to make us wise unto salvation." They warn us against man's "philosophy," and man's "vain deceit." Thus guiding us amid the conflicting and ever-changing theories of men who know not God

and yet consider themselves wise! Not only do they consider themselves wise, but far above a faithful follower of the lowly Nazarene! Haeckel informs us that, "Christ Himself had no knowledge whatever of astronomy—indeed, He looked out upon heaven and earth, Nature and man, from the very narrowest geocentric and anthropocentric point of view." Considering the sublime teaching of Christ as to the duty of man to man, and man to God, his comprehensive view of man's life here and hereafter, it is but a step from the sublime to the ridiculous to further consider such a criticism on the Son of God, who knew, as Christ did, the will and ways of God to fit Him to be the heir of all things.

We will continue our investigations further as to when, and how, the world began to evolve *itself*.

In the beginning there was gas, or a "nebulous cloud," according to scientists and evolutionists. This is rather a difficult subject to deal with, because, as we have already read, there was scientifically, no beginning—just an "eternal evolution of substance." Any-way there *was a time* when this "nebulous cloud" arose—never mind where it came from, for no scientist has yet even attempted an explanation on this point, although its existence requires *SOME* accounting for, considering that it was inorganic matter, and it possessed the powers of "feeling and inclination." According to La-Place, "the particles forming the cloud were very hot," he was not there to see, but I only mention this because some scientists, like Herbert Spencer, state that the "embryo universe" was cold. Any-way, hot or cold, the particles by universal suffrage, or by some other method, unknown to scientists, took upon themselves to form the "solar system;" therefore, it was necessary that this "diffused fire mist" should condense a little, and move its particles a little closer together, "according to Newtonian laws." As the Newtonian laws of attraction, or gravitation, formed the basis of this "world building nebular theory," let us consider these laws.

Sir Robert Ball tells us, that "every body in the universe attracts every other body." He also says that "the law of gravitation underlies the whole of astronomy." But when we read in a "Million of Facts," by Sir Richard Phillips, that: "Universal gravitation . . . is an utterly impossible mode of action," I think it time we consulted Sir I. Newton on the matter. I find, according to a letter he sent to Dr. Bentley, February, 1692, that he expressed the opinion, "that attraction should be innate and inherent in matter so that one body can act upon another at a distance—is to me so great an absurdity, that I believe no man, who has, in philosophical matters, a competent faculty of thinking can ever fall into it." I shall never fall into it, especially considering Sir I. Newton's words, that:—

"Gravity must be caused by an agent acting according to certain laws, but whether this agent be material or immaterial I have left to the consideration of my readers." Professor Bernstein's consideration is, that:—

"The theory that motions are produced through material attraction is absurd." Perhaps Sir I. Newton agrees, for he says:—

"What I call attraction may be performed by impulse, or by some other means unknown to me." Well, if Sir I. Newton does not know we must not be surprised that, C. V. Boys, F.R.S., etc., says:

"It is a mysterious power which no man can explain; of its propagation through space all men are ignorant." I quite believe this, and also the following, written by Professors Singer and Berens:

"A body on earth falls to the ground, this is observation, body and earth attract each other, this is an obvious (?) and necessary inference and *inference* only." Dear me! I shall believe as Professor W. B. Carpenter says:—

"We have no certain experience at all . . . the doctrine of universal gravitation then is a pure *assumption*."

The fact is that "gravity" is not required, there is not the slightest evidence in the universe around us of the existence of such a "mysterious power."

In Joyce's "Scientific Dialogues," we read:—

"It seems very surprising that philosophers, who have discovered so many things, have not been able to find out the cause of gravity. Had Sir I. Newton been asked why a marble, dropped from the hand, falls to the ground, could he not have assigned a reason? That great man, probably the greatest man that ever adorned the world, was as modest as he was great, and he would have told you he knew not the cause."

This is valuable evidence, coming from believers in the theory of gravitation.

The learned Dr. Price asks:—

"Who does not remember a time when he would have wondered at the question, WHY DOES WATER RUN DOWN HILL? What ignorant man is there who is not persuaded that he understands this perfectly? But every IMPROVED man knows it to be a question he cannot answer. For the descent of water, like that of other heavy bodies, depends on the attraction of gravitation, the cause of which is still involved in darkness."

Well! It is astounding! Newton invents a theory, which admittedly has no known foundation in Nature; a pulling, a pushing power called "gravitation." Nobody understands its working, no one knows anything about its cause, it has never been seen, tested, or felt, yet such a person as Pope wrote:—

"Nature and Nature's laws lay hid in night;
God said: 'Let Newton be,' and all was light."

Where is the light? A question is asked of an "improved man," and he cannot answer! Why does water run down hill? Why does it not run up hill? If the earth is a globe it does both! Fancy! There are, so scientists say, 21,923,200 cubic miles of land, and 323,722,000 cubic miles of water in the "globe." Whatever keeps this preponderance of water underneath, and on the top, and on the sides, and all round *the outside* of the comparatively small portion

of "land"? Water DOES run down hill. Why does it not run down the globe hill—and fall off? Light is coming!—"Gravity is a theoretical power necessary to the theory that the solar system made itself into numerous rotating whirling globes, each one that has been, is, or will be capable, perhaps, of supporting life, as we understand it, upon its surface." Apart from this theory, in all its ramifications, gravity can find no place in Nature.

Leave paper astronomy, and come out in the light of Nature. Why does a balloon ascend? Because bulk for bulk it is lighter than air. It will rise to a position; at that elevation it will stay because it will have found its equilibrium. When it loses its bulk by an escape of gas, it will collapse and descend to earth again, for the simple reason that its weight is greater than that of the air it displaces. Wood floats in water; a piece of solid iron sinks; why? Because bulk for bulk the wood is lighter than the water it displaces, whereas bulk for bulk the iron is heavier than the water. The denser a body the greater its weight; recognising this truth scientists say—gravity is another name for weight. They may call it "gravitation" if they choose to do so; but when an apple falls to the earth, it falls by its own weight when released from the stalk on which it grew; not because the apple has been pulled by the earth, or the earth pulled by the apple.

Considering all the contradictions and uncertainties of the "scientific world," as to what is, or is not gravity,—its very existence being questioned, the following words, by Professor T. H. Huxley, are highly significant:—

"If the law of gravitation ever failed to be true even to the smallest extent, for that period the calculations of the astronomer have no application."

DISCOVERY OF NEPTUNE.

From the foregoing chapter it is obvious that "science" can supply no information when we ask for the origin of matter or motion. In fact, when we ask about origins, "science" is dumb! The "world building" scientists who build on atoms—or little some-things—cannot prove the atomic theory upon which they build; or even tell us the origin of atoms; or how they came to be *diffused through space*, or by what law diffused matter did aggregate.

Camille Flammarion, a popular astronomer, says:—

"The most probable hypothesis, the most scientific theory, is that which represents the sun as a condensed nebula. This carries us back to an unknown epoch, when this nebula occupied the present place of the solar system. . . . Let us imagine, then, an immense gaseous mass placed in space. Attraction is a force inherent in every atom of matter. The denser portion of this mass will insensibly attract toward it the other parts, and, in the slow fall of the more distant molecules toward this more attractive region, a general motion is produced, incompletely directed toward this centre and soon involving the whole mass in the same motion of rotation. . . . It has begun to turn so quickly as to develop, at the exterior circumference, a centrifugal force superior to the general attraction of the mass, as when we whirl a sling; the inevitable consequence of this excess is a rupture of the equilibrium, which detaches an external ring. This gaseous ring will continue to rotate in the same time and with the same velocity; but the nebulous matter will be henceforth detached, and will continue to undergo progressive condensation and acceleration of motion. This same feat will be reproduced as often as the velocity of rotation surpasses that by which the centrifugal force remains inferior to the attraction."

According to this "scientific theory,"—this "most probable hypothesis," the "planets" were detached from the condensed sun mass, we are to *imagine* how.

Lord Salisbury when President of the British Association for the Advancement of Science, asked the following question, that has not yet been answered:—

"If the earth is a detached bit, whirled off the mass of the sun, how comes it that, in leaving him, we cleaned him out so completely of his nitrogen and oxygen that not a trace of these gases remains to be discovered, even by the sensitive vision of the spectro-scope?"

Sir Robert Ball informs us that, "some of the elements which are of the greatest importance on the earth would appear to be miss-

ing from the sun. Sulphur, phosphorus, mercury, gold, nitrogen may be mentioned among the elements which have hitherto given no indication of their being solar constituents."

But there are many objections to the probability of the nebular theory being true, even supposing the world to be a globe. It is well known that the planets revolve around the sun from west to east; but, totally ignoring the nebular hypothesis, it was stated a short time back by Professor Lankester, that "one of the satellites of Saturn went round that planet the wrong way!—thus calling for a fundamental revision of our ideas of the origin of the solar system." This is not the only instance. The "moons" of Uranus instead of rotating from west to east rotate from east to west! while the planes of their revolution are nearly at right angles to the orbit of their "parent," Uranus! Sir Robert Ball says that "we are not in a position to give any satisfactory explanation of this circumstance."

I am about to describe now, what Sir Robert Ball calls "a discovery so extraordinary that the whole annals of science may be searched in vain for a parallel." I must be as brief as possible and yet "develop the account of this striking epoch in the history of science with the fulness of detail which is commensurate with its importance."

It is supposed that the supreme controlling power in the solar system is the attraction of the sun, and that every planet in the system revolves around the sun in an elliptic path. Newton's laws of gravitation, of course, underlies all this supposition. According to this law every body in the universe attracts every other body. The planet Uranus was observed to have "perturbations." Le Verrier, a great French astronomer, set himself to investigate the cause of this disturbance. The influences of older planets were found to be inadequate to account for the perturbations, so Le Verrier commenced a search, by the aid of mathematical investigation, for an unknown planet. It also appears that another astronomer, Mr. Adams, had undertaken the same task as Le Verrier, each being ignorant of the others labour. Now for the "discovery."

On the night of the 23rd of September, the sky being clear, a telescope was pointed in accordance with Le Verrier's instructions. The field of view showed a multitude of stars. One of these was really the planet Neptune. The next night the object was again observed. "It had moved, and when its motion was measured it was found to accord precisely with what Le Verrier had foretold. Indeed, as if no circumstance in the confirmation should be wanting, the diameter of the planet, as measured by the micrometers at Berlin, proved to be practically coincident with that anticipated by Le Verrier."

"The world speedily rang with the news of this splendid achievement. Instantly the name of Le Verrier rose to a pinnacle hardly surpassed by that of any astronomer of any age or country. The circumstances of the discovery were highly dramatic. We picture the great astronomer buried in profound meditation for many months; his eyes are bent, not on the stars, but on his calculations.

No telescope is in his hand; the human intellect is the instrument he alone uses. With patient labour, guided by consummate mathematical skill, he manipulates his columns of figures. He attempts one solution after another. In each he learns something to avoid; by each he obtains some light to guide him in his future labours. At length he begins to see harmony in those results, when before there was discord. Gradually the clouds disperse, and he discerns with a certainty little short of actual vision, the planet glittering in the far depths of space. He rises from his desk and invokes the aid of a practical astronomer; and lo! there is the planet in the indicated spot. The annals of science present no such spectacle as this. It was the most triumphant proof of the law of universal gravitation."—Sir R. Ball.

The joyful bells of the scientific world, however, soon stopped ringing. The above "splendid achievement," "the most triumphant proof of the law of universal gravitation," has been weighed in the balances and found wanting.

Mr. Babinet, September 15th, 1848, read a paper before the French Academy of Sciences, as follows:—

"The only sittings of the Academy of late in which there was anything worth recording, and even this was not of a practical character, were those of the 29th, and the 11th. On the former day M. Babinet made a communication respecting the planet Neptune, which has been generally called M. Le Verrier's planet, the discovery of it having, as it was said, been made by him from theoretical deductions which astonished and delighted the scientific public. What M. Le Verrier had inferred from the action on other planets of some body which ought to exist was verified—at least, so it was thought at the time—by actual vision. Neptune was actually seen by other astronomers, and the honour of the theorist obtained additional lustre. But it appears from a communication of M. Babinet, that this is not the planet of Le Verrier. He had placed his planet at a distance from the sun equal to thirty-six times the limit of the terrestrial orbit. Neptune revolves at a distance equal to thirty times of these limits, which makes a difference of nearly TWO HUNDRED MILLIONS OF LEAGUES! Le Verrier had assigned to his planet a body equal to thirty-eight times that of the earth; Neptune has only ONE THIRD of this volume! M. Le Verrier had stated the revolution of his planet round the sun to take place in two hundred and seventeen years; Neptune performs its revolutions in one hundred and sixty-six years! Thus, then, Neptune is not M. Le Verrier's planet, and all his theory as regards that planet falls to the ground! M. Le Verrier may find another planet, but it will not answer the calculations which he made for Neptune.

"In the sitting of the 14th, M. Le Verrier noticed the communication of M. Babinet, and to a great extent admitted his own error. He complained, indeed, that much of what he said was taken in too absolute a sense, but he evinces much more candour than might have been expected from a disappointed explorer. M. Le

Verrier may console himself with the reflection that if he has not been so successful as he thought he had been, others might have been equally unsuccessful; and as he has still before him an immense field for the exercise of observation and calculation, we may hope that he will soon make some discovery which will remove the vexation of his present disappointment."—"Times" Newspaper, Sept. 18th, 1848. "Cosmos," by Humboldt; and "Earth not a Globe," by "Parallax."

It must not be supposed that Neptune was never observed until the time of the above recorded "discovery." Several instances have been discovered of Neptune being noted, and marked as a star on the catalogues of earlier astronomers. On May 8th and 10th, 1795, Lalande observed the same star.

Even supposing that Le Verrier had fully proved his case, it would neither have proved the theory of gravitation true, nor the tremendous distances of the stars and their gigantic sizes as postulated. The perturbations of Uranus were more likely caused by the known powers of magnetism and electricity, for we must not lose sight of the fact that there is every reason to suppose and believe that the sun is the seat of electrical phenomena. As to the distances and size of the stars we shall have more to say later on, but with assurance we say now that there is not an astronomer who knows the distance or size of any one of them. One is led to believe that the star distances and magnitudes are calculated according to the method John Wesley suggested was employed—"distance proves the magnitude, and the great magnitude proves the tremendous distance."

ECLIPSES.

It is often asserted that "the globular theory must be true because astronomers can predict eclipses most accurately." If the capability of predicting eclipses is going to determine the truth or otherwise of any world system, we should get a confused medley of "true systems!" for all theories regarding the order of the universe claim the power to foretell eclipses, one as accurately as the other. It should be recognised that practical astronomy—a science of observation, for the study and development of which the Greenwich Observatory was established—is independent of any, and every theory. Eclipses are not timed by any calculation concerning the rate or distance at which the earth be supposed to fly round the sun and the moon round the earth, or by the rate at which the moon and the sun travel over the earth. The calculations necessary to locate future eclipses are based upon the records of past observances of these periodically recurring—phenomena.

Eclipses occur in cycles. An eclipse of the moon occurs again after a cycle of, practically, 18 years $10\frac{1}{3}$ days. If all the eclipses are observed in this period it would be possible to foretell all future ones; a certain amount of mathematical skill, of course, is necessary. It was by this rule that ancient astronomers accurately predicted eclipses.

Thales, who lived 600 years before the birth of Christ, predicted eclipses. Ptolemy also foretold eclipses for hundreds of years to come. Egyptian, Hindoo, and Chinese astronomers of ancient times foretold eclipses. A. McInnes, in his work on "Pagan Astronomy," says:—

"More than 2,000 years ago the Chaldeans presented to Alexander the Great, at Babylon, tables of eclipses for 1,993 years; and the ancient Greeks made use of the cycle of 18 years 11 days, the interval between two consecutive eclipses of the same dimensions Mere theorising about the sun and moon—the great unerring clocks of time—has thrown chronology and the calendar into confusion, and hence scientists cannot agree as to the world's age."

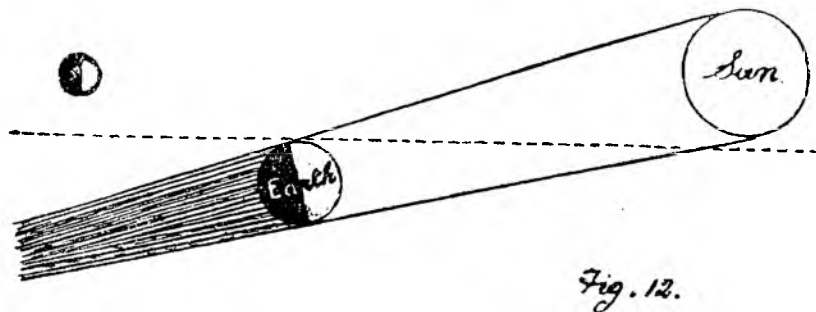
If the facts already given are not sufficient to convince the reader that the "globular theory" has nothing whatever to do with the accuracy of eclipse occurrences, the following, from "New Principia," by Morrison, F.A.S.L., R.N., may effectually convince the student:—

"Eclipses, occultations, the position of the planets, the motion of the 'fixed stars,' the whole of practical navigation, the grand phenomena of the course of the sun, and the return of comets, may all and every one of them be as accurately, nay, more accurately, known without the farrago of mystery the mathematicians have

adopted to throw dust in the eyes of the people, and to claim honours to which they have no just title The public, generally, believe that the longitudes of the heavenly bodies are calculated on the principles of Newton's laws. Nothing could be more false."

How are eclipses of the moon caused? Our astronomers of the "globular theory" school tell us that a times comes when the earth lies directly between the moon and the sun; the moon is thus plunged into "the shadow" of the earth, the light from the sun that the moon is supposed to reflect is intercepted, and the moon is eclipsed. This is very remarkable, and I doubt its possibility, considering that even in the depth of a total eclipse the moon remains visible, and actually glows with a bright copper coloured hue; but there are even greater objections than this against "the shadow" theory.

Now, according to the "globular theory," a lunar eclipse occurs when the sun, earth, and moon are in a direct line; but it is on record that since about the 15th century over 50 eclipses have occurred while both sun and moon have been visible above the horizon. The accompanying illustration will show how utterly impossible it is to harmonise this fact with even the globularists' own theory.



The horizon to an observer on the earth would be at right angles from a perpendicular line where he stood, and above this horizon—overhead—was the sun and moon visible—the moon eclipsed.

One may read carefully a whole host of "scientific" books before finding the information that there have been several instances of lunar eclipses being seen with both sun and moon above the horizon—why this silence?

Writing to the Astronomer Royal on this subject I was informed that the above phenomenon was caused by "refraction," which caused the sun and moon to appear "above the horizon when wholly below it." Ah! of course! Professor Airy once said: "One of the most troublesome things an astronomer has to deal with is refraction." But it seems a bit convenient at times! Is the phenomenon of a lunar eclipse with both sun and moon visible above the horizon due to refraction? Let us consider the position.

First, the globularists admit that the facts observed in Nature relative to this case do not agree with their globular theory; that is a proper admission to make. A theory concerning the operation of "refraction," instead of clearing up the difficulty, really adds to the dilemma.

What has "refraction" to do in the matter? The moon has visibly risen, and the sun has not yet set, in accordance with accurate almanac time, and an eclipse of the moon is due, and takes place through "refraction." It must be "refraction," astronomers say so. We will now deal with "refraction."

Refraction only operates when our line of sight, or a ray of light, passes from one medium into another of different density. Get a basin; place it where a light causes part of the rim to cast a shadow into the bowl; place, say, a penholder obliquely in the basin and then pour in some water, and you will see that refraction will apparently raise the immersed part of the penholder, while the shadow will go back and down. Now apply the experimental knowledge thus gained to the theory before us. If refraction did throw up the sun and moon, then refraction would throw "the shadow" further down away from the moon—and there could not be an eclipse. And so it is impossible for astronomers to prove our earth—*terra firma*—to be a heavenly body, whirling and spinning between the two luminaries, the sun and moon.

They say: "The shadow of the earth on the moon proves the world a globe." Oh! How are we to know that it is the shadow of the earth? Is there any special way of identifying it? Might it not be "the shadow" of some other moving dark body? It is supposed that the earth is a globe because the shadow on the moon is curved; but it is not only a globe that can cast a circular shadow on a sphere; experiment with an orange, a cube, and a lighted candle, in a dark room, and whatever "shadow" that is cast on the orange by the cube will be curved—how could it be otherwise?

Eclipses of the moon may be caused in several ways. I do not profess to know how they are produced, for I believe, as it says in Ecclesiastes, 8th chap., that "a man cannot find out all the work that is done under the sun: because though a man labour to seek it out, yet shall he not find it; yea, further, though a wise man think to know it, yet shall he not be able to find it." We cannot know all the works of God; we know that there are "dark bodies" in the sky; the moon may be eclipsed by the periodical motion of one of these.

Eclipses of the sun and moon, or any celestial phenomena, cannot prove the earth to be a globe, or even flat. It is most illogical to search the sky for "proof" as to the shape of the earth. It is quite possible to determine the figure of the earth while we are on it; having done this, all that occurs in the sky must be explained—if explained at all—in harmony with the ascertained fact that the earth is a plane.

THE SUN'S DISTANCE.

Sir Richard Proctor, in his work on "The Sun," informs us that "the determination of the sun's distance is not only an important problem of general astronomy, but it may be regarded as THE VERY FOUNDATION OF ALL OUR RESEARCHES." So it is the foundation of all their researches, in fact, THE ASSUMED DISTANCE OF THE SUN FROM THE EARTH IS THE "MEASURING ROD," USED BY THE ASTRONOMER TO DETERMINE ALL OTHER DISTANCES. What is the length of this measuring rod? What kind of "foundation" are the researches of the astronomer built upon?—let us see.

Sir Robert Ball informs us that "the dimensions of our luminary are commensurate with his importance. Astronomers have succeeded in the difficult task of ascertaining the exact figures, but they are so gigantic that the results are hard to realise." He says: "The *actual* distance of the sun from the earth is about 92,900,000 miles." Fancy the "actual distance" being "about"! No doubt it is advisable to have a saving clause "about" in the "exact science" of astronomy, for Professors Airy and Stone gave the distance of the sun from the earth as 91,400,000 miles. Evidently THEY made a slight mistake in a few millions, because Encke knew the distance to be 95,000,000 miles—in winter, and a few millions less in summer. This is not an exact scientific statement, considering that it is summer in one part of the earth, and that it is winter in another part of the earth at the same time. But this is a scientific trifle; for after all, what is a matter of 2,000,000 miles in 95,000,000? When we come to Copernicus we find him stating that the distance of the sun from the earth to be "3,000,000"—what!—your book says, "5,000,000 miles"—Oh, yes, it is all right, the 3,000,000 miles was an earlier guess—I beg pardon—calculation.

The ideas of ancient astronomers as to the distance of the sun from the earth were not quite so great as the ideas of modern astronomers, although, no doubt, they considered themselves quite as accurate as do modern astronomers in their statements of "actual distance." Pythagoras gave as his estimate of the sun's distance from the earth a matter of "44,000 miles." However, he was wrong, right enough, for Tycho Brahe, and others, knew the distance of the sun to be about 13,000,000 miles above the earth." Some time afterward it was shown that even Tycho Brahe was a few millions of miles out, and his "observations" must have led Kepler millions of miles astray, for in 1670, Cassini demonstrated, in the usual way of astronomers, that the distance of the sun from the earth was "85,000,000 miles." No doubt he did his best; but of what avail were his efforts when Sir I. Newton afterwards gave the distance as "28,000,000 miles," or "54,000,000"; no need to be particular, for Sir I. Newton said, "either distance would do very well." I am sorry to say it, but I am afraid Newton was forgetful or ungrateful, as the basis of his labours were the laws of Kepler; but he totally ignored the distance of the sun from the earth according to Kepler's law—"12,376,880 miles."

Mayer gives the sun's distance as over 104,000,000 miles. One of the latest globular theories, "Koreshan Astronomy," which claims to interpret all ancient legends, and mythologies, and to furnish the basis of all reason and science, emphatically states that the distance of the sun from the earth is about "4,000 miles."

Some say it is 96,000,000 of miles. I do not give all the authorities with their "actual" and "about" distances; but, according to the "globular theory," the distance of the sun from the earth may be ANYTHING BETWEEN "4,000 MILES" AND "104,000,000," this represents the astronomical "measuring rod"—"the foundation of all our researches!"

With the above futile results of attempts to ascertain the distance of the sun before us, a thoughtful consideration of the following Scripture may serve a useful purpose.

"Thus saith Jehovah, which giveth the sun for a light by day, and the ordinances of the moon and of the stars for a light by night, which divideth the sea when the waves thereof roar; the Jehovah of Hosts is His name: If these ordinances depart from before me, saith the Lord, then the seed of Israel also shall cease from being a Nation before me for ever. Thus saith Jehovah:—"IF HEAVEN ABOVE CAN BE MEASURED, AND THE FOUNDATION OF THE EARTH SEARCHED OUT BENEATH. I will also cast off all the seed of Israel for all that they have done."

"The heaven for height, and the earth for depth . . . there is no searching."

Astronomers, with their various ideas concerning the sun's distance, speak concerning millions of miles as though they were but inches. In fact, it is as Joyce, in his "Scientific Dialogues," says:—

"We talk of millions, with as much ease as of hundreds or tens, but it is not, perhaps, possible for the mind to form any adequate conception of such high numbers. Several methods have been adopted to assist the mind in comprehending these vast distances." You have some idea of the swiftness with which a cannon ball proceeds from the mouth of a gun—at the rate of about 8 miles in a minute. The numbers of minutes in a year is 525,600, so it would take a cannon ball travelling at the rate of 8 miles a minute, 22 years to reach the sun from the earth!

The "exact figures" concerning the size of the sun are as various and as unreliable as the distances given. We are informed that the sun is "more than a million of times larger than the earth;" with a diameter variously estimated by modern astronomers in harmony with their different ideas as to its distance. According to Russell, the diameter of the sun is 882,000 miles; but Giberne says it has a diameter of 850,000 miles and Sir Robert Ball, of "exact" figure fame, has found the diameter to be 866,000 miles.

When this gigantic sun is considered one really must wonder where the supply of fuel is obtained from, to maintain the great heat it must have. It is also curious to note (supposing, according to modern astronomy, that all the heat we get actually comes from the sun) that the nearer we get to the sun the greater is the cold. On lofty mountains, even under the equator, are to be found never

melting snows; and at sea level the hottest parts of the earth are not under the equator (which, of course, is supposed to be nearest the sun), but are places some degrees—about 10—north and south of the equator. Our astronomers seem to think that their explanations concerning the earth and celestial phenomena are almost complete. They may yet learn that “there is more in heaven and in earth than is dreamt of in their philosophy.”

Job said, in enumerating what he knew to be idolatry and sin against God:—

“If I beheld the sun when it shined, or the moon walking in brightness, and my heart had been secretly enticed, or my mouth had kissed my hand: This were also an iniquity to be punished by the Judge: for I should have denied the God that is above.”

It is well-known that sun worship was practised at the time in which Job lived; and many years after his time we find God’s prophets lamenting the fact that those who by their knowledge ought to have done better, were worshipping the sun, moon, and all the host of heaven. It will no doubt come as a revelation to many to learn that heliolatry, or sun worship, is still practised, and in this country. It is not really to be wondered at, when such men as Sir Robert Ball say:—

“For the power to live and move, for the plenty with which we are surrounded, for the beauty with which Nature is adorned, we are immediately indebted to one body in the countless host of space, and that body is the sun.”

How different is this from the words of St. Paul:—

“God that made the world and all things therein, seeing that He is Lord of heaven and earth giveth to all life and breath, and all things He is not far from everyone of us, for in Him we live, and move and have our being.”—Acts. 17.

But are we indebted so much to the sun as Sir Robert Ball supposes? I think not. All the heavenly bodies have their God-given functions. In Deuteronomy, 33rd chap., we read that there are “precious fruits put forth by the sun, and precious things put forth by the moon.” In Job we read:—

“Canst thou bind the sweet influences of the Pleiades (the seven stars): Or loose the bands of Orion? Canst thou lead forth the Mazzaroth (the signs of the Zodiac) in their season, or canst thou guide the Bear with her train?” I know that very few believe that the moon, stars, and “planets” have much influence in the affairs of this earth, but Holy Scripture teaches that they do have their *role* to fulfil, as in the 19th Psalm:—

“The heavens declare the glory of God; and the firmament sheweth His handiwork. Day unto day uttereth speech, and night unto night sheweth knowledge. There is no speech or language where their voice is not heard. THEIR RULE (or direction) IS GONE OUT THROUGH ALL THE EARTH, and their words to the ends of the world.”

For the benefit of those who have “faith” in the opinion of scientific men in preference to the Bible, I may mention that Kepler, one of the “greatest astronomers,” believed in the influence of the stars; and so did Flamsteed, our first Astronomer Royal.

“CUI BONO.”

“Of all terrors to the generous soul, that *cui bono* is the one to be most zealously avoided. Whether it be proposed to find the magnetic point, or seek a north sea passage impossible to be utilised if discovered; or a race of men of no good to any human institution extant, and of no good to themselves! or to seek the unicorn in Madagascar, and when we have found him, not to be able to make use of him; or the Great Central Plateau of Australia, where no one could live for centuries to come; or the great African lake, for all the good it would do us English folk, might as well be in the moon; or the source of the Nile, the triumphant discovery of which would neither lower the rents nor take the taxes off anywhere—whatever it is, the *cui bono* is always a weak and cowardly (?) argument; essentially shortsighted, too; seeing that, according to the law of the past, by which we may always safely predicate the future, so much falls into the hands of the seeker for which he was not looking, and of which he never even knew the existence. The area of the possible is still very wide, and very insignificant and minute is the angle we have staked out and marked impossible. What do we know of the powers that Nature has yet in store; of the secrets she has yet awaiting discovery, and the wealth concealed? Quixotism is a folly when the energy which might have achieved conquests over misery and wrong, if rightly applied, is wasted in fighting windmills; but to forego any great enterprise for fear of ridicule and the dangers attending it; or to check a grand endeavour by the *cui bono* of ignorance, stupidity, and moral scepticism, is worse than a folly—it is baseness, and cowardliness.”

A well-known infidel has written:—

“In every Christian country the masses of the people are taught in childhood that God created the universe in six days and rested on the seventh. Yet every student knows this is utterly false, every man of science regards it as absurd, and the more educated clergy are beginning to explain it away.”

Though this is not exactly true it is rather near to it. Now the truth of Christianity is called in question to-day, as in old time, by the wisdom of this world—“science.” I would ask my readers after having read through this work, before drawing any hasty conclusion for or against the arguments herein, to carefully consider the fact that they have been trained, perhaps from early childhood, to believe

the "globular theory" true. It is a compulsory subject at school, and the plane earth teaching is never referred to, except perhaps in derogatory terms by teachers who could not give a lucid exposition of our standpoint. Considering also that such men as our titled astronomers go out of their way to inform the public that "it is only the untutored mind that believes the earth to be flat," it is not to be wondered that so many people, consciously or unconsciously, are prejudiced against any teaching not in harmony with the "globular theory"

Infidels and astronomers, who say that no scientific men believe the Story of Creation, narrated in Genesis, to be accurate, make a great mistake. However, the only appeal I make is, that one and all will judge this little book on its merits, using their natural sense in its study; also doing as the Scripture commands:—

"PROVE ALL THINGS, HOLD FAST THAT WHICH IS GOOD."



EARTH'S SUPPOSED SHADOW IN LUNAR ECLIPSE. 77

vessel not suit its behaviour to the globular theory? Is it because it is only a theory? Why do Astronomers violate the law of Perspective when they make diagrams of ships at sea? And now, when the tricks of the so-called Astronomical 'Science' are exposed, why should not all our readers believe the plain truth, that the Earth and sea form one vast outstretched and circular plane?"

SECTION 4.

THE EARTH'S SHADOW IN A LUNAR ECLIPSE.

The Moon has been a sad trouble to our Modern Astronomers, as she has so often belied their theories; but, being determined to make use of her somehow, they assert that the globularity of the world is proved by the shadow of the Earth passing over her in a round form during a Lunar Eclipse.

Before entering into this subject, it may be as well to say a few words respecting Eclipses. Many people, when they find that an Eclipse takes place at the time predicted, are apt to think what a wonderful science Modern Astronomy must be that can foretell such events so exactly. But the truth is that the recurrence of Eclipses are mere matters of calculation from those which have happened at certain times before, and it is known by experience that such will take place at certain times again. The Chaldeans calculated them thousands of years ago, and Aristarchus and Ptolemy could predict

them as well as Newton or La Place. Mrs. Somerville in her "Physical Sciences," p. 46, remarks—

"No particular theory is required to calculate Eclipses, and the calculations may be made with equal accuracy, *independent of every theory.*"

I remember a good story respecting a man who had been summoned to give evidence in a certain trial. He did not appear but a friend came in his stead. "Why," asked the Judge, "does Mr. Blank not appear?" "My Lord," replied the man, "I could give your Lordship a dozen reasons why he could not come." "Let us have them, then," said the Judge. "In the first place, my Lord, my friend is dead." "That will do," said his Lordship, "you can keep your eleven other reasons to yourself." So the Earth having been proved by experiment to have no curvature, and is declared by God to be "founded upon the seas and established upon the floods," that fact ought, as a matter of course, to be a sufficient reason why it is not a wandering Planet, and, therefore, that it would be as impossible for its shadow to cause an Eclipse of the Moon, as for that dead man to give evidence in a Court of Law. Still, perhaps, it may be useful and interesting to make a few remarks respecting this alleged proof, as they will show some of the great mistakes which our Modern Astronomers have made.

According to the Newtonian theory, it is necessary in a Lunar Eclipse, for the Sun to be on the opposite side of the supposed globular Earth, so that the Earth's shadow may thus in passing be cast upon the Moon. But, as Lunar Eclipses have occurred when both the

Sun and the Moon were above the horizon, it stands to reason that, in such circumstances, it would be absolutely impossible for the shadow of the Earth to have been the cause of the Eclipse of the Moon.

During an Eclipse of the Moon its surface has repeatedly been seen during the whole time it lasted, thus clearly proving that its Eclipse could not have been caused by the shadow of the Earth. I quote the following illustration of the fact from what took place at Collumpton, Devonshire, on 19th March, 1848—

“The appearances were as usual till twenty minutes past nine; at that period, and for the space of the next hour, instead of an Eclipse, or the shadow (*umbra*) of the Earth being the cause of the total obscurity of the Moon, the whole phase of that body became very quickly and most beautifully *illuminated*, and assumed the appearance of the glowing heat of fire from the furnace rather than tinged with a deep red. . . . The *whole disc* of the Moon being as *perfect with light* as if there had been *no Eclipse whatever*. . . . The Moon positively gave good light from its disc during the total Eclipse.”*

Again, the Earth, with a supposed diameter of 8,000 miles, is said to revolve round the Sun, with the velocity of about 1,100 miles per minute; the Moon being reckoned to have a diameter of 2,200 miles, and to go round the Earth at the rate of 180 miles per minute, thus, according to calculation, the Eclipse of the Moon, by the shadow of the Earth passing it, should not take four minutes, whereas the usual time occupied by a Lunar Eclipse is generally about two hours, and it has been known to have been extended to four.

* “Philosophical Magazine,” No. 220, for August, 1848.

Parallax sums up the matter as follows, and quotes several instances to show that the opinion has lately gained ground among Astronomers of note, that there are *non-luminous* bodies in the heavens which may cause an Eclipse of the Moon—

“We have seen that during a Lunar Eclipse the Moon’s self-luminous surface is covered by a semi-transparent ‘something’; that this ‘something’ is a definite mass, because it has a distinct and circular outline, as seen during its first and last contact with the Moon. As a Solar Eclipse occurs from the Moon passing before the Sun, so, from the evidence above collected, it is evident that a Lunar Eclipse arises from a similar cause. A body, semi-transparent and well defined, passing before the Moon; or between the Moon’s surface and the observer on the surface of the Earth.

“That many such bodies exist in the firmament is almost a matter of certainty, and that one such as that which eclipses the Moon exists at no great distance above the Earth’s surface, is a matter admitted by many of the leading Astronomers of the day.”*

It is thus clearly evident that there is not the shadow of a proof that the shadow of the Earth is the cause of a Lunar Eclipse, and therefore no argument can be drawn from this alleged proof that the Earth is a globular Planet.

I doubt not that many of my Readers know the famous passage in the *Æneid*—

*Facilis decensus Averni,
Sed revocare gradus superasque evadere ad umbras,
Hic labor, hoc opus est.*

* “Zetetic Astronomy,” pp. 148, 149.

It is true that Virgil did not write as an Astronomer, but as a Poet, yet the thought has occurred to me that the above lines, with a small parenthetical addition, might be suitably employed to show the impossibility of our World careering round the Sun, and might, perhaps, be read with renewed appreciation by some of our repentant Astronomers, thus—

“It is easy to descend to the lower regions,
But (for the Earth) to retrace its steps and ascend to the upper
skies,

There is the difficulty—this is the task.”

