

The Origin of the World

Book Review

Chapter 2. THE DEPTHS OF THE SKY.

By R. McMillan.

IN reading over the previous chapter I noticed I had mentioned the "sky," and I felt that it would be quite wrong of me to go any further without explaining what I mean when I say "the sky." There is no such thing as the sky. Men have imagined one, that is all! The blue you see when you look up during the day is not a real thing, but is just the effect of the sunlight. If you could look through the haze of sunlight, you would see the stars shining in the daytime just the same as they do at night. There is no "sky," but I have to say "sky" so that you may understand me when I speak about things that appear to be above us. But what is above us? Nothing at all! What is all about us? space! But space is nothing? Yes, space is nothing also! Outside of this little world of ours there is no "up" or "down," or "east" or "west," or "north" or "south," or any direction at all.

Having said that, I feel as if I ought to stop and give you a month's vacation to think about it. But that would be of no use, for you would never be able to arrive at the truth merely by thinking. You must have facts in order to arrive at the truth: Your own senses deceive you more than anybody could do with the printed page of a book. It appears so simple for you to ask how the world began, but as soon as ever I begin to explain it I realize that you have got to learn quite a lot of facts which are necessary for an understanding. And the first of them is, What is the "sky?" As I have told you, there is no "sky" at all, but if you look out into space at night you will see the stars shining. I told you that the stars were suns, some of them a million times brighter than our sun. But what is holding them still? They are not still. They are not being held up at all. Every star is flying as fast as we are, or faster. Some are travelling so fast that a cannon-ball in flight alongside them would appear to be creeping.

Nothing is standing still in all the wide universe. Nothing is fixed; nothing stays where it is for a single second. That may be difficult, very difficult, for you to understand; but it is true, and that is why it would be of no use for me to begin telling you how the world came to be unless I first told you some of the facts of the universe which are quite well known to all scholars.

When you look up into the sky at night you see the stars, thousands of them. And they seem quite a long way off, do they not? Suppose you were asked how far away you thought the stars were, I wonder what you would say. It is very wonderful to learn how distant they are, and then ask people about it, just to find out how little they know about the world they live in. Very few people know. I know people who spend years and years reading silly books, and think they are "well read"; but they have no idea of what sort of a world they live in, or how far away the stars are, or how the world came to be, or how it will end. You would think that people who came to live in a little world for three score years and ten would want to know what kind of a world it was, would you not? But they do not! Millions upon millions of them die and never dream of the glory of the miracle-world they are voyaging in, and they live complaining and die disappointed, crying "Vanity of Vanities, all is vanity." But it is not! All is miracle, and romance, and delight, and great joy if you know what life means, what the world means, and the story of it. It is a wonderful world—a world of never-ending glory, and we ought to know about it, and realize what a wonderful thing it is to live.

You know the Southern Cross, do you not? The early Spanish navigators, when they saw these stars, said that they formed a cross, and they worshipped

it. But lots of people say that it does not form a cross at all, and if you know what the stars mean you soon realize yourself that they do not form a cross in any sense of the word. That, however, has nothing to do with what I want to tell you. If you know the Southern Cross, you probably know the "Pointers" which point to the Cross. Well, one of these pointers is called by astronomers "Alpha Centauri"—that is, the first star (Alpha is the first letter of the Greek alphabet) in the constellation of the Centaur. That was the first star that was measured in our hemisphere, and the distance of Alpha Centauri from Australia is—how far do you think? It is the nearest star, as far as we know; and its distance is 26,000,000,000 miles. I do not know how far that means; neither does any one else. Neither you nor I really understand what a billion means. I know that among the Americans a billion means—I find, when I come to write it, that I have forgotten, and it is not worth looking it up. But you are quite safe in thinking that an American billion and an English billion are quite different things, and they are both quite beyond our grasp. Astronomers long ago gave up using ordinary figures for starry distances. The stars are too remote for our puny measuring rods of miles. They have a different measure entirely, and that is the velocity of light.

Do you know how fast light travels? When I first heard that light travels at a rate that could be measured, I was astonished. I had never thought about it at all, but light seemed to me to be there all the time, just as the force of gravity is. If you let a cup fall, it seems to fall at once. I did not know that a force pulled it down at a certain speed. In fact, I did not know there was such a thing as gravitation till I was a man. Light was the same sort of thing to me—a something that is, that always had been, like the air or the sun.

Light travels at the rate of 186,000 miles a second. You ought to make a note of that, for it is terribly upsetting, and you ought to be quite sure about it. Light travels at the rate of 186,000 miles a second; and if the world is 25,000 miles round, then light would travel—how many times round the earth in a second? You work it out, and you will remember it. Do not take my word for anything. Find it out for yourself, and if you can show me that I am wrong I will thank you for setting me right.

Suppose a ray of light left your house tonight to travel to the nearest star, how long do you think it would take to get there, travelling at the rate of 186,000 miles a second? You could never guess, so I had better tell you. It would take a ray of light three and a half years to reach the nearest star, travelling at the rate of 186,000 miles a second. And that star is the nearest! If the nearest star is so far away, how far is the furthest? I do not know—nobody does. If you went out on the wings of light to that star Alpha Centauri, and made a dwelling there for yourself among the flaming gases of which it is composed, and then had a look for the next star, you would not be one mile closer to it, from all appearances, than when you left Australia. The distance of the next star to it might be sixty "light years" off, or a hundred "light years" away. There are stars known to science now that are distant thousands of years from us, measured by the velocity of light. Out we go on the wings of thought, to vast stars and suns without end, forever and forever—no stop, no stay, no pause through all the mighty depths of the shoreless sea; and yet there is no end, as there was no beginning! And this fathomless abyss of space is what you thought was the sky. But there is no sky. There is no end, no beginning, and no sky; yet you ask, "How did the world begin?"

Next Lesson:

THE SPEED OF THE EARTH.

TRIUMPHANT PLUTOCRACY.

By R. F. Pettigrew, formerly Senator for South Dakota.

Academy Press, 112 Fourth Ave., New York City. 430 pp.

Here is an inside story of fifty years of American business-and-politics, by a man who was a sufficient nuisance to the big business imperialists to cause Mare Hanna to be as anxious to defeat him at the polls as to elect McKinley President. It is interesting and instructive muck-raking.

There are pages where he grows eloquent in the interests of democracy over the tariff on nickel; pages where he reasons that panics are due to the failure of the House of Representatives to endorse bi-metalism; pages where he runs sentences in capitals to convince his readers that the railroads are their property having paid for them with high freight rates and fares; but as a whole it is accumulative evidence enough to convince the most politically innocent that Wall Street controls Washington—and that, too, in a very crude and open manner. In it there is marshalled the unsavory facts of the last half century of American public life, ranging in importance from the drunken sprees of Grover Cleveland to the peculiar harmony between Samuel Gompers and the Trusts.

Ex-Senator Pettigrew is of the opinion that the only solution for our present problems is "for the workers to take possession of their jobs, assume the direction of economic policy, and take the full product that they create." After writing a whole book to show who has the political power, and the force they have at their disposal to protect that power, he draws the rather astonishing conclusion that our emancipation "under our form of government can and should be accomplished not by force but by political action." Who said freedom is impossible for the American people because they think they already have it?

In some remarks Pettigrew shows decidedly clear vision. The attention of various political parties is respectfully directed to what he says of Bryanism: "It is the politics of an ignorant, unimaginable and a rather vain mind that is quick to trifles and impotent before major issues. Reform politics in the United States has never existed on any other basis, and therefore reform politics has always proved an easy mark for the machinations of big business."

The book will doubtless be heralded as "an amazing revelation" by the liberal press who are in the habit of standing agape at all manner of things that everyone else knew long before. For a worker; perhaps the most instructive feature of the book is the frequent occurrence of remarks that tend to the conclusion that the liberal anti-imperialist factor in American politics is but the expression of economic interests that would find it more profitable for the government to spend money developing the interior of U. S. than on exploiting outside peoples. They may rail at imperialism, but are not likely to assist us in overthrowing capitalism. F. W. T.

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