A Christmas Carol for 2009
Or, How God Concocted the Gift of Life on Planet Earth

Once upon a time (some two and a half billion years ago) the Lord Governor of the Milky Way Galaxy was challenged by his eight year old son Tiny Tim to solve a riddle.

Allow me to take a moment to clarify the background setting of this story: after the Big Bang the speeding celestial masses gradually coalesced due to gravity forces into galaxies. But as the distances between these galaxies became measurable in billions of light years God decided that each galaxy should have its own Lord Governor to handle the affairs of the local congregation. My story then has to do with the local Lord in charge of our Milky Way Galaxy.

These Lord Governors reside in luxurious mansions built inside the black holes at the center of each galaxy. Unlike mortal humans, they do not age and die. Thus the Lord's son Tiny Tim also never grows up. He is forever eight years old. Of course we know that – Charlie Brown and Calvin, they are boys forever.

One day the Lord gave his son a present; it was a bucket of cut diamonds. And he said onto him, These stones are hard and strong, they cannot be damaged or scratched; but they cannot resist fire, and you must not bring them near any fire.

But Tiny Tim had the natural curiosity of a little boy, and he placed the diamonds in a ceramic dish, and he built a fire underneath it. And behold! The diamonds caught fire and burned brightly for the longest time. And there remained only white ashes from the beautiful stones.

Now Tiny Tim knew he had done wrong. He had not heeded his father's words. But he wished to have these stones back to play with; they were so beautiful. So he went to his father and said, I had done wrong, you told me that the stones could not resist fire, but I placed them in a ceramic dish and built a fire underneath it. And they caught fire and burned. I repent my wrong doing. But I must have these diamonds back to play with.

His wise father said, The gemstones burned because they're graphite or carbon with interesting crystalline structures; as you disobeyed my warning, I shall not get replacements for them. The boy started to weep, saying, Father, I know you have supernatural powers, and I already repented, can't you bring back the stones from the ashes? The father replied, The residue in the dish is nothing; the real product from the combustion are two: a heat which has already dissipated, and a gas CO_2 (carbon dioxide) which also has floated away.

The boy thought for a while, and asked, If you can capture the gas and add heat to it, wouldn't that bring back the diamonds?

The father began to laugh, and he said, The combustion process is irreversible; that means you are on a one-way street, you can get heat and a greenhouse gas going in the correct direction, but going in the opposite direction is impossible. Also, were the process reversible, the carbon you get would not be diamond, but some form of black dust.

Hallelujah Hallelujah Hallelujah Hallelujah

After sending Tiny Tim to his room for the night, the Lord Governor lit a pipe and settled in his easy chair. He was in deep thought. The boy had innocently proposed a riddle – is the chemical union of two elements with energy release absolutely and without qualification an irreversible process? As he said, if he has the CO_2 gas, and also another source of energy supply equal to or greater than the energy released, is there an alternative path of progression which has the effect of reversing the process?

The Lord decided rather quickly that the diamonds could never be restored to their previous state. He would get another bucket from the diamond dealer soon. O, my poor boy!

But what about the other element "oxygen" in the CO_2 gas? Is there any advantage to be able to separate the oxygen molecules from the compound? What if I mix water with CO_2 and bombard it with light energy? There! The Lord shouted with some excitement. I see a pathway of releasing the oxygen from CO_2, and let the carbon combine with water in many ways, and I will name them sugars (carbohydrates).

So Tiny Tim's idea of simply heating the CO_2 did not work, but his father used this thought and found that oxygen can be recaptured from the gas and used again and again to burn and produce heat. This inexhaustible use of oxygen is possible because the light energy from a star can be used to recycle used oxygen and get fresh oxygen. Used water is also recycled by sunlight to get fresh water.

Hallelujah Hallelujah Hallelujah Hallelujah

My readers may have noticed that I had written the text in the style of King James Version of the Bible. Now we're back to Christmas 2009.

The miracle of photosynthesis which God devised uses living cells which can break up CO_2 into oxygen and carbohydrates with the help of sun light as an energy source. The miracle of creation of the living cells of course has to be concurrent with photosynthesis. In the inanimate universe there is abundant water and carbon dioxide, but very little free oxygen.

A site selection within the Milky Way for God's experiment requires the following:

(a) a planet not too distant from a star for light energy and not too close to be too hot for life

(b) it must have large quantities of water and dry land

(c) it must have a rapid self-rotation so as to distribute rain fall; and also, to double the surface area of the planet

receiving sun light every day.

(d) the planet must have a mass large enough to retain an atmosphere, but not too massive to interfere with locomotion of animals

Evolution of life forms from simple to complex is obviously a predetermined design feature of God. Like all engineering projects, a complex machinery is assembled from simpler components which had been developed earlier. The earliest life forms contain cells which had the task of modifying planet Earth's atmosphere to be 20% oxygen. In stages, life forms evolve toward a final apex species, a human being.

It is my tenet that mankind has inherited the mind of God. There is no likeness in physiological terms.

++++++ The End +++++

Happy Holidays