

FOUR POINT FIVE

BILLION YEARS

THEN

2,000 A.D.

FOREWARD.

The document "FOUR POINT FIVE BILLION YEARS THEN 2000 A.D" is the third in a sequence of documents I have written to my grandchildren Joanne and Nicholas Houghton-Best. At the start of each decade 1980 and 1990 I recorded events which I hope will be of interest and perhaps of value to them. These documents are included as appendices 1, 2 and 3

The documents 1980 and 1990 are part of our family history records, which I compiled over a period of fifty years. The family history records may provide a basis for future generations to extend well beyond the year 2000.

The document for the Millennium has required more time, thought and preparation than the statements made at the start of a decade as it had to go far beyond the limited boundaries of recent history. My grandchildren and any future generations are reminded they will need time and patience, to travel with me, and complete with understanding, the journey which I have set for them.

Added Note:

Appendix 3

Was added in 2010. It includes messages to my Great Grandson James Malone

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FOUR POINT FIVE BILLION YEARS THEN 2,000 A.D.

To Joanne and Nicholas Houghton-Best From Stanley Houghton

This document is presented to you on the 1st January, in the year 2,000. It is to commemorate the start of a new stage of history and will contain hope for the future and reminders of our responsibilities to protect planet Earth for future generations.

In this year of 2000, many writers all over the world will wish to record their opinions on a very wide range of subjects; some will seek to contribute their influences to guide (the human race) Homo sapiens sapiens into the future.

It may be before we embark on the next 1,000 years we need to look back in time in an attempt to get our directions right for the future.

How far back in time do we need to travel?

In my work of establishing our family history records, we were able to consider the lives of many generations of our ancestors, we were able to have some understanding of our “roots”, but to suggest that the records contributed to understanding our origins would be incorrect.

FIRST STAGE OF OUR JOURNEY: HOW FAR DO WE REALLY HAVE TO TRAVEL?

To understand more of our origins. I want to take you back 4.5 billion years, then travel through time to the year 2,000 and beyond into the projected future.

That is: 4,500,000,000 years plus 2,000 years to travel.

You will need time and patience to make this journey with me. I will quote accepted scientific opinions which attempt to explain how planet Earth was formed, how all life forms sprang from a common origin, follow some of the paths of evolution which over billions of years linked single cell life and many subsequent species through to recent times and homo sapiens sapiens. (Modern man).

Many scientists do not accept that a religious influence controls the path of evolution. **Charles Robert Darwin (1809-1882)**, a British scientist, laid the foundation of modern evolutionary theory with his concept of the development of all forms of life through the slow working process of **natural selection by the survival of the fittest**. Darwin's theory was first announced in 1858. His complete theory was published in 1859, in *The Origin of Species*, the "book that shook the world". He also provided additional support that the earth itself is not static but evolving.

Some scientists consider there is a purpose to the amazing diversity of life and that the wonders of the universe and planet Earth require a controlling power to achieve that purpose. The writer prefers a combination of these two opinions: evolution by natural selection, but linked to the free operation of natural selection there is need for a controlling power to give purpose and meaning to everything that exists: all life, time, space and the entire Universe. It does not matter what name we give to the controlling power. Almighty Power or Force may be more appropriate than God.

The purpose of this part of the document is not to influence acceptance or rejection of the conflicting opinions. It seeks only to consider some of the fundamental issues of life and evolution.

As we start our journey through time we need to consider what comparisons can be made to understand how planet Earth gave life to all living things. First we will consider writings from the Bible, then scientific opinion. The Bible, for the purpose of this study, to be used simply as a record of what may have been early-inspired opinions.

We know that a literal translation of the Bible is to be avoided.

Quote Rev. Bruce Vawter, Microsoft, Encarta (R) 97

"Most present-day biblical scholars, accept the story of Adam and Eve for what it appears to be: a Hebrew story of human origins having much in common with myths of other ancient people"

The Earth's crust was not formed in six days. Changes to the formation of Earth have taken place over billions of years and continue now and into the future.

The Bible has had a great influence on people's lives throughout history,

and is accepted throughout the World more than any other religious record. Genesis needs to be updated for the 21st Century and every subject, including science, has to be updated as knowledge unfolds.

We are now concerned with the creation of Planet Earth and how she became the mother of all living things.

THE SECOND STAGE OF OUR JOURNEY THE CREATION OF LIFE.

Scientists claim that life evolved from stardust.
How is that possible?

Carbon is the basic element of all life. The carbon in our bodies was originally obtained from burning stars, explosions destroying the stars formed huge dust clouds. About 4.5 billion years ago these clouds coagulated (solidified) to form our solar system including the rocks of the Earth's crust, these events took many millions of years. The Earth's crust in the subsequent period was rocked by huge meteorites, flooding and volcanoes. Continents were relocated around the Earth and the boundaries of oceans were established and part of planet Earth was ripped out and formed the moon. Its gravitational influence together with that of the sun gave stability to the Earth. Without it Earth would have rotated much faster and have continuous hurricane winds.

The surface conditions of Planet Earth are very different to those of the other eight planets in the Solar System. No other planet has liquid water or an oxygen-rich atmosphere and no other planet is known to support life.

It is uncertain if any form of life could have survived on Earth before four billion years ago, but in the following years the first single cells were multiplying.

Life was here to stay. Thereafter bacteria dominated the world for hundreds of millions of years. More complex life; first seaweed, then other species, including animals, evolved much later. All life shares one common origin, and much that is basic to bacteria is also basic to us.

Even though carbon forms the main ingredient to life, because of its ability to form long chain-like molecules, it is by no means the only element to life. Most notable is the element phosphorus.

These elements then...combined in the dust of the Earth and provided the origin of life.

Some scientists group the chemical elements together and for simplicity call them stardust.

The origin of life resulted from chemical reaction in the dust of Mother Earth, which provided the ingredients for evolution and eventually humans.

The statement in Genesis needs to make clear that mankind evolved billions of years after simple forms of life had formed from Earth's dust. At a later stage of our journey we shall consider how the process of evolution changed simple forms of life to an enormous number of species including fish, plants, reptiles, dinosaurs, mammals, primates and humans.

THE THIRD STAGE OF OUR JOURNEY EARTH'S FOSSIL LIBRARY

Geologists divide the immense period of time into five separate blocks. Most of Earth's history is included in the first two blocks, which together are known as the Pre-Cambrian period, this covers a time span of about 3,900 million years.

The succeeding 600 million years are divided into three blocks, which are further subdivided into fifteen different periods of time.

Our concern is now focussed on the period starting 600 million years ago, at that time fossils of animals for the first time became abundant.

What are fossils and what do they tell us?

Plant and animal remains become fossils when they are buried in sediment, perhaps in sand or mud, as more sediment settles on the sand or mud, the water in the sand or mud is squeezed out and a type of rock called shale is formed, inside the form of the plant or animal remains.

The fossils are often beautifully preserved and can show a considerable amount of interesting details. Not all fossils are formed in sand or mud, sticky substances may trap plant or animal details: resin transformed to amber, tar and other sticky substances.

We have a vast library of evolution in the ground and with taps of geological hammers we can open rocks to reveal a record of the path taken to develop many living things. The dead provide a flood of information.

Ice has also contributed to our records. A frozen man, given the name of Otzi, was located in the ice of the Italian Alps. He had been buried for only 5,000 years; other animal and plant findings have been made in locations, which have remained continuously frozen.

Bones of dinosaurs and shells of some fish are typical fossils; they survive because they are sufficiently robust to withstand decay.

The fossil library, in and from mother Earth's graveyard, is very vast and informative, it enables us to link together the sequences of the diverse paths which evolution has taken since 600 million years ago.

The business in hand is now to establish what messages the fossils provide for us.....and that is the task of the next stage of our journey.

THE FOURTH STAGE OF OUR JOURNEY DIG FOR THE ANSWERS

Although fossils became abundant about 600 million years ago, they were mainly of the soft-bodied species. Then about 550 million years ago there was a very important evolutionary change, at a time named the Cambrian Explosion. For the first time in the history of life skeletons became common, providing a very reliable fossil record. At that time most of the skeletons were of soft-bodied animals covered by an exterior skeleton. Anthropoids, similar to crabs and lobsters, an extinct animal in this group has been identified by the name trilobite; very great numbers were present in the seas between 400 million and 550 million years ago. As the trilobites declined another group took over, identified by the name ammonites, a soft-bodied creature with a spiral shell. By the Devonian period, 350 million years ago, fish were so numerous that this time is often referred to as the Age of Fish.

Animals were also making progress; 450 million years ago creatures scuttled across the mud, the first invasion of the land. The first plants appeared about 420 million years ago.

Vertebrates, the group with spinal columns to which we belong, struggled on to the land about 370 million years ago; the vertebrates with four legs evolved from fish.

The invasion of land continued; by 300 million years ago, the reptiles were taking their first steps to dominance, to later establish the world of the dinosaur in their various forms. The invasion of the air was next as part of the dinosaur family took to the air: the extinct Pterodactyls, birds that were feathered dinosaurs, and later bats, which are flying mammals.

Dinosaurs inhabited the land for more than 100 million years, but about 65 million years ago they became extinct. This may have resulted from a combination of influences, including climatic changes, disease, lack of sufficient food. The cause is also considered to have resulted from the effect of an enormous asteroid, with a diameter of 180 kilometres, smashing into the Earth's surface on the edge of the Caribbean, by the Mexican town of Chicxulub. Red-hot debris was scattered over thousands of kilometres; kilometres high tidal waves encircled the Earth and flooded coastal plains. Rock-dust and soot from burning forests swirled high into the atmosphere, blocking out the sun, huge quantities of water vapour and sulphur-bearing rocks were evaporated by the blast and taken into the sky. Torrential rains followed contaminated by sulphur acid. Scientific evidence has been compiled supporting the explanation of this disaster to the Earth.

That dinosaurs became extinct is certain but not all Scientists agree on the causes. The scientific evidence supporting the facts of evolution are reliable, but care is needed; we should not accept all statements supported by "so called" scientific evidence.

The "nuclear winter" passed in a few years, but it took almost a million years for the planet to fully recover. There were survivors: rodent-like species; most were no bigger than a domestic cat, birds and others.

Within a few million years there was a large range of mammals on land, varieties of hunting carnivores and browsing herbivores. In the oceans: whales and in the air: bats. Mammals are warm blooded, with insulating coats of fur or hair able to survive in climates much cooler than those, which reptiles could tolerate. They became the dominant land animals. The period named as the Cainozoic era, is known as the Age of Mammals.

The Ice Age began over two million years ago. One mammal, the mammoth, a member of the elephant family, was able to withstand the cold, protected by a coat of long hair covering its body. Mammoths became extinct when the ice sheet retreated about 8,000 B.C. In places which have remained frozen mammoths have been found in a preserved state.

Among the tree climbers were the early primates, the group that would ultimately give rise to apes and us. In 1998 fossilised primate remains of 40 million years old, the world's oldest were found in Poudaung, Burma.

It is now recognised that nervous systems, spinal cords and brains all developed from primitive groups, but of the billions of species to have become extinct or survived only one has the brain and intelligence to dominate all other species. That one is to be considered in the next stage of our journey.

THE FIFTH STAGE OF OUR JOURNEY THE PATH TO HUMAN EVOLUTION.

Primates are the highest order of mammals; they include lemurs, apes, monkeys and humans.

Hominids include any member of the human family.

With Scientists there is not perfect agreement to the exact path of evolution to modern humans. New evidence can change opinions. On the day of writing this part of the text the following statement was made:

“Theories about mankind’s ancestry are likely to be thrown into confusion after the discovery of a skeleton more than 3 million years old in South Africa”

Remember! ! ! Just as Genesis needs to be updated, so too does scientific opinion. I repeat: We should not accept all statements supported by “so called” scientific evidence. However science is the best tool we have for the task now ahead of us.

When and where did mankind originate? ?

Some strong opinions suggest possible answers:

Evidence exists making it clear that by about 25 million years ago apes had appeared in considerable variety, then we know very little until the hominid fossils begin to appear about 5 million years ago.

Our earliest known ancestors lived about 4 million years ago, in Africa. Their bones resembled those of a chimpanzee, although they walked on two legs. They spent a considerable time in trees, mainly to avoid predators and to search for food. The name given to this group was **Australopithecus Afarensis** and the first fossil found was female and given the name Lucy.

It is uncertain how many groups of different beings were involved before modern humans emerged. Including:

Australopithecus Africanus

Australopithecus Robustus

Australopithecus Boisei

The Genus Homo

Homo Habilis

Homo Erectus

Homo Sapiens

Homo Sapiens Neanderthalensis

Homo Sapiens Sapiens (Modern Humans)

We will limit our considerations to the following links:-

The second link Homo Erectus.

This group lived 2 million years ago, they made tools and were successful hunters, tall by comparison to earlier groups and are thought to have had strong social links with each other. This group is considered to have survived to about 250,000 years ago and in the time changed considerably, both in appearance and life style. As far as we know they first appeared in Africa, but fossils were also found near Peking, China.

The brain and mental capacity was very limited to our standards. Homo Erectus probably lacked both the intelligence and the fine breathing control, which is necessary for full speech and language, but body language, grunts and calls would enable them to communicate.

The third link The Neanderthals

This group lived 200,000 to 30,000 years ago.

They are the last of the early hominids to live before modern humans came along. In some respects they were similar to us but were different physically; they had large faces, heavy eyebrows and short, strong and stocky bodies, which helped to conserve heat. They cared for each other, helped those who suffered injuries and buried their dead.

They spent most of their time on the move, hunting and collecting food, wood and flint for tools. They hunted with spears and used stone tools to prepare animals for food.

One very important advantage Neanderthals had was the use of fire.

Homo Sapiens Sapiens.....Modern Humans

It is believed that Modern Humans originated in Africa. It is difficult to say exactly when, but there have been discoveries of fossils that are over 50,000 years old. Around 40,000 years ago modern humans began spreading throughout Europe and about 30,000 years ago they had spread to almost every continent in the world.

Studies have been made to determine whether or not humans originated from quite separate groups. For example, have the American Indians or Australian Aborigines evolved completely independently from the rest of Homo Sapiens? Scientific tests of their mitochondrial DNA and that of other Homo Sapiens Sapiens confirmed that every human alive today evolved from a common group, probably consisting of a handful of individuals.

This is the so-called '**Mitochondrial Eve**', that is the name given by Scientists, to a small group of individuals thought to have lived in Africa perhaps about 200,000 years ago.

Even with the appearance of modern humans about 100,000 years ago, we know little of the progress made up to 40,000 years ago, then in Europe carvings, cave paintings and exquisitely worked stone tools began to be made. By 12,000 years ago there were villages and agriculture, and in the Fertile Crescent of the Middle East towns such as Jericho were being built just 10,000 years ago.

**A VIEW OF THE NEXT STAGES OF OUR JOURNEY
WHERE ARE WE GOING FROM HERE?**

STAGE SIX IS A PLATFORM TO PAUSE AND CONSIDER OUR
WAY FORWARD

We have to cover some very important ground

HOW PLANET EARTH RELATES TO ALL LIVING THINGS

JOURNEY THROUGH TIME AND SPACE

A JOURNEY TO THE CENTRE OF THE BRAIN

OUR RESPONSIBILITIES

A LOOK BACK TO THE 1900's

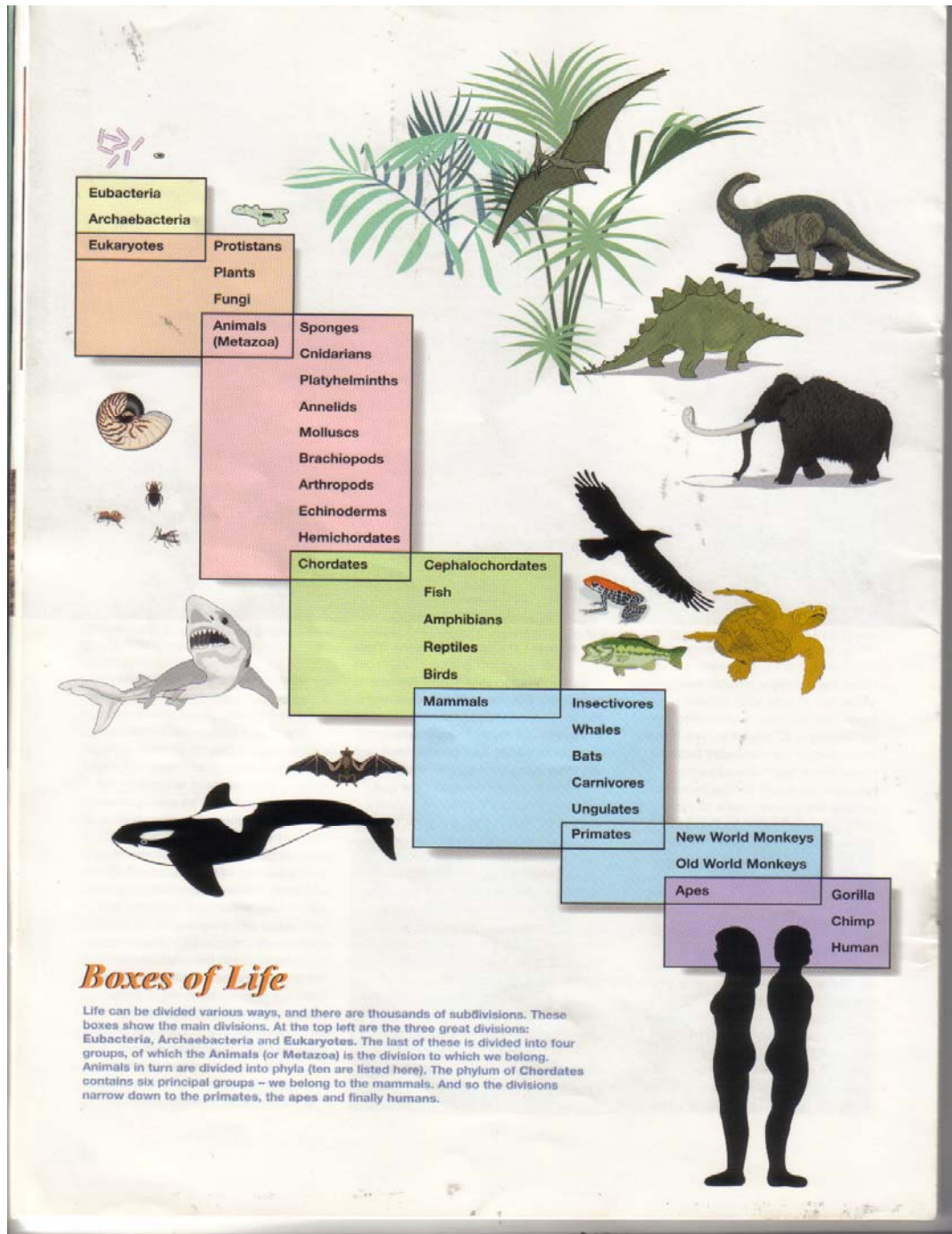
WHAT AFTER 2000?

BUT BEFORE WE MOVE ON.... Let us have a summary of evolution:

The gulf between modern humans and bacterium appears almost immeasurable, but in fact there are fundamental similarities. Most significant is the universal possession of DNA, which leaves little doubt that all life shares one ancestor. The links join from Single Cell life through billions of species to Homo Sapiens Sapiens.

THE FOLLOWING DIAGRAM ON PAGE FOURTEEN PROVIDES A
VERY CONDENSED ACCOUNT OF THE STEPS AND DIRECTIONS
TAKEN BY THE PATH OF EVOLUTION.

From the publication "History in Our Bones" by Simon Conway Morris



Having followed this diagram the path of evolution we will now focus our attention to Planet Earth.

THE SEVENTH STAGE OF TRAVEL OUR EARTH WHAT A WONDERFUL WORLD

How does planet Earth relate to all living things?

We have considered how the dust on the surface gave life to all forms of life and that the environment was just right to support life, or could it be that life adapted to the conditions of the planet which existed during the period of evolution?

Irrespective of the different opinions, which can be held, life can only continue with the support of Mother Earth. We have to protect the temperature, the resources for food, shelter and the means to survive.

All is available for us, but it must be protected and used correctly.

What a fantastic set of circumstances!

Looking further at the wonders of the system.....

Earth is one of nine planets revolving around the sun. This group of planets split away from the sun about 4.5 billion years ago, and as stated, is called The Solar System.

The second planet out from the Sun is Venus, it has a hot molten surface of lava full of Carbon Dioxide with temperatures of 480 C (896 F), and it is blanketed by dense yellow clouds caused by sulphuric acid. The clouds prevent the escape of heat; the atmospheric pressure is 90 times greater than on Earth. Volcanoes on Venus may still be active.

The fourth planet out from the Sun is Mars; it is an arid cold and lifeless planet, mainly covered in red dust. Its atmosphere is thin and poisonous to human beings.

As the third planet out from the Sun, Earth is in the middle of two problem planets. How in the middle of trouble, do we happen to have stable conditions and a temperate climate, which has supported various forms of life for millions of years? We are in the right place; any closer to the sun the Earth would be too hot for life to survive and if we were further away, our planet would be too cold.

Rock formations, mountains, oceans and volcanoes in the right mix also contribute to the control our climate. Volcanoes produce Carbon Dioxide,

which sinks into the oceans; it is absorbed into the rocks on the floor of the ocean. Rocky plates are in continuous earth movement; volcanoes recycle the carbon dioxide in the saturated rocks. The cycle may take 100 million years, but it makes a great contribution to the Earth's stability and climatic conditions.

That is not the end of the story: remember the gravitational influence the moon has and how it prevents us spinning out of control?

That is still not the end of the story: The Sun is 25% hotter, than when the Solar System was young, this should have been catastrophic for Earth, but for some reason, climatic conditions have changed very little over billions of years.

What fantastic set of circumstances prevented life from being fried?

The first line of this stage of our travel is
“How does planet Earth relate to all living things?”

My mind was focussed on the concept that life can only continue with the support of Mother Earth. That is a true concept.

I had not given thought to how much Earth depends on living things.

The fantastic set of circumstances, which prevents over-heating from a hotter Sun, is embodied in **COAL, LIMESTONE AND CHALK**, materials formed from tissue, which had life. Chalk is built up from plankton, microscopic organisms; a block of chalk just six kilograms in weight concentrates 1,300 litres of Carbon Dioxide. The combined influence of these materials returns protection to Mother Earth and prevents over heating.

Thus, a partnership is formed between Earth and Living Things.

No other planet has this incredible range of protection!.

At a later stage we will consider the separate issue of the damage to the Ozone Layer and the possible problems from global warming.

The Earth orbits the sun at a speed of 30 kilometres per second. The present 365 days rotation of the Earth around the sun is slow when compared to the 425 rotations, per year, of about 750 million years ago.

The Earth is slowing down.... The experts predict it will grind to a halt in about 4.5 billion years and the sun will burn itself out. Without the sun our planet would be a lifeless ball of rock and there would be no water. No plants could grow and animals including humans could not survive. Thank goodness.....For Our Wonderful World.

The Solar System is just a tiny part of a huge galaxy, known as the Milky Way, which contains more than 200 billion stars and their planets, and thousands of clusters and nebulae, its diameter is about 100,000 light years. There are billions of other galaxies in the known Universe.

The Universe now has a radius of about fifteen billion light years; Earth is like a speck of dust in the vastness of the Universe.

I now ask the reader to consider the microscopic organisms in a drop of pond water. We cannot see them, but they have life and live on our planet; they are supported by planet Earth.

Compare the vastness of the Universe with the life contained in a drop of pond water.

Consider Space and Time. Outside our Solar System

Is there a limit to space?

If we can imagine travel out beyond the furthest point of known Universe, would we circle back to the point we started, or would we meet a barrier boundary? What would be behind the barrier, or is there no limit to space! Does it just go on forever?

Was there a beginning to time and will there be an end?

Has time always been and will it go on forever?

I put it to the reader man has not the level of comprehension to solve the mysteries of the Universe, Space and Time.

In the future, scientists will solve some of to-day's mysteries,perhaps influenced by the published work of these three men:

Albert Einstein (1879-1955) one of the greatest scientists of all time extended our knowledge, including three important papers: The Quantum

Nature of Light, A Description of Molecular Motion and The Special Theory of Relativity.

Sir Isaac Newton (1642-1727) also one of the greatest scientists of all time. He extended our knowledge concerning the law of universal gravitation, invented the branch of mathematics called calculus and carried out experiments to investigate the nature of light and colour.

Charles Robert Darwin (1809-1882) Corrected man's understanding of evolution. See page 5 of this document.

There are continuous contributions being made adding to the findings of all the previous great scientists but opinions have to be corrected and updated.

On the Internet, together with private and confidential data banks, we have the greatest concentration of knowledge ever assembled. We can build space vehicles and travel into space for greater understanding of the Universe. Scientists consider that about 15 billion years ago, all substance in the Universe was assembled in a relatively small area. The substance was so dense that gravity made it terrifically hot. Finally it got so hot and so tightly packed that it exploded. We call this explosion the Big Bang, which caused all the substances in the universe to be expelled, to form stars and galaxies and moons and planets. The galaxies continue to fly through the universe at colossal speeds.

But with all this knowledge, we still do not possess the comprehension to understand: where did the substance come from, what is the purpose of life and the Universe and what power, if any, is behind it all?

THE EIGHTH STAGE OF OUR TRAVEL.

JOURNEY THROUGH SPACE, TIME AND GRAVITATION.

The serious scholar will enjoy this journey; it may stimulate him/her to further research, but to the not so serious. I suggest you read it, then move to the next stage of our journey.

We are going to consider not only Space and Time, but also Light, Gravitation and Magnetic Forces.

All animals including humans have an in-built clock as part of the brain, which provides the clockwork of our lives. It influences many things: when to sleep and when to wake, when to hibernate, or when to fly or swim to the south.

Time goes fast when you enjoy yourself. When you were five years old waiting for your sixth birthday a year seemed like eternity. The older you get the shorter the years seem to become.

Our perception of time changes.

Time in any one place can be measured with great accuracy and precision. If we fly around the world we can measure the time we took and the distance we travelled.

Time on our planet flows, from a second, hour, day, week, and months to years.

Distance, starts at one point and ends at another.

On Earth they both keep to their rigid fixed frameworks.

Our normal understanding of space, time and gravity is adequate for all normal purposes, but when considering bodies moving at almost the speed of light, the powerful gravitational fields near black holes and the large structure of the universe, scientists must use the ideas contained in the special and general theories of relativity.

Albert Einstein started a new concept with his theory of Relativity.

The effect of motion and gravity on time is that it is expanded.

Special Relativity.

The theory states that the only constant in the Universe is the speed of light in a vacuum (186,000 miles/300,000 Km. per second). Every-thing else, i.e. speed, length, mass and the passage of time, varies according to the observer's frame of reference (particular view).

Prior to this theory it was considered that space and time were absolute (fixed) and that space was completely separate from time. In the mathematics of relativity, however, time and the three dimensions of space - length, breadth and height - together form a four-dimensional framework called space-time continuum.

Reminder At this stage of our travel I did explain that the serious scholar

would enjoy this part of the journey. The linking of time and space is not easy to understand, so to the not so serious reader, I say don't worry about it, read it, but leave the understanding to the Einstein's.

In the normal way we consider speed. If two cars each travelling at 100 km. per hour in opposite directions have a head-on collision, the speed of the impact will be 200 km. per hour, but if an observer is approaching a source of light at 150,000 km. per second and that source is emitting light at 300,000 km. per second, the observer will measure the light at precisely 300,000 km. per second - not 450,000 km per second as common sense would suggest.

General Relativity.

The theory states that the effects of gravity and acceleration are indistinguishable. For example, people in a lift cannot decide whether the force that acts on them is caused by gravitation or the acceleration of the lift.

Gravitational forces are linked to the bending of space-time; any object bends the space-time that surrounds it. In the case of an object with relatively large mass, such as a star, this bending can cause a change in the path of anything else passing near it - even light.

It is considered that if a space vehicle could travel closer to the speed of light it could travel for one year according to the on board clock, but on return to Earth find that the vehicle had been away for ten Earth years. As the speed of a body approaches the speed of light, its mass increases dramatically, its length diminishes and time measured by the on board clock passes more slowly, compared to normal time with a stationary clock.

In 1971 two atomic clocks were fitted to two high-speed aircraft. One travelled eastward, that is, in the rotational direction of earth, and one westward. After the flight, the on board-clocks were found to have lost or gained time (relative to the ground-based atomic clock) depending on their direction of travel, an effect of motion, and their altitude, an effect of gravity. Did one fly to the past and one to the future? ?

Another theory suggests that to travel to the past, that out there (whatever that means) are collapsed stars, which form a type of black hole, similar in shape to a doughnut, and passing through the black hole breaks the time barrier.

The Block Universe Idea, suggested by some scientists, links the past present and future. All exist as one thing at the same time. The future is out there waiting for us, just as space is out there. In breaking through the time barrier we could in theory return to the past or advance to the future. This would suggest that our sense of time is an illusion, time does not flow, the future is pre-determined and has already happened and humans do not have free will. It makes no difference what we decide to do; we were programmed to do all that we do.

H.G.Wells made a fantasy Film “ Time Machine.” As you can imagine its inventor travelled into the future and returned to his present. It may be that the scientists, who suggest that the future already exists and all events are pre-determined, got their ideas from the excellent film of H.G.Wells.

There is no scientific evidence of an existing pre-determined future

Quantum Mechanics This theory rejects the concept that the future is pre-determined. Happenings are not predictable. We can only contemplate probability.

What will opinions be in 50 or 250 years time? ?

Scientists make an important contribution to our society. They should be given an increased role to guide politicians, but they should adopt a policy, not of how much we know, but rather how little we know.

When programmed computers can build themselves, but it did not begin that way, they did not just spring into existence. Is it possible that the Universe, time, space and all matter just sprang into existence, and that Earth with all of its in-built controls, created what the other planets were unable to create, or is it just possible that in keeping with our normal understanding, we have free will, but for the complicated structure of all nature, there is a need for control from a co-ordinating body? An Almighty Power, Almighty Force or The Power of Nature. What’s in a Name? Most believers prefer the name God. Why not? Take your choice

THE NINTH STAGE OF TRAVEL
JOURNEY TO THE CENTRE OF THE BRAIN

GENESIS CHAPTER 1. Then God said:- “
Let us make man in our own image, in our likeness, and let them rule over the fish of the sea and the birds of the air, over the livestock, over the earth, and over all creatures that move along the ground.”

IN OUR OWN LIKENESS.

When I was a child I thought as a child. I pictured God up in heaven with golden hair and a long golden beard, sitting on a golden throne, behind the golden gates of heaven. He looked down from heaven and had continuous concern for all people on Earth including me.

Now I am a man. I do not consider any likeness to an Almighty Power or Force would involve two arms, two legs, two eyes, a nose and mouth etc.- in short a human body. Genesis is again resorting to mythical language and needs to be updated.

To me the Bible is a helpful guide for mankind. I have read and studied it from cover to cover; all 1,448 pages and am of the opinion praise and or criticism should only be made after reading this important book. I would not like to damage its important messages, just see them updated.

What sets Humankind apart from the billions of other species involved in the history of evolution.....**IT IS THE HUMAN BRAIN**

If there is a likeness to a possible Almighty Power. I suggest it may be the combined total brainpower of all humankind, which scientists claim originated in Africa. We could name the founders of the first small group of modern humans Adam and Eve and the place in Africa: Eden or any other names we care to think up! What do names matter? The important fact is we know that humankind first arrived, at some time and in some place. They took on the task to rule over all other creatures, and with their superior brainpower to create and change, to make probes into the Universe. Mankind's brain is Unique.

First let us consider other influences; it is important to appreciate that the whole of nature works through intricate structures, with all forms of life able to adapt to their various environments. Studies of the limited brainpower of other species reveal a wonderful range of in-built abilities, to control co-ordination, breathing, modify body temperature, store energy and through specialised senses; survive.

Let us now go to the Centre of the Human Brain:

I invite you to read the following and consider the outstanding power of the human brain, which has, in terms of life's long history, only just arrived.

At this stage of evolution the influence of the Human Brain is so outstanding it appears to be the ultimate objective of all that has gone before.....but will it remain so?

Like the rest of the body the brain is made of cells. Brain cells or neurons, are specialised units for receiving and transmitting information. Somehow the skull has room for at least a hundred billion of these (10 to the power of 11). To count all of the connections in the CORTEX (the outer layer of the brain) at the rate of one per second would take 32 million years.

Neurons are organised into specialised regions with specific jobs to do. The sheer number of cells and their connections give the human brain its raw power to make us the creative and adaptable beings we are. It is this advantage which sets us apart from the billions of all the other species.

The brain is just over 2% of total body weight, but it consumes a massive 20% of the glucose and oxygen needed by the whole body.

Clearly defined regions carry out the brain's many tasks. The five main senses, i.e. vision, hearing, touch, taste and smell, keep the brain up to date with the outside world.

The outer layer of the brain called CEREBRAL CORTEX is very large in humans and provides superior ability for language, elaborate social organisation, delicate finger movements and good vision.

The CEREBELLUM at the rear base of the brain takes care of co-ordination between the senses and movement. Essential to all animals.

How do we know which part of the brain controls which part of the body, co-ordination ability to reason or store memory?

- (1) If a given part of the brain is damaged. We observe which of the responses has suffered loss.

- (2) C.T. Scanner. (Computer Tomography) uses X-Ray at different angles to build up a picture of the brain to observe which part of the brain has been damaged, then consider the loss of abilities.
- (3) M.R.I. (Magnetic Resonance Imaging) provides a much clearer picture of the brain and reveals how many atoms in the sample and what state they are in.
- (4) PET (Positron Emission Tomography) injects a radioactive form of chemical into the bloodstream. Screen images of the brain in colour can be observed to show which parts of the brain are active when different activities are undertaken.

AXONS. These are the electric cables of the neurons that criss-cross throughout the brain to link up the networks of cells.

When an axon reaches a junction with another cell there is a gap too wide for the electric signal to jump across so the brain uses chemistry to bridge this gap; it uses as many as 40 different neurotransmitters.

A newborn baby has a brain two-thirds the size of an adult brain but a human baby is among the most helpless at birth.

The brain cells grow very rapidly before and after birth as the baby has to complete the building of its own brain with the responsibility to build the billions of parts correctly.

As a baby grows it is bombarded with new sensations and experiences, and gradually begins to take control of its body.

They have to develop their brains in the “critical period” of early life, i.e. to see, talk, walk, think, remember etc.

Experience at this stage is a vital part of brain development.

USE IT OR LOSE IT.

Applies to the brain as much in old age as it does in childhood.

If you do not like the idea of being related to the chimpanzee, forget it, you are a modern human, with a very superior brain. You are part of one of the most powerful influences on Earth, perhaps in the Universe.

THE TENTH STAGE OF TRAVEL

OUR RESPONSIBILITIES.

The ability to survive and avoid extinction is most prominent in the simple form of life: bacteria. It has existed from the time life originated, that maybe about 4 billion years ago, to the present day.

Modern Humans do not have this survival experience, only the responsibility of being custodians of planet Earth and all that is in, on and around the Earth.

Many of the billions of species that became extinct did so, because of natural changes or disasters to the environment in which they lived. In the last half billion years there have been six mass extinctions, by different acts of nature: meteorite impacts, volcanic explosions and ice ages.

It is possible that the seventh disaster has already commenced, but not as a disaster caused by nature? With the brain and intelligence of man all species are at risk. Man is already the deadliest predator in the history of life. Given that the present rate of man made extinction of species is allowed to continue, by the year 2,200, 80% of the existing animal and plant life will be extinct; millions of years of evolution wiped out in a few generations.

Our generation has a chance to reverse the process but it will become more difficult for future generations. (Professor David Suzuki refers in his lecture The Science Show).

Man's greatest threat is man. The greatest threat to all living things is man.

In normal conditions the ozone layer's reaction to ultraviolet (UV) radiation prevents a dangerous form of radiation, known as UVB radiation reaching the Earth.

Man made gases (CFC's) float high into the atmosphere and these gases are broken down by ultraviolet radiation from the sun. The chlorine atoms released act as chemical helpers in the complex reactions that destroy ozone. The end result is that the ozone, which should provide a protective blanket around the Earth, is converted into oxygen, while the chlorine is left free to repeat the process and cause more damage.

Especially fast reactions occur over the Antarctic and Arctic forming ice crystals in the winter. The sun in late winter and early spring provides the energy that triggers the reactions that open holes in the ozone layer and by this there is a loss of protection and all living things are put at risk.

UVB radiation causes skin cancer and other diseases. It can damage DNA, the genetic material in every living cell. Two thirds of the plants and crops are known to be sensitive to UVB, and studies show that UVB penetrates the oceans to 20m, where most marine life lives.

Many scientists believe life on Earth could never have evolved without the protective ozone layer.

Resulting from global warming, the polar ice caps have already started to melt, and if not halted, vast areas of the Earth will be flooded. In the most severe case the sea level could rise more than 50 metres, many towns and cities in coastal areas around the world would be submerged, changes in climate will also cause many agricultural areas to become deserts.

CFC gases result from the use of aerosols, disposal of unmodified refrigerators and central heating equipment, exhaust trails from jets and from cars, the destruction of tropical rain forests, certain insecticides used in agriculture and other suspected products.

Failure to control the situation will result in the greatest environmental problem facing mankind. So why do we not stop all use of these products? International agreements to control the problem are high on the list of priorities, but because of greed or economic necessity in the poorer countries (for cheap inefficient refrigerators, cars and insecticides to meet the needs of the world's poor) there is still a big demand for these products. Smugglers dealing in CFC's and other chemicals threaten control. In some parts of the World CFC smuggling is second only to drug smuggling.

So is there no hope for future generations and us? There is every hope, if the ozone eating chemicals are brought into better control. Nature, or some power, is on our side, and will just replace the ozone, the ozone layer will eventually recover and the holes will no longer appear.

WARNING. Even if the world stopped using all of the destruction products tomorrow, it would take until the middle of the 21st century to get back to normal conditions.

IT IS THE RESPONSIBILITY OF THE WORLD POPULATION.

In the interest of economic growth and for ever increasing prosperity, we exploit world resources as though they are for the sole use of the present generation. We pollute the environment of land, sea and air.

A large section of opinion calls for strict control, but for the remainder they pay lip service or ignore the problems. We have to hope that adequate precautions are taken to avoid the threat of contamination resulting from inter planetary space travel. We may face many unknown risks as we extend our knowledge: cloning, genetic engineering, diseases created by research out of control. Health problems we inflict upon ourselves: from drugs and transmitted diseases.

Some observers in the western world have warned that western civilization as a whole is on a fundamentally wrong track, racing towards a head-on collision with the limits of what our planet can tolerate. They have tried to take soundings that go deeper than the concrete effects of pollution and environmental destruction. There is something basically wrong with western thought, they claim.....and I agree with them! !

Professor Suzuki in his lecture warned of the danger of World population outstripping the pace we are able to produce food and this has already happened millions starve to death each year. The world population is on the increase. It would double at the following percentage rates of growth
 ∴
1% to double in 70 years. 2% to double in 35 years. and 3% to double in 17.5 years.

Some controls have been introduced to limit world population growth, but not enough information has been given to inform how close we are already to population explosion and possible catastrophe.

Reader, are you thinking: What a list of gloom and doom ?

But is it? Do we not have to face up to our responsibilities? How can we know what corrective action has to be taken if we do not highlight the situations which need to be changed? The problems and responsibilities listed are not negative issues, they are positive. I have tried to light up the right roads we need travel into the future.

Maybe you are thinking: What can little me do about it ?

Much more than you think. You are part of the world population, which in terms of communication and collective thinking is becoming more compact and it has the power to influence on a worldwide scale.

Today we can sit anywhere at all on this planet and access the whole of human experience on a computer screen. The influence has been growing stronger in the time you have been reading this document and it cannot be halted.

We appear to be on the threshold of a completely new age. We are no longer simply citizens of a city, or a particular country. We live in a planetary civilization.

You are not little you. You are part of the powerful planetary civilization, which is as strong as the total sum of all individuals involved. It is important that as many individuals as possible, including you, realise that:-

**We do not inherit the Earth from our parents.
We borrow it from our children.**

We should not side step our individual contribution to the responsibilities of the planetary civilization, which if given a significant response, can achieve some of the corrective action required for the new age.

THE ELEVENTH STAGE OF OUR JOURNEY
BEFORE THE NEW AGE, LET US GO BACK A LITTLE.

I was born in 1925. As a child of 5 or 6 years, the elderly people I met (then, of my present age) were born about the year 1855. I remember how much the hardships of life were ingrained into all aspects of their appearances. Two things helped me, in later life, to appreciate what life had been for many of them. I read books of Charles Dickens (1812 - 1870) He did so much to focus attention on the poor social conditions of his day. I also studied census forms, giving family details from the 1850's to the 1920's. The overcrowding and poverty was very apparent. Children were always on the streets of Liverpool selling oddments, newspapers and matches etc.

As a boy of seven or eight I can remember many bare footed, neglected children in Liverpool attempting to earn a little money in any way they could, even begging, a popular task involved, collecting wooden boxes,

chopping them with an axe, into standard lengths of wood (known as chips) and binding them into a bunch of “chips” to sell as firewood.

Throughout the early 1900’s life was hard, but for some reason when people looked back in memory, they spoke of their former days “as the good old days”. Many of them endured overcrowding in shared accommodation, poor diet, gas or candle lighting, and poor heating. Water and toilets were sometimes located centrally in a court surrounded by a number of squalid dwellings.

Many people did not know how to use a telephone or had not been driven in a car or heard a radio, (then called wireless). Domestic electricity started to be installed around 1930 then considered a luxury. Fridge/Freezers were a dream of the future. Television, computers, all present forms of travel including outer space, was all unrealistic, imaginations of mad scientists. Even they were unable to dream up the wonders of the Internet.

The 20th Century provided a springboard from which we are able to welcome the millennium and drive into the 21st Century.

Children in bare feet and the general hardships of people needed to be recorded, but throughout the century all knowledge and skills, social, economic, scientific, engineering, medical, technology, literature, art, music, architecture, commerce and industry, exploration and adventure, all progressed at meteoric pace, at a rate very much in excess of the progress achieved in any previous century.

May I remind the reader, when we considered man’s responsibilities, we also considered the cost of so called progress.

Let us consider some of the unimportant and important paths taken during the 100 years leading to the year 2000

- | | |
|-------------|--|
| 1900 July 2 | Maiden flight of von Zeppelin’s airship |
| Aug 31 | Coca Cola went on sale for the first time in Britain |
| Oct 14 | Sigmund Freud published his book
The Interpretation of Dreams
He argued that dreams are a means of satisfying our desires.... sometimes our wishes are socially |

unacceptable and so suppressed by day. The impact on Human Psychology is still felt to this day.

- 1901 Jan 22 Queen Victoria died at the age of 81. She had reigned for 63 years over **an empire that stretched to all corners of the globe.**
- May 9 Census published, revealed that the population of England and Wales was 32,525,716.
- July 10 **First electric tramway between Shepherd's Bush and Southall in London.**
- Dec 2 King Camp Gillette announced plans to market a disposable razor.
- Dec 11 Marconi sent a faint but audible **wireless signal across the Atlantic and radio was born.**(In December 1909 he was awarded the Nobel Prize for his outstanding work)
- 1903 Dec 17 Wilbur and Orville Wright made history by flying their first biplane 850 feet. Five years later Wilbur flew for over an hour and **the birth of air travel became a reality.**
- 1904 Dec 13 **London's first electric underground train went into operation.**
- 1905 July 1 Albert Einstein published his **Theory of Relativity** and amazed the world with his ideas about the universe, time, space and motion.
- 1908 Sept 5 Leon Delagrang set a new flight record by staying airborne for 29 minutes and 54 seconds.
- Sept 16 General Motors commenced manufacture
- Oct 15 The Royal College of Surgeons allowed women to to obtain a licence in dental surgery.

- Nov 7 **Rutherford detected a single atom of matter.**
- 1909 July 25 Louis Bleriot made the **first English Channel cross flight in 37 minutes.**
- 1910 Aug 27 Thomas Alva Edison demonstrated **his first talking picture** in his laboratory. 17 years later Al Jolson was seen talking and singing on screen.
- 1912 Mar 28 The House of Commons **rejected an appeal for women's right to vote.**
- Apr 15 **The Titanic** hit an iceberg in the North Atlantic and over 1,500 were drowned. **The Unsinkable Ship** became a tragic event in maritime history.
- 1913 Apr 3 In her fight to obtain **Votes for Women.** Mrs Pankhurst was imprisoned for inciting persons to place explosives outside Lloyd George's home.
- 1914 28 June The heir to the Austrian throne was assassinated in Serbia.
- 28 July Austria declared war on Serbia
- 4 Aug Britain declared war on Germany.....**FOR:-**
The First World War between: (Germany, Austria, Hungary and their allies) on one side, against (Britain and the British Empire, France and Russia and their allies), including the USA, who joined them in 1917.
- 1915 Oct 13 Nurse Edith Cavell was executed by the Germans
- 1918 Nov 11 **World War 1** : Germany surrendered, the war ended after a human cost of over 10 million dead.
- 1922 Nov 26 The British archaeologist discovered **The Tomb of Tutankhamun**, the fifteen year old Egyptian Pharaoh. The discovery is the richest find in The Valley of the Kings, it included the Pharaoh's solid gold death mask.

- 1923 Jan 27 On this date the first rally of the German Nazi party was held in Munich. **Adolf Hitler** then rose to become German Chancellor on 30th January 1933.
- 1926 Jan 25 John Logie Baird, the father of television, transmitted the first T.V. images
- 1927 May 20 Lindbergh flew 33.5 hours non-stop across the Atlantic.
- 1928 Jan 5 Over 65's received their first O.A.P of 10 shillings a week (50p.). Over 70's received 5 shillings per week.
- Mar 29 Women over 21 given the right to vote.
- Aug 1 The Morris Minor car took to the road.
- Sept 30 Professor Alexander Fleming discovered Penicillin.
- 1933 Feb 8 Hoover cleaners first sold in U.K. for less than £5.
- 1936 Aug 26 First ever-talking pictures on television were transmitted by the B.B.C.
- Oct 5 The Jarrow March began, trek to London to protest about 68% unemployment in their area.
- 1938 Mar 14 The Nazis, led by Hitler, marched into Vienna.
- Sept 30 Chamberlain returned from Munich, promising "*peace with honour and peace in our time*"
- 1939 Jan 28 Radio Active Nuclear fusion was discovered and the power of the atom was recognised.
- Sep 3 Chamberlain declared war against Nazi Germany as they attacked Poland. World War 2 commenced.
- 1940 May 10 Winston Churchill became Prime Minister of Great Britain.
- June 3/4 In face of the German onslaught 335,000 troops were evacuated from Dunkirk, France.

- Sept The skies above Britain roared to the sounds of RAF and Luftwaffe planes as the **Battle of Britain** was fought.
- 1944 June 6 Allied troops landed in Normandy and pushed the Germans back through France. By August Paris was liberated.
- 1945 April 30 Adolf Hitler killed himself as death camps were revealed.
- May 7 Germany signed unconditional surrender. The war in Europe ended.
- Aug 6 Hiroshima and Nagasaki, both towns in Japan, were devastated by American atomic bombs. The Emperor Hirohito unconditionally surrendered. The Second World War was finally over at the cost of 55 million lives.
- 1948 Jan 30 **Mahatma Gandhi.** Was assassinated by a fanatical Hindu. Gandhi secured India's freedom from British Rule.
- 1949 Oct 10 **People's Republic of China Commenced.**
- 1952 Feb 6 **King George VI died**
- Feb 8 **Elizabeth was proclaimed Queen**
- 1953 Mar 5 **Stalin died** after being the Soviet Leader for 30 years.
- Jun 1 **Hillary and Tensing conquered Mount Everest.**
- Dec 1 The first Trans - Atlantic telephone cable agreement was signed.
- 1957 Oct 4 **The Russians launched a satellite called Sputnik 1** into orbit 500 miles above the Earth.
- 1961 Apr 12 **Yuri Gagarin, was the first man to fly in space in** Russia's Vostok spaceship.

- 1962 Feb 20 **John Glenn was the first American to orbit the Earth.**
- 1963 Nov 22 **U.S. President John F.Kennedy was assassinated** while being driven through Dallas, Texas.
- 1964 June 14 **Nelson Mandela** was sentenced to life imprisonment by the South African Government. In 1990 he was released from prison and in 1994 was elected president of South Africa.
- 1965 Jan 24 **Winston Churchill died aged 90**
- 1967 Dec 3 Dr.Barnard performed the first human heart transplant.
- 1968 Dec 21 Saturn V rocket of Apollo 8 was launched. Americans Frank Borman, James Lovell and William Anders spent Christmas in space.
- 1969 Apr 9 **Concorde 002** the British built prototype of the Anglo-French supersonic airliner, made her maiden flight.
- July 21 **Neil Armstrong**, an American, made the historic step onto the moon's surface, to become the first man on the moon.
- 1970 Feb 9 A bill was passed giving women rights to equal pay.
- 1971 Feb 15 Decimal currencies was introduced in Britain to replace shillings and pence.
- 1973 Nov 6 Argentina attempted to regain the Falklands. They were defeated by Britain.
- 1976 Sept 9 **Chairman Mao** of China died.
- 1978 July 26 Louise Brown, the first test tube baby was born.
- 1980 Nov 8 Voyager, an American spacecraft, discovered a 15th moon around Saturn.

- 1981 Feb 24 Charles, the Prince of Wales, proposed marriage to Lady Diana Spencer.
- Apr 11 **Columbia**, US space shuttle, the first reusable spacecraft took off for its three-day maiden flight.
- July 29 Prince Charles married Lady Diana Spencer at St.Pauls.
- 1982 Oct 11 The Tudor ship: Mary Rose, was raised after having been sunk 400 years previously.
- 1983 July 20 Fossil remains of carnivorous dinosaurs were found in Surrey, England.
- Sept 4 U.S. claimed that the world population was 4,721,887,000.
- 1985 Nov 18 Anglo-French agreement to build a Channel Tunnel.
- 1989 Nov 9 East Germany opened its border to the West.
- 1990 Feb 27 Kuwait liberated from invading Iraqi army by U.N.
- 1997 Aug 31 **Diana, Princess of Wales**, *'The peoples Princess'* was tragically killed in a car accident.
- 1998 Apr 10 Northern Ireland A document "The Good Friday Agreement" gave hope to an end of violence.
- 1999 Aug 30 More than twelve months after The Good Friday Agreement, the situation in N. I. had not been resolved.
- 1999 Throughout the final year prior to the millennium, the western countries were engaged in a brutal war, many of the horrors similar to those committed in World War 11 were repeated. The conflict was in Yugoslavia, which includes Kosova. President Slobodan Milosevic, a harsh dictator, was quite prepared to allow his troops to repeat the acts of

atrocities performed in Hitler's war of torture and murder. Milosevic embarked on a programme of ethnic cleansing in Kosova.

European and USA bombers and missiles in vast numbers were committed to protect the rights of the Kosovans, but well over a million were driven from their homes. Their return is now policed by a multi-national force,

MOLOSEVIC IS NOW A LISTED WAR CRIMINAL.

Shortly after the brutalities in Kosova, massive slaughter of the civilian population of East Timor was committed by militia forces; who did not accept a majority vote, which granted East Timor independence from Indonesia.

Once again a multi-national forces had to rescue civilians from the horrors of the Hitler/Molosevic forms of atrocities

WHAT A WAY TO END A CENTURY.

THE TWELFTH STAGE OF OUR JOURNEY.
INTO THE FUTURE

This part of my document,
"Four Point Five Billion Years Then 2000 A.D.,"

Is a complete departure from the remainder of the document. All previous writings seek to record events which have happened and took place in a sequence which resulted in the provision of the environment on which all life depends, attempts have been made to demonstrate how we humans relate to the whole of nature and the Universe, and a reminder of our responsibilities to protect the environment, in its widest sense, for future generations.

NOW WE BURST INTO THE FUTURE:2000 A.D. HAS ARRIVED

The millennium, to many will be seen as just another New Year, but it is not. We have considered the changes throughout time and focussed on the rapid progress made during the 1900's. The changes to our lives already being developed, will in the future, make recent progress appear "that we were standing still"

All previous pages in this document were written with a subject or situation in mind and I had no pre-conceived ideas as to how my messages would be developed and presented to you. I wanted them to be influenced by the teachings and opinions of those who have specialised in their particular subjects, but also to be influenced by my own understanding of the various subjects and situations.

BY CONTRAST FOR 2000 A.D. AND THE FUTURE.....

At the very beginning of the document, I had pre-conceived ideas how I would anticipate future events: my experience of life, my training and business responsibilities, conditioned my thinking to be aware of the probable future trends in business, commerce, transport, medical research, building techniques, engineering, all science and an almost unending list of what, in accepted terms, are labelled progress, including the need to keep the computer as servant and avoid the growing risk of turning society into Cybersouls. That is what I intended to write about, but will now leave it to the many thousands of millennium writers who will fill our book shelves and internet sites with their anticipations of so-called future progress. In the following pages I will seek to explain my revised ideas of the form of human progress I hope will develop in the future.

A CHANGE OF STANCE FOR THE WRITER.....

I rejected my former pre-conceived ideas of what the millennium future may hold for us. As I compiled the contents of this entire document I became convinced that society is out of step with the means to achieve real progress.

Compiling this document influenced my thinking in a way I had not anticipated, my concentration became focussed on the powerful influences, (of which many in our society are unaware), demanding that society now conforms to the laws of nature, or be forced to deal with serious future consequences.

Technological progress and changes to the environment have moved and are moving too fast, to meet the conditions required by natural laws.

If the reader does not agree that we are out of step with nature, please, do yourself a favour contemplate or re-read **“The Tenth Stage Of Travel Our Responsibilities”**

I now embark on my most difficult task. I know how I would like to see society progress, but how to define clear objectives and the means to achieve those objectives is another matter and before I reach the bottom line **“I need to establish a platform for realistic understanding”** I also need to make some statements and include some quotations:

1. Society can never stand still, **more profit and more technological progress seems to be in the best interest of us all, but is this true at any price?** For example; would it justify claiming Earth’s resources for the sole benefit of our generation and would it be acceptable to disregard the need to protect the conditions which keep Earth a stable planet? Would killing people who do not agree with those who have power be justified if it increases power and profit?
Should we continue to defy the laws of nature, if it is in the best interest of profits and technological progress and in doing so, is it acceptable to destroy the majority of animal and plant life, which we have learnt from our readings, evolved over billions of years?
2. In 1. above I used the expression “would it justify”, suggesting future problem situations which could happen, regrettably, our out of step problem with nature is already well ahead, driving strongly towards a possible risk of catastrophe.
3. I repeat Society can never stand still. We can change to a more responsible society but this may be the task of future generations when it is forced on them. However if we can now focus on the act that we should not delay protecting the environment and the whole of nature, because as time goes by the problems become greater and greater. To generate this change we need realistic understanding by a significant section of world society.

**THIS CHANGE IS THE PROGRESS I HOPE MANKIND
WILL ACHIEVE DURING THE NEW MILLENNIUM.**

Say it is not possible, it will not happen, not sufficient people will bother, the damage will be realised too late and we cannot turn the clock back.

That is a point of view. But.....What choice do we have?

Consider the alternative.

4. We need to develop principles; we need to listen to what others have said:

We really need to know ourselves.

Quotation: ALBERT EINSTEIN “A human being is part of the whole, called by us “Universe,” a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest - a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.”

Albert Einstein is one of the wisest men who ever lived; his scientific discoveries rocked the foundations of human understanding. To me his message above tells me that we are part of nature and we need to get in step with nature. My concern is that we seem to be at war with nature; we seek to destroy it; we seek to destroy what we belong to and we are blind to what we are doing.

Mankind’s failure to apply the correct principles to nature is influenced by the way we deceive ourselves. If it benefits me and I can get away with it, do it. There is a need for us to really know our true selves and to be as we would like other people to think we are. This would make a considerable contribution for creating within mankind the principles we need to be in harmony with one another and to get in step with nature.

There are laws of nature, which if we try to skip, we do so at our peril. The infant child, having been responsible for building much of its own brain conforming to the correct pattern, then it learns to crawl, walk, observe, listen, make sounds then talk. If locked away in a dark room, kept in bed, given baby food and deprived of conversation until it becomes a teenager, it would never recover from skipping its essential infant programme.

The normal child has to study mathematics before algebra, algebra before calculus. It is not possible to do calculus until we understand algebra.

In construction we make a strong foundation before we start building.

The farmer has to sow his seeds in spring, tend his crops throughout the growing season and reap his harvest in autumn. He cannot spend spring and summer on extended holiday, plant seeds in autumn and expect to reap his harvest.

The whole of nature, of which we are a part, needs to keep to the rule of the farm. **Do not skip essential matters.**

Technically we have advanced more quickly, than our ability to attain the level of responsibility required to control the circumstances we have created. We are attempting to skip essential matters, which take us out of step with nature.

WHEN DO WE REACH THE BOTTOM LINE ?

It is sticking out a mile! We have arrived at it! Find it here!

We have the opportunity to choose our future

CHOICE 1.

Put at risk the planet, extend the present threat to all life, allow greed of the mighty to inflict further suffering on the weak. Continue to reject the principles, which were skipped in the interest of, so called progress.

CHOICE 2.

Give lip service to take corrective action and introduce ineffective controls, which do not provide real solutions. Leaving future generations to be forced to take action when the system crashes, which perhaps by then, maybe beyond their control.

CHOICE 3.

Or, we can act now, before the situation in the future forces us to protect what will be left of our heritage. To accept the challenge of responsibility requires greater global adherence to principles, which conform to the laws of nature.

Principles, which could become more firmly accepted, to protect planet Earth and all living things, to care for our fellow men and avoid greed.

We can never have a perfect world community, but we can work towards it and reverse some of the problems, which have already developed.

A growing number of governments and individuals are sincere in wanting to reverse the present trends and thus protect the future.

May I remind you of a previous statement?

What can little me do about it?

I repeat: -

“Much more than you think, you are part of the world population which in terms of communication and collective thinking is becoming more compact and it has the power to influence on a world-wide scale.

Today we can sit anywhere at all on this planet and access the whole of human experience on a computer screen. The influence has been growing stronger in the time you have been reading this document and it cannot be halted.

We appear to be on the threshold of a completely new age. We are no longer simply citizens of a city, or a particular country. We live in a planetary civilization.

You are not little you. You are part of the powerful planetary civilization, which is as strong as the total sum of all individuals involved. It is important that as many individuals as possible, including you, realise that:-

We do not inherit the Earth from our parents.

We borrow it from our children.

We should not side-step our individual contribution to the responsibilities of the planetary civilization, which in total can achieve some of the corrective action required for the new age.

GO INTO THE NEW AGE
AND PLAY YOUR IMPORTANT PART.

Stanley Houghton

Dated 1st January 2000

**APPENDICES 1, 2 & 3
AND THE EPILOGUE**

APPENDIX 1.

To Joanne and Nicholas Houghton-Best

It is New Year 1980. This year Joanne will start the serious task of learning to read and Nicholas the serious task of learning to speak, both will extend their abilities to understand and be understood.

Some day both may understand why I have written this message and compiled our family history records. I consider my duty is to protect and pass on the family details now in my possession; they are yours as much as they are mine. What you do with them is for you to decide but I would like to think the records will be extended by future generations.

Your Great, Great, Great, Great Grandparents, born in the days prior to 1825 were born to an uncomplicated world which was about to progress with the advantages of the steam engine: for sea and rail travel, for power to the factories which met their moderate needs.

Your Great, Great, Great Grandfather John Pendleton said to your Great Grandmother Catherine Houghton nee' Tagg: "Some day machines will fly." Later my own generation made what we considered to be the most rapid progress of any generation in history. Electric lighting in our homes was a luxury in 1930, but in the following fifty years we started to use the world's natural resources as though they were for the sole benefit of our generation. We saw the birth of an unlimited list of technological, medical and scientific advances. Television, space travel and the silicon chip were some of the wonders of our age. We must carry the shame of being the first generation capable of destroying the world's population and we left the problems of nuclear waste for many future generations.

Subsequent generations may conclude we were irresponsible; it is for them to judge. It is true we made a contribution to progress, but in doing so we spoilt the quality of life and obscured the standards of happiness previously known.

As we approach the 21st Century, your probable needs and those of children not yet born are of vital concern to us. Progress is being made to conserve energy and to develop alternative sources of energy. Men made materials are being developed to meet your anticipated requirements and the means to increase food production for a growing world population is a problem we hope to solve. Attempts are being made to recycle materials. We are trying to protect our existing and your future environment so perhaps we should concentrate more on understanding the greater purpose of life and thus improve the quality of life. Solve these problems and you will make real progress.

Problems are there to be solved!

John Pendleton was correct "Someday machines did fly"

Have peace. Have happiness in your lives.

Stanley Houghton

1st January 1980

APPENDIX 2.

To Joanne and Nicholas Houghton-Best

It is New Year's Day 1990 and ten years to the day since I reported that Joanne was about to start the serious task of learning to read and Nicholas the serious task of learning to talk. It was not difficult for me to predict that both of you would extend your abilities to communicate: to understand and be understood.

It was not possible for me to predict that my own skills to communicate would be extended. My message to you in 1980 was recorded by ink flowing from my fountain pen. My message for 1990 is processed through my home computer I.B.M. Personal System /2 Model 30 286 and will be stored on Drive C, the hard disk of my computer. Perhaps some day one of you will take my hand written account of our family history records and record them on computer disc.

Prior to 1983 I kept up to date with most Business Management Subjects. Having decided that computers were not for me; I thought they were for the next generation. Then in 1983 I contributed a strong influence for a computer to be installed at Pembroke(C&P) Ltd. The Company name was later changed to The Newhall Group Ltd of which, for the record, I am the Administration Director and Company Secretary. In six weeks from the date of this message I will retire from full time business and resign my directorships.

Then in the coming years I will explore the mysteries of, what in 1990 terms is, my powerful computer. I am certain well before the year 2000 young and old will become aware of the extent of world information, which the use of the computer can make available to us. There will be continuous additions to computer information and facilities on a scale we cannot now conceive.

In 1980 I wrote of the extent of world progress made since 1825 and in particular of the progress made by my own generation. You may recall that I praised my generation for the rate and range of progress made, but I had to accept we used up world resources as though they were for the sole benefit of our generation and we failed to protect world environment just to achieve short-term progress. I expressed the view that future generations may conclude we were the irresponsible generation.

During the years 1980 and 1990 some of the hopes I expressed to protect the environment gained wider acceptance.

Some changes to political, economic and social thinking have been achieved far beyond projections possible in 1980.

World populations now know that the Ozone Layer around planet Earth has been damaged and must be protected to avoid over-heating and the resultant disasters to the planet.

International political organisations, the world organisation known as Greenpeace and many others, even Pop Groups, have combined to protect the quality of life for the present world population and for the generations, which follow.

World peace and co-operation between nations made enormous progress during the year 1989. The tension between the Eastern and Western Block of Countries of the World had been a serious threat to world peace for forty-five years. In the year 1989 agreements for arms control were negotiated and ratified between the major powers. Freedom was restored to all of the people living in the countries of Eastern Europe. The problems of terrorism in various parts of the world are significant, but the threat to world peace does not exist at present.

Problems are sometimes solved only to be replaced by other problems
 Drugs and some contagious diseases are problems, which did not destroy the lives of previous generations, but they are major threats to your generation and must be eliminated by an enlightened society.
 International co-operation to control these disastrous social problems is now meeting with moderate success.

Real success must come from within the individuals making up the total population

The 1980 message has not changed:-

Seek to understand the greater purpose of life

Live to the standards everyone knows to be right

The quality of life will improve

Solve these problems and you will make real progress

PROBLEMS ARE THERE TO BE SOLVED!

John Pendleton (remember him?) was correct:
 "Some day machines did fly"

Have peace. Have happiness in your lives.

Stanley Houghton
 1st January 1990

Update: During 1991 a wish in this document was achieved: the writer's hand written account of the family history records was recorded on computer disk.
 He was able to transfer the former limited records and extend the database

APPENDIX 3

To Joanne Houghton Malone, Nicholas Houghton Best and Welcome to James Malone. My great grandson, born 27th June 2009.

It is New Years day 2010. This document is the final in the sequence of four documents I have written to my grandchildren, I do not anticipate writing a document in 2020, this final document, in which, my great grandson James, born on the 27th June 2009, is included. I now repeat extracts from former notes to Joanne and Nicholas to remind them of some of the events and situations recorded and for James to read in the future. One day I hope James will read and understand my messages and perhaps see how my mind worked.

At New Year 1980. I stated: In this year Joanne will start the serious task of starting to read and Nicholas the serious task of learning to speak, both will extend their abilities to understand and be understood.

My generation made what was considered to be the most rapid progress of any previous generation. We saw the birth of an unlimited list of technological, medical and scientific advances, but we started to use the world's natural resources as though they were for the sole benefit of our generation. We must carry the shame of being the first generation capable of destroying the world's population. Subsequent generations may conclude we were irresponsible; it is for them to judge. It is true we made a contribution to progress, but in doing so we spoil the quality of life and obscured the standards of happiness previously known. Solve these problems and real progress can be achieved.

At New Year 1990. I made reference to the family history records which I have compiled, my hope, then and now, is that future generations will value the knowledge of their origins and obtain answers to the question "What are my roots? My hope is that the records will be extended into the future.

The decade saw some of our generation considering the powerful influence of computers and I expressed the opinion of being certain that well before the year 2000 young and old will become aware of the extent of world information which the use of computers can make available to us. I stated: There will be continuous additions to computer information and facilities on a scale that we could not then conceive.

And now in 2010 I realise how right I was.

Hope, which I expressed in 1980, and subsequent years, for the protection of the environment, appeared to gain wider acceptance in political, economic and social thinking. World populations became concerned about the problem of global warming and the probable damage to our planet. The action taken was not sufficient and in 2010 it is planned by 2050 the situation could be greatly improved; ***this has been the poor response to the need of protecting world populations and planet Earth.***

At New Year 2000. The document for the Millennium required more time, thought and preparation, than the statements made at the end of a decade, it had to go far beyond the limited boundaries of recent history. My grandchildren, great grandson

and future generation are reminded they will need time and patience, to travel with me, and complete the journey of life, which I have set before them. The path is contained in my booklet: "FOUR POINT FIVE BILLION YEARS THEN 2000 A.D. Copies have been issued to all interested parties, including the web site and library of The Liverpool History Society. A COPY IS LODGED WITH THE PARENTS OF JAMES FOR HIM TO READ AT AN APPROPRIATE AGE.

At New Year 2010 So much has happened since my observations leading up to the year 2000. James my great grandson arrived he and his generation are the future and what a responsibility they have: to protect the future of all life and planet Earth. To resolve the conflict between religions, each now claiming to serve the true God, the probability is they all serve the same God, taking different paths and having different names for the same God. The progress in medical research, of which I have a reliable understanding, will enable future generations to live healthy productive lives to ages far beyond present life expectancy. To take advantage of this progress they will have to live responsibly. We all have the gift of life; we are not robots or some kind of mechanical machine that is programmed only to do good to others and to ourselves. We do have a sense of right and wrong, which we can accept or ignore. The abuse of drugs can destroy our lives, greed, passion, power, the obsession to maximise profit, any combination of these influences, can injure or even destroy lives, cause wars, prosperity for some and starvation for others, and the abuse of each other including innocent children. We need to understand that the world population is one big family, which started from a few individuals who were the common ancestors of all individuals now spread through out planet Earth; we also need to realise that we are in most cases, in conflict with nature and accept that we are part of nature. In self-interest and preservation we need to live accordingly and accept the laws of nature.

So much of my previous writings were directed to Joanne and Nicholas, I tried to pass over my life experience to them, give my opinion of human achievements and future hopes, quite a few of my anticipations did happen, but some of what I recorded or anticipated is starting to fade into history and has been overtaken by the happening since the year 2000. And I realise the future is of much greater importance. James has yet to learn to talk, to write and read, to understand and to have opinions of life, he and I may never hold serious conversation, but I wish to place on record: his life and future are very important to me, I will try to get to know him, my writings may help him to get to know me. The gift of life is all ahead of you James use it wisely, as you change from boy to man: set objectives and plan to achieve your objectives Look for happiness in your life and treasure every moment.

Let me close with reference to my note to Joanne and Nicholas

On the 1st January 1980

Extracts

Your Great, Great, Great, Great Grandparents born in the days prior to 1825 were born to an uncomplicated world which was about to progress with the advantages of the steam engine: for sea and rail travel, for power to the factories which met their moderate needs.

Your Great, Great, Great Grandfather to said your Great Grandmother Catherine Tagg
"Some day machines will fly"

As we approach the 21st Century, your probable needs and those of the children not yet born are of vital concern to us. Progress is being made to conserve energy and to develop alternative sources of energy. Man made materials are being developed to meet your anticipated requirements and the means to increase food production for a growing population is a problem we hope to solve. Attempts are being made to recycle materials. We are trying to protect our existing and your future environment; perhaps we should also concentrate more on understanding the greater purpose of life and thus improve the quality of life. Solve these problems and you will make real progress. Problems are there to be solved Have peace. Have happiness in your lives

Final Note: Our generation tried, but we failed to achieve many of our objectives

THE EPILOGUE

On the first page of my document

FOUR POINT FIVE BILLION YEARS THEN 2,000 A.D.

I stated the obvious that:

“In this year of 2,000 many writers all over the world will wish to record their opinions on a very wide range of subjects; some will seek to contribute their influence to guide (the human race) Homo sapiens sapiens into the future.”

Most of my writing is focussed from the time of the birth of mother Earth, the history of all forms of life, and man’s responsibilities. Only at the end of the document did I consider the type of future that appears to be essential if mankind is to survive and get back in step with nature. I have made my point and do not intend to dwell on it in The Epilogue.

The Epilogue will extend the details of some of the important aspects included in my writing, it will go further by giving expert technological opinion on subjects which were to have been included in my previously intended projections for 2,000 and beyond.

The many writers all over the world with their specialised knowledge will provide us with a volume of projections far greater than we can digest.

I will draw to the reader’s attention to just one of those writers.

Richard Dawkins is the Charles Simonyi Professor of the Public Understanding of Science, at Oxford University.

He is a Leading Scientist and predicts, “that the Pace of Technological Advance Could Eventually Give Us the Ability to Conquer Any Disease and Even Cheat Death.”

Before the reader considers the views of Richard Dawkins, may I point out that the men of science already cheat death; transplants and pace makers are the first steps leading to some of the wonders of our technological future. I consider that this man has the ability to interpret

the scientific trends, which can suggest some aspects of our probable future.

He has written: “Where is humanity headed during the coming millennium? Will we colonise other worlds, redirect the flow of evolution, conquer disease and non-accidental death - and cope with the consequent overpopulation?”

Will we answer all outstanding questions of existence? Will science solve the riddle of human consciousness and will physics come to an end in the long sought Theory of Everything? Or will we destroy ourselves and all other life forms, in either a physical explosion or a biological one?” Nobody knows.

But we can make educated guesses. Prophets don’t have to resort to “stars”, tealeaves or crystal balls. There are other methods, which really work. Science itself can be used to prophesy.

The obvious method (not necessarily the best) is direct extrapolation of present trends.

The pre-eminent trend of our time is Moore’s Law. It is a trend in the true sense of the word (first stated in 1965 by Gordon Moore, co-founder of Intel). It is strictly all about transistors, but the implications are much wider. **The number of electronic logic units you can pack into a given area of integrated circuit doubles every eighteen months. It translates into a regular doubling in computer speed and memory size for a given cost.** Whichever way you look at it, computer power is increasing exponentially at a prodigious rate. The increase is expected to continue for at least the next 15 years.

Computers as powerful as today’s finest desktop machines will be small enough and cheap enough to be placed in Christmas crackers. Tiny computers will be surgically implanted in our bodies, to take over the functions of defective organs, to help the blind to see, or to give new functions that nobody ever had before. It may not come in the next century”, but Richard Dawkins expects “that during the third millennium Computer-controlled machines to be conscious”.

He continues.....”It is not difficult to make such forecasts. All I am doing is speeding up what we can do already, by a factor, which has been measured. It would be positively surprising if something like my prophecy for the early part of the next century doesn’t come true.

Whole new technologies will anyway spring up as the millennium advances and these are harder to predict.

Some are already dreamed about, but are still largely undeveloped in practice. Nanotechnology is the name given to the construction of tiny machines, on the molecular scale. We know such machines will work, because nature has already evolved them. Bacteria have a rotating propeller, driven by a molecular motor. In principle, we could manufacture this motor, or others to do different tasks. Such molecular machines could be cloned within the body, on a massive scale, thousands of times finer and more delicate than the surgeon's smallest instruments, and millions of times more numerous.

If ever the ancient dream of conquering death becomes a reality, nanotechnology will be deeply implicated in the triumph - or catastrophe. The resulting social and political problems - overpopulation for a start - will be harder to solve than the technical problems."

Richard Dawkins turns to Transport he states: "there is no obvious equivalent of Moore's Law when it comes to human travel at high speeds. We can't just extrapolate existing trends. He made reference to a fantasy story, in which the main character Phileas Fogg went around the world in 80 seconds. Travelling at the same speed it would take many generations of reproducing humans to get to the nearest star "Proxima Centauri", the individuals who finally arrived at the star would be as far separated from those who originally embarked as we are from the characters in the bible. Nevertheless he considers: - There is a reasonable chance it will be achieved before the next millennium is through.

If so, it represents the best chance we have of seeing dramatic evolutionary changes in the human frame."

Human Evolution. "Biologists commonly say that human evolution has stopped, but Richard Dawkins considers biological evolution is not out of the question, a lot can happen in the 30 to 40 generations that a millennium allows. The differences between the many breeds of dogs have been achieved in less.

It is often said that the human frame has not changed in 50,000 years, but we are not the same as each other. The small stature of the pygmies in Africa almost certainly represents a Darwinian adaptation to life in the deep forest. The timescale of their evolutionary divergence from their

non-forest dwelling cousins is thousands of years, or at most tens of thousands.

Even if human evolution has temporarily stopped conditions could easily change during the coming millennium and start again.

Space travel has been mentioned as one possibility to influence evolution, but well short of travelling to the stars, colonies might start up on our neighbouring planets. The deliberate “greening” of Mars is a real prospect, even leading to its atmosphere acquiring oxygen in an engineered version of the way Earth’s did when bacteria evolved billions of years ago.

Human technology has scarcely begun to exploit the prodigious versatility of domesticated bacteria.

However Earth-like we manage to make another planet, conditions would be so alien that human survival, and reproduction, would become hard. Though cosseted by third millennium medicine, Martian colonists would find it hard to survive, especially for infants. Natural selection, in the old sense of survival of the fittest, might start to bite again, and through subsequent generations, should result in considerable evolutionary changes from humans on Earth, enabling them to adapt to an alien environment. And if, as seems likely, there is little intermarriage between Marsian colonists and those who stay on Earth, it might not take long for our species to split into two. As for colonies around other stars, interbreeding with the home stock would become impossible. Divergence into separate species would be inevitable.”

Richard Dawkins has been talking about “adaptation to a highly artificial world, which would be true natural selection.” What about artificially guided evolution? Here we don’t need to talk about going to other worlds. The only barrier to it is political. If we wanted to make a new species of humanity, say - one that enjoyed servile labour and was reluctant to rebel - we could start now and achieve the goal within the third millennium. We have wrought dramatic changes in the form and behaviour of dogs, cabbages and maize cobs, yet we have kept our bodies as nature left them. It is technically feasible - and compared to interstellar travel relatively easy to bypass Darwinian evolution altogether and manipulate human genes directly. There are still technical problems, but this century’s Human Genome Project presages their solution in the next century. And the closer we get to that solution, the more urgently we need to solve the political and social problems that it will raise. Do we want a brave new

world of artificially constructed embryos, designer children, made to measure? Probably not. So how are we going to stop it, and the other advances that we fear? To attempt to halt the quest for understanding is unrealistic. We can't, and shouldn't, stop science; we can, and should, control the technology that flows from it. This is a political matter and the responsibility of all of us, including scientists who must learn political wisdom, and politicians who must learn enough science to understand the alien world towards which, like it or not, we are collectively racing."

Extracts taken from The Express, Thursday October 28, 1999