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A Layman's Version A Layman's Message

BY R. G. S. COLLAMORE \checkmark

And it was so.-Genesis I





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INTRODUCTION

According to the Book of Genesis, God commanded "and it was so". God looked upon His work and everything He had made and saw that "it was good", and "very good". Thus He briefly, and without qualification, revealed His estimate, conclusion and satisfaction as to His creation of the earth and the inhabitants thereof.

It appears, however, that not only many laymen but clergymen as well take issue with Him, and do not accept as true the Bible account relative to either the creation of the earth or its inhabitants. Others do not accept as true the account relative to the creation of the earth, but do accept the account relative to the creation of its inhabitants—thus both groups wholly or partially claim that "it was not so", "not good", "not very good". And yet many of these same people, acknowledging only a partial acceptance, claim to accept the Bible as literally true from cover to cover.

"Come now, and let us reason together, saith the Lord." Isaiah 1:18.

In obedience to this expressed command I have been persuaded to attempt to offer such assistance as it is

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possible for me to give to all those involved in the unfortunate controversy between the so-called Fundamentalists and Modernists or Liberals.

My work is designed to reveal to both groups certain mistakes in their premises, as it is immediately evident that they *do* ignore or misconstrue certain vital factors. In very many instances they are largely controlled by acceptances based on allegations that have been erroneously taken for granted as truth. I am familiar with the arguments advanced by both groups, and such knowledge, combined with other knowledge which I have acquired during many years of investigation, study and experiment, warrant my claim of fitness for the task which I have laid upon myself, and which I have been induced to submit herewith in a report as broad and brief as possible.

"If the foundations be destroyed, what can the righteous do?" *Psalms* 11: 3.

ROBERT GOULD SHAW COLLAMORE.

FUNDAMENTALISM

The first conspicuous error made by both parties in this controversy over the literal interpretation of the Bible, is the use and application of the terms *Fundamentalism* and *Fundamentalist*.

The real Fundamentalist does not subscribe to some portions of the Bible and purposely qualify or exclude Genesis and other portions coinciding with and supporting Genesis. This is just what some persons calling themselves Fundamentalists do, although by reason of their belief in the Copernican theory they are to that extent actually Anti-Fundamentalists.

Two Methodist clergymen apparently grasped this important point when one of them from his pulpit substantially declared that, so far as he knew, "the only true, prominent Fundamentalist in the United States is the Reverend Wilbur Glenn Voliva, of Zion City, Illinois, who actually

preaches and believes in the literal interpretation of Genesis and other portions of the Scripture bearing thereon." Another clergyman, the Reverend Herbert A. Sawyer, of Virginia, Minnesota, has gone on record as saying, "I cannot conceive how the anti-evolutionists accept even the Copernican theory; between the two schools Voliva is the more consistent." *Literary Digest*, January 13, 1923.

With some exceptions Protestant clergymen are Modernists and consciously or unconsciously believe and support the wrecker and have not yet awakened to the fact. "In the face of this infamy," says the Reverend Harold J. Hamilton, of Rochester, Michigan, "it is time for the Protestant churches to clean house and banish every Modernist minister from his pulpit." New York Tribune. Literary Digest, November 18, 1922.

The Anti-Fundamentalists or Modernists also use the term Fundamentalism incorrectly, so this common error should first be corrected by both groups.

According to charges, countercharges, admissions and suggestions by many clergymen, published or otherwise announced, there exists at the present time, particularly in the Protestant churches, offensive and scandalous conditions. It

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is the clergy itself which made and continues this scandal and offense, and we have at once, self-admitted guilt and condemnation within the very ranks of the contenders. Judging by their own self-appraisement, they are not qualified to offer any remedy to clarify the situation, or to successfully extricate themselves from deplorable existing conditions. As sowers and reapers they are consistently entitled to the injurious and unwelcome harvest they are now reaping. Evidently an outside life-line is needed, as it seems that no life-line is at present available within their possession or ranks.

"When Clergymen Disagree, What Shall the Humble Layman Think?" (Boston American, June 11, 1923.)

The article appearing with this caption refers to the controversies now pending relative to the opinions of the Honorable W. J. Bryan, Dr. Fosdick and Dr. Van Dyke, concerning the evolutionary theories of Charles R. Darwin, the globular theory and the cosmogony of the Bible. That caption has a consistent mate that is entitled to equal prominence and consideration—

"When Astronomers Disagree, What Shall the Humble Layman Think?"

Considering that both religion and astronomy are treated in that same article, why does the *Boston American* point the query to clergymen and omit the astronomers?

Professor G. P. Serviss, in the Boston American of January 21, 1922, voices the opinions of thousands of humble laymen concerning astronomers as follows:

"The letters that I have received on this subject are at once amazing and disheartening. However, there can be no doubt that they exhibit truly the state of mental uncertainty in which thousands find themselves with regard to the question whether the earth is round or flat. Even many of those who say they believe that it is round, nevertheless show that they have no settled conviction on the subject and simply accept the statement because they find it in wellaccredited books or hear it from persons of repute for learning."

In that published statement of admissions by Professor Serviss, it appears that thousands are

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in doubt and others have no definite, settled conviction other than the plea of taken-for-granted as an excuse for acceptance of the globular theory.

Similar admissions previously published by Professor E. L. Larkin in the *Boston American* under date of March 24, 1915, are as follows:

"Our nation is classed in geography as enlightened. But the enlightenment regarding even our little solar system, to say nothing of the hundred million suns, is so dim that it is really dark or black. The ignorance on even elementary astronomy is simply phenomenal."

If such an amazing condition of prevailing ignorance does exist, then why? What is the cause? In spite of the great number of educational mediums teaching and enormous expenditures supporting the globular theory, there are still thousands of doubters not convinced. These are without settled convictions of any sort, but occupy themselves with a search for information and explanations. Meanwhile perplexity is in control, at least so far as the United States is concerned.

Such amazing conditions of abysmal ignorance

which were apparent to Larkin and Serviss, are revealed and emphasized in the Fundamentalism feuds; and such ignorance and admitted perplexity should be met and overcome. But it appears that the forces now in control have been and are now unable to meet successfully the issues involved, so that the light will have to come from other sources. Such sources should remain unobstructed.

II

THE MAIN ISSUE

The so-called Fundamentalists claim to adhere to the literal interpretation of the Bible, while the so-called Anti-Fundamentalists to a great extent deny and reject such an interpretation. Thus is revealed the main issue between these two Protestant groups.

Modern astronomy and cosmogony are the principal weapons used by the Anti-Fundamentalists. Biblical astronomy and cosmogony *should* be the weapons of the Fundamentalists, but unfortunately they stupidly or unwisely reject them, and through their rejection ignore their own best means of attack, and support the weapons and become the allies of their opponents. They have not yet awakened to their suicidal position, by which they have surrendered the whip hand to their opponents.

The subject "calls for light, not laws, for painstaking scholars, not policemen," writes the Reverend Ellison R. Purdy, of the Friends in Minneapolis, "and those who are sincerely opposed to evolution should meet the theory on the field where it has gained the ascendency, and not on another." Literary Digest, January 13, 1923.

Correct—that field should be the objective, but what is that field? The following chapter plainly reveals it.

Truth is truth and science is science, whether discovered and proved by ancients or moderns, by the educated or uneducated, professional or non-professional, majority or minority. But sometimes truth and science may be retarded by some unexpected influence least justified in retarding them; and sometimes truth and science are advanced and perpetuated from some source least anticipated. These influences and sources are not under the exclusive control of any one class whatever.

What is accepted as scientific truth in one decade, is in another decade discarded as false, and such instances and conclusions especially relate to astronomy and cosmogony. III

THE KEY TO DEFEAT ANTI-FUNDAMENTALISM

The key to defeat infidelity is also the key to defeat Anti-Fundamentalism. For that key we can consult no better authority than the late Robert G. Ingersoll, who knew that key and preached it sincerely, boldly and publicly. He also made public his analysis thereof, and openly revealed the basis upon which he relied in support of his belief. In addition he admitted and suggested the method that, if used, would change his belief and totally defeat infidelity. It is as follows:

"If it shall turn out that Joshua was superior to Laplace—that Moses knew more about geology than Humboldt—that Job as a scientist was the superior of Kepler—that Isaiah knew more than Copernicus, and that even the minor prophets excelled the inventors and discoverers of our time, then I will admit that infidelity must become speechless forever."

Thus we have Ingersoll's admission that he was principally guided in the formation of his opinions by

astronomy and cosmogony and that victory or defeat are contained therein. Each contestant, he averred, had equal opportunity to use the same key to fact and truth. Thus he submitted his analysis for consideration, indicating that modern astronomy and cosmogony may be false and Biblical astronomy and cosmogony may be true.

Ingersoll named Laplace, Humboldt, Kepler and Copernicus; they constitute his principal authorities, his basis, his bulwark and his reliance. Consequently they are to be considered and judged accordingly.

In addition to and corroborating Ingersoll's analysis is a similar analysis by the late Professor Andrew D. White, an ex-President of Cornell University. He substantially claimed that the theories of Copernicus, Kepler, Galileo, Descartes and Newton, not only disposed of the old theological conception of the Universe, but also contributed a new basis for the theory of evolution conspicuously different from the theory of direct creation. This subsequently resulted in the formal presentation on July 1, 1858, of two papers by Charles R. Darwin and Alfred Russel Wallace respectively to the Linnaean Society at London, and gave birth to the theory of evolution by natural selection. In addition Professor White claimed that the Magellan voyage of 1519-1521 and similar voyages since, not only support the evolutionary theory as against the theory of direct creation, but also score a brilliant victory for science and for proof of the rotundity of the earth and the antipodes, thus doubly confirming the evolutionary theory. But he admitted that the eminent authorities, Linnaeus in the eighteenth century and Cuvier and Agassiz in the nineteenth century, were prominent opponents of the evolutionary theory. A History of the Warfare of Science with Theology, by Professor White.

The late Professor J. R. Draper, of the New York University, held opinions similar to Ingersoll's and White's. He substantially claimed that whether the earth is flat or globular was surely settled by three sailors—Columbus, DeGama and Magellan, particularly the latter's circumnavigation of the globe. Professor Draper claimed that he could not understand how anybody could doubt the globular form, in view of the daily rotation movement and that other movement of the earth on its orbital course around the sun. He admitted that doubts and opposition existed, especially when considered in relation to the Bible and Genesis as against science, and concluded that the question cannot be settled until one of the opposing

factions surrenders. Professor Draper in The Conflict between Religion and Science.

The conclusions and positive declarations of Draper as regards the movements of the earth and truth of the same are, however, most emphatically denied and rejected by many authorities who even subscribe to the globular theory, some of whom are cited in subsequent chapters of this book. This proves that others than the children of the Church find it possible to differ radically from Professor Draper. And herewith I submit the objection and denial by Professor Paul Painleve, of Paris, whose blow from the shoulder is as follows:

"Under the old teaching it was explained that the world turned on its axis and in space. Of course, this is mere talk; no such thing occurs, but such explanation must be given so the ignorant can have a mental picture of what the universe is like. Neither the earth nor the stars whirl in space." Boston Sunday Globe, April 29, 1923.

Under such a ruling by Painleve, children have been taught to believe falsity as fact, owing to their lack of mental capacity to understand actual truth. Conse-

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quently, not only the children of the Church, including Professor Draper, but also all others who accept as fact the alleged rotation of the earth and its orbital course around the sun, are the victims of delusions invented for children and the ignorant.

Are Genesis and the Bible to be disposed of by such delusions accepted as fact by Ingersoll, White and Draper, and lauded as science and evolution? What else can be expected than conflict between religion and alleged science when such falsification is resorted to in behalf of the globular theory and evolution?

Here we have in a nutshell the basis and defense of infidelity—the basis and defense of evolution, and the basis and defense of the Anti-Fundamentalists, all practically in one group, wielding the same weapons, adopting the same methods of attack and launching against the same objective—the Bible. Their admissions, confessions and claims are open, full and free.

It seems incomprehensible that such intellectuals as Ingersoll, White and Draper, and many others, should be so deluded, so easily trapped by that Magellan voyage and similar voyages, clearly revealing that they were engulfed in that maelstrom of mistakes and nonsense. It is inconceivable that such voyages should be

blindly accepted as genuine and taken as sufficient and exclusive proof of the fallacy of Biblical astronomy and cosmogony.

To oppose and meet the contentions of the Anti-Fundamentalists, it is only necessary to go into their camp and turn their own weapons against them. It is possible to reveal the weakness and worthlessness of their evidence by exposing the contradictions and doubts that exist and are emphasized among themselves relative to their own conflicting opinions, and thus reveal their much-divided house built upon the sand. It has been proved again and again that socalled great minds are sometimes misled and quickly and easily caught, often by quite simple problems. They announce ridiculous opinions, give misleading advice and make absurd predictions relative to important problems. The present controversy is a notable instance of just such a state of affairs.

The Fundamentalists should proceed at once to force their opponents to occupy the defensive position. The primary move to accomplish this result is for the Fundamentalists to reject the following alleged proofs, assumptions, speculations and contentions upon which their opponents rely:

1 The Magellan voyage and similar voyages.

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2 The doctrine of the antipodes.

3 The doctrine of evolution as set forth in 1858 and 1859.

4 The alleged distances of the sun, moon and other orbs in space.

5 The alleged movements of the earth.

6 So-called science, as alluded to repeatedly.

The first and second are principally relied upon to prove the rotundity of the earth and thus refute the Biblical claims.

The third is called upon to refute the Biblical narrative of Creation.

The fourth is quoted to refute Scriptural teaching as embodied in the declaration of Jesus Christ when on the Cross—"Today shalt thou be with me in Paradise."

The fifth is relied upon to refute the Biblical claims as to the foundation, immobility and stability of the earth.

The sixth is considered the birth date of true science.

IV

CIRCUMNAVIGATION

The Magellan voyage and similar voyages have been taken for granted as only possible on an earth of globular form, and are cited as proof of rotundity and the theory of antipodes. This taken-for-granted confidence and acceptance, in combination with other equally blind acceptances, have led to some of the deplorable straits in which the Fundamentalists now find themselves and from which they are struggling to extricate themselves.

Many persons have discovered the falsity of that circumnavigation theory and its consequent claims, and have rejected it as proof of rotundity and antipodes; subsequently, they have wondered why they ever believed it to be true. The Fundamentalists also should banish that taken-for-granted acceptance and analyze the problem as many others have done to arrive at the truth.

Now as to circumnavigation. A globular earth form arbitrarily demands certain conditions that must

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be complied with and from which evasion is absolutely impossible. If all of the surface of the earth as now known can be reached otherwise than in compliance with these conditions, then the claim to rotundity fails accordingly, not only as to navigation, but also as regards many of the claims of astronomy.

What is circumnavigation in all latitudes and longitudes? Can complete circumnavigation be accomplished on both a globular form and on a flat surface? Or exclusively on a globular form? Or exclusively on a flat surface? Is complete circumnavigation necessary in order that all parts of the surface of the earth as now known to exist may be reached? These questions require detailed, descriptive answers and just consideration.

Complete circumnavigation on a globular form is the encirclement of the entire length of every parallel of latitude and the entire length of every meridian of longitude and the return, in each instance, to point of first departure. It must include all latitudes and all longitudes and not exclude any of them. Thereby the globular form is tested, and the possibility of reaching all points on the surface of the earth as a flat surface by latitude and longitude other than by complete circumnavigation is also tested.

Latitude on Globular Form

According to the exigencies of a globular form, latitude is measured on imaginary lines circling the earth; those lines north of the equator have the north geographical pole as the center for each parallel, and those lines south of the equator have the south geographical pole as the center for each parallel. Both geographical poles apply equally as the center for the parallel called the equator, and the courses on all these parallels are from east to west and west to east.

Thus the test of latitude on a globular form is as follows: All points on the earth's surface north of the equator are so situated that a line from any point down and through the earth, would pass through or near the interior center of the earth and emerge south of the equator. All points on the surface of the earth south of the equator are so situated that a line from any point down and through the earth would pass through or near the interior center of the earth and emerge north of the equator. A line from any point on the equator down and through the earth would pass directly through the interior center of the earth and emerge on the equator at a point directly opposite the point from which the line started. The zeniths

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and nadirs of each and every line apply accordingly, and it is absolutely necessary that these positions of lines, angles, zeniths and nadirs be thoroughly understood as they apply particularly to travel east and west and determine the helms to be used on those courses.

Such positions are exacted by a globular form, and travel must and will conform thereto if the earth is a globular form. To illustrate these various positions, —assume a ship is on the 45th parallel north latitude heading east; another ship is on the 45th parallel south latitude heading east; another ship is on the equator heading east. Each ship is to maintain its respective latitude going east continuously until it returns to its point of first departure. By so doing it returns by the west, thus describing a circle by latitude around the earth,—assuming, of course, for analysis and illustration, that there is a water course for the entire distance of each parallel of latitude.

Bearing in mind that the lines and zeniths are factors as previously described, the ship on the 45th parallel north latitude is directly over the line that goes down through the interior center of the earth and emerges near the 45th parallel south latitude. This ship so continues in this relative position throughout its

continuous and complete voyage in going east and returning by west, and in so doing circles the north geographical pole, keeping equidistant at all points of its voyage from said pole. Thus this ship's left or port side is always facing the pole, and to do so requires the port helm in turning around the pole to hold it to its position in respect to its zenith and nadir. In going west and so continuing and returning by east, the same conditions apply as to zenith and nadir, but in this case the right or starboard side of the ship is always facing the pole, and to turn around the pole requires the starboard helm. During both of these voyages this ship will actually conform to all the demands of a globular form.

Bearing in mind the lines and zeniths as factors as previously described, the ship on the 45th parallel south latitude is directly over the line that goes down and through the interior center of the earth and emerges near the 45th parallel north latitude. This ship so continues in this relative position throughout its continuous and complete voyage in going east and returning by west, and in so doing circles the south geographical pole, keeping equidistant at all points on its voyage from the pole. Thus its right or starboard side is always facing the pole, and to do so requires

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the starboard helm in turning around the pole to hold to its position in respect to its zenith and nadir. In going west and so continuing and returning by east, the same conditions apply as to zenith and nadir, but in this case the left or port side of this ship is always facing the pole, and to turn around the pole requires the port helm on this voyage south of the equator. During both of these voyages this ship will have conformed to all the demands of a globular form.

It will be noticed that these two ships in relation to each other and as to helms on their respective east and west voyages occupy different positions but use the same helms *differently*,—just the *reverse* of each other. This is a most important point to consider and understand, as such factors determine much as to what constitutes circumnavigation by east and west voyages on a globular form, and induce the question: Would those two ships in fact, really occupy such different positions in relation to each other and require such different helm manipulation in going east and west?

The four illustrations refer to a direct east and west analysis, but an irregular zigzag east and west course is subject to a similar analysis and applies accordingly.

Now as to the third ship, which is on the equator. Bearing in mind the lines and zeniths as factors as previously described, the ship on the equator is directly over the line that goes down and through the interior center of the earth and emerges on the equator at a point directly opposite the point from which the line started; the zeniths and nadirs apply accordingly. This ship is going straight, whether on its continuous eastern voyage or its continuous western voyage, and there is no deviation to right or left. Therefore the amidship helm is the helm required by a globular form on such strictly eastern and western voyages, and the equator latitude is the only latitude of the whole one hundred and eighty-one latitudes whereon a straight, continuous circling of the earth by latitude can be This "going straight" factor has confused made. many persons, as they erroneously believe that it applies to all latitudes and the entire extent of each latitude, whereas it only applies to the equatorial latitude in its entire distance.

This last illustration of the third ship refers to a strictly east and west analysis, but an irregular equatorial course is subject to a similar analysis.

It should be noticed that while the first two ships occupy different positions and use the same helms

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differently in relation to each other on their respective east and west voyages, the third ship occupies quite a different position and requires different helm manipulation. Thus a globular form demands *six* different positions and requirements for these three ships, each pursuing easterly and westerly courses, encircling the earth according to the globular theory. This again induces the question—Would those three ships in fact, occupy such different positions in relation to each other and require such different helm manipulation in going east and west?

It has been claimed by expert mariners that the heeling of a ship obliges certain allowances to be made because of the angle created by the heeling position. If that angle is an important factor, how much more so are the various, pronounced angles when a ship is south of the equator, practically upside down in relation to a ship north of the equator and also to the true north, north geographical, and north magnetic poles? For both ships rely principally upon instruments in reference to the so-called true north for guidance, and the globular form demands all these different conditions and angles.

I submitted my analysis as to these three ships and their voyages to the Navigation Department of a

certain correspondence school which is a recognized authority, and received the following reply—

"Your conclusion is correct and will be all the more apparent if the said courses are projected on a globe, but does not hold good in actual practice."

Here we have an authority admitting that my analysis as applied to a globular form is correct, and also admitting that such positions and conditions are not complied with in actual practice of navigation. In other words, two admissions which operate against the alleged proof that the Magellan voyage of circumnavigation determined the shape of the earth and that shape to be globular. Consequently, if in practice other positions and conditions are complied with instead of globular requirements, then the Magellan voyage has not proved the rotundity of the earth and an antipodes, and science did not gain a crushing victory in 1519-1521, or destroy every geographical conception based upon sacred writings as is so confidently claimed by Professor Andrew D. White. Instead of scoring a victory, science has been in fact, the victim of a cruel delusion.

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Latitude on a Flat Surface

In relation to a flat or plane surface, latitude is measured on imaginary lines circling a central point, that point being the north center (or call it pole, for brevity), and all these latitudinal lines have a common center. The parallels begin at that center and increase in length as their distance from the center increases. These circles are from east to west and west to east, and all points on the earth's surface are so situated on these parallels of latitude that the same position applies equally to all objects in connection with and relative to vertical and horizontal lines and zeniths, there being no divergence between them whatsoever.

Relative to the flat surface, a ship on any latitude north or south of the equator, sailing east and so continuing, has the left or port side facing the north central pole; in fact, the ship is turning around that spot and in so doing uses the port helm in the turning process, and in due time returns to the point of first departure. A ship on any latitude north or south of the equator in sailing west and so continuing, has the right or starboard side of the ship facing the north central pole; in fact, the ship is turning around that

point and in so doing uses the starboard helm in the turning process, and in due time returns to point of first departure. Thus both the east and west courses, on every latitude north and south of the equator and including the equator, are accomplished by sailing around the north central pole, there being no south central pole south of the equator on a flat or plane surface.

Having thus presented the analysis of latitude in relation to a globular form and a flat surface, the comparison shows that the globular form requires six different methods in the process of sailing continuously east and west, while the flat surface requires only two methods in circumnavigation by latitude.

Going latitudinally east or west on a flat surface the direction is not toward any boundary or edge, as is so commonly and erroneously believed, as the process of going toward any boundary or so-called edge on a flat surface would be by longitude. This has not yet been done, either on the theory of a globular form or a plane, and to those explorers and mariners who have gone farthest south by longitude, there has always been in front of them the horizon beyond and not a definite edge or boundary. None of them ever reached or solved this horizon, and until this is

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actually accomplished the claims of the experts and advocates of the globular theory remain premature and worthless. Their claims and arguments are also open to criticism and rejection because they have so confidently and sarcastically repudiated all those others who do not accept the truth of their globular theory.

Longitude on a Globular Form

In relation to a globular form, longitude is measured on imaginary lines circling the earth from north to south and south to north, all meeting at the north geographical and the south geographical poles, which are respectively the points farthest north and farthest south of the equator. These longitudinal lines separate most widely at the equator. From the equator and toward both poles these lines gradually converge until they meet and come to a point at each pole respectively.

All of these longitudinal lines or meridians of longitude require only one helm for a ship on a continuous voyage from north to south and south to north and its return to point of first departure. That helm is the amidship helm if the voyage is strictly by longitude. Even if the ship sailed an irregular course with the

object of circling the earth from north to south and return by north, or vice versa, to prove circumnavigation by longitude and thus prove the rotundity of the earth and an antipodes, the controlling helm would still be the amidship helm. For longitude on a globular form requires straight sailing. But such straight sailing by longitude as to a complete circling of the earth has never yet been accomplished, and is quite different from circumnavigating by latitude; consequently, not one of the three hundred and sixty meridians of longitude has been traveled its entire length by any globular method. This reveals that the earth as a globular form with a north pole and a south pole has not yet been demonstrated as such by circumnavigation, and failure to so demonstrate it defeats the advocates of the globular theory. In view of which, the claims of the advocates of the flat surface theory are to date correspondingly sustained.

Longitude on a Flat Surface

Relative to a flat surface, longitude is measured on imaginary lines starting from the north central pole and extending southward, the lines diverging and increasing in divergence as the distance from the pole

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increases. For illustration,—a wheel laid flat conveys a good idea of those longitudinal lines on a flat surface; the hub represents the north central pole and the spokes represent the three hundred and sixty meridians of longitude. A ship to sail the entire length of any of those lines from the north central point or spot to the farthest southern point, and from the farthest southern point to the north central point and continuing on and over that point and down to the farthest southern point, completes a voyage covering from north to south and south to north, showing that complete longitudinal circumnavigation is not necessary in order to reach all points on the surface of the earth. Thus the one hundred and eighty-one parallels of latitude and the three hundred and sixty meridians of longitude on a flat surface cover all points on the surface of the earth, the latitudinal lines being circular and the longitudinal lines being straight. The circular lines require the port helm going east and returning by west, and the starboard helm going west and returning by east. The straight lines require only the amidship helm, going north to south and south to north. And the entire operation is accomplished by a simple four-method process as against the eightmethod process required by the globular form.

Complete circumnavigation under the requirements of the globular theory demands that the earth be completely circled east and west and north and south, in order that all points on the earth's surface be reached. Whereas complete circumnavigation is not necessary on a flat surface in order that all points on the earth's surface be reached, as we have pointed out above. In order to support and emphasize this contention in favor of the flat surface theory, I will submit in the next chapter on Navigation, the admissions of certain eminent experts and authorities on the globular theory.

V

NAVIGATION

As a preliminary presentation of the issues involved relative to navigation in connection with the shape of the earth, the following statements of two experts on the globular theory are submitted for consideration.

Statement and prediction by J. von Gumpach as published by him in 1862—

"As bearing upon navigation and commerce, it involves the preservation of millions of dollars' worth of property and thousands of lives. During those 150 years since the time of Sir Isaac Newton, there have perished at sea, solely in consequence of his erroneous theory, at a very moderate computation some 10,000 human beings, the majority of them British sailors, and property in addition worth from twenty to thirty millions of pounds sterling. At the present period, the annual losses at sea attributable to the same cause, amount to 500 lives and property valued at a million pounds sterling. All from no other cause save an erroneous

astronomical theory. Such losses will continue unless that theory ceases to be applied to the practical purposes of navigation."

Statement and prediction of Commander J. Foster Stackhouse, published in 1915-

"Between 1909 and 1913, Lloyds lost 214 vessels, a total of 260,063 tons, without knowing just how, when or where the losses occurred. The average of ships lost in this way is more than one a week, and represents an actual loss of \$500 an hour. After I had studied such statistics as these for a while it seemed to me some serious scientific investigation of the matter was absolutely necessary." Boston Sunday Herald, February 14, 1915, and elsewhere.

Commander Stackhouse also averred that it is now believed that Cape Horn's true position is different from that shown on the charts and that it is vitally important that it should be exactly located. Also that Hervagault's Breakers should be located as they may be connected with the loss of the *Titanic*, as the Breakers are about sixteen miles southeast of the assumed position of the *Titanic* when sunk.

Two steamships sailed from England, both bound for New York. One of them, the *Titanic*, unfortunately was lost, the other arrived safely. Report as to the latter vessel appears in the work *Wrinkles in Practical Navigation*, by S. T. S. Lecky, Master Mariner, Commander, R. N. R., F. R. A. S., F. R. G. S., etc., and substantially contains the following admissions by him.

It appears that he, with another mariner, were on a trip from England to New York City. When nearing their destination, they, together with the captain and two officers of the ship, arranged to independently take observations at noon and compare their findings. They very nearly agreed.

They were favored with excellent conditions, as the day was clear and cloudless, the sea smooth and the horizon clean-cut, yet within two hours later, on making Long Island, New York, they found to their astonishment that their findings were fourteen miles in error. He admitted that many such cases had come under his notice.

Thus this noted expert admits that five observers, including himself, were wrong to the extent of fourteen miles, although the weather, atmosphere, horizon, sea and sun conditions were all that could be desired.

They were so wrong that he describes it as a "phenomenon," and measures it by the term "magnitude." It is worthy of note that he recalls that many such cases have come under his notice, yet frequently without disastrous consequences. Why they are so wrong he does not know and has no theory to account for such errors, but he suggests that mariners look into the matter as it may be due to dip or refraction.

Another case published by Lieut. E. Middleton, of England, is substantially as follows—

I have sailed with very superior navigators in H. M.'s Troopships, and when only ten days out of port, we have barely escaped disastrous shipwreck, although the weather remained fine during the whole ten days and the sea like a pond. Nevertheless, the captain confessed that he was "out" some 200 miles in his observations and it was only by a miracle we escaped destruction. This escape, coupled with Captain Nilsen's 110 mile error, caused me to smell a nautical rat.

Remarks by officers tended to show that the disbelief in the globular form is much wider among educated authorities than is supposed.

Another disaster occurred in October, 1922, as fol-

lows. A Gloucester fishing schooner was totally wrecked when she struck Sable Island, although her captain believed he was 14 miles south of the island. Later he blamed it to strong tides. A similar disaster occurred in January, 1919, to the Northern Pacific off Fire Island. A Boston Herald editorial claimed that "no one knew why the Northern Pacific was so far out of her course; other ships that night fared safely through the fog."

The George Washington came near to disaster in February, 1919. The great transport was running for the Boston Light, but was instead headed straight for Thacher's Island, off Cape Ann, and narrowly escaped a wreck. President Wilson was on board. In this case the error was again attributed to the fog, but this vessel, like the Northern Pacific, was too far north. There are two other noticeable facts concerning those two vessels, and in fact, concerning most sea disasters, viz.—the estimates as to errors are uniformly from eleven to eighteen miles.

The mystery which surrounds these figures, eleven to eighteen, receives further emphasis by the report of the *Cruise of the Carnegie*—

"We were astonished as the *Carnegie* proceeded south toward the region of Queen

Mary Land, to find the chart errors in declination constantly increasing, until, in the region of latitude 60° S. longitude 110° E., they reached a maximum of 12° for the U. S. and British charts, and of 16' for the German charts."

It is a conspicuous fact that although these errors result in terrible disasters there is little activity as to investigations and there is an apparent attempt to discourage efforts to solve the mystery. Such a state of affairs naturally gives rise to such questions as— Why eleven to eighteen miles error in estimates every time? Why the apparent secrecy?

The Builder of September 20, 1862, published the following suggestion—

"Assuredly there are many shipwrecks from alleged errors of reckoning which may arise from a somewhat false idea of the general form and measurement of the earth's surface; such a subject, therefore, ought to be candidly and boldly discussed."

Thus the warnings and conclusions of J. von Gumpach, Commander Stackhouse, *The Builder*, and Middleton are in substantial agreement and the citations

as to the various vessels previously referred to are significant facts that should cause fair-minded, unprejudiced persons to consider and, if possible, analyze the subject.

Having cited a few cases of disaster, I will now cite a few cases of admissions as to the relative value of the globular and plane theories, especially as relates to plane sailing, and what the globe earth theory cannot account for. Dunraven in *Navigation* substantially claimed that—

"—the sailing, day's work and all the problems solved by the help of Traverse Tables, would be impracticable on the supposition that the earth is a sphere, and for the purposes of navigation the earth is treated as flat."

This authority admits that it is practicable to navigate the earth only if it is regarded as a plane surface. Such an admission induces the question, how is it possible to navigate the earth on such a supposition and still claim that it actually is *not* flat? And further, why is it impossible to navigate the earth on the claim that it is globular? It is equivalent to claiming that a person cannot go to his house by a street that

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does exist, but can go to his house by a street that does not exist.

Professor Evers in Navigation in Theory and Practice, substantially admits that—

"In practice, scarcely any other rules are used but those derived from plane sailing, and longitude is more frequently found by it than by any other method."

So what they have claimed as false is apparently actually true for purposes of navigation, and the globular theory is erroneous. For all credit is given to the plane theory and none to the globular.

We here have two more confessions from two more advocates of the globular theory. Professor R. A. Gregory, F. R. A. S., in *Elementary Physiography* admitted that—

"Circumnavigating on a flat surface with the compass needle pointing to the center of the surface, a ship might sail due east or west and eventually return to the same point by describing a circle."

D. Wilson-Barker, R. N. R., F. R. S. E., in Navigation, has admitted that—

"The fact that the earth has been sailed

around, is not sufficient proof as to its exact shape."

Many sea captains and officers haughtily assume to tell us all about it because it is their profession, but S. T. S. Lecky, Mariner, previously referred to, tells us how little they know and how ignorant they are on the subject:—

"He (the captain) only knows that by certain formulæ learned parrot-like, certain results are produced, but *how* is a mystery."

Such a severe criticism of sea captains by Lecky, induced me to apply a test. I submitted a certain problem in navigation on latitudinal circumnavigation of the globular form to three noted nautical schools in the United States. The problem consisted of a course north of the equator, a course south of the equator and a course on the equator, with a ship on each course heading east and to so continue the entire length of its course and return to point of departure —circumnavigation by latitude. Helm manipulation, is, of course, the key to this problem, and if that is correctly stated, all the other factors will conform to the requirements of the globular theory. But if helm ma-

nipulation is incorrectly described, then Lecky's criticism is warranted and sustained and such sea captains and nautical experts stand self-condemned.

In answering the problem, the first school claimed the amidship helm for all three courses.

The second school claimed the starboard helm for the course *north* of the equator, the port helm for the course *south* of the equator, and the amidship helm for the course *on* the equator.

The third school sent a representative to interview me personally and subsequently answered as follows— "Your problem and your sketch and solution of that problem are correct for a globe form."

The first two schools disagreed as to the courses north and south of the equator, but agreed as to the course on the equator; and the third disagreed with the first and second schools as to all three courses, but agreed with the plane theory as to all three courses. Yet this same school adheres to the theory of the globular form.

Such answers from three nautical schools confirm Lecky's "parrot-learning" criticism, and reveal that those experts did not know what constitutes east and west on a globular form—the form they believe is true.

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The answer of the first school indicates that China is the antipodes and nadir of the United States and vice versa, and that the 45th parallel south latitude is the antipodes and nadir of itself. Consequently, not one of those antipodal lines would pass through or near the interior center of a globular form, and neither line would have the length that a globular form estimate necessarily demands.

The answer of the second school indicates that the helm for the course north of the equator is in fact the helm for the course south of the equator. Just the reverse, as the answer should have been port instead of starboard. The helm for the course south of the equator, should have been starboard instead of port, then the zeniths and nadirs and interior center of the globular form would coincide. These are the factors that show how navigation determines whether the earth is a globe or a plane surface, and the application of these factors by experts will show whether or not they understand these two theories.

Considering Lecky's criticism of sea captains, I was not greatly surprised to receive such incorrect answers from the three nautical schools noted above, nor equally incorrect answers from various sea captains. Two sea captains in particular, were con-

founded and amazed when their arguments were met and their blunders revealed.

Here is another instance of error that appeared in the Boston Sunday Advertiser, November 30, 1919, relative to circumnavigation—

"If we had X-ray eyes that could look straight down through the earth to the other side at our friends of the antipodes, we should see of human beings only the soles of their feet pointing up at us. The Chinese hurrying about would look to us as we look to the worms, if they had sight, and could look up at us from the ground. To the Chinese it is you that hang head downward. Compared with you the men in China are hanging head downward and their houses all have the roofs hanging down."

According to this description published and distributed as correct educational information, a line straight down from Boston would emerge in China. Therefore China, which is on the same latitude as Boston, is the nadir or antipodes of Boston, and this line would not go through the interior center of the earth but through the earth at 42° above the interior

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center of the earth. Such a blunder agrees with the one made by the nautical schools.

If the earth's form is an oblate spheroid the true analysis is as follows:-Taking Boston Light as a definite location, approximately 42° 20' north latitude and 70° 53' west longitude, a line from this point would go straight down, passing near the interior center of the earth and would emerge on 42° 43' south latitude and 109° 7' east longitude in the ocean southwest of Australia. But if the earth's form is a sphere, then a line from the Light would go straight down and pass exactly through the interior center of the earth and emerge on 42° 20' south latitude and 109° 7' east longitude in the ocean southwest of Australia. A difference of 23 miles of latitude in the comparison of oblate spheroid with sphere. Such lines would not emerge on their own latitude as the nautical schools and the Boston Sunday Advertiser claimed.

China is to the east and west of Boston and the United States, on practically the same latitudes and in the northern hemisphere,—not beneath and south of us or in the southern hemisphere.

Another Boston paper, misunderstanding what constitutes an antipodes even for a globular form, published the following:—

"Ripley's Ramble Round the World, South China Sea, January 23, 1923. The rocky Island of Cavite, the naval base of Manila, is one of the best fortifications we have. And in the harbor, slowly riding at anchor, are many destroyers and other armored craft. Your Uncle is wide awake. Today at 9.31 A. M. I was exactly half way around the world. The Laconia was about straight down from where you stand.

Latitude 12° 7' North, Longitude 118° 54' East."

With this statement was an accompanying sketch showing a ball form with some buildings at the exact top marked "New York". Straight down at the exact bottom of the ball was a steamer bottom up to New York and marked "*Laconia*." By Robert L. Ripley— *Boston Globe*—April 5, 1923.

Consider the blunder of claiming that 12° 7' north latitude was approximately straight down from 40° 42' north latitude, the latitude of New York City, and both latitudes north of the equator and in the same Northern hemisphere. If the earth were a sphere, the antipodes of 40° 42' north latitude would be 40° 42' south latitude in the southern hemisphere. If the earth were an oblate spheroid the antipodes of 40° 42'

north latitude would be 40° and a few miles variation from 42' south latitude and in the southern hemisphere. The antipodes of 12° 7' north latitude would be 12° 7' south latitude, and not 40° north latitude. China being on the same latitudes as the United States, the people of both countries occupy the same upright position relative to one another and not feet toward feet as those experts erroneously claimed.

Such men with such ideas as published in the Boston Sunday Advertiser and Boston Globe disclose at once their ignorance of circumnavigation. Yet they think that they can ridicule others who do understand the positions of latitude and longitude on the globular and plane surfaces of the earth. Such published blunders reveal the necessity of just such detailed explanations as appear in this book relative to navigation.

The important question, however, is as to the size of the earth south of the equator; whether it is the same size or larger than the earth north of the equator. If larger, then latitudinal and longitudinal lines will be affected thereby and distances increased and the duration of darkness will differ from the duration north of the equator.

It has been admitted that there are many factors and conditions that apply exclusively to the portion of

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the earth south of the equator. This would indicate that it is much larger than the portion north of the equator. The darkness is of longer duration south than north, but as the exact extent has not yet been accurately determined any conclusions as to the exact size and shape of the earth are correspondingly uncertain.

There are larger water areas and less land surface south than north. The presence of land is necessary for geodetic surveys, and if it is lacking, little data can be secured bearing on the southern regions in comparison with the northern.

It has also been admitted that whether the earth is spherical, spheroidal or ellipsoidal there is thus far no positive evidence.

According to explorers Shackelton and Amundsen, the South Polar region is a great continent, the South Pole itself situated on a plateau 10,000 feet high. And according to explorers the North Pole lies at sea level, and there is a vast difference between the North and South Poles as to fish and animal life, vegetation, ice, etc.

In Anson's Voyage Around the World, by R. Walter, the following error as to distance is reported:

"The whole squadron esteemed themselves upwards of 10 degrees more westerly from the Straits of Magellan, so that in running down by our account about 19 degrees of longitude we had not really advanced half that distance."

Here is a mistake in distance of about 10 degrees, and all estimates by a whole squadron were wrong. This was because their calculations were made on rules and tables based upon the supposition that the southern hemisphere was the same size as the northern hemisphere, and that distances would be, therefore, equal.

To cite another and similar instance—in the Voyage by the Discovery, by Captain R. F. Scott, he states—

"From Wilkes' report concerning Eld's Peak and Ringgold's Knoll land, I must conclude those places are non-existent, and there is no case for any land east of Adelie Land. Thus, once for all, we have definitely disposed of Wilkes' Land. True geographical conditions should be known."

Captain Scott came to this conclusion because he asserts he actually sailed over the region Wilkes claimed

to be land. Notice how sure he was that he had for all time settled the mooted question himself.

In South Sea Voyages, by J. C. Ross, another discrepancy is reported:

"We found ourselves every day from 12 to 16 miles by observation in advance of our reckoning. By our observations at noon, we found ourselves 58 miles to the eastward of our reckoning in 2 days."

In the United States Exploring Expedition, by Wilkes, we find a similar error reported:

"In less than 18 hours he was 20 miles to the east of his reckoning in 54° 20' south."

The reader will note that when the route taken is east or west, the same results are obtained; therefore currents are not the cause of the discrepancy between observation and actuality, as the phenomenon occurs on both east and west.

In an announcement by Andrew Carnegie, reported by the *Boston Post* of January 21, 1911, the Carnegie Institute exonerated the captain of a British ship who ran his vessel upon the rocks, by proving that

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the British Admiralty charts by which the captain was guided were two or three degrees astray.

Here is another instance where a sea captain lost his ship when it was not his fault but was the fault of astronomers and nautical experts. But sea captains up to date have evidently not cared to defend themselves, especially if their own conclusions happen to bear out the plane form theory.

The following paragraph appeared in the Literary Gazette, October 19, 1861:

"Every existing chart and sea route having been elaborated under the Newtonian hypothesis, it follows that the location of rocks, shoals and other maritime dangers has all along been misplaced in greater or less degree, whereas the true cause, never dreamt of, is an astronomical theory."

Permit me to cite another illustration of the skepticism of mariners who, to a certain extent, are apparently obliged to remain silent on theoretical problems of navigation yet are compelled to bear the blame in case of disaster. Lieutenant E. Middleton substantially makes the following extraordinary statement:

"I did not leave the ship before hearing certain remarks made by navigators which

were so derogatory to Captain Cook, the famous navigator, that I forbear to repeat The fact is that many people in them. authority have long known what to disbelieve, but do not know even yet what to believe or who to believe, and this represents the real difficulty of the position. The rapidity with which the climate changes from Antarctic cold to tropical heat, argues that the sun must be very close, so as to render such a change possible, in that it is a very fair argument to urge that with a very distant sun and the diameter of the globe representing such a very small proportion of that distance, the climate of the globe would be very much the same all over."

Mawson in the Aurora proved the existence of Wilkes' Land by dividing his crew into two parties, and encamping on Wilkes' Land 1200 miles apart. This, although the fact Wilkes' Land had been discredited by most Europeans for 72 years. Mawson, however, found no trace of Clairie Land seen by D'Urville, and Shackelton found no trace of New South Greenland and declared it a myth, as his soundings showed such a location to be 1901 fathoms of water. Amundsen further reports that "Emerald Island on the charts was sailed over by Captain Davis,

consequently if it exists at all, it must be incorrectly charted, and there are other islands charted the positions of which are doubtful."

The *Carnegie* explorers and scientists arrived in San Francisco on February 21, 1921, and reported that "The Royal Company Islands noted on many maps and projections as at a point south of Australia, cannot be located and perhaps never actually existed, although they were claimed to have been discovered 70 years ago by a British mariner. Similar errors in distances were noted in the Indian Ocean. The *Carnegie* sailed right over the region charted as the Royal Company Islands. It will take more than this to shake the belief of sea-faring men in the Royal Company Islands." *Boston Transcript*.

This "now you see it, now you don't," as to the Royal Company Islands, apparently is a duplicate instance of the Wilkes' Land controversy, with 72 years and 70 years respectively applying to the persistence of the myths in both cases. Wilkes, Scott, Shackelton, Mawson, Amundsen and the *Carnegie* explorers and scientists have made reports as to the far south regions, and it is very conspicuous and significant that each finds something that some others do not find, and at the same time each deny something that others claim they did find.

D'Urville finds Clairie Land, but Mawson denies its existence. Wilkes finds a large stretch of land that now bears his name, but Scott and others called it a myth only to have Mawson re-discover it. Shackelton finds no trace of South Greenland, which is duly charted, and Amundsen and Captain Davis find no trace of Emerald Island, also charted. The *Carnegie* experts deny the existence of the Royal Company Islands, which sea-faring men declare do exist. All of these various claims and denials relate to the regions south of the equator and toward the alleged South Pole. Such variance induces the following questions:

What kind of observations of latitude and longitude did Captain Scott make when he failed to find Wilkes' Land, a stretch of land over 1200 miles long equivalent to the distance from New York City to Havana, Cuba?

Yet Mawson found it and reported it and his findings were corroborated by Shackelton. What kind of observations of latitude and longitude did Mawson make when he failed to find Clairie Land, found and reported by D'Urville? What kind of observations of latitude and longitude did Shackelton make when he failed to find New South Greenland, which is duly

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charted? The same question may be applied to Amundsen, Captain Davis and the *Carnegie* experts relative to Emerald Island and the Royal Company Islands respectively.

The Boston Post of December 9, 1921, reports the following relative to sea disasters:

"A year's record to June 30 showed 222 American craft foundered and 555 figured in other misfortunes. All the other nations have similar lists. It is difficult to understand, with all the wonderful inventions now at hand, how there could have been so many collisions and sinkings. The sea yet takes its toll and there is much marine work to be done, so much in fact, that it may take generations of men to complete it."

Comparison with the estimates and conclusions of the *Literary Gazette* of 1861, *The Builder* of 1862, J. von Gumpach in 1862, and Commander Stackhouse in 1915, all reveal such important reports of mysterious happenings and significant warnings that people should certainly consider the subject seriously.

The North Pole Skepticism

Consider the charges and countercharges, the bitterness and rivalry that were disclosed in the contro-

versies between Cook and Peary and their respective supporters relative to the alleged discovery of the North Geographical Pole. Prince Albert of Monaco, the eminent geographer and scientist, doubted Peary and practically charged him with "voluntary deception."—Boston Transcript, July 1, 1922. Consider that General Greely, the famous explorer, supported the contention of the Prince of Monaco, but claimed that "he did not think Peary wilfully lied but was probably mistaken." Boston Sunday Post, July 9, 1922.

MacMillan, the explorer, claimed that he "found land very different from the current delineations on the latest and most authoritative maps"; that he "sailed over areas indicated as land" on those maps and that "nearly all points are incorrect astronomically in the Arctic region." *Boston Sunday Globe*, August 27, 1922. *Boston Post*, October 6, 1922.

Stefansson, the explorer, makes the following statement relative to the Arctic regions and maps of same:

"We look at a map of the northern hemisphere—one that has the equator for its circumference. Such a map compels the realization that the Arctic is not at the top of the world, but central with reference to the

lands on which we live, that radiate from it as from a hub. You will probably discover that in comparison with the rest of the world, the Arctic is much smaller than you thought. You may discover, too, that you cannot buy in England a map that shows the whole northern hemisphere (in the sense in which numerous maps show the eastern hemisphere), and that discovery may indicate how new to most of us must be such ideas as lie back of the serious projects of Admiral Moffett and General Brancker. If they be new, let us give them serious thought in case they may prove more important than we at first supposed." Boston Transcript, Sept. 22, 1923.

This additional evidence by another explorer as to errors in the present maps and the lack of correct maps, reveals not only uncertainties concerning distances at the poles and equator, but concerning all points lying between. All these uncertainties and errors tend to support the flat-earthian's contentions.

The Antarctic and South Pole Skepticism

Consider the bitterness, denials, jealousies and rivalries of the various explorers and nations over the exploration of Antarctic regions and the alleged South

Geographical Pole. Consider the alleged deception of Scott by Amundsen, whereby Scott was given to understand that the voyage by Amundsen was not for the purpose of reaching the South Pole but quite otherwise. Yet that was exactly Amundsen's goal. Because of that deception which gave Amundsen priority England could not be credited with the discovery of either the North or South Poles. Scott was so shocked when he learned that Amundsen had outwitted and beaten him that he preferred death to an inglorious return home.

I ask again, are the Sacred Writings to be attacked and discredited because of allegations by such men as Magellan, Cook, Peary, Amundsen and Scott? The answer should be, I think, "No."

In closing this chapter on navigation, I submit for consideration the following questions: How could Amundsen and Scott reach approximately the point claimed to be the South Geographical Pole with the British charts to guide them in the various latitudes and longitudes that they reported, when, according to the *Carnegie* (non-magnetic ship) experts, those charts were incorrect as to all latitudes south of the equator down to the 60th parallel, with 30° more to go south before the 90th parallel would be reached,

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with the charts 12° in error even at the 60th parallel? Especially, considering that Amundsen and Scott did not know at that time that the charts were wrong, as the *Carnegie* experts did not find the errors until after that alleged discovery of the Pole. How could Shackelton, with the use of such incorrect charts, go to any such points of latitude and longitude as he reported and be sure of it, when he also was ignorant of the errors which were found later by the *Carnegie* experts?

Not only are plane earth projections used as in navigating the seas, but the plane factor also applies to the land as well as to the sea. Note the following:

"The Plane Table is used in the Coast Survey as the principal instrument for mapping the topographical features of the country, and is universally recognized as the most efficient and accurate means for that purpose." U. S. Coast and Geodetic Survey.

"The center of population of the country is determined by regarding the United States as a plane surface." *Boston Globe*, October, 1921.

The principle of a plane surface controls observations on both land and sea, but the plane maps and

charts now in general use showing the Mercator projections, are quite different from the genuine plane projections of the flat earth theory. The latitudes and longitudes of the Mercator projections are represented by squares, whereas the latitudes on the flat earth projections are shown as circles, and the longitudes as beginning at the north center and extending southwards as straight lines diverging as they extend southward. But even with this difference, navigators continue to rely to a great extent upon the Mercator charts and maps and mingle with them certain globular theory features and estimates. Such applications inevitably result in many contradictions in navigation.

VI

DAY AND NIGHT

To account for day and night on our earth is a problem that is as popularly misunderstood as the problem of the east to west or west to east circumnavigation of the earth. The argument resorted to by those persons who do not understand existing conditions and the application of certain factors that control the problem of day and night, assert that if the earth were flat, then there would be day all the time and no night. Such an argument reveals at once that such claimants have not grasped the true situation.

An illuminating orb or device only lights a given area commensurate with the size and brilliance, power of penetration, distance, height and perspective of the orb. The sun as an illuminating body lights a certain area of the earth. The area lighted is practically round and the center of the sun is directly over its center. The light becomes fainter as it extends toward and eventually reaches its limit of penetration, that limit being the rim or boundary of the lighted

area. All the area beyond the boundary is proportionately dark so far as the sun is concerned. Consequently we have dawn and twilight at the extreme edges, and elsewhere within lighted area we have complete day. Beyond the rim we have darkness and night, so far as the sun is concerned.

As the sun advances on its course westward, so also does the light from the sun advance westward, and becomes dawn to that portion of the earth that just previously has been night. This dawn is followed by complete day. At the same time the twilight boundary also advances and becomes twilight to that portion of the earth that just previously has been day, and twilight is followed by darkness, then by complete night. The process continues as the sun circles the earth from Cancer to Capricorn and Capricorn to Cancer. Some parts of the earth have more or less light or darkness and at different times than some other parts. Bear in mind the position of the sun relative to the different lengths of latitude, the equator, the north geographical pole and the midnight sun feature, in combination with height of the sun above the earth, distance and perspective.

This process is well illustrated by a person carrying a lighted lantern at night in a flat field. The light

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illuminates a certain area of the ground, representing daylight. The ground outside the lighted area is dark and represents night. The rim of the lighted area represents dawn and twilight. As the person advances with the lantern, so too does the light of the lantern advance, the ground is progressively lighted and darkness follows in the rear.

According to the globular theory the sun is an immense orb, millions of miles distant from the earth, in comparison with which the earth is as a mustard seed to an orange. The insignificance of our earth in space is a favorite hobby with many who hold to the globular theory, and according to them, both the sun and the earth are suspended in space. The rays of light of the sun penetrate space in every direction and fill a cubical content three billion, six hundred million miles in diameter. The so-called insignificant "speck" of earth is located within that vast, brilliantly lighted area of space, being ninety to one hundred million miles distant from the sun. This distance is small in comparison with their estimate of the three billion, six hundred million miles penetrated by the light of the sun; consequently their theory of the location of the earth in that vast lighted area reveals that the tiny earth globe is completely surrounded by light. Tust

as would be in the case of a mustard seed suspended in a room brilliantly lighted by a device that completely and perfectly lighted the whole space and completely excluded darkness. Under such conditions there would be perpetual light all the time on all sides of the mustard seed.

In view of all the conditions exigent to the globular theory relative to the sun and diffusion of its light, the argument resorted to so confidently by some persons that if the earth were flat there would be all day and no night, instead of applying to a flat surface actually applies to a globular form. The fact that we do have day and night on our earth does not bear out the alleged size and distance of the sun and the penetrating power of sunlight.

According to the law of perspective as analyzed by some authorities, "a straight line infinitely long has its vanishing point, and a line lying in a plane like the sea also has its vanishing point." Consequently, lines to the sun, to the moon and to ships at sea, relative to the horizon (which is called the vanishing trace of the system of planes), have their vanishing points in the trace of their planes. The analysis of such lines is further explained and demonstrated in Chapter VII

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DAY AND NIGHT

relative to canals, and is made particularly clear by the example of the Panama Canal.

To account for day and night by the globular theory forces globularists to resort to extraordinary experiments to prove that the earth rotates. One of these is the so-called Pendulum Experiment. Some globularists accept it as proof, others reject it as ridiculous and not proof. Here again we disclose more contradictions and weak links in the chain of alleged proofs that are brought against Genesis.

In the Figure of the Earth, by J. von Gumpach, it appears that there were sixty-three experiments with the pendulum made in various latitudes north of the equator, and twenty-nine experiments south of the equator by Captains Foster and Kayter and General Sabine. All of these experiments demonstrated that the pendulum as a factor of proof is absolutely worthless. There have been many other experiments resulting in failures reported in the English Mechanic of October 23, 1896; by Iconoclast in Earth Review, April-May, 1897; the Liverpood Mercury; the Manchester Examiner Supplement, and in a lecture delivered in Berlin, Germany, by Professor Shoepfer. A report of this lecture appears in the Scientific American Supplement, of April 27, 1878. It discloses the

fact that Professor Shoepfer had been appointed to assist in experiments relative to the Leon Foucault's pendulum theory, and the outcome of these experiments caused Professor Shoepfer to reject the Copernican theory that he had taught for many years, and persuaded him to believe that the earth does not revolve on its axis and does not go around the sun, and that there is no proven evidence for such a theory.

Of course, Alfred Russel Wallace, Professor Painleve, and others referred to in this book, who also rejected the rotation claim, were aware of the Pendulum Experiment claims by others, yet rejected those claims.

VII

CANALS

According to the exigencies of the globular theory, "Canals have to be constructed in strict accordance with the rotundity of the earth; great engineering works could not endure for a day if they were constructed on the theory that the earth is a plane. As a matter of fact, the apparent level at any point is continually corrected at successive points as the survey advances, so that it shall correspond with the curvature of the earth, and the Panama and Suez Canals were constructed exactly in accord with the theory that the earth is round, and distinctly in disaccord with the theory that the earth is flat. So that the proponents of the flat earth theory assert, either with colossal impudence or colossal ignorance, that the engineer's datum level indicates an absolute horizontal plane extending the whole length of the work from Colon to Panama." Such is the analysis and claim of Professor Garrett P. Serviss as published in the Boston American under date of January 21, 1922.

It induces the following questions and reply. Why do all the plans and profile projections of the Panama Canal as used by the constructors, copies of which have appeared in various publications, show all lines drawn exactly in accord with the descriptions and claims of the advocates of the plane theory, and in disaccord with the claims of Professor Serviss and other advocates of the globular theory? Why are such flat earth plans and projections used and so represented in various publications if they are wrong and false? Have any such globe earth plans and projections as indicated by Professor Serviss ever been drawn, used or represented in publications? And if they have, when, where and by whom? If not, why not?

Professor Serviss claims that it is colossal impudence or colossal ignorance on the part of advocates of the plane theory to claim that "the engineer's datum level indicates an absolute horizontal plane extending the whole length of the work." If his denial is correct and the claim of the flat earth experts is incorrect and false, then why did the British House of Parliament issue in *The Book of Standing Orders*—"Imperatively demand and require the engineers and constructors of Great Britain, that in the case of construction of a canal, cut, navigation, turnpike or other

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carriage road or railway, to have a datum horizontal line which shall be the same throughout the whole length of the work"?

How could the Chinese construct their Grand Canal, which is the largest in the world and beside which the Panama Canal is a pigmy, and their other canals and engineering works, when all such construction was done before the alleged discovery of the globular earth form? Prior to the alleged discovery and partial acceptance of the earth as a globular form, how could other canals be constructed in Europe and elsewhere when allowances were made for no such form or size of the earth?

"Roman Catholic Authorities were combatting and rejecting the globular theory and issuing edicts against it and restraining the faithful under penalty from believing such a theory until 1758, A. D., under Pope Benedict XIV." *Astronomical Essays*—Reverend G. V. Leahy, S. T. L., 1910. How then could any canal or engineering work be surveyed, estimated and constructed with allowances for the curvature of the earth as of a globular form by any Roman Catholic prior to the removal of that condemnatory decree in 1758 A. D.?

It appears that upon the request of an English

publication, the *Earth Review* of London, three reports were received from three English authorities relative to the problem of the alleged curvature of the earth in connection with the construction of canals and public works, substantially as follows:

In February, 1892, the Engineer's Office of the Manchester Ship Canal Co., England, reported "that it was not the practice in laying out Public Works to make allowance for curvature of the earth."

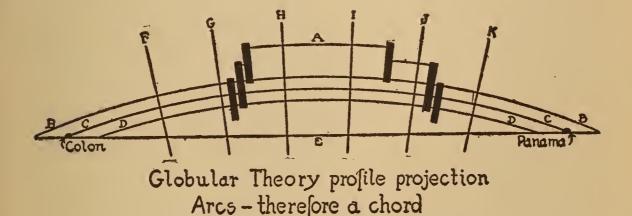
In October, 1893, G. W. Winckler, Assoc. Inst. C. E., M. E. I. C., of England, a surveyor and engineer of many years' experience, over his signature, reported concerning allowance made for the curvature of the earth, that "nothing of the sort is allowed."

In January, 1896, T. Westwood, of England, a surveyor, over his signature, reported that "not the least allowance was made for curvature of the earth" (relative to a certain work) "although if the earth were a globe, 112 feet ought to be allowed."

In answer to an inquiry by Mr. Thomas Winship, a friend of mine, as to whether any allowance was

made for the curvature of the earth in the construction of the Panama Canal, a reply was received from the Isthmian Canal Commission as follows—"In re to allowances for curvature of the earth in working the Canal, no allowance was made."

Correspondence between the officials of the Panama Canal and myself relative to the feature of convexity of the earth, reveals their admissions that "Such convexity cannot be shown by or in any way through the construction plans and projections of the Panama Canal." But said plans and projections do show that the construction corresponds with and applies to a flat or plane earth.



not drawn to scale but sufficient for illustration

The Globular Theory Profile Projection

This sketch has eleven lines—six of those lines are vertical lines drawn as required by a globular form, and three of those lines marked B, C, D, stretch from Colon to Panama; B represents the high water line; C represents the mean sea level line, otherwise known as the datum line; D represents the low water line each line representing about fifty miles linear measurement.

The uppermost line marked A represents the line indicating the course from the locks at Colon to the locks at Panama, a distance of about thirty-one miles. The lines marked A, B, C, D, are curved in arcs to conform to the requirements of the globular form theory. The line marked E is a chord for the lines marked B, C, D (especially for C, the datum line), or straight line between Colon and Panama, said chord line being shorter than the lines B, C, D. The distance straight down from the middle of the line marked A to the middle of the line marked C, the datum line, is about eighty-five feet, and if continued straight down to the line marked E would have an additional length of 417 feet 8 inches, or a total of about 502 feet 8 inches from A to E.

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Thus a globular form projection for illustration requires five lines—four of them arched and one of them straight. The middle of the datum line C to Colon is about twenty-five miles and the allowance for curvature of the earth for this distance is 417 feet 8 inches, and same estimates apply from the middle of the datum line C to Panama, but the distance from Colon to Panama or vice versa being about fifty miles, then the allowance for curvature of the earth for the fifty miles would be 1,667.50 feet.

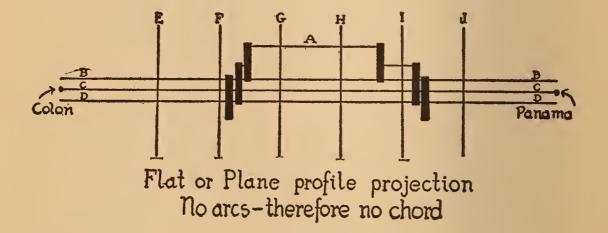
In addition to these lines marked A, B, C, D, E, there are six vertical lines marked F, G, H, I, J, K, a sufficient number of vertical lines to represent the direction upwards toward the respective zeniths, also representing the direction downward toward the interior center of the globular form. From thence they continue downward and emerge at the antipodes or nadir. As they continue upwards the lines diverge and the farther they are extended the more they diverge. But the lines going downwards converge and meet and cross one another at or near the interior center of the earth; continuing downwards they separate more and more as they approach their respective antipodes.

Consequently, all such lines, estimates and applica-

tions would have to be complied with and so appear in illustrations connected with the Panama Canal construction plans, according to the claims of those who assert that the canal and similar works would not endure for a day if not actually constructed under such methods and applications.

The Flat Earth Profile Projection

This sketch has ten lines. Six are vertical lines and four are horizontal lines. Three of the lines marked B, C, D, stretch from Colon to Panama; B repre-



sents the high water line, C represents the mean sea level line, otherwise known as the horizontal datum line, and D represents the low water line; each line represents about fifty miles. The uppermost line

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marked A represents the course between the locks at Colon end and the locks at the Panama end, a distance of about thirty-one miles. All four lines are represented as straight horizontal and no fifth line or chord is necessary or possible, as there is no arc. The distance from the middle of the line A down straight to the datum line C, is about eighty-five feet.

In addition to these four lines, there are six vertical lines in the sketch, E, F, G, H, I, J, and all extending upwards toward their respective zeniths, and also indicating their downward direction to the low water line of the Panama Canal. Whether these six lines are extended upwards or downwards, they do not meet, diverge or converge but remain the same distance apart at all points of their lengths, and to date no known nadir or visible antipodes exists. If the earth is flat, then such lines and conditions as are indicated in this sketch will exist and must be complied with, and will appear accordingly in all projections.

It is important that the law of perspective is demonstrated and established by this profile projection of the plane theory and by similar projections drawn and used in connection with the construction of the Panama and Suez Canals. It plainly answers the arguments of the globular form advocates who claim

that the curvature of the earth accounts for the appearance and disappearance of ships at sea over the horizon. This important feature of perspective appears in the profile projections of the Panama Canal: the line marked A in the plane sketch is the line from the locks at Colon to the locks at Panama, this line being about thirty-one miles in length. Leaving Colon and sailing to Panama, whether the course is winding or not, ships recede from view, hull first and then the masts. In approaching Panama, the masts will appear first, then the hull. Exactly the same conditions apply (barring interference by obstructions) to ships going from Panama to Colon. For each direction the same perspective applies equally and the same for all ships on all other courses. In the Culebra Cut, nine miles in length, ships disappear from view and appear to view exactly as ships do on other courses in going nine miles away from an observer toward the horizon; or coming from the horizon toward the observer. All these horizontal lines represent a perfect illustration of the law of perspective, solving the problem of the appearance and disappearance of ships and other objects at various distances, the rising and setting of moon and sun, the phenomenon of day and night on a flat surface. Therefore it completely an-

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swers and disposes of the alleged curvature and dip claims set forth by globularists.

While it requires some time and many words to explain these two sketches properly, the conspicuous difference between them may be seen at a glance.

Refraction as a factor has been ignored in the descriptions of both projections, because it does not consistently work out with the requirements of the globular theory estimates for alleged curvature, altitudes and distances in connection with the visibility or invisibility of objects. Refraction is a matter of atmospheric conditions, variable and uncertain, and it would apply more consistently, if applied at all, to the flat earth than to the globular form projection.

There are many projections of the Panama and Suez Canals, and such projections appear in various publications and are easily procured for examination. All of them are in accord with the flat earth cosmogony and in disaccord with the globular theory. During many years of investigation and inquiry, I have never been able to find, either for inspection or possession, even one globular theory projection of the Panama or Suez Canals, and I have never met or heard of any person who has ever seen or heard of any such globular earth projection. Such a situation induces the fol-

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lowing question. Why are the profile projections of the Panama and Suez Canals always drawn, used and published in accord with the flat earth theory, if that theory is wrong and in disaccord with the form of the earth, and not drawn, used and published in accord with the globular theory, if that theory is right and in accord with the form of the earth as claimed by many?

It is not necessary for one to go to the seashore to observe how ships appear to view when approaching and disappear when departing in relation to distance and horizon, or how the moon and sun appear in relation to the horizon and the phenomenon of day and night. Necessary investigation has already been made and the essential information has all been revealed and accounted for by the straight lines that apply to both the construction of the Panama Canal and to the flat earth of Bible cosmogony. The Panama Canal and the Suez Canal projections and construction plainly and conspicuously tally with Scripture, and definitely contradict and refute the contentions of those who advocate and support the globular theory.

VIII

UNIVERSAL GRAVITATION

It is not generally known that there are several conflicting theories as to the so-called Gravitation Theory which is alleged as necessary to the maintenance of our earth and which is used to support the Copernican-Newtonian System or School. This theory has its advocates and its opponents, even within the ranks of its followers, conflicting not only as to the existence or non-existence of gravitation and its operations, but as to its cause, origin and necessity. Such wholesale opposition, emphatic contradiction and ridicule would indicate that there is nothing left of the law of gravitation for a would-be believer to believe, or a would-be skeptic to oppose. Gravitation is a subject exposed to the ridicule of both globularists and flat earth advocates, and in view of such conditions it is practically a waste of time to give any more than a very brief consideration. For this reason, I will only cite from one English authority and two authorities in the United States.

Alfred Russel Wallace in his opinion finally placed the earth and not the sun, in the center of the universe. Wallace's contention disposes of the orbital course of the earth around the sun, and thus disposes of the sun's power of gravitation which holds the earth in its course.

A letter to me dated June 9, 1922, contains the admission that "The latest results of physics show a lack of any evidence that the earth moves in space." This not only confirms Wallace but confirms the absolute nothingness of alleged gravitation. In addition to these two admissions, we have the admission by eminent scientists in a general meeting of the American Philosophical Society at Philadelphia, April 22, 1922, that the gravitation law is false and to be rejected with both the Newton and Einstein Theories. And so it goes, and yet other intellectuals, especially among the clergy, swallow the bait, hook and line, just as if gravitation was a proved fact and unanimously accepted as such.

Let us now ascertain how all these remarkable and amazing theories are arrived at and presented to the unsuspecting public. The following was published by Professor G. P. Serviss in the *Boston American*, May 27, 1914: "For many minds the chief charm of astronomy is the immense stimulus that it offers to the imagination. With all the universe before him where to choose, a man can make worlds, suns and solar systems to suit himself, while science furnishes him with stupendous figures, illimitable prospects, mysterious objects, suggestions of uncomprehended laws and of a boundless variety of conditions based upon an essential unity of composition which can be pressed into service to support almost any theory, however extraordinary and however contrary to human experience."

Evidently such is the character of the evidence used to discredit the Bible and the declaration of Jesus Christ when on the Cross, "Today shalt thou be with me in Paradise."

IX

Speed of Light

According to the Copernican-Newtonian School advocating the globular theory, the estimates of the distances from the earth of the sun and other orbs in space are so conflicting and unreliable that it is difficult to make a selection; in fact, it is simply take your choice, one estimate is as correct as any other of the generous supply offered by some scientists.

It appears that the principal factor used to determine the distance of the sun and various orbs in space, is called speed of light. This unit of measurement was first used by Ole Roemer in 1676, relative to the positions of Jupiter's moons in connection with the width of the earth's orbital course around the sun, the width of said course at that time being estimated as about 192,000 miles; it has subsequently been estimated as approximately 186,324 miles. Therefore light moves about 186,324 miles a second.

Even with this alleged definite basis to determine distances, the estimates of astronomers and scientists

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vary so widely that they might almost as well have no basis. Some of the estimates of some of the globularists as to the distance of the sun from the earth are as follows:

Copernicus' computation,			3,391,200	miles
Kepler's	66		12,376,800	66
Newton's	66	about	40,000,000	66
Martin's	66	81 to	82,000,000	66
Cassini's	66		85,000,000	66
Airy and Stone's	66		91,400,000	66
Hansen's	66		91,659,000	66
Ball's	66	about	92,700,000	66
Laing's	"		93,000,000	66
Dilworth's	66		93,726,900	66
Encke's	66		95,274,000	66
Hinds'	66		95,298,260	66
Huyghens'	66		96,000,000	66
Gillis and Gould's	"m	orethan		66
Mayer's	66		104,000,000	66

The transit of Venus occurred June 3, 1869, and various governments made observations. In Europe there were fifty stations, in Asia six stations and in America seventeen stations and the estimates made by all of them varied from eighty-eight million miles to one hundred and nine million miles. Other experts of the four schools supporting the globular theory

disagreed, not only as to distance but as to the basis of computation. They denied the assumption that there was any orbital movement of the earth around the sun to furnish a basis for determining the alleged speed of light.

It has been claimed that the most rapid motion known is the passage of a ray of light or an electrical current. But even this speed, said to be 186,324 miles a second, is slow in comparison with the rapidity of vision, for the various enormous distances of sun, moon and stars from the earth are bridged by a simple glance of the eye without any difference in the time required, whether the distance be thousands, millions, billions or trillions of miles. Similar absurdities are revealed in the computation of the sizes of various stars, the measurement of the speed of light, and the duration of the so-called light years, as well as the alleged enormous length of time that it takes for light to travel from an orb to the earth, while it takes, as a matter of fact, only an insignificant time for eyesight to travel to any of the orbs.

The alleged distances from the earth of the moon, sun and other orbs in space and the time required to reach them as calculated by some astronomers under the so-called light-year estimates, have attracted

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the attention of some clergymen relative to another Biblical statement, and have induced the inquiry as to the possibility of any such actual departure from the earth and arrival elsewhere. Consider, in this connection, the words of Jesus Christ when He was on the Cross: "Today shalt thou be with me in Paradise."

It appears that a certain class of astronomers claim that the speed of light is about 186,000 miles a second, that it travels in the form of ether waves, that each wave, after it leaves the surface of its source becomes detached from and independent of its source. When the ether wave strikes the retina of the eye it produces the sensation that we call light. Now, if a star is two hundred light-years distant, the light-wave that is now entering our eyes left the star two hundred years ago, and if that star should be extinguished today it would be two hundred years before we would be aware of the fact, for it would be that long before the last of the ether-waves now en route from the star would enter our eyes." Isabel M. Lewis, of the United States Naval Observatory, Boston Transcript, October 27, 1923. Also letters to author dated November and December, 1923.

Another school of astronomers and scientists admit

that: "For a long time we have believed that light is a wave-motion of some hypothetical thing called ether. This theory never was satisfactory; it was not reasonable. Finally the belief in an ether had to be abandoned. The radio waves and light waves are electromagnetic waves, that is, periodic variations of the electro-magnetic field in space." Charles P. Steinmetz, quoted by Professor Larkin, who added—"Not waves, only variations." Boston Advertiser, December 18, 1922.

Other experts reject both the aforesaid theories because these take for granted the orbital course of the earth around the sun, while these last scholars deny that there is such a course and consequently reject the speed of light factor as essential to the problem.

Thus it appears these three classes of astronomers and students (all globularists) conspicuously disagree, and disclose the fact that the speed of light problem is a very unsettled one, even among themselves. In view of this radical difference of opinion, it seems only fair to enquire which theory is correct, or are any of the theories correct?

Many persons, however, mistakenly believe that the speed of light problem has been satisfactorily settled beyond a doubt, depending upon "taken for granted"

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as their reliance for acceptance. Other investigators have quite different ideas on the subject of the projection of light, and their conclusions render the contradictions and uncertainties of the aforesaid globularists more conspicuous than ever.

Observe the light from a match, candle, an electric bulb, lantern, lighthouse, or searchlight, illuminate radially or in stream-line. The rays of light are projected and diffused for a limited distance only. This distance may, to a certain extent, be increased by increasing the power or size of the source of light. A lighted lantern in a field spreads its light rays only a very little distance, yet its light may be visible to an observer a mile or more distant, barring obstructions and the atmosphere permitting. The headlights of an automobile project their rays of light a comparatively few feet, but the distance may, to a certain extent, be increased by increasing the illuminating power or changing the lenses. Yet automobile headlights, headlights of locomotives and signal lights are visible to an observer several miles distant. A light that is receding from an observer is followed by the retina of the observer's eye with more or less strain, and can be followed further and more easily with the aid of a glass; showing that instead of the

light approaching the eye, it is the retina of the eye that follows the light. But if the receding light changed its course and approached in the direction of the observer, there would be a corresponding lessening of strain on the retina as the visibility of the light increased and the distance between the light and the observer decreased.

If light carried on and on independent of its source, whether the source was extinguished or not, as some globularists claim, then it would appear to be unnecessary to increase the power of the lighting device of a lighthouse, as a device of ordinary power would be sufficient for all purposes. In many instances, however, the power of the illuminating device has to be increased to overcome distance.

It is furthermore evident that it is the control of the source of light which controls its dimness or intensity, its fluctuations and its extinguishment. This is true, of course, allowing for atmospheric conditions. Similar conditions and principles apply to all luminaries and sources of light whether celestial or terrestrial. And instead of this light question being an abstruse problem beyond the comprehension of the layman, it resolves itself into a much simpler matter than many scientists would have us believe.

Х

CURVATURE

According to advocates of the globular theory, the curvature of the earth amounts to about eight inches to a square mile. This curvature interposes to prevent, partially or entirely, the view of objects at a distance, consequently it is necessary to ascertain whether or not this estimate for curvature applies correctly. The following calculations are based on the globular calculation of curvature.

First	mile			8	inches
Second	66			32	66
Third	66	6	feet		
Fourth	66	10	66	8	66
Fifth	66	16	66	8	"
Sixth	66	24	"		
Seventh	66	32	"	8	66
Eighth	66	42	66	8	66
Ninth	66	54	"		
Tenth	66	66	66	8	٠٠
Eleventh	66	80	66	8	66
Twelfth	66	96	"		

Thirteenth	Mile	112	feet	8	inches
Fourteenth	66	130	66	8	66
Fifteenth	66	150	66		
Sixteenth	66	170	66	8	66
Seventeenth	66	194	66	8	66
Eighteenth	66	216	66		
Nineteenth	66	240	66	8	66
Twentieth	66	266	6.6	8	66

Refraction was ignored in making these calculations but according to the expert's allowance for refraction requires a reduction of about one seventh; for instance, the sixth mile estimate of twenty-four feet, would be reduced to about twenty feet, six inches. Refraction, however, as a factor applicable to the globular form exclusively, is much disputed, for when it is applied it does not consistently or satisfactorily overcome the difficulties that globularists anxiously desire to overcome in order to meet and defeat the arguments of the flat earthians. The proofs of the latter group, however, remain valid, for objects are visible at distances and heights all out of proportion to curvature estimates even when allowance for refraction has been made. Such conspicuous inconsistencies seriously damage the curvature claim.

Abrupt drops or dips from mile to mile are con-

CURVATURE

spicuous in estimates of curvature. Of course a ship could not appear or disappear as gradually as it actually does if such estimates in feet were deducted from the height of the hull from the water-line to rail. If such a deduction were made it would leave very little, if any, of some hulls visible, even at relatively short distances. For instance, consider a distance of six miles with a drop of over twenty feet; how much of a hull would be visible, if that drop interposed to hide from view a hull twenty feet above the water, assuming the observer to be at sea level at the water's edge? Some towboats would be entirely or nearly out of sight at such a distance. The fact is, that for quite a number of miles, there is no appreciable reduction in the visibility of the hull at each mile,-not a particle of difference between the third and sixth miles, although according to the calculations of curvature the drop would be the difference between six feet and twenty-four feet. This again exposes the fallacy of the curvature claim for our earth.

This alleged curvature, with or without refraction, was tested by an actual course, lighthouse and observatory, through a problem in curvature submitted by me to twenty eminent globularists of Canada, England and the United States representing some of

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the most famous institutions of those countries; and not one correct answer was received. Furthermore, the opinions and estimates were so conflicting, some so ridiculous, that one authority subsequently admitted that "such difference of opinions by such eminent men is proof enough that such questions are very far from being settled."

The aforesaid problem also revealed how mistaken many of those experts were relative to propositions concerning the horizon, altitude, distance and visibility. Such mistakes at once invalidate the curvature and refraction factors, and also condemn the methods employed by globularists in their attempts to prove the rotundity of the earth.

Those twenty experts failed completely because their curvature estimates obliged them to believe that the horizon was much nearer to the observer than it actually is. All of them claimed that the horizon was in front of the lighthouse (the object under observation) whereas the lighthouse is actually in front of the horizon. Their estimates of the distance of the horizon from the observer placed it from ten to fifteen miles nearer than it actually is, and their estimates as to the visibility of the lighthouse varied proportionately. Nothing was correct.



CURVATURE

If curvature actually exists, a ship receding from view would vanish long before it could reach a distance that would reduce it to a speck. It would vanish at a distance so short that it would be large and distinctly visible just prior to the last abrupt drop that would hide it from view. The horizon factor is a most important one in navigation, and such experts as those to whom the lighthouse problem was submitted are of the class of those who make the estimates and tables for navigation purposes. It is absolutely necessary, therefore, that these authorities have a correct method and basis of calculation. Just such an error of ten to fifteen miles in their navigation charts as these experts made in their solutions of the problem, resulted in such havoc as disclosed by Wilkes, Lecky, Middleton, Stackhouse and J. von Gumpach, and the voyages of the George Washington and Northern Pacific steamships referred to before.

All these errors can be traced directly back to Magellan's famous voyage, which has caused such consequent confusion. What a scoop that sailor, Magellan, made! Too bad that he cannot return and learn what a mess he unwittingly created by his voyage. How persistently that other eleven to eighteen miles

mistake in computation bobs up, muddling the course of astronomer, navigator, and clergyman.

For centuries prior to the Magellan Voyage and even after Columbus had made his voyages westward, the complete or partial disappearance of craft at sea or of objects at a distance was not ascribed to the alleged curvature of the earth (Ptolemaists excepted), but to perspective. The Ptolemaists could not and did not convince others that curvature of the earth accounted for the disappearance of craft or other objects at the horizon, nor by the shadow on the moon at the time of a lunar eclipse, or by the rising or setting of the sun, moon or other orbs. Perspective was sufficient explanation and held until the Magellan Voyage was accomplished. But to the Roman Catholic Hierarchy, even the Magellan Voyage was not sufficient proof for curvature to supplant perspective until the year 1758, A. D., only about one hundred and sixtysix years ago.

XI

LUNAR ECLIPSES

Lunar eclipse is another factor that has persuaded many persons in favor of the solution offered by advocates of the globular theory, who claim that the shadow on the moon at the time of a lunar eclipse is caused by the position of the earth between the moon and the sun. The darkness on the moon is the earth's shadow when the earth, moon and sun are in line with one another. And because the shadow so cast is round, then the earth itself must be round to have cast such a shadow.

Another reason alleged by some experts, but not all, is the prediction of an eclipse in advance of its actual occurrence. Thus some persons think the experts must know and that this indicates that it is the globular form and theory that enables them to make their predictions.

The following questions seem pertinent to the solution of the problem: Are the earth, moon and sun in a line with one another at the time of eclipse as

claimed? Is the earth between the moon and sun at the time of a lunar eclipse? Have there been any lunar eclipses when both the moon and sun have simultaneously been above the horizon and visible to the observer? To substantiate the claims of the globularists, the first two questions must be answered affirmatively and the third negatively.

Records and publications show that certain admissions and confessions of eminent astronomers who advocate the globular theory reveal the fact that the moon is to them the most inexplicable body in the solar system, although it is the nearest to the earth; their tables show serious disagreements of observation concerning it. Even at the present time there is much uncertainty as to the exact position of the moon in space, and various theories have so far failed to explain the seemingly erratic behavior of the moon. Such conditions reveal that, under the globular theory, ignorance concerning the moon is the rule rather than the exception. At the very beginning of the analysis of lunar eclipses and the acceptance or rejection of the globularists' theory of the cause of the darkness on the moon at various times, blank ignorance as to the essential fundamentals confronts the advocates of the globular theory and has to be reckoned with. If their tables

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and observations are so faulty and unsatisfactory to themselves, then their opponents are justified in rejecting them.

It is well known that at various times on certain sections of the earth in broad daylight both the moon and sun have been above the horizon, simultaneously visible to an observer; the last time this occurred was on October 16, 1921. At such times the earth, moon and sun were not in the line claimed by globularists and the earth could not have been between the moon and sun. Even at such times, if the earth casts any shadow at all, the shadow would not be cast on the moon but in quite the other direction. To overcome such adverse conditions the globularists resort to the theory of fairy-refraction, that under their manipulation can raise, lift up, advance, retard or pull down anything on the earth, above the earth, and even the earth itself. This may look plausible to some, even if not convincing to others.

The eclipse of the moon on October 16, 1921, as previously referred to, caused great consternation among globularists, giving rise to such comments in various publications as—"Moon Off Its Course"— "Moon Arrived Ahead of Time"—"What's the Matter with the Moon?" and so forth. Such a tempest

in a teapot—and yet the moon would not and could not proceed on any such course if it were not the natural and correct one for it. Such a state suggests the question,—What is the matter with the astronomers?

According to the Boston Herald of February 26, 1909, Professor Percival Lowell stated in Huntington Hall, Boston, that "there are dark bodies or orbs in space"; and according to the Boston American, February 15, 1910, Professor G. P. Serviss stated that "there are invisible dark bodies in space." In Astronomical Curiosities by J. E. Gore, it appears that Hirst and J. C. Russell, on October 21, 1878, saw an unexpected shadow on the moon; and E. S. Wiggin, Michigan, on May 16, 1884, claimed "a dark body passed over the sun and it could not have been the moon." According to Lieutenant E. Middleton, of England, Captain Nilsen saw, on August 29, 1886, "a sudden (unexpected) eclipse of the sun, very nearly total."

Long before the globular theory was thought of, the ancients could predict lunar and solar eclipses quite accurately and without the aid of watches and clocks. The Chinese for a length of time extending over 3,858 years were also able to predict eclipses in advance of

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their occurrence. The Chaldean Saros could predict eclipses several centuries before Christ, and numerous authorities have claimed that "nothing could be more impertinent than the assertion of some writers that astronomical predictions arise from any modern theory."

Another globular form authority has admitted "that an examination of solar and lunar motions, reveals the absolute immobility of the earth."—Professor O. M. Mitchell.

According to G. F. Chambers, F. R. A. S. England, in his work, *The Story of the Eclipses*, 1899, the solution of the prediction of eclipses is substantially as follows:

"Eclipses occur in almost, though not quite, the same regular order every 6585 1-3 days, or more exactly eighteen years, ten days, seven hours and forty-two minutes; this assumes that five of these years are leap years. This is the celebrated Chaldean Saros and was used by the ancients. A more accurate succession will be obtained by combining three Saros periods, making fifty-four years, thirty-one days; while best of all, to secure an almost perfect repetition of a series of eclipses will be a combination of forty-

eight Saroses, or eight hundred and sixtyfive years for the moon, and of about twenty Saroses, or more than 1,200 years for the sun. If there are five leap years in the eighteen years, the odd days will be ten; if four leap years, there will be eleven; if only three leap years, the odd days to be added will be twelve. We Westerns owe a great deal of our present knowledge in certain departments to the information stored up by Chinese observers during many centuries before and after the Christian Era, and their observations of comets may be singled out as having been of inestimable value to various nineteenth century computers, especially E. Biot and J. R. Hind."

"It has been known since remote antiquity that eclipses occur in cycles." Encyclopedia Britannica, 11th Edition.

Cycles and repetition determine the basis for the prediction of eclipses, and not the flat or globular form of the earth. Some eminent English authorities offer similar theories for the basis of the predictions of eclipses of both moon and sun.

XII

RIVERS

There has been much discussion relative to the flow of the waters of the Mississippi River and whether or not its mouth or outlet is lower or higher than its source. A globular form of the earth induces such discussions and differences of opinion. Once more the globular form is on trial to ascertain whether the rivers of the earth can and do flow regardless of the peculiar conditions which such a form demands. The fact that there are such discussions and doubts among the globularists themselves, reveals the fact that the globular theory is surrounded with many questionable factors.

I herewith submit for consideration some of the clashing opinions of certain authorities and advocates of the globular theory:

"Downhill flow, mouth lower than source." Scientific American, N. Y.; U. S. Coast and Geodetic Survey, Washington; Principals of English High School, Boston, Mass. Stuy-

vestant High School, New York City; Central High School, Pittsburgh, Penna.; East High School, Minneapolis, Minn., and Clark Brown, Civil Engineer, Albany, N. Y.

"Uphill flow, mouth higher than source." Central High School, Erie, Penna.; Austin High School, Chicago, Ill.; Edwin Tarrisse, Washington, in Sunday Magazine; Rev. L. A. Lambert, Buffalo, N. Y., in his work, Tactics of Infidels.

D. M. Parry, astronomer, Indianapolis, Ind., claimed he "was not acquainted enough with the facts to hazard any judgment and thought the question a catch one."

Elbert Hubbard, East Aurora, N. Y., claimed it "was a good proposition but he would have to take a little time to Fletcherize on it before giving a reply." He failed ever to make such a reply, however.

Clark Brown, in replying, informed me that he had "submitted the problem to a number of college-trained men in the engineering profession and to a few teachers; all of them were aware of the difficulties relative to the problem, therefore all declined to answer it, admitting inability to do so."

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Professor H. H. Turner, Oxford University, England, claimed (by a sketch) "that in one sense the mouth is higher than the source. The force determining the flow of the water is gravity only (with, of course, the resistance of the river bed added) causing it to flow downhill as regards A-G and uphill as regard A-C."

Some of these writers claimed that gravity was the controlling factor, some that centrifugal force was. One claimed that there could not be any flow by gravity. Others averred that if rotation ceased, the flow would be northward instead of southward, as at present time. Some advanced the "center of the earth" as a factor in the problem, and some claimed that it was not a factor. The opinion of Edwin Tarrisse appeared in an article by him in the Associated Sunday Magazines, Inc., September 13, 1908, Can Water Run Up Hill? He claimed that "the mouth of the Mississippi River is about three miles higher than the source," and gave his reasons therefor. The Reverend L. A. Lambert previously cited claimed that anyone who claimed that the mouth of said river was lower than the source, "would be resorting to inane platitudes."

I have submitted only a few of the directly-expressed opinions on the subject; there were many evasions. The globular theory forces these authorities to assume such positions and make such evasions whether they like it or not. Even Robert G. Ingersoll was puzzled by the problem of the flow of various rivers upon a globe form and would not accept some solutions offered as true.

Various globularists have likened the earth in shape to an orange or sphere, an egg, a pear or an oblate spheroid. Assuming the earth is a sphere relative to the flow of the Mississippi River, then the analysis would show that the mouth or outlet of the river would be lower than its source. Thus the flow would be downward and not upward, because a sphere is equal all over its surface by the sea level datum line from the poles to the equator and from the equator to the poles. Thus, in going in any or all directions, the labor is equal. The source of the river being elevated above the entire datum line determines that the mouth or outlet is lower than the source, so far as a perfect sphere is concerned. But if this is true, the sphere must not rotate, as rotation would influence the flow and change the form of the earth, bulging it at the equator and flattening it toward the poles. But the

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sphere-form is not acceptable to those who insist upon rotation movement, and rotation brings in the problem of centrifugal force, demanding an oblate spheroid earth-form with the equatorial diameter about twentysix miles greater than the polar diameter. This renders the datum line surface of the earth unequal, as from the poles to the peak of the bulge at the equator is an ascending line while from the equator to the poles is a descending line. The datum line is made unequal by the bulge at the equator. On a globular form there is no change in distance from the outside datum line surface to its interior center, but the distance from the outside datum line surface of an oblate spheroid to its interior center varies from poles toward equator and from the equator toward the poles. This variation indicates that an increase in labor is required in going towards the equator and less labor required in going away from the equator. Thus processes toward the equator are ascending and away from the equator are descending.

Some globularists claim that the distance from the North Geographical Pole to the equator is about 6224 miles, and the length of flow of the Mississippi River from source to mouth is about one-quarter of that distance as the crow flies. The semi-diameter of the

earth is about thirteen miles more at the equator on account of the bulge, and a certain proportion of that variation applies to the Mississippi River; the proportion being about one-fourth of thirteen miles or about three and a quarter miles. Allowance must also be made for the elevation (in feet) of the source of the river above the sea level datum line; the deduction of this elevation for the proportional allowance for bulge shows that this elevation of the river's source is far from being sufficient to overcome that three and a quarter miles handicap. Results show that after due allowance, the mouth of the river is higher than the source, and the flow of the waters is an ascending process. To ascend against this three and a quarter mile handicap and overcome it, the claim is made by some, especially by Tarrisse and Lambert previously referred to, that it is the centrifugal force caused by the rotation of the earth which drives the waters of the river up to its mouth and outlet.

The assumption that the earth is egg-shaped or pearshaped gives rise to numerous additional difficulties to the globularists. It induces contradictions and antagonism among them, and upsets all preconceived notions of latitude, longitude and distance, and the theory of the law of flow of rivers.

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The assumption of the oblate spheroid form with the feature of equatorial bulging and variation at the poles, works one way with the Mississippi River flowing away from the North Geographical Pole toward the equator, and quite another way with the Nile River, that flows away from the South Geographical Pole and toward the equator, then over the equator and then away from the equator toward the North Geographical Pole. If an ascending course is maintained by the Mississippi River with the mouth higher than the source, then for a short distance the Nile River ascends to the equator and descends the balance of its length, and its mouth is therefore lower than its source. It would appear, therefore, that the Mississippi River is controlled by rotation and centrifugal force, but the Nile River gets along very nicely without such assistance. One flows up, the other down. An example of complete conspicuous contradiction produced by the exigencies of an oblate spheroid form which is also productive of other contradictions. For some rivers flow from north to south and south to north, some flow from east to west and west to east, and some flow in various directions. The following questions might pertinently be asked: Why do some rivers require rotary, centrifugal and centripetal as-

sistance, while others do not? Why refer to the mouth of the Mississippi River as the Lower Mississippi, if it is in fact the Upper? Where does the quotation, "A river never rises above its source" fit in with the requirements of an oblate spheroid form?

With all the absurdities and inconsistencies that insistence upon a globular form forces its advocates to accept, it is not surprising that from the chaos created thereby it is necessary to have at least four different schools of scientists, all advocating the globular theory and supporting it with various alleged proofs.

The fact is that the law of the flow of rivers absolutely precludes the possibility of adjustment and manipulation to which they are submitted by various globular earth advocates to support their conflicting theories. Descent, declivity, depth, width, volume, speed and course are the controlling factors and all these tally with the plane earth theory and the laws of Biblical cosmogony without conflict.

I am fully acquainted with the evasions resorted to by globularists in their attempts to evade a definition of a level, horizontal, or datum line. They variously describe it as "A line tangent to the surface of the earth," and "corrected at various or successive points."

Such hedging is not necessary if the tangent factor

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controls. As it is, both these factors conflict, and do not work out even with house plans on either flat or sloping land. Calculations on a flat form control, and such plans reveal at a glance what constitutes level, horizontal, straight, vertical and zenith in contradiction to what constitutes curvature. This "tangent" and "correction" excuse is in the same class with the "refraction" excuse.

XIII

THE PROTESTANT CLERGY

In regard to astronomy and cosmogony, clergymen have such diverse opinions that reference to their belief or disbelief obliges classification to reveal the conflicting views held by the respective groups.

Some scientists and their supporters boast of the victories they have won over the church and clergy in the conflict between religion and science. Some clergymen even join with scientists in magnifying that boast and at the same time belittle the efforts of the losers. One group of clergymen is not at all interested in investigations of astronomy and cosmogony or questions as to whether the earth is of a globular or of a flat form. These men do not believe that these are matters in which religion and the clergy are concerned.

Another group of clergymen actually become participants in the contest, evidently aware of some of the weapons of defense in their possession but ignorant of other even more valuable weapons of offense

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within their grasp. Ignoring such resources, they remain ignorant of the weakness of the weapons of the scientists and finally conclude that the scientists must know their own field. Reasoning thus they withdraw from the contest. Other clergymen are still in doubt, while others become actual allies of the scientists. Such a state of affairs permits the scientists to score another victory, though the actual facts of the case give very little, if any, genuine cause for such a boast.

Still another group of clergymen are so situated in very satisfactory social and financial conditions that they are not at all interested in the subject. But if they have any intellectual bias, it is toward the views held by the scientists. The latter boast of this passive acquiescence as of a victory and magnify such a conquest as though it were a triumph against doughty opponents.

There is still another group of clergymen which attempts to "temporize" for the Bible, asserting that it does not claim to be a treatise on science and is entirely dissociated from scientific theory. Other clergymen claim that the Bible does indicate the earth as globular in form and cite *Isaiah* XL: 22, relying upon the term "circle" that appears in that verse.

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They claim that this justifies the scientists in their belief in the globular theory, and that it reveals to them that there is no conflict between Scripture and Science.

Those clergymen who rely upon that word "circle" as indicating that the Bible teachings support a globular earth-form show how easily they can be misled, how susceptible they are to error. It would be well to consider just here the definition and application of the term circle.

Definitions of A Circle

"A plane figure bounded by a curved line called its circumference, which is everywhere equally distant from a point within it, called the center." Chambers Encyclopedia. Webster's Academic Dictionary.

"A plane figure enclosed by one line, all the straight lines drawn to which from one point within the figure are equal to one another." *Euclid*, Book 1, Definition 15.

"In Geometry, a plane figure bounded by a curved line which is everywhere equally distant from a point within called the center." Appleton's New Practical Cyclopedia. Encyclopedia

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Britannica, 11th ed. Vol. 2. Universal Cyclopedia and Atlas.

"A closed plane curve exactly alike throughout, all of its points being equidistant from a point within called the center." Webster's New International Dictionary.

"It is he that sitteth upon the circle of the earth." Isaiah 40: 22.

"To primitive man the earth was a flat disk. Of such a nature was the cosmogony of the Babylonians and Hebrews." *Encyclopedia Britannica*, 11th ed. Vol. 8.

If the various standard dictionaries and encyclopedias count for anything, then such authorities certainly contradict the contentions of those clergymen who do not believe that the term circle applies to a plane or flat surface. That Thomas Paine grasped this important error on the part of such clergymen is clearly indicated in his severe criticism of them when he declared, "The two beliefs—modern astronomy and the Bible—cannot be held together in the same mind; he who thinks he believes both has thought very little of either."

Another eminent authority supports the findings of

the dictionaries and encyclopedias in this matter. Professor Edward W. Maunder, of the Royal Observatory, Greenwich, England, published a work entitled *Bible Astronomy*, and in that work devoted one chapter to an analysis of Joshua's "Long Day". In it he particularly noted the use of the term "circle" and the passage at *Isaiah* 40: 22. He declared that "nowhere in the Bible is there any allusion to the earth as of a spherical form." In the preface of his work, Professor Maunder declared himself an astronomer and a Christian, and the combination qualifies him accordingly.

In view of the evidence of these authorities there are sufficient grounds for the belief that many clergymen have been duped by both the findings of the Magellan voyage and the alleged Scriptural basis for their beliefs.

Furthermore, it appears from these various authorities, that the period of time covered when the term "circle" was applied, includes centuries, B.C. and A.D.

Some clergymen contend that Moses and those "other old fellows" knew nothing about astronomy, cosmogony and science; but these were conclusively answered by 1 *Thessalonians*, 2: 13—"When ye received the word of God—ye received *it* not *as* the word

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of men, but as it is in truth, the word of God." And *Job*, 38:22 and 23—"Hast thou entered into the treasures of the snow? Or hast thou seen the treasures of the hail, which I have reserved against the time of trouble, against the day of battle and war?"

According to the evidence of Mr. Lyell Rader, one of the greatest chemists of the United States, in the *Boston Sunday Post*, January 9, 1921, the Bible gave the secret of how to make perfect the explosive T. N. T. Its original imperfection, due to a tiny bit of impurity, had resulted in the terrible Black Tom disaster of July 30, 1916, and the Halifax disaster of December 6, 1917. Notwithstanding the passage of many centuries since the composition of the Bible, the science in the 38th chapter, 22-23 verses of the *Book of Job*, was there and not discovered and applied until after 1917. Rather slow work for moderns in comparison with the accomplishments of those unscientific "old fellows" of Bible times.

Professor E. W. Maunder, in his work previously referred to, substantially asserts that "The facts that are stated in the first chapter of *Genesis* must necessarily have been revealed, as man himself could not have found them out by any process of research." According to Professor Maunder, a globe earth au-

thority, it is evident that Moses and some of those other so-called "old fellows" were especially favored beyond the advocates of modern astronomy and cosmogony. The verse from *Thessalonians*, quoted above, should be recalled again in this connection.

Some clergymen and laymen consider that the Bible statement, "hangeth the earth upon nothing" (*Job* 26: 7), indicates that the earth is of a globular form suspended in space. But "hangeth the earth upon nothing" decidedly refutes the Copernican-Newtonian theory which claims that the earth is held by the sun and cannot escape from it; that the sun holds our earth to its orbital course around itself, and at the same time to another course in relation to Vega. This theory also pictures what would happen to our earth if perchance the sun should let go its grip on the earth. In view of the alleged grip of the sun on the earth, where does "hangeth upon nothing" fit in with the globular theory? Is the sun that specified "nothing"?

Professor Edwin Tenney Brewster, of Phillips Andover Academy, Andover, Massachusetts, author of *The Understanding of Religion*, wrote me, under date of July 2, 1923, as follows:

"I think you will find the most significant point in my book the frank admission that the Bible

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teaches that the earth is flat. I don't hold that view myself—but there isn't any doubt that the Bible does. All modern scholars I find are agreed on that. I'm sure it's held much more widely than we 'globularists' have any idea." And again under date of August 14, 1923—"By the way, you allude, apparently, to 'thousands' of believers in a flat earth. I wonder if you have any data. I happen to be especially interested in the number of flat-earthians. 'Tens of thousands' is nearer my estimate."

XIV

EVOLUTION

According to various recognized authorities preaching and advocating the theory of evolution, the basis thereof appears to have been derived from the statements set forth in two papers read before the Linnæan Society at London, on July 1, 1858. One paper was presented by Charles R. Darwin, the other by Alfred Russel Wallace. Both based their deductions and conclusions on the theories of Copernicus, Kepler, Galileo, Descartes and Newton, all of which were in turn based upon the result of the Magellan voyage, 1519 to 1521. This voyage, which is the generally accepted basis of the globular theory and the doctrine of the antipodes, is thus also responsible for the theory of evolution, for various astronomers and scientists accepted the Magellan voyage as a demonstrated circumnavigation of the earth. And it is asserted that such a voyage could only possibly be made on a globular form; that the earth, therefore, must be globular and there must be an antipodes.

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These astronomers and scientists fully believed that a ship could sail a circular, or an irregularly circular course around a central point, crossing every meridian of longitude on a globular form, and that such a feat would be utterly impossible on a flat surface.

Consider what an inexcusably stupid conclusion this is for intellectual men to hold. One might just as well claim that a man cannot go around his house and return to the same spot he started from because his land is flat. The two special chapters relative to circumnavigation contain sufficient evidence to completely refute all the arguments based on the alleged findings of the Magellan voyage on this matter.

When Wallace presented his paper before the Linnæan Society, in 1858, he then held certain astronomical beliefs relative to worlds and the position and purposes of the sun. But after further study and consideration, he repudiated some of his former contentions and advanced his *new* theory, which startled some scientists but favorably impressed others. He claimed the *earth* occupied the central position and not the sun, and that the earth was the only inhabited planet and the sun and all the other orbs were contributory to the earth. That the whole of the available past life of the sun has been utilized for life develop-

ment on the earth, and the earth has been especially favored by these cosmic arrangements. Thus, so far as he is accepted as a globularist, his new theory, which places the earth at the center of our universe, disposes of the alleged orbital course of the earth around the sun. It also disposes of the alleged aphelion and perihelion positions of the earth, and the extra three million or more miles distance of sun from the earth at certain times. It upsets the globularists' conception of the shape, length and width of such an alleged orbital course, from which is derived the basis for estimating the alleged speed of light in connection with Jupiter's moons. It upsets all their pre-conceived notions as to distance and size of the sun and of the other orbs in space, and disposes of the alleged course of the earth toward Vega. What induced Wallace to make such radical changes in his former beliefs?

To a certain extent Wallace is supported by Professor William Bateson, world famous English biologist, who assailed Darwin's Origin of the Species at the convention of the American Association for Advancement of Science at Toronto, Ontario, December 29, 1921, where he made, in effect, the following ad-' mission:

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"Forty years ago the Darwinian theory was accepted without question; today scientists have come to a point where they are unable to offer any explanation of the genesis of species."

Wallace receives some support from another source by the sweeping declaration from one of the most famous institutions in the United States. The statement is substantially as follows:

"You no doubt know that the latest results of Physics seem to show that it is impossible to detect such motion—no man knows, and we have no evidence to decide, whether the earth is moving through space or not; witness the conflicting theories of navigation." June 9, 1922.

In addition to the evidence of these reputable authorities, there are three other schools of astronomers and scientists advocating the globular theory, all three denying the orbital course of the earth around the sun and all the factors dependent upon that course, including the movement of the earth relative to Vega. Some of those authorities reject the theory of rotation and tipping of the earth, and all of them claim that the Copernican-Newtonian System cannot account for the phenomena of day, night, seasons and lunar and solar eclipses.

Opponents of the sacred writings are, as a matter of necessity, obliged to produce something as a substitute to replace the claims of those portions of the Bible they are attacking. They seem to have selected *Genesis*, the first Book, as their principal target, and having discredited it, the balance of the Bible is more easily discredited and rejected.

The evolutionary theory was selected as the most plausible substitute for Biblical teaching. Its choice seems to have satisfied many laymen and some clergymen, and many clergymen have been induced thereby to abandon the ministry, and even abandon religion.

The ideas of natural selection and the survival of the fittest, resultant destructive philosophies which grew out of the evolutionary theory, and which reached a climax in the doctrine of the superman, the supreme product of evolution, were particularly alluded to as false philosophy by Professor Paulsen in *System of Ethics;* by William Archer in Fighting a *Philosophy;* by Owen Wister in A Pentecost of Calamity; the boast of Gerhardt Hauptmann relative to Nietzsche's Zarathustra; and by R. H. Bevan in

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Germany's Moral Insanity. Leslie's, December 14, 1918.

Unfortunately, it appears that the opponents of evolution attempt to show how ridiculous it is, but this method is not sufficient. It should be attacked at its very foundations.

XV

COMPARISONS

Robert G. Ingersoll publicly invited comparison of the accomplishments of Laplace, Humboldt, Kepler, Copernicus and other men of the so-called modern times with those of Joshua, Moses, Job, Isaiah and other men of Bible times. Professor Andrew D. White invited similar comparison between the two groups, and both Ingersoll and White favored the former. Those invitations were, to all intents and purposes, challenges. It is only necessary, therefore, to ascertain whether the alleged superior accomplishments of the former group have been such as to really merit the confidence of Ingersoll and White. Certainly, globularists cannot reasonably complain if the alleged accomplishments of Copernicus, et al, are analyzed and their values, if any, scrutinized by eminent globe-earth experts and authorities.

It is generally understood that various nations have enjoyed peculiar advantages and opportunities. Succeeding generations learn from preceding generations,

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inheriting from the accumulated wisdom of the past. Therefore, with increasing populations there are increasing needs and opportunities for advancement, and it is quite consistent that such factors should be considered in comparisons relative to the men and times concerned in the challenges issued by Ingersoll and White.

We must also consider that the lives and accomplishments of Copernicus, Kepler, Descartes, Newton, Galileo, Laplace and Humboldt, are practically an open book in comparison with the lives and accomplishments of Moses, Job, Joshua and Isaiah and other men of the Bible. Even at this late date facts concerning them are only being gradually learned through excavations and research, revealing the marvelous knowledge and accomplishments of the men of those remote centuries. The Lost Arts, to which unprejudiced writers occasionally refer in terms of respect, must not be forgotten in this relation.

Copernicus

Nicholaus Copernicus was born February 19, 1473, and died May 24, 1543. His chief claim to fame is based on his work, On the Revolutions of the Heav-

enly Bodies. Copernicus was dissatisfied with the findings of the Ptolemaic System, another globular theory, and is credited with exploding it. He gives the Pythagoreans credit for having given him the first hint. Pythagoras was a Greek philosopher, living in the sixth century B. C., but, although he conceived of the earth as a globe, he did not assume that the sun occupied the central position. Copernicus has been credited with the following admission:

"Neither let anyone so far as hypotheses are concerned, expect anything certain from astronomy, since that science can afford nothing of the kind."

The Inquisition ruled that Copernicanism was a forbidden doctrine and condemned it in 1616. Two edicts of 1620 and 1633 restrained Roman Catholics from embracing Copernican views, and this restraint remained in full force for one hundred years and in nominal force for a hundred years longer. The condemnatory decree was removed from the Index in 1758, under Benedict XIV.

Dr. Paley observed that the Copernican System was one guess among many.

The great Bacon ridiculed the Copernican idea of motion of the earth.

Goethe declared-

"In whatever way or manner may have occurred this business, I must still say that I curse this modern theory of cosmogony, and hope that, perchance, there may appear in due time some young scientist of genius who will pick up courage enough to upset this universally disseminated delirium of lunatics."

Galileo

Galileo Galilei, commonly called Galileo, was born February 15, 1564, and died January 8, 1642. He made great improvements in the telescope, and on January 7, 1610, he discovered four satellites of Jupiter by means of his improved instrument. The first telescope was made by Johannes Lippershey, an obscure optician of Middleburg, October 2, 1608. Galileo established mechanics as a science, and discovered the spots on the sun. He treated with scorn Kepler's suggestion of the occult attraction of the moon. His capital errors are his theory of the tides and the nature of comets. At six audiences with Pope Urban VIII, Galileo failed to convince the Pontiff of the truth of Copernicanism. The revolution which Galileo accomplished had been prepared by his predecessors.

Kepler

Johann Kepler was born December 27, 1571, and died November 15, 1630. He propounded the three fundamental laws of planetary motion, viz., the laws of elliptical orbits, of equal areas, and of the relation between periods and distances. Tycho Brahe's researches made possible Kepler's discovery of these three laws. Kepler did not regard the stars as so many suns, and he divested the Copernican System of its absurdities and completed the Rudolphinian Tables which had been left uncompleted by the death of Tycho Brahe. Kepler's biographers have published that, out of four of his suppositions, three are now indisputably known to be false.

Descartes

Rene Descartes was born March 31, 1596, and died February 11, 1650. He is principally famous for his theory of vortices, known as the Cartesian Philosophy.

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In England his philosophy made only a slight impression. In Germany and Switzerland it took no root. Of Cartesianism towards the close of the 17th century the only remnant was an overgrown theory of vortices which received its death-blow from Newton and a witty executioner in Locke. A Latin abridgement of philosophy dated 1784 A. D. tells us that "the innate ideas of Descartes are founded on no arguments and are now universally abandoned. Its theories, taught as ascertained and verified truths, were as worthless as the systematic verbiage which preceded them."

Such is the report of the *Encyclopedia Britannica* on Descartes, the man whom Professor White extolled as one of the five greatest men that our race has produced in the refutation of sacred writings. But it now appears that the Cartesian Philosophy was annihilated and not the sacred writings, and White's judgment suffers accordingly.

Newton

Isaac Newton was born December 25, 1642, and died March 20, 1727. His most important work is *Principia;* the whole work was published in 1687. His thoughts were directed towards the problem of

gravitation in 1666. He was inspired by Descartes' Geometry and he calculated from Kepler's laws. He also sought information from John Flamsteed and engaged in unpleasant controversy with Wren and Hooke, especially Hooke, as to priority claims relative to some features of the gravitation theory. Voltaire is the authority for the well-known anecdote about the apple, having received the information from Newton's favorite niece, Catherine Barton; how much truth there is in it can never be known. Other alleged discoveries and accomplishments have been credited to Newton.

John Wood in his work on astronomy and cosmogony published the following:

"Newton's law of gravitation has been scientifically assailed by the eminent Encke and others."

Professor John R. Young published the following:

"Newton in his *Principia*, Book III, admitted, 'I by no means affirm that gravity is essential to bodies.'"

Professor Bernstein in Letters to the British Association, referred to gravitation as follows:

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"The theory that motions are produced through material attraction is absurd. Attributing such a power to mere matter, which is passive by nature, is a supreme illusion . . . it is a lovely and easy theory to satisfy any man's mind, but when the practical test comes, it falls all to pieces and becomes one of the most ridiculous theories to common sense and judgment."

Laplace

Pierre Simon Laplace was born March 28, 1749, and died March 5, 1827. His chief claim to fame is his work, *Mecanique Celeste*, which ranks second only to the work *Principia* by Newton. Other of his works are *Systeme du Monde* and *Essai Philosophique*. Laplace's nebular hypothesis is well known to astronomers but rejected by many. Between Laplace and Legendre there was a feeling of more than coldness owing to Laplace's appropriation, with scant acknowledgment, of the fruits of the other's labors. Laplace has been justly blamed for not recognizing the unquestionable contributions of his predecessors and contemporaries, inferentially appropriating them as his own.

Alexander Brownlie in the American Geographical

Society's Bulletins for February and April, 1902, discussing tides, asserted that:

"Both the theories of Newton and Laplace must be abandoned as explanations of the true conditions."

Professor T. J. J. See, United States Navy Mare Island Observatory, on January 30, 1909, announced to the Astronomical Society of the Pacific his rejection of Laplace's Nebular Hypothesis. Professor See is the author of many scientific papers published in the transactions of the learned societies of the United States and Europe.

Humboldt

Friedrich Heinrich Alexander Humboldt was born September 14, 1769 A. D., and died May 6, 1859 A. D.

A traveler in the interests of science, his chief claim to fame is his work *The Kosmos*. He is practically the founder of the modern science of physical geography and placed meteorology on a firm basis. He owed much of what he accomplished to his rare power of assimilating the thoughts and availing himself of the contributions of others. He has been credited with the following statement:

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"I have known for a long time that we have no argument for the Copernican system, but shall never dare to be the first to attack it. Don't rush into the wasp's nest; you will bring on yourself the scorn of the thoughtless multitudes. If once a famous astronomer arises against the present conception, I will, too, communicate my demonstrations, but to come forth as the first against opinions which the world has become fond of—I don't feel the courage."

Summarized briefly, those seven men,—Copernicus, Galileo, Kepler, Descartes, Newton, Laplace and Humboldt—have been credited with certain alleged accomplishments. Ingersoll and White evidently regarded these accomplishments as genuine and permanently established beyond doubt or refutation. According to recognized authorities, those alleged accomplishments have not been established, but quite the reverse. Not only did those seven men disagree more or less among themselves and with their contemporaries, but subsequently other recognized authorities have assailed their theories and published their reasons for their objections and rejections.

Those seven men based their findings upon the theory that the sun is *immovable* in space, whereas the subsequent claim is made that the sun is, in fact, rush-

ing through space at the rate of eleven or twelve miles a second. That important fact warrants certain objections and rejections, and all of such radical changes certainly tend to discredit the theories based upon the immobility of the sun, regarding which Ingersoll, White and Draper did not reasonably consider, evidently realizing that to do so would refute their own claims.

Having considered this group of men and some of their accomplishments it is proper that the *other* group of men and some of *their* accomplishments should also be considered for comparison, in order that both groups may be judged.

As a group, various men of ancient times produced the Book of Books, the Bible—matchless and unanswerable, perpetuated through the centuries down to the present day; furnishing material for the literature, comparisons and challenges of Ingersoll and White.

"It has been the inspirer of morals, eloquence, art, poetry, politics, law, medicine, sanitation and hygiene. It is the book of books and the begetter of books." *Boston Globe*.

"It is a book which teaches us the first revolutions of the world, and which also foretells its

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last; it recounts them in the circumstantial language of history, it extols them in the sublimest strains of poetry, and it chants them in the charm of glowing song." Southern Illustrated News, September 27, 1862.

"Within the last twenty years, the Book of Genesis has come very prominently into view as the starting point of numerous discussions. Science and history have combined to lead us back to it. Here are the rudiments of all Scripture truth." Horatio Bonar, D. D., in *Earth's Morning*.

"All the discoveries of modern times, such as electricity, telephone, telegraph, wireless telegraphy and the steamship were foretold in the Bible." Rev. Dr. MacArthur in his sermon in Tremont Temple yesterday, *Boston Post*, September 9, 1912.

"The accomplishments of the air men seemed a fulfilment of the prophecy of the New Testament." Rev. Dr. A. A. Berle, *Boston Journal*, September 5, 1910.

"We are digging up things that astonish us. Ur of the Chaldees is no longer a fantasm; Nebuchadnezzar becomes a reality; they all lived and they all did things. What our later knowledge

has affirmed is, that long before the advent of Christianity the social, intellectual, artistic, communistic conditions of the race were developed along lines which today are regarded as fundamental. Are we of the 20th Century going ahead, or are we trying to catch up with the men of fifty centuries ago?" *Boston Sunday Post*, March 10, 1914.

"Automatic vending machines, income taxes, running water through terra cotta pipes and elevators in Christ's day." Proved by Papyrus. Professor D. C. Stanwood, *Boston Post*, February 20, 1923.

"'A man's life consisteth not in the abundance of the things which he possesseth.' St. Luke 12:15.

"If the text above could be seen, read, and really understood by all the adults among the fifteen hundred million human beings on earth, the world would be better off. There is more wisdom in St. Luke's fourteen words than in a hundred international treaties, for those fourteen words really mean Peace." Boston Sunday Advertiser, December 25, 1921.

"The Ten Commandments have not in more than three thousand years been improved upon. The Crucifixion, the most epochal event in human

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history, was described by Matthew with a pathos and force that have never been surpassed." Boston American.

Moses

Moses was born 1571 B. C. and died 1451 B. C. He is credited with being a peculiar treasure unto God above all people, especially favored by God, talking with God and delivering God's message, the Ten Commandments at Sinai, to the people. Moses is credited with having written the *Pentateuch*, the first five Books of the Bible. He wrote of Jesus Christ about fifteen centuries *before* the birth of Christ and this fact was confirmed by Christ Himself as follows:

"For had ye believed Moses ye would have believed me, for he wrote of me; but if ye believe not his writings how shall ye believe my words?" *St. John* 5: 46-47.

"And Moses was learned in all the wisdom of the Egyptians and was mighty in words and deeds." Acts 7: 22.

"A new angle is thus suggested from which to view the "momentous pronouncement" in the Mosaic cosmogony: 'Let there be light.' Even these earliest students of the origin and structure

of the universe recognized the overwhelming importance of light." Professor G. P. Serviss, in *Boston American* of June 2, 1923, quoting Professor Shapley of Harvard Observatory, in *Harper's Magazine*.

Consider that this "momentous pronouncement" by Moses occurred over *thirty centuries* before Copernicus, Laplace, Humboldt, Kepler, Galileo, Newton, Darwin, Wallace, Ingersoll, White, Serviss, and Shapley were born, and also that Moses has been particularly quoted and referred to during all that time by both Ancients and Moderns, and above all, especially by Jesus Christ.

Joshua

Joshua was born 1553 B. C. and died 1443 B. C. Joshua succeeded Moses. When Moses ascended Mt. Sinai, Joshua accompanied him part way, and was the first to accost him on his return.

Joshua is most famously associated with the well known and much discussed "Joshua's Long Day" when the sun stood still. See *Joshua*, tenth chapter.

Job

"The Book of Job is full of suggestions of advanced thought and civilization. From almost every point of view it is a fascinating document as well as a monumental poem." Mr. J. Ranken Towse of the New York *Evening Post. Literary Digest*, April 6, 1918.

"Job and Isaiah are the two most powerful books in the Bible. Nothing can compare with them in beauty except the Sermon on the Mount." *Boston American*, June 2, 1923.

Commenting upon Job 28: 12-23, a certain writer claimed that they contained "essential wisdom, far off and exceeding deep; who can find it out?" So, too, Job 38: 22-23 is far off and exceeding deep, fraught with advanced thought and science which, when found out even partially, enabled the United States to correctly make and use the explosive T. N. T. in the World War.

Isaiah

"Isaiah is the name of the greatest, and both in life and in death the most influential of the Old Testament prophets." Encylopedia Britannica.

Ingersoll made comparisons of the discoveries and inventions made during our modern times with accomplishments of ancient times. His allegations are subject to due consideration, although some persons do not consider that allegations made by Ingersoll have any bearing whatsoever on religion. But for the sake of comparison, and to follow both Ingersoll and White into the subject matter introduced by them, these factors and features are here considered briefly.

There have been wonderful discoveries and inventions in various branches of science during modern times,-in geography, chemistry, surgery, electricity, navigation of air and sea, mechanics, etc. The telegraph, telephone, telescope, microscope, wireless, radio, x-ray, aeroplane, automobile, printing press, farm implements, clocks, chronometers, foods, railroads, steamboats, processes in art, masonry and explosives, whether arrived at through accident, chance or otherwise, all are entitled to due recognition and credit. But it should also be remembered that, to a very great extent, the ancients first discovered and produced many of the most important and essential materials, implements and fundamentals, some of which are mentioned in the following list, that now enter into the conception of modern inventions. To

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be consistent and just, future generations will likewise give due credit to those of preceding generations, some of them now known and referred to as Ancients and Moderns.

Here are just a few of the things which we owe to the Ancients: language, hieroglyphics, letters, numerals, money, law, will, architecture, engineering, buildings, bricks, sanitation, ventilation, acids. masonry, chemistry, ointments, perfumery, jewelry, colors, bells, wheels, harnesses, boats, anchors, bronze, brass, copper, iron, glass, gold, silver, books, geometry, history, oratory, clothing, bread, furniture, vintage, census, hammers, nails, and other useful and ornamental articles, utensils and products too numerous to mention, but which have been referred to by many authorities and writers from time to time. A glance through this list reveals at once what originals, what fundamentals were produced by the Ancients which have contributed in various ways to many modern inventions and discoveries, and to prospective future accomplishments beyond estimation. What were Ingersoll and White thinking of to hint at such an invidious comparison between Ancients and Moderns? Even the very few of the above-mentioned items are sufficient to bury their arguments beyond resurrection,

and in view of all the records and information obtainable, it appears that Ingersoll and White had really nothing whatever to offer as a challenge for comparison in behalf of their selected seven men, whose theories were based principally on assumption, error and speculation.

Many Christians have claimed and continue to claim that the Holy Bible is not to be accepted as an authority on astronomy, cosmogony, certain chronology or science, but only as an authority on religion and salvation. Such a claim indicates limitation, but such claimants forget that at times they conspicuously accept the Holy Bible as the original authority on many other matters not relevant to religion, viz.—history, chronology, poetry, philosophy, predictions and many other factors pertaining to knowledge of which there is definite reference, the steam engine, the flying machine, the telegraph, wars.

In view of these various admissions as to the correctness and reliability of the Holy Bible on such matters, sometimes for many *centuries in advance*, why then do these claimants attempt to place upon The Word the restrictions of incompetence in matters contained in and pertaining to Itself—creation and the order of the universe? Why do they claim it to be so infallible in so many varied instances and not reliable as to its own province?

XVI

Religion and Science

Under the above caption, certain opponents of the Fundamentalists are now anxiously and energetically engaged in attempts to prove that there is no antagonism between religion and science. By applying these two terms as they do, such opponents are befogging the issue, as there are many religions other than those which have the Bible, the Books of the Old and New Testaments, partially or entirely, as their basis of belief. The vital issue is not Religion vs. Science, but the Bible vs. Science.

The aforesaid opponents cite certain theories relative to astronomy and cosmogony in the various controversies and call these theories "science." It is that sort of alleged science that does antagonize Scripture. Distinguish between science and that so-called science, and the course is definite and clear; mix and befog them and arguments pro and con can continue indefinitely, as past and present conditions certainly reveal beyond a doubt.

According to published reports under date of May 26, 1923, a joint statement declaring that there is no antagonism between religion and science was signed and issued. This statement, representing the conclusions of a group of forty distinguished Americans, was prepared by Dr. Robert A. Millikan, formerly of the University of Chicago, apparently under cover of the theory of evolution. The intents and purposes of the aforesaid statement have not in the least distinguished between science and so-called science or between various religions; it remains a misleading, indefinite public statement.

In line with this statement, Dr. Millikan in The Christian Century (Undenominational), issued another statement reported in The Literary Digest of July 14, 1923, as follows:

"Again, both science and religion have reached their present status through a process of development from the crudest beginnings, and the great leaders of the past must be judged by their standards rather than by ours. Once get this point of view and you will never think of asking whether *Genesis* is to be taken as a modern textbook of science. It was written long before there was any such thing as science. Everyone who reflects believes in one way or the other in God."

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According to other information from other authorities, some of which appears in various chapters of this book, that aforesaid public statement reveals misleading inconsistencies and errors. In connection therewith consider the belief, conclusions and claims of some other authorities, notably Darwin and Wallace, and especially the admission of Darwin,—

"Disbelief crept over me at a very slow rate but was at last complete. The rate was so slow that I felt no distress." *Encylopedia Britannica*.

Darwin, formerly religious, slowly but surely abandoned religion, disbelieved after he entertained and accepted evolutionary ideas. Such was Darwin's confession that evolution did contradict and was an opponent of religion, and it was well known that Wallace had previously given up all belief in revealed religion. Wallace also claimed that evolution contradicts and is an opponent of religion, and Darwin and Wallace are herewith cited because their theories are at the bottom of the present bitter controversies.

The late Professor John W. Draper, of the University of New York, regarded evolution to be a principal factor in the conflict between religion and science, while the late Professor White claimed the

struggle was between dogmatic theology and science. Both claimed that it is useless to attempt to reconcile the statements in *Genesis* with the discoveries of science.

Certainly there is nothing indefinite about Draper's and White's conclusions. They use the terms, "warfare," "conflict," and "antagonist," while the others conspicuously announce, "no conflict" and "no antagonism." Draper claimed, "One of the antagonists must give way," while the others claim, substantially, "There is no antagonist to give way."

Professor A. D. White, in his work *A History of the Warfare of Science with Theology*, claims that instead of it being Religion vs. Science, it is a struggle between Dogmatic Theology and Science. In this work he quotes Mr. Gladstone, as follows:

"In an address at Liverpool, Mr. Gladstone remarked, 'Upon the ground of what is termed evolution, God is relieved of the labour of creation, in the name of unchangeable laws He is discharged from governing the world.'"

Evidently Mr. Gladstone did not fail to see that the theory of evolution is an antagonist of God and Christianity.

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The fact that the terms "conflict," "warfare," "struggle," and "antagonism" are definitely used and applied, and bitter charges and countercharges continue to be made, reveals that it cannot be science, but the taken-for-granted, so-called science that is the disturbing factor, practically all the contestants failing to distinguish between true science and alleged science.

Some opponents of Scripture, anticipating increasing difficulties, are resorting to other tactics, alarmed that the alleged results from the Columbus and Magellan voyages are not strong enough and may not always hold as sufficient proof for their arguments. Witness the various published statements relative to even older civilizations when the earth was regarded as a sphere many thousands of years before Christ; such claimants are especially anxious to have some kind of a spherical belief prominently advertised at a date so far, far back in the past that Genesis. Moses and Bible times will appear ridiculously modern in comparison therewith. So in the future we may expect references to other times still more remote, it only being necessary to have them sufficiently removed for the purposes of the opponents of Genesis.

However, the alleged fact of such a civilization

would contradict Dr. Millikan's claim that "Genesis was written long before any such thing as science," because science would certainly be connected with that superior civilization before Genesis was written, antedating Dr. Millikan's data; thus he is doubly contradicted.

We should not overlook, however, or intentionally disregard that exhortation that appears in the closing verses in the closing chapter of the Bible—

"If any man shall add unto these things, God shall add unto him the plagues that are written in this book; and if any man shall take away from the words of the book of this prophecy, God shall take away his part out of the book of life and out of the holy city, and *from* the things which are written in this book."

That warning is significant; it is neither affirmation nor negation. But the greatest and most conclusive test of the entire Bible from the first chapter of *Genesis* to the last chapter of *The Revelation*, is the correct analysis of the Magellan voyage and similar voyages, and the analysis of the Panama Canal and other canals. Such a test is absolutely necessary for a speedy and correct solution of the vital issues now

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pending relative to the Bible, religion and the science of navigation.

When all is said and done, pro and con, the actual, visible, daily demonstrations on the earth by the flow of the waters of the rivers of the earth, and the actual, visible, practical demonstrations by man,—notably the Chinese, Panama and Suez canals,—with one sweep dispose of the assumptions and contradictions and verbiage of Newton, Copernicus, Galileo and others of their school and their advocates.

Dr. Millikan says "reflect." Yes, reflect, that is the principal purpose of this book, that those who read will reflect, and not substitute "taken-forgranted" for reflection. It is noticeable that many prominent clergymen claim that they are liberal, tolerant and open-minded and only seek truth; that they are ever ready to sincerely consider any information that may lead them to discover that they are mistaken or have not correctly or sufficiently understood certain factors upon which they have based their opinions and conclusions. Dr. Millikan's admonition comes to them with startling clarity, especially on those momentous pronouncements to which the writer of *Genesis* added, "And it was so."

The End



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