

I'LL MAKE ME A WORLD

by Ronald L. Dart

And God stepped out on space
And He looked around and said:
I'm lonely—
I'll make me a world.

From "The Creation," James Weldon Johnson.

Once upon a time, there was no world. There was no universe as we know it. There was only space. There was a time when God arrived at a decision to create the world—when the world was born in the mind of God.

Before there could be a man, there had to be a place for man and that place had to be carefully designed. Man would be physical, so his environment had to be physical. He would need food, air, water, a survivable temperature range. He would need companionship, animal and human, and the opportunity to grow and develop. All this took thought and planning.

And so the planning began. A planet would be required— and power....

'First of all we will need a star. The star will have to be big enough to be far away and still provide light, warmth and power. Too close, and we might fry our man with radiation. Too far, and he can't grow food. The star needs to be big enough to have sufficient fuel to last over time. We want it to remain stable for as long as we need it.

We must give careful consideration to the quality of the radiation from this star. Part of the radiation will fall in the visible range and will be called light. Light must have certain properties to be useful. Unlike ultraviolet and X-rays, it must not be harmful. X-rays will go right through tissue and cause damage. Light will simply be reflected from the skin and will be harmless. Yet light must penetrate the atmosphere, while X-rays must be absorbed. A nice little problem in physics must be solved.

Since man will be able to see, we want him to like what he sees. For that matter, we want to like it ourselves. If we make different frequencies of light different colors, and vary the qualities of absorption, diffusion, refraction, and reflection, we can get rainbows, red sunsets, green leaves, yellow lemons, blue skies, and blue-green water. What we can do with flowers and birds is only limited by our imagination.

The planet we have in mind will have to be 93 million miles from the selected star—no more, no less. This will give it the optimum climate. Our man will have to grow food, and the food will have to be watered. At 93 million miles, the sun will evaporate and raise about 5,435 tons of water from one square mile of ocean surface every hour. The temperature differential, and the weight of water vapor should serve to get the water to high altitudes and keep it there long enough for the wind to carry it over land. If we cool it at the right time, it should serve as an effective sprinkler system.

The planet will have to be just the right size. If it is too large, gravity will make everything

heavier. It will hold more oxygen and more oxygen will mean more water. A much larger planet could have oceans that are 1500 miles deep. If we make it too small, it won't hold the lighter gasses at all. There is, it seems a rather narrow range of size for this planet we want.

We can also see that one side of it will be too hot and the other side too cold. We can handle that by simply turning it on its axis. We must, however, get the speed of rotation right. Our man can get used to days of varying lengths, but if we turn too slow, we burn everything up in the days and freeze it at night.

Even with the planet spinning, there is still a problem. The equator will be too hot, with perpetual summer, and the northern latitudes will be too cold to be useful. What if we tilt the earth a few degrees? This will give us seasons, and much more of the earth can be cultivated. The cycles of heat and cold will help keep the insects under control. A 23 degree tilt should be optimum. If we vary much at all, life won't survive....

By the way, the evaporation we have been talking about will make the oceans saline. What will that do to marine life? And how will our fish breathe? Simple. We make oxygen soluble in water. Plankton, tides, waves, rain, surface absorption will all oxygenate the water. We will equip our fish with gills that will take the oxygen directly from the water.

What are tides? Well, we have to move these huge oceans to keep them from getting stagnant. We will put a satellite around the earth at precisely the right distance, and its gravity will pull the oceans toward it. The tides will move with the moon. The moon will also give man a sense of the passage of time.

Fresh water poses several problems. By all our laws, fluids become more dense as they get colder. Cold water will be heavier than warm water. Lakes and rivers will freeze from the bottom up and will become solid ice. Fish cannot survive that. What if we make an exception to our general law? What if we design the water molecule so it is heaviest a few degrees above freezing—say, four degrees centigrade? Water would sink as it gets colder until it reaches four degrees. Then, as it gets close to freezing, it will start to rise. We will get two things from this. Ice will float and form a barrier between the air above and the water below. Deep water will never freeze. We will also 'turn over' our lakes twice a year moving oxygen to the deeper waters so the deep water fish can survive.

By the way, there is something else we can do with water. When it is in clouds and begins to condense, if we give water crystalline qualities, we can create little flakes of ice crystals—snow. With the right properties of random crystal development, we can make every snowflake different, no matter how close you look. And we can make them pretty. Snow can be used to store water during the cold seasons, and let it run down the mountains forming creeks and springs during the summer—a perpetual supply of cold clear water. Not bad at all. In fact, it is very good!

Now let's give a little thought to the reproductive cycle of pine trees...'

The Bible tells us that God said, 'Let there be light, and there was light.' I suppose we could assume that was all there was to it—that God only wanted 'light,' and didn't especially care what form it took or what its characteristics might be. But that idea is absurd on the face of it. Are we to believe that God just 'lucked into' gorgeous sunsets?

The entire creation account is presented to us as though God merely spoke the word and it was done. But the evidence of thought and planning leaps at us from every corner of creation. There is attention to every detail.

There is artistic beauty worked into what could just as easily have been drab and uninteresting. There is engineering of the highest order. There is even comedy. Creatures seem to have been deliberately designed in ways to confound those who would try to ignore the architect, the engineer, the designer, the creator.

There is no way for the human mind to comprehend the work that went into the planning and execution of this world. No detail was too small to escape attention. No engineering problem could be left unsolved.

There came a point in the planning process, for example, when God decided He would put flying birds in the air around this planet. This required some thought. Principles of aeronautical engineering were involved. Any student pilot knows that nothing flies unless the laws of aerodynamics are obeyed. Lift, thrust, and drag are the basics, and from there, we have to think about weight and balance, the effect of control surfaces, fuel and fuel storage, transition from high speed flight to slow to hover, power to weight ratios, navigation, landing gear, sensory systems, and control systems. If it is a bird instead of a plane, we can add biological systems for reproduction, neuromuscular control, and worm processing.

Everyone knows that God is a 'Creator,' but few seem to consider what that means—that God is an engineer, a scientist, an artist, an architect, a designer, and a builder. No one grasps how much planning and painstaking care was taken with all the little problems of physics, chemistry, electronics, hydraulics, optics, and biology that faced the creator of all this.

Think about the wings of birds. They had to be strong, but very light. Man invented aluminum and titanium to solve his problem. God solved it with hollow bones. Man has covered wings with fabric and metal. Skin was too heavy if used to provide all the lifting area required for the wings of a bird, so God used feathers. And to keep the feathers from flying apart, He invented microscopic hooks to hold them together. With no respect at all for God's patent, we copied it and called it Velcro.

Airlines pay artists to design distinctive paint schemes for their aircraft. It was the artist in the Creator that designed the decorations of birds. Some species of bird would need protective coloring, but not all. Birds can fly, they can roost in trees far from the reach of most predators, so the Artist decided to make them beautiful. It was done a thousand different ways, and given the capacity for random development into a thousand new ways.

Then there were the animals. There were millions of details to consider and no detail was too insignificant to warrant attention. Even the neurological systems of dogs and cats had to include the ability for dogs to shake off water and cats to always land on their feet. Simple stuff, you say? You should see it in slow motion. No serious designer can afford to take these things for granted.

How long did all this thinking and planning go on before the first piece of work was done? It may seem like a meaningless question, because the one about whom we ask it is not limited by time. But the question is not meaningless at all. The work may have been done 'fast' by our reckoning, but the work still had to be done. Every alternative had to be explored. Every potential problem had to be eliminated. Every detail had to be addressed. Nothing could be left to chance, for chance cannot be depended upon to create the best of all possible worlds.

At every turn, a decision was required. Every decision had to be made and made in sequence, because some decisions depended on other decisions.

How fast God went from one decision to another makes little difference. But if one decision had to follow another there was sequence. And if there was sequence, there was time—by any human reference, a lot of time.

But time did not matter. God was in no hurry. He worked against no deadline. And He thoroughly enjoyed That He was doing. God the Creator was doing what He did best. He was creating one engineering marvel after another, one work of art after another, and myriads of creatures of staggering beauty and complexity.

It was a joy. It was satisfying beyond belief. And unless you can understand this, you may never fully appreciate God. The words of Genesis seem to say that God took pride in His work, His planning, His craft....

When God had finished all of His work, He looked around with great satisfaction and pronounced it 'very good.' He then crowned the creation with an act of great symbolism. When He was all finished, when He had pronounced it 'very good,' He stopped work and rested.

Was He tired? Not in the traditional sense. But He had worked, not just for six days, but for all the time it took to plan it all before He ever started. He was not tired. He was not exhausted. He was not weary. He was not even finished.

But for God, as for man, there is a time to cease from labor and to savor what has been done. The 'rest' of God was a statement of how He felt about the incredible effort He had put into the creation of His world.