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Co-editors: Andy D Potts, Mike L Anderson

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Henry van Dyke, D.D. (Princeton, Harvard, Yale) LL.D. (Union) was Pastor of the Brick Church in New York. The book from which these excerpts were taken was written in 1896.

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stories such as 'Does the Big Bang make God redundant?'..."

Revd Dr Ernest Lucas, a research scientist and author, is Director of Christian Impact.

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TWO BLOSSOMS FELL TOGETHER 4/5/1996

Frank Opie

Two blossoms fell quietly, almost unnoticed, from a bough of the tree of life in autumn...

One was old and spent, worn by the year and tired beyond telling. The other was fresh, plucked by and untimely gust before its fragrance could spread through the garden.

The older blossom drifted down silently, an expired final breath, to its earthly rest among the roots of the tree planted by the gardener. I looked, but could not feel too sad, for it had cheered my heart on occasions when I had come looking for cheer and strength from the tree. Now in the fulness of time, its work done, it was gone. Yet not gone,... for nothing is truly gone that is remembered...it lived for me and had just moved on to live in eternity future. It bloomed afresh on the tree elsewhere, seen by the gardener, but not by me. I remembered the flower with gratitude for a few shared moments of love. In those times of precious togetherness I had felt a strong link with other flowers long shaken from the tree, but none forgotten. I would remember, my heart was wrapped around the tree as closely as the ivy clung to its rising trunk. My memories warmed by love as the tally of time grows long and the leaves fall around me.

I scarcely knew the other blossom ...it was a recent discovery for me...plucked away before the ripening days could mellow into a fruitful friendship. The signs of winter had come early, tearing at its petals, twisting its twig with fearful strength and wasting power. The leaves around seemed to sense the passion of the wind for change and sought to protect the flower but a hidden worm had devoured its strength prematurely. Young without, but old within. It did not drift away easily at the end. It seemed rather to rally and sink by cycles as the breezes blew before the finally shaking free and driving along the ground scattering the petals away.

And in the thinking place where I stood beneath the tree, I wondered again at the Gardeners wisdom and love. The gracious gift of life undeserved, so permanent and fragile, so enduring, so frail. I saw

the other flowers that remained intact among the buds of next spring, shiver in the breeze and forget the lightening of the bough by two once equally immortal blossoms. How easily we forget that blossoms are not meant to live forever as flowers. We spend our days preserving our floral beauty and neglect the fruit to come. Yet I could not turn away so easily.

I had shared the breath of life that pervades the freshness of the garden by the tree and watched the dew of heaven condense like pearls on the petals, transformed to diamonds by the rising sun, reminiscent of another dawning in another garden...and rejoiced. I had reached out to touch the falling petals of the other blossom in faith and hope to find the worm was it its heart before the wind began to strip its barrenness away. I felt the keener loss for this flower and wondered if I would find it on the tree that grows before the Gardeners home in eternal summer when I reach home.

Only the Gardener knows.

Wisdom from the Past

EXCERPTS FROM THE GOSPEL FOR AN AGE OF DOUBT

Henry van Dyke

"Christianity always has been and probably always will be, subject to obscuration and misunderstanding. It has been presented as a complex system of doctrine. In reality, it is a spiritual life. The arguments used to defend it have often become hindrances to its acceptance. The formulas framed to express it have often Him who is its true and only centre. Christ is Christianity" (pp vii-viii).

"The observant wanderer in the field of nature today no longer stumbles upon Dr. Paley's old-fashioned, open-faced, turnip shaped watch lying on the ground. He finds, instead, an intricate and self-adjusting chronometer, capable not only of marking time with accuracy, but also of evolving by its own operation another more perfect and delicate instrument, with qualities and powers which adapt themselves to their surroundings and so advance forever (p 10).

"Historically He appears alone, as no great man has ever appeared before or since. Heroes, teachers, and leaders of men have always been seen as central stars in larger constellations, surrounded by lesser but kindred lights. Plato shines in conjunction with Socrates and Aristotle; Caesar with Pompey and Crassus; Luther with Melancthon and Calvin; Shakespeare with Beaumont and Fletcher and Ben Jonson; Napoleon surrounded with his brilliant staff of marshals and diplomats; Wordsworth among the mild

glories of the Lake poets. In every case, if you search the neighbourhood of a great name, you will find not a blank sky, but an encircling galaxy. But Jesus Christ stands in an immense solitude. Among the prophets who predicted Him, among the apostles who testified of Him, there is none worthy to be conjoined with Him. It is as if the heavens were swept bare of stars; and suddenly, unexpected, unaccompanied, the light of lights appears alone, in extreme isolation...

... The highest type of human piety, the excellence of a beautiful soul, has never been reached among men without repentance and self-abasement. But Jesus never repented, never abased Himself in shame and sorrow before God, never asked for pardon and mercy. Alone, among His followers who kneel at His command to confess their unworthiness and implore forgiveness, He stands upright and lifts a cloudless face to heaven in the inexplicable glory of piety without penitence." (pp 73-74).

Henry van Dyke, D.D. (Princeton, Harvard, Yale) LL.D. (Union) was Pastor of the Brick Church in New York. These excerpts are taken from The Gospel for an Age of Doubt. (1896) Hodder and Stoughton, London.

SOME ENTRIES FOR THE 1999 Darwin Awards... (From the Internet)

The awards are given annually (and usually posthumously) to those individuals who have most spectacularly attempted to remove themselves from the human gene pool.

DON'T ASK GOD TO PROVE HIMSELF, HE JUST MIGHT
A lawyer and two buddies were fishing on Caddo Lake in Texas when a lightning storm hit the lake. Most of the other boats immediately headed for the shore, but not our friend, the lawyer. Alone on the rear of his aluminum bass boat with his buddies, this individual stood up, spread his arms wide (crucifixion style) and shouted: "HERE I AM LORD, LET ME HAVE IT!"

Needless to say, God delivered. The other two passengers on the boat survived the lightning strike with minor burns.

A MAN, HIS GLUE AND THE BUTTOCKS OF A RHINO

A Vermont native, Ronald Demuth, found himself in a difficult position yesterday. While touring the Eagle's Rock African Safari (Zoo) with a group of thespians from St. Petersburg, Russia, Mr. Demuth went overboard to show them one of America's many marvels. He demonstrated the effectiveness of "Crazy Glue"...the hard way. Apparently, Mr. Demuth wanted to demonstrate just how good the adhesive was, so he put

about 3 ounces of the adhesive in the palms of his hands, and jokingly placed them on the buttocks of a passing rhino.

The rhino, a resident of the zoo for the past thirteen years, was not initially startled as it has been part of the petting exhibit since its arrival as a baby. However, once it became aware of its being involuntarily stuck to Mr. Demuth, it began to panic and ran around the petting area wildly making Mr. Demuth an unintended passenger.

"Sally [the rhino] hasn't been feeling well lately. She had been very constipated. We had just given her a laxative and some depressants to relax her bowels, when Mr. Demuth played his juvenile prank," said James Douglass, caretaker. During Sally's tirade two fences were destroyed, a shed wall was gored, and a number of small animals escaped. Also, during the stampede, three pygmy goats and one duck were stomped to death. As for Demuth, it took a team of medics and zoo caretakers to remove his hands from her buttocks. First, the animal had to be captured and calmed down. However, during this process the laxatives began to take hold and Mr. Demuth was repeatedly showered with over 30 gallons of rhino diarrhea. "It was tricky. We had to calm her down, while at the same time shield our faces from being pelted with rhino dung.

I guess you could say that Mr. Demuth was into it up to his neck. Once she was under control, we had three people with shovels working to keep an air passage open for Mr. Demuth. We were able to tranquilize her and apply a solvent to remove his hands from her rear," said Douglass. "I don't think he'll be playing with Crazy Glue for a while."

Meanwhile, the Russians, while obviously amused, also were impressed with the power of the adhesive. "I'm going to buy some for my children, but, of course, they can't take it to the zoo," commented Vladimir Zolnikov, leader of the troupe.

NEWS BRIEFS (From the Internet)

- * More support for the five-kingdom theory
- * Aerobic bacteria evolved millions of years earlier than previously thought.
- * New evidence clinches view that exploding giant stars produce black holes
- * Scientists engineer clever mice
- * Scientists engineer friendly mice
- * Geriatric mice reveal key to their longevity
- * UFO in deep space
- * Pain sensitivity gene discovered.
- * Russians create new element
- * Solar wind puzzle solved
- * Hippos and whales closely related

* More support for the five-kingdom theory

The living world is popularly divided into plants and animals. The more accurate picture is a division into five distinct groups. New evidence corroborates the view that green plants, red plants, brown plants, fungi, and animals have evolved independently from single-cells and should therefore be placed in separate kingdoms. The research is part of the "Deep Green" project involving 200 scientists from 12 countries.

* Aerobic bacteria evolved millions of years earlier than previously thought.

New evidence from the fossil bacteria indicates that photosynthesis arose 700 million years earlier than previously thought. The fossils were dated at 2 and a half billion years old. The findings mean that the beginning of the atmosphere's transition from reducing to oxidizing occurred much earlier.

* New evidence clinches view that exploding giant stars produce black holes

Astrophysicists have found gases around a suspected black hole that could only have arisen from the blast of a supernova. Since no light can escape from black holes, scientists cannot actually see them. Their existence is inferred from their effects on the orbits of neighbouring stars.

* Scientists engineer clever mice

Through genetic engineering, scientists have made mice better able to learn, remember and perform tasks such as pattern recognition. Inserting an extra gene into the mouse produced the strain. Their abilities continued into adulthood and were passed on to their offspring.

* Scientists engineer friendly mice

Researchers may have found a way to make mice much more sociable. The behaviour change occurred after they transplanted a single gene. The finding raises hope for new treatments for psychological disorders.

* Geriatric mice reveal key to their longevity

The good news is that you can live longer. The bad news is that it takes a low-calorie diet - at least for mice. The diet works by preserving the functioning of genes that retard aging. The mice lived up to 50% longer.

* UFO in deep space

An object detected three years ago has stumped astronomers. Usually spectral analysis enables scientists to determine an object's composition and distance within a week of discovery. However, the

UFO's pattern does not match any known patterns. It is not known whether it is in our galaxy or at the very edge of the universe.

* Earth at risk from 1 000 asteroids.

True, up to this number are large and close enough to pose a potential planet-wide risk to earth. However, there is no need to panic. A collision is extremely improbable. A little more probable is extensive regional damage from smaller asteroids.

* Pain sensitivity gene discovered.

People vary in the ability to handle pain. One factor, a pain sensitivity gene, has been discovered. The finding has raised hopes of new treatments for long-term pain.

* Russians create new element

A new super-heavy element created by Russian physicists lasted surprisingly long - 30 seconds - before disintegrating. The element, yet to be named, has an atomic number of 114. This brings the number of elements, natural and human-made, to 81.

* Solar wind puzzle solved

For 37 years astronomers have been unable to explain the high Speed of the solar wind that travels at 3 million kilometers per hour. They had expected a speed of half that. New measurements from satellites have solved the mystery. It turns out that magnetic waves that spiral from the science augment the speed of the solar wind.

? Hippos and whales closely related

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Their temperaments differ greatly, but recent genetic studies reveal that whales and hippo are closely related. They share gene sequences with no other animals. Other evidence revealed that the camel, pig, giraffe, sheep and cow were distantly related.

Fallacies and Fabrications in the name of God and Science

HOW NOT TO TELL TIME: THE ARGUMENT OF THE BEARD

Mike L Anderson

Customer: "I see you are selling this watch rather cheaply, but how accurate is it."

Shopkeeper: "Not perfectly"

Customer: "Okay, for that price, I'll take it."

Customer (a week later): "Hey, this watch doesn't work."

Shopkeeper: "Well, I told you it wasn't perfectly accurate, but it is accurate twice a day."

The humour and the shopkeepers ploy hinges on some ambiguity in the phrase 'not perfectly.' There are degrees of imperfection. When does 'not perfectly' become 'very badly?' It's hard to say when you dealing with a continuum. But there are still real differences between points on a continuum. The shopkeeper tried to collapse the difference between 'not working perfectly' and 'not working at all'. In so doing he committed the so-called argument of the beard. (It's hard to say how many hairs are needed to make a beard, but there is a clear difference between having a beard and being clean-shaven).

I saw a nice example of this, also to do with time, at a church seminar some time ago. The speaker was a trained geologist; the subject radioactive dating. He proceeded to dig up instances of inaccurate dating to cast doubt on the whole radioactive dating procedure. He had a point. Geologists cannot date rocks with absolute precision. Accurate dating depends on three conditions.

- 1) One knows the initial conditions.
- 2) The system is isolated.
- 3) There is a constant rate of decay.

These conditions are not always met. Sometimes mistakes are made. Our geologist made much of the discrepancies, the uncertainties and the problems to the point of throwing the radioactive timepiece out altogether and exchanging it for one of his own. He used the population growth of humans to claim that we could not have been around for very long. All that is needed to produce the current global population, at even conservatively estimated growth rates, is 6000 years.

Our geologist has committed the fallacy of the beard; he has collapsed the difference between good and bad timepieces and gone so far as to exchange a Rolex watch for the plastic variety that one finds in a lucky packet.

In fact, radioactive dating meets the conditions for accurate time keeping rather well. Radioactive decay, because it occurs at the quantum level, is known to be not significantly affected by temperature, pressure or chemical state (1). This is one reason why mainstream geologists are confident that their estimate of 4.5 billion years for the earth's age is accurate to within 10 percent (2). On the other hand there are many factors which influence population size - drought, pestilence, natural disasters, war etc. It is an absurdly poor choice of timepiece as Sir Arthur Keith pointed out as long ago as 1935 (3). If one

applied the method to bacteria, one would have to conclude that they have been on the earth for no longer than a week. This is all it would take for the earth to be knee-deep in bacteria at conservative growth rates.

It is curious to see some Christians using the argument of the beard when it is so often used against moral absolutes. Cicero defended incest by arguing that "touching my mother with my little toe is not wrong and everything else is a matter of degree." Our Christian geologist may not want Cicero as a bedfellow, but while the particulars differ, the fallacy is the same.

Notes

(1) Brush, S. G. (1983) Ghosts from the Nineteenth Century: Creationist Arguments for a Young Earth. In "Scientists Confront Creationism." L.R. Godfrey (Ed.). W. W. Norton & Company, N.Y. p 66.

(2) Ibid p 67

(3) Keith, A. (1935) Darwinism and its Critics. Watts & Company, London p 14-15.

RIPPLES AT THE EDGE OF THE UNIVERSE

By Ernest Lucas

It is rare for a scientific discovery to make front-page headline news. On April 24th [1992] the discovery by the Cosmic Background Explorer (COBE) Satellite of ripples of matter at the edge of the universe made it. Cosmologists, scientists who study the structure and possible origin of the universe, made such comments as: 'This is the most important scientific discovery of the century' and 'We have found the Holy Grail of cosmology'.

People tend to link scientific ideas about the origin of the universe with questions which have traditionally been the province of religion. So, it was not surprising that some papers carried follow-up stories such as 'Does the Big Bang make God redundant?' Before answering that, we need to know a bit more about the Big Bang Theory.

When I first became interested in ideas about the nature and origin of the universe in the late 1950's there were two competing theories. Since the 1920's everyone had been agreed that the universe is expanding. The great star systems, the galaxies, are all rushing away from one another. The Big Bang Theory (BBT) explained this on the basis of an initial great explosion of energy. As things cooled down matter was able to form, first as sub-atomic particles, then as atoms, and then these formed gas clouds. Out of the

gas clouds, were formed stars and planets, so producing the galaxies. By extrapolating backwards from the present rate of expansion the date of the big bang can be fixed at about 15 billion years before the present.

Steady State Theory

The competing theory was called the Steady State Theory (SST). According to this, as space-time is stretched by the expansion of the universe, new matter, in the form of hydrogen atoms, comes into being spontaneously. This happens at a rate such that the average density of matter in the universe always stays the same. The attraction of this theory for some people, including one of its originators, Sir Fred Hoyle, was that it seemed to do away with any idea of an original act of creation. This made some Christians suspicious of it. In fact in 1951 Pope Pius XII expressed the view that the BBT was more in accord with Christian theology than the SST. The reasons for this seem to have been the fact that the big bang can be dated, so giving the universe an obvious beginning, and also the fact that scientists admitted that they could not explain how the big bang happened, so making it possible to invoke a special act of God the Creator.

Unlike his predecessor in Galileo's time, Pope Pius XII backed the scientific winner. By the end of the sixties it was clear that all the available scientific evidence favoured the BBT. First there came evidence that the universe is not uniform in space and time. It has a discernible history, contrary to the predictions of the SST but in agreement with the BBT. Then came the discovery that the universe is bathed in a uniform background of radiation which is just under 3 degrees above absolute zero (about -270 degrees C). This was the predicted 'after-glow' of the big bang. As time went on, the extreme uniformity of this background radiation got the cosmologists worried. The galaxies would have never been formed unless some ripples of non-uniformity occurred at quite an early stage in the life of the universe. It is these ripples which COBE has, apparently, been able to see.

Bubbles

So the SST fell by the wayside in the 1960's. Unfortunately for those who regarded the BBT as supporting Christianity, as the seventies passed into the eighties some astrophysicists began suggesting that the big bang might not be scientifically inexplicable after all. Eventually they put forward a theory based on a combination of quantum physics and the understanding of gravitation derived from the General Theory of Relativity. Put simply, they argued that it is possible for a tiny 'bubble' of space-time to appear in what is called a quantum vacuum and to blow up very rapidly to produce the big bang. So, they

claimed, the universe did arise out of nothing - a quantum vacuum - but it did not need a Creator to do so.

Although the IBBT has gained ground among cosmologists, it is still rather controversial. Apparently the observations made by COBE are in accord with the requirements of the IBBT, though they do not specifically support it. But what if its scientific problems should be overcome? Will this justify the claim that the creator is redundant? My answer is: No, not if he is the creator God of the Bible, and of Christian theology based on it. I say this for the following reasons. Firstly, science has its limits. It works with carefully defined, and strictly limited, methods and concepts. These restrict the kind of questions scientists can ask and answer while using the scientific approach. Scientists are concerned with the physical world of matter and energy. They limit themselves to what can be counted, weighed and measured. They try to express their findings in terms of mathematics. Any scientific answer to the question 'How did the universe begin?' has to be given in terms of matter and energy. Ultimately science can never take us back beyond some primeval system of matter and energy - whether it is a quantum vacuum of something else. Science can never tell us whether that system has always existed, or whether God created it out of nothing.

Out of nothing

The quantum vacuum may explain why the universe exists in the form we know, but we can still ask, 'Why was there a quantum vacuum which could give rise to an inflationary big bang?' By the way, it is misleading to speak of a quantum vacuum as 'nothing'. It is not nothing in the normal sense of the word: the sense it has in the theological statement that God created the universe out of nothing. Far from being absolute absence of anything, a quantum vacuum is an energy field that has an average value of zero, but which, because of the probabilistic nature of quantum events, seethes with sub-atomic particles and bubbles of space-time briefly coming into being and then disappearing again - unless a bubble suddenly inflates into a big bang.

First Cause

Secondly, the claim that the IBBT makes God redundant is based on a misunderstanding of what Christian theologians mean when they speak of God the Creator as the 'First Cause' of all things. They do not mean that God can be discovered by tracing back some sequence of physical events until we reach the first of them, which will in some way clearly have to be caused by God. To argue like that is to put God on the level of all the physical causes in the universe. What they

have meant is that the whole network of physical events we call 'the universe' exists only because God created it.

The God of the Bible is all-powerful and all-wise. He is quite free and able to create any kind of universe he wishes in any way he chooses. He could have created a Steady State universe if he wanted to. It would not have had any beginning discernible to the creatures living in it. But then there is nothing in the Bible of Christian theology to suggest that we should be able to discern its beginning. Belief in the createdness of the universe does not depend on whether or not we date its beginning, or even on whether or not we can find any scientific evidence that it had a beginning. Belief in its createdness is not dependent on scientific evidence, but primarily on divine revelation.

Thirdly, the Bible teaches that God is not only the creator of the universe but also its Sustainer (Col. 1:16f; Heb. 1:3). The universe continues to exist and function only because God constantly holds it in being. The Bible expresses this in very concrete ways: for example in Ps. 104 the psalmist expresses the teaching found throughout the Bible that God is constantly involved with, and active in, his creation. How? Well, I think that the implication is that what we call 'laws of nature' are not evidence of nature going on 'on its own' in the absence of God, but are evidence of the on-going activity of God. Far from shutting God out of his creation, the laws of nature are an expression of his faithfulness within the physical world. If the laws of nature are an aspect of God's activity, when the Psalm 8 says that the moon and the stars are the works of God's 'fingers', we can see the laws of nature as his fingers at work making the galaxies out of a big bang.

Revd Dr Ernest Lucas, a research scientist and author, is Director of Christian Impact.