

The prevailing hypothesis for the formation of our Universe is known as "The Big Bang". About 13.7 billion years ago an extremely hot and dense point began expanding rapidly. The first cause of that expansion is unkown, but time itself is believed to have begun in that instant because conventional physics breaks down "before" it occurred. Some hundreds of thousands of years later simple atoms (mainly hydrogen) had formed that eventually, after millions more years, could condense into stars.

#### Universe

Beginning in oblivion
Primeval atom point
Forces once unified
Spontaneously tear apart
Creating space and time

Inflation for a millionth of a second
Mass from energy.
As it cools in a new expanse
Welcome first gravity
Then strong and weak nuclear
Electromagnetic might
By the first second fundamental particles take form

Nucleosynthesis Recombination

Now there is enough substance To be called a void

All the time in the Universe For Building blocks to coalesce

Until the first spark ignites
Hydrogen compressed to fusion
The first sun is born
A light to shine in the darkness

And then everywhere at last the sky is on fire

Circles in circles, background dispersed, defining a ghost of the past Is this the first or the last or the middle of infinity What was meant to be!

Cyclical regression
Exists, as observed
Chaos and imperfection is the seed of existence

Sown so that it will evolve

Universe of untold beauty Elegant, complete and free

Once the building blocks of the Universe were in place it was just a matter time. Stars gathered together into galaxies and the birth/death cycle of stars produced heavier elements, including carbon which provides the framework for all known organic life.

#### Grandiose

labyrinth

Supermassive centre - the lynch pin, focus point
Basis for growth to begin the task of spinning and congealing galaxies
Natural philosophy, language of god; - the Grand Book,
writes itself
Endeavour to discover or wander - endlessly in a dark

All Suns Born From dust and gravity Spheres in fluid Buoyant in the black

A stellar nursery, gas and colours Embrace the spiral arms of a billion brethren

Across aeons in silence Structure of the Cosmos takes form

Assayer and examiner
Theorised fields toward a proof
Non-intuitive - Cold dark matter
Self accelerating engine
Clusters will cluster if left alone
From finite mass or break the fundamental law

Living theatre
Ancient and young

Finite age limits
How much light we see
Era of stars entrenched
In a swirling ether

All Suns Born From dust and gravity Spheres in fluid Buoyant in the black

Symptom of the awe That we all feel Almost forever Is the longest time to be Ten billion years or so after the Universe began, in an unassuming corner of an ordinary galaxy, a few coincidental factors conspired to enable organic life to evolve. From primitive beginnings, life developed self awareness and started to ask questions about its own origin. As part of that inquiry the life form built a probe to travel far out into space to gather information. The little machine carried a record of life on its home planet in the hope that at some point in the future contact might be made with another intelligence.

# Voyager

Nurtured by nature in a quiet corner Left alone to reach potential Quest for adventure is an ingrained trait Gift or curse of sentience

Little explorer as an ambassador Perhaps will be the only evidence left Civilisation that has reached outward Looking back on the pale blue .... dot

> How long will we have to wait to know? To discover whether we are alone Drake's equation inspired a message A Voyager will carry those hopes

The farthest flung object of mankind from home A mariner in an endless ocean.
The grand tour is only just beginning and may herald the greatest moment ....of all time A collective outlook

This piece of metal, immortal, floating in heaven

Without understanding, existence is for naught Observance is a purpose in itself

How long will we have to wait to know?
To discover whether we are alone
Drake's equation inspired a message
A traveller carries those hopes
Termination shock, heliosphere
Outside the zone of the solar wind
The space probe Voyager
The spirit of man

A major step forward in the search for answers posed by intelligent life would be the development of a technique to travel faster than light, in effect being able to warp space-time so that vast distances could be compressed into manageable journeys. This achievement, discovery and control of "The Bridge", amounted to the greatest scientific breakthrough in history.

### The Bridge

A fundamental shift in the understood laws Enables the seemingly impossible Think outside the curve to find the traverse Shortcut solution to the main constraint The hindrance of distance

The bridge is the way to cross the great divide The once fabled "other side"

No violation
Not superluminal
Negative matter
Supports a wormhole in the 'brane

Prospects of immediate end
The sweet touch of fate's kiss if such things could exist
What chance? Of paradox

It is the duty of a sentient being to supersede itself in evolutionary terms, which requires a fair degree of practical optimism. All intelligent life forms at some point face the stark reality of self-destruction versus the capacity to overcome the most grave of challenges.

### Extropy

The spread of man across the stars
In the debt of true power barnessed
Ever present, ever pervasive
The eureka moment
Nature tamed for the common good
The only way is up
Dance a fine line with self destruction

Extropy Future's dream

Interdependence for survival Benevolent map, the way forward

Altruist learning machine
Serve and be served: symbiosis
Implement the blue print of the prime directive

While the base human pursuit of art and philosophy Can be perfected by the decree of immortality

> Extropy Inevitably

Final synthesis Transferral of conscience Solving the riddle Mortal flesh superseded The leading theory for how the Universe is projected to end is simply that it will expand until all energy dissipates and the average temperature reaches absolute zero. Such a state will be a comparable "nothingness" to the initial state of "everythingness" prevalent at the Big Bang. Perhaps they are one and the same. In any event, this possible future is a very long way off, measured on a scale of a trilliontrillion years.

#### Heat Death

From dim remains
Of the last dying sun
An ancient remnant
Of all that has now gone
Distant age
When the stars ceased to shine
New dark era, dawns

There was no reverse
For the arrow of time
Densities disperse; unbroken line
Toward equilibrium
Light is wearing out
Absolute zero

When everything is nothing, the perspective will change Decay to radiation, like dust on the wind...heat death

Yet, there is glory in oblivion

Approaching the end of time When the last photon will die Fading away Only silence survives

No Omega point
A gradual end
Final dissipation to mute chaos
.....heat death!

Twilight in the garden of the Universe
The human cult's Empire long since bid farewell
All the shades of light, gone from here forever
The moment that is now should be as your last

Consciousness remains awake in the gap A memory, dormant, in hyperspace

Maximum entropy

In 1956 Isaac Asimov published a short story entitled "The Last Question" according to which mankind will one day develop an artificial intelligence that, in turn, designs its own successor. At some point in the far future the consciousness that remains of humanity will merge with the intelligence to create a singular entity. That entity permeates all time and space as the Universe ages and comes to solve every problem it ever faced...except one, that being "how can the net amount of entropy in the Universe be massively decreased?"

After heat death has occurred time ceases to have any meaning and, effectively, the Cosmic entity has an eternity to solve the last question. Hence, finding the answer is inevitable. But what could be the consequence of putting the solution into effect? Perhaps it turns out that the price is destruction - which is the last experience left for an eternal being. If the entity knew the solution lead to the creation of a new Universe that would be the ultimate act of love; because there can be no greater sacrifice than the knowing acceptance of oblivion, in order for a new life to be able to contemplate the new Universe.

## **Outside Time**

I exist in the empty dimension at the scale of the multi-god Where The Last Question is answered by an eternity to choose Diminished or absolute

The secret of the nature of everything Can only be learned ... outside time

The outer edge is finally surpassed The entropy barrier The substance of one fabric Every point in every place

To decide to enact the sequence Carefully prepare my fate From the vantage of infinity The end of all ends, an open gate

Blown away by the great creation Every God has its day Overlaid by the next inflation Reborn outside time

Destroyed for love, for now....

Music by Blade & Monsterworks; except "The Bridge" by Wilkinson/Monsterworks; Lyrics by Jonathan Grenville Higgs for Eat Lead and Die Music, © 2014. Recorded, Mixed and Mastered by Lewis Childs at Earth Terminal Studios, Hampshire, UK, 2012. Fractal Artwork by Sven Geier (www.sgeier.net).