

The Origin of the World

By R. McMillan.

Chapter IV.

THE EARTH'S MOTION

Before we can really discuss the origin of the earth, we must get a clear idea of what the world is, where it is, and what it is doing. I told you that the earth revolves on its axis, to bring day and night; and the rate of revolution is, say, a little more than a thousand miles an hour. That is wonderful beyond all comprehension. Then, when you have wrestled with that problem, till your head is muddled, you have got to remember that the earth is flying round the sun, to bring Christmas and New Year's Day, at the rate of one thousand miles a minute! The fastest cannonball is a slow creeper compared with that, and yet before you can understand what the world is, and how it came to be, you must understand something of what it is doing.

Thus I have told you of two motions that the world has. When you have always been thinking that the world was firm on its foundations, and solidly fixed, the centre of all the heavenly movements, it is a bit surprising to find that it has two very rapid motions. But now I want to tell you about a third motion, which is even more surprising, more amazing, more incomprehensible, than the other two. You will see from this third motion that the question of the origin of the world is by no means a simple one. If you once come to understand what the world is, what the people on it are, and what is our true place in nature, it will not only make you wiser, but it will make you better and sweeter and more patient and lovable. The old Greeks, hundreds of years before Christ, affirmed that knowledge was virtue. And they were not far wrong. One of their poets named Euripides, who lived almost four hundred years before Christ, said:—

Happy the man whose lot is to know the secrets of the earth. He hastens not to work his fellows hurt by unjust deeds, but with rapt admiration contemplates immortal Nature's ageless harmony, and how and when her order came to be. Such spirits have no place for thought of shame.

You want to know "the secrets of the earth," and I am glad that an Australian girl, in this twentieth century, has that ambition and desire, and dares to ask about the world, "how and when her order came to be." I would like to explain it to you in one chapter, but that is impossible. Besides, what you learn easily you forget promptly. Everything in the world that is worth having has to be worked for, and the things you get easily or for nothing are rarely worth having.

What I want to make clear to you now is this: Our world circles round the sun at a distance of, say 93,000,000 miles. But ours is not the only world that belongs to the sun. We are not the only pebble on the beach. There are other worlds than ours, circling round our sun. Some are larger, some are smaller than ours. Some travel more swiftly, most travel more slowly. You can see some of them in the sky sometimes, and they look just like stars, except for this: none of them twinkle!

There are four brother worlds which are visible to the naked eye from this world. One is Venus, a bright planet which is nearer to the sun than we are. Sometimes it is an evening star, sometimes it is a morning star, and sometimes it is out of sight entirely. It is not a star really, for the stars are suns, burning, flaming, gaseous suns, just like ours; and it is the flaming gas of which they are composed that makes them twinkle. The planets ("planet" means "wanderer") are solid worlds like ours, and are quite black; and you would never see them except for the light of our sun being reflected from them, just as it is from the moon. These four planets are visible to us because the sun shines on them; and in the night-time, when our sun is hidden from us, we can see the planets in the darkness. They are the sun's children, just as the moon is our

child, our planet.

The moon is 240,000 miles from us, and it is a dead world, a slag, a cinder circling round this world. Oliver Wendell Holmes, the American poet, says it is drifting dead and still, "without its crew of fools." That is, there are no people on it. We would never see the moon with the naked eye if it were not for the sun shining on it. When the moon is "full," it rises in the east, just as the sun sets in the west; and we see the whole circumference of the moon, and we say, "The moon is full tonight." But it is not. It seems so only because it is opposite to the sun. When the moon is on the same side of the earth as the sun, we say there is no moon, but there is: only we are not able to see it. There are really no "quarter" moons or "new" moons or "full" moons at all. The moon is going round and round the earth all the time, at nearly the same distance; but the ancient people thought it disappeared. We cherish their traditions in our language. We have wrong ideas about nearly everything, and that is why we have war and crime and poverty and misery and woe untold on the earth.

Our sun has eight worlds circling round it; the nearest one is almost thirty-seven million miles distant from the sun, and the furthest about 3,000 million miles away. The story of the planets is a very interesting and wonderful one, but I must not stop to tell it now. One planet which you can see in the sky is about 1,300 times larger than our earth, though it looks just like a tiny moon in the mighty depths of the dark blue sky. But all the sun's family would make only a mouthful for our father the sun. There are hundreds of little worlds called planetoids drifting through space between Mars and Jupiter, and they are held in their places by the same law that keeps our world in its place—that is, the attraction of gravitation; and I think I shall have to tell you about that before I will dare to tell you how the world began.

What I want you to understand now is very simple, and it is this: Our sun is in the centre of a family of worlds, and the children are for ever circling round their daddy. Our world is travelling round the sun at the rate of 68,000 miles an hour. The outermost planet that we know of is Neptune, and it travels more slowly, at a distance of, say, three thousand million miles; and our sun and the planets (we are a planet!) are moving in a vast space on—nothing! They are all falling through space. They are upheld by a power which passeth all understanding. Our big solid earth, our dear old world, is a speck of matter flying through space round a central sun. It is too awful, too wonderful, too vast to contemplate, and it changes all our ideas about everything.

Now listen to this, and understand it if you possibly can. Our sun and all his family are passing through space at the rate of thirteen miles a second. Do you believe that? You may take my word for it. Our sun is passing through space at the rate of 13 miles a second, and is carrying all the family along at the same rate, so that our world is revolving on its axis at a thousand miles an hour; it is circling round the sun at the rate of a thousand miles a minute, and it is passing—along with the sun—at the rate of thirteen miles a second. Those are three motions only. But it has seven, and we will leave the other four alone. Three are more than we can understand.

And where are we going to? Nobody knows. They used to say that we were travelling towards the constellation of Hercules, but I do not think that anybody really knows. We have only learned our scientific astronomy so recently that you cannot expect us to know everything, and the more we learn the more we find out we do not know, for the subject is vast and wonderful. Yet you want to know how the world began! Ah me!

Next Lesson: "The Law of Gravitation."

SUBVERSIVE

THAT secrecy is a necessary concomitant to capitalism is becoming so evident as to be almost axiomatic.

From the secrecy surrounding the petty pow-wows of the political ward heelers, to that which enshrouds the international conferences, it is clear to the most casual observer that in order to put any thing "across" it is necessary that the rank and file must be kept in ignorance of what is being done. The infinite pains to which the capitalists must go in their efforts to conceal from whence they derive their wealth is shown in the report of the sub-committee investigating radical propaganda in connection with the Lusk anti-sedition bills of New York State.

The report consists of four large, thick volumes, two of which contain an elaborate history of the working class movements, from the formation of the European labor and Socialist movements up to and including the formation of the American Communist Parties, the data for which was largely obtained in the Red raids of 1919, and which is labelled Subversive Movements. The other two volumes designated "Constructive Movements," show the work of Americanization, which is being conducted for the purpose of off-setting the former movements.

That the knowledge by the working class of surplus value would be subversive of capitalism is the nearest to the truth of anything that the capitalists have ever said, and that they are fully alive to its possibility no one could doubt who has access to the report in question. All their old friends and stand-bys are called into action, the churches, press, schools, factories, organizations of all kinds and description for the perpetuation of their capitalistic ideals of freedom and democracy. But that the very weapon which they use will in turn be used against them, and have their countereffects on the minds of the workers whom they try to deceive, does not seem to occur to the capitalistic mind. The question: Why all this sudden solicitude for the workers' welfare? is being raised.

Reports are coming in that the Americanization movement that started off so auspiciously has already petered out. Classes cannot well be conducted in shops that are shut down. Forums started in churches are monopolized by radical speakers, schools are so over-crowded that teachers find it impossible to devote the necessary time to teaching the young ideas on how to hoot patriotically, an above all stands the example of Russia, like a great beacon light throwing its beams to the furthest corner of the earth, an encouragement to the workers of the world to keep up the class struggle to a victorious conclusion.

KATHERINE SMITH.

Things have happened in recent years which bring the greatest changes in the ideas and habits of the Old World. War, which sometimes brings riches for the peoples, finally brings ruin and death, too. There are plenty of examples in history. We shall see new ones which will touch us more closely. It is not impossible that the long conflagration which has desolated Europe, and the peace which followed the war and was only its prolongation, have struck the old civilization of Europe more cruel blows than our ignorance and frivolity believed. We begin to suspect the depth of the evil. England, the great merchant, while extending her plant, is suffering a decline in her commerce and an unemployment crisis, and the end is still unseen. Germany, forced toward bankruptcy, drags France to ruin with her. France is staggering under 35 billions of debt. Italy is suffering, Russia is dying of hunger, Austria is dead. Even the United States is surprised to see its affairs growing worse. Throughout the world the nations are torn out of their ambitious dreams by an unknown disease. The great and terrible lesson is not yet understood. But the time will come when it will make itself understood.—Anatole France.