

# **General Theory of the 3D Cobweb Universe**

**Author Contact:- tetrahedron\_1\_3\_6@aol.co.uk**

## **ABSTRACT**

This is the first "theory" in a sequence of three.

[by:- **tetrahedron\_1\_3\_6@aol.co.uk** All should be available on <http://vixra.org>]

[1] General Theory of the 3D Cobweb Universe [<http://vixra.org/all/1404>]

[2] Spherical Topology - The Basis for Fundamental Forces of the Universe

[3] Sphere Geometry of Forces & Fundamental Particles of the Universe [**viXra:1311.0196** ]

There was only minor connections of logic along the sequence (insufficient for a reference or a Wikipedia citation!). The flash of inspired intuition overwhelmed logic and the "verifiable facts" in the General Theory of the Cobweb Universe. Each theory was "believed to be better" than the previous one, (in the areas that it covers) without any verifiable proof!

This is called a General Theory because it covers many diverse aspects.

### **The consequences & conclusions:-**

NOTE: As most of these concepts are of a "jigsaw puzzle type theory", be aware that if one concept is flawed the others can remain valid.

Overall, this puts forward a comprehensive, "collective theory" exploring new possibilities and to explain the diverse observations made, including:-

[1] A stringy universe.

[2] Small even-sized particles of energy & matter.

[3] the number of other universes limited in number by "quantum numbers".

[4] there is a family tree of universes.

[5] there is a family tree of forces.

[6] local expansion leading up to creation of the next multiverse level. No dark energy required, it is just the natural evolution of the multi-dimensional, multi-universe!

[7] multi-dimensional, multi-universe nature of matter.

[8] This theory ties up with string theories for 11, 16 and 26 dimensions.

### **A brief overview of the contents & the 11 novel concepts:-**

The new concept / aspects of /consequences of the embryonic "3D cobweb structure of the universe":-

Everyday & scientific assumptions -Summary -Details -Scientific

[1] **Cubically connected space**

[2] **Interconnectedness & intertwining**

[3] **"Surface splitting" of universes**

[4] **Space-time start**

[5] **The quantum numbers of the evolving family of universes**

[6] **The evolving family tree of universes**

[7] **Helices of space & double helices of time. Time is an UNSTABLE "substance"**

[8] **Entropy of Dimensional Expansion**

[9] **The Big Bang**

[10] **The matter and gravity**

[11] **The Holographic principle.**

Testable aspects:- 5 verifiable testable observations.

## **CONTENTS**

### **INTRODUCTION**

Assumptions -Summary 1

Assumptions -Details 2

Assumptions -Scientific 3

[1] First concept 4

### **Cubically connected space**

[2] Second concept 5

### **Interconnectedness & intertwining**

[3] Third concept 6

### **"Surface splitting" of universes**

[4] Fourth concept 6

### **Space-time start**

[5] Fifth concept	6
<b>The quantum numbers of the evolving family of universes</b>	
[6] Sixth concept	7
<b>The evolving family tree of universes</b>	
[7] Seventh concept	7
<b>Helices of space &amp; double helices of time. Time is an UNSTABLE "substance"</b>	
[8] Eighth concept	8
<b>Entropy of Dimensional Expansion</b>	
[9] Ninth Concept	9
<b>The Big Bang</b>	
[10] Tenth Concept	9
<b>The matter and gravity</b>	
[11] Eleventh Concept	9
<b>The Holographic principle.</b>	
[12] Summary	9
The consequences & conclusions.	
[13] "Results and analysis"	10
The phenomenon to be explained by any theory of the universe (& quantum mechanics and gravity if possible) (& the value constraints where appropriate)	
[13a] Parameters	11
[13b] "Results" codes	11
[13c] Theory applicability	12
[13d] Results summary	13
[14] Testable aspects	13

This is presented in the form of a seminar because:-

- [1] It presents over ten different concepts that sometimes have little inter-relationship.
- [2] There is no experimental results. (but there is observational evidence of others mentioned in the verifiable tests.)
- [3] There is little complex mathematics or equations. (There some complex concepts to stretch the imagination!)
- [4] The imagination needs to be engaged to understand the background to the concepts conceived.

Welcome to the thoughts that will probably stretch your imagination more than any other in your lifetime. I plan to take your imagination beyond time and space - to before the big bang. This is thinking outside the box. This is thinking outside the world. Indeed, this is thinking outside the universe!

Firstly I need to put this theory into the context of scientific theories. Most theories are built on some assumptions, previous theories and on observations, to a greater or lesser extent. Before we move on to the assumptions, we will move one step beyond this, to the question of freedom of choice or free will. In general, the scientific view is at one of two extremes. One view is that everything is predetermined and that consequently there is no freedom of choice or free will. The other extreme is that at the most basic, smallest level, everything is random, uncertain and unpredictable. This randomness is consequently tied in to freedom of choice or free will. Someone's view of freedom of choice or free will cannot be cut off from their view of their basic assumptions and / or religion. Christianity tends to have a dichotomous view of free will. One section of the bible will speak of choosing between good and evil, whilst another part will speak of everything being God's will.

Albert Einstein's comment on his view was "God doesn't play dice".

We will use initials for an overview of assumptions and free will.

### **Assumptions - Summary**

Freedom of choice	[xF] = none [F] = yes
D Dream	[xF]
I Imagination	[xF]
C Chemical	[xF]
E Electrical	[xF]
.	
G Games holography	[xF]

R	Re-enactment holography	[xF]
E	Entertainment holography	[xF]
A	Area holography	[xF]
T	Two states simultaneously	([xF]), [F]

P	Progress of time	[N/A]
I	"Instant point" of time	[N/A]
L	"linear" progression of time	[N/A]
E	Experiments same every time	[N/A]

### .Assumptions - Details

Now, back to the assumptions hidden behind everyday life.

Common assumptions:-

[1] My experiences are not part of

- [a] "someone" else's dream. If this was true there would be no freedom of choice. or
- [b] "someone" else's imagination. If this was true there would be no freedom of choice.

[2] My sensory experiences are directly interpreted by the mind,

[a] with the sensory experiences, which are "experienced" being "experienced" in an external "real world" not artificially, chemically or electrically induced. If this was true there would be no freedom of choice.

[b] with any given input giving a fairly uniform output. e.g. a musical sound repeated will be heard the same each time.

[c] with the same musical sounds repeated at different times evoking very different memories of course.

[(A brief explanation before the next assumption.) Holography is the ability of 2 dimensional information to describe something that is 3 dimensional. The hologram on your credit card looks like a 3 dimensional image.]

[3] My experiences are not part of

[a] a holographic "game simulation", where the "player" makes whatever "choices and moves" they desire, but, you are one of the characters in the game! If this was true there would be no freedom of choice. or

[b] a holographic historical re-enactment. where the "player" makes no choices, but it is a "virtual playback" of an individual's [or group] life. The life could be from facts about someone from the past or it could be wholly fictionalised! You are one of the characters in the game! If this was true there would be no freedom of choice. or

[c] a holographic entertainment programme. If this was true there would be no freedom of choice. [I suspect that the vast majority of the life of the vast majority of people would be the torture of boredom, not entertainment to someone else!]

### Assumptions - Scientific

Now two scientific theories that influence assumptions:-

[4] My experiences are not part of the Holographic principle.

The holographic principle states that the description of a volume of space can be thought of as encoded on a boundary to that region. For black holes the description of all the objects which have "fallen in" can be entirely contained in surface fluctuations of the event horizon. The universe could be "fully described" by the holographic information on the universe's "event horizon boundary surface!". The "information" on the "event horizon boundary surface" would not be influenced by the thoughts of an individual on the planet Earth. If this was true there would be no freedom of choice.

[5] **My experiences are part of the** Uncertainty principle

In quantum mechanics, the Heisenberg uncertainty principle states that certain pairs of physical properties, such as position and momentum, cannot be **simultaneously** known to extremely high precision. That is, the more precisely one property is measured, the less precisely the other can be measured.

An extension to this theory is the Schrödinger's Cat thought experiment: A cat, along with a flask containing a poison and a very weak radioactive source, is placed in a sealed box. If an internal Geiger counter detects a radioactive disintegration, the flask is shattered, releasing the poison that kills the cat. The Copenhagen interpretation of quantum mechanics implies that for a while, the cat is simultaneously alive and dead, until the "observation" is made. Of

course when we look in the box, we see the cat is either alive or dead, not both alive and dead.

A further extension to this theory is the tie-up between quantum uncertainty, causality and freedom of choice. The theory is that:-

[a] if the cat is always either alive or dead, there is no randomness. Everything (past, present and future) is pre-determined. If this was true there would be no freedom of choice.

[b] if the cat is both alive and dead, before being "observed", there is randomness. Nothing is pre-determined. Everything is "decided" by the outcome of the "observed" random events. **If this was true there would be freedom of choice!**

Now for time assumptions:-

[6] An effect follows a cause as time progresses.

[7] Time progresses in "one direction" only. We only "see" "one instant point" of time

[8] My time experiences are part of an unbroken "linear" progression.

[9] If two people do exactly the same experiment or process, in the same order, under identical conditions it will produce the same result. This is the major basis for western science. Of the options covered by the initials DICE GREAT, only option "T" has freedom of choice option [F], if two states can coexist.

There are different ways to group scientific theories. My groups are:-

[1] precise, accurate and measurable theories e.g.  $E=mc^2$  (The equation only.)

[2] imprecise and difficult to measure theories e.g. There is "a life" after death.

[3] "step ladder" theories, where a part of the theory relies on a previous part being true. e.g. Evolution relies on the theory that there are variations within a species & some of that variation is passed on to offspring.

[4] "jigsaw puzzle" theories where there are many part to the theory, each of which adds together to give a more complete picture. Each part's validity is independent of the other parts. e.g.

Some of the "jigsaw puzzle" pieces leading to the "Big Bang Theory". (Not the tv comedy series.)

[a] The red shift in the spectrum of galaxies is caused the galaxies moving apart

[b] The microwave background radiation is a relic radiation from the past

[c] The microwave background radiation wavelength has been lengthened dramatically from its original wavelength by the expansion of the universe.

[d] The microwave background radiation origin was from the phase change from hydrogen plasma to neutral hydrogen.

The theory I am going to explain has aspects of the last three types.

There are different ways to explain a theory. I could give you the history of my thoughts on the subject. I could start at the very beginning, because this does certainly have a beginning: at the beginning of time! or I could start now and work backwards.

I'll start now and take you on a quick tour, back to the beginning, but I'll be describing the scenery of the contexts on the way. That way you will not get out of your depth too quickly. I can then move forward in time, showing you where the "jigsaw puzzle" pieces fit into the overall theory.

I'll start at the beginning and take you on the "Journey of your lifetime - What happened before the Big Bang!".

[1] First concept

### **Cubically connected space**

If you were born before 1960 you might have played board games as a child. For many children, nowadays, if it is not electronic it quickly becomes an "I am bored" game. These games often used two dice (or one die). Each die would have opposite face numbers adding to seven.

Now, imagine you have four small, identical black cubes, like four dice. You lay them on a flat surface and push them together to make a two by two matrix, with each cube touching two other cubes. You now place four more cubes, which are identical to the others, except that they are clear, directly on top of the black ones. You now have two aligned layers: a black one with a clear one on top.

Now hold that image whilst we have a brief diversion.

Look to your right. Now look straight up. Now look straight at me. You have just observed the concept of our three dimensional space universe. The light leaving me to travel to your eyes takes a finite amount of time to travel that distance. During that time I am getting older! For someone about a third of a metre or a foot away from me, I will age about one thousand millionth of a second during the time the light takes to reach their eyes! Everyone is older than they appear! When you are looking at me (or anything!), you are also looking into the past; at the time dimension effect in our universe.

Now, another brief diversion from our stack of cubes or dice.

You would think there would be a large number of possible arrangements for stacking four black cube and four clear cubes.

First cube - 2 possible colours - 8 possible locations. (I am including BOTH layers!).

Second cube - 2 possible colours - 7 possible locations.

Third cube 2 possible colours - 6 possible locations.

. . . and so on. There are surprisingly few totally unique possibilities.

The possible arrangement of the stacked cubes.

Now back to the 4 clear dice on top of 4 black dice. You can look through the clear dice in two horizontal dimensions of the three space dimensions but not the vertical one. [Arrangement 1]

We need to look at more arrangements. We now take two adjacent clear blocks and swap them with the two adjacent black blocks underneath. There is a clear view in only one dimension. [Arrangement 2]

The rotation of the four blocks that we moved through two right angles matches the original version of two separate layers tilted on its side. If the four blocks of the side layer had been rotated through only a right angle of ninety degrees, this arrangement would match an arrangement of one of the rotations with one black and clear cubes swapped over as described below.

Back to the four clear cubes on top of four black ones again. Swap over a stack of black and clear. Now go to the diagonally opposite corner stack and swap them. [Arrangement 3]. If the top layer is rotated through a right angle this gives a previously mentioned arrangement.

Back to the four clear cubes on top of four black ones again. Now one black die is swapped with the clear one above it. We look again and see that, as before, we can look through the two horizontal dimensions, but not the vertical one. [Arrangement 4]

Now the top layer is rotated through a right angle of ninety degrees. Not surprisingly, we can see through the top layer in the two horizontal dimensions. Now we can also see through the vertical dimension. [Arrangement 5]

A further rotation has the same effect, as does a further rotation of ninety degrees. Three of the four rotations give three dimensional clear views. For each of these three special cases it would be possible to see through a line of identically arranged cube arrangements in three different dimensions. [Arrangement 6] & [Arrangement 7]. So there are only seven possible arrangement.

The images of the three-dimensional clear view is what you need to put in your memory banks to help understand the big picture later on.

Try and get more than seven completely different arrangements by playing around with kids building blocks, but remember each sub-cube must be identical in all three dimensions.

[Please be patient with me as I air my personal little annoyance.]

The LOGICAL numbering system for those who do not know any better! (like Americans).

The U.K. counting system (pre 1970s anyway):-

$(1,000,000)^1 =$	1,000,000			million
(	= 1,000,000,000	thousand	million	
$(1,000,000)^2 =$	1,000,000,000,000			billion
(	= 1,000,000,000,000,000	thousand	billion)	
$(1,000,000)^3 =$	1,000,000,000,000,000,000			trillion
(	= 1,000,000,000,000,000,000,000	thousand	trillion)	
$(1,000,000)^4 =$	1,000,000,000,000,000,000,000,000			quadrillion

The prefix bi- means 2 ( $^2$ )! The prefix tri- means 3 ( $^3$ )! The prefix quad- means 4 ( $^4$ )!

The old British thousand million is called a billion in America nowadays. (I don't know when or why it became different). The current American system rapidly runs out of words for large numbers. There are a lot of very large numbers needed to describe our universe.

A useful format to inform the ignorant:-

quadrillion(UK) (= 1,000,000,000,000,000,000,000,000)

Useful new names (especially for newspapers) would be:-

k\_million for [thousand million(UK) = billion(USA) ]

Similarly for these k\_billion k\_trillion

[2] Second concept

### **Interconnectedness & intertwining**

Imagine you have a clear drinks bottle. You pour half a cupful of water into it. You then carefully pour half a cupful of oil into it. The oil floats on top of the water as a separate layer. You move the bottle a little. The oil and water intermingle a little at their mutual boundary & then quickly separate again. Now stretch your imagination a little - the oil gets stretchy and stringy like the putty like stuff used to stick posters on walls and the same happens to the water. Shaking the bottle intermingles the two liquids, but every bit of oil is interconnected. Every bit of water is interconnected. Now the next step. The overall volume stays the same, but the water expands and becomes less dense. The oil shrinks and becomes more dense. This will then start to look a bit like a coarse bath sponge. Now another step. Another stretchy stringy liquid is added which does not mix with the water or oil. If one liquid expands, one or both of the other liquids shrinks.

Now for a gigantic stretch of the imagination! Instead of three intermingled liquids we have three intermingled universes! The dimensions of one universe cannot mix with the dimensions of another universe. The dimensions of the other two universes would not intrude on the other universe. The three universes intermingle and intertwine.

The three universes can be pictured like an extrapolation of the black and clear cubes. The two universes being like two blocks of cubes with intertwining, with the clear cubes representing the dimensions of one universe & the black cubes representing the dimensions of the other universe. The intertwining is like the "stringy" oil & water example.

Store this as another picture for your memory bank.

[3] Third concept

### **"Surface splitting" of universes**

The "parent" universe can be thought of as being the surface of a balloon. The two "children" universes start out as the inner and outer surfaces and then unzip into two separate universes, like the unzipping of the strands of a DNA molecule. Each of the two new universes gain a dimension in the process.

[4] Fourth concept

### **Space-time start**

Now for more imagination exercises. Earlier on you looked right, up and forward. The three dimensions of space and there is time as well. Now imagine we lose one space dimension. We are on a flat plane. We could never see inside a circle. Now imagine we lose another space dimension. We are down to one space dimension and one time dimension. We could not see past a dot! Now for a gigantic shrinkage of the imagination! That one space dimension and one time dimension amalgamate into a single space-time dimension!

Now we are at the beginning!

When that single space-time dimension splits to form one space dimension and one time dimension, time begins (so something can happen!) and space begins (so there is somewhere for something to happen!). Any concept of "before" the creation of the one space dimension and one time dimension universe is totally meaningless, because time did not exist and space did not exist.

More pictures for your memory bank.

A black hole could be thought of as a region of the universe within which space and time are amalgamated, but mass and hence gravity still exists. Is gravity a force more basic than the creation of space & time?

[5] Fifth concept

### **The quantum numbers of the evolving family of universes**

We now have our intertwined universes of energy, intertwining & intermingling at the speed of light. Expanding and contracting at the speed of light in an infinitesimally small omniverse of

universes. All the runaway simple harmonic motion energy movement and entanglement is building energy and evening out the energy distribution along the strands or strings of the universe. Eventually, in one of the universes, the strands or strings of the universe (ours or one of its ancestors) gets

[1] squeezed beyond its infinitesimally small diameter limit

[2] gets stretch beyond its energy capacity limit

[3] gets stretch beyond its tension energy limit.

The universe shatters into energy fragments. The enormous pent up energy is released into very small, very evenly sized packets of energy (that will eventually change into the building blocks of matter - the fundamental particles). strung along the remnants of where the strands used to be, but that strands were expanded by many magnitudes by the inflationary stage of the universe. This shows up in the stringiness of our universe.

There is not just one universe created, not just one inflation period. There is a family of universes created, each with its unique "quantum number" because they started at quantum sizes! It starts with the splitting of the space-time amalgam splitting into the one space dimension and one time dimension universe. All subsequent universes split into two "child universes" by adding one time dimension to its own time dimension(s) to create one of its "child universes" one space dimension to its own space dimension(s) to create the other one of its "child universes".

The release of the pent up entanglement energy and "entropy of dimensional expansion" energy drives the splitting of the universes and the expansion of the universes. Every universe with the same number of total dimensions are entangled and known as a multiverse. There is no entanglement between universes on different levels with different number of total dimensions. Each change of level produces, inflation (nominally because extra dimensions are added, but magnitudes more inflation also occurs) new forces and new phenomena.

[6] Sixth concept

### The evolving family tree of universes

Code for the universe members of the family tree [3,1] means [3 space, 1 time] dimensions

<u>phenomena created</u>	<u>{forces} &amp; {dimensions of universes}</u>
<b>[a] space-time amalgamated</b> (no time, no space) <b>INFLATION</b>	<b>[1]</b>
<b>[b] space and time</b> <b>INFLATION</b>	<b>[1,1]</b>
<b>[c] energy &amp; radiation</b> <b>INFLATION</b>	<b>[1,2] {electromagnetic} [2,1]</b>
<b>[d] mass &amp; inertia</b> <b>INFLATION</b>	<b>{gravity} [1,3] {strong} [2,2] {weak} [3,1] &lt;-US</b>
<b>[e] ?? { } { } { }</b>	<b>[1,4] { } [2,3] { } [3,2] { } [4,1]</b>
<b>For multiverse [d] {gravity} is a force between [1,3] &amp; [3,1]</b>	
<b>For multiverse [e] { }{ }{ } are the forces between [1,4] &amp; [3,2], [2,3] &amp; [4,1], [1,4] &amp; [4,1]</b>	

[1,3] & [3,1] are dimensionally opposite universes. This is why gravity is so weak.

Our universe [3,1] will evolve into both [3,2] and [4,1] universes.

{ } is a type of force between the two intertwined universes within the same multiverse.

There is no forces between the multiverse levels.

The fact that a fridge magnet is magnetic shows that (an invisible to us) part of its multidimensional nature is in both the [1,2] and in the [2,1] universes simultaneously with the part normally observed in our "normal universe".

For the next multiverse, where each universe has a total of 5 dimensions it would be very difficult to predict what two? phenomena will appear. (They do seem to be facets of energy.) It would be predictable that in the range of strengths of the six forces created there would a much stronger and a much weaker "fundamental" force than the forces we now know of.

[7] Seventh concept

### **Helices of space & double helices of time. Time is an UNSTABLE "substance"**

The tangled and stretched space-time amalgamated universe shattered, expanded and inflated into the one space dimension and one time dimension universe. When the extremely high energy, high tension, intertwined strands of the expanding universe shattered there was a tremendous recoil of the extremely small, extremely uniform fragments. Not only did the strands shrink in length, but they coiled up into tightly bound helices. And, then, further so that the helices themselves coiled up into helices of helices, like the strands of DNA. The single coils were the quanta (the smallest, indivisible chunk) of one-dimensional space. The double coils were the quanta (the smallest, indivisible chunk) of time. The double-helix time quanta are most unstable when associated with matter. (The long term instability of the proton?) The double coils of time are intrinsically, energetically unstable. They eventually uncoil into single coils of one-dimensional space. The "decay of a quanta of time" creates a "quanta of one-dimensional space". This creates an expansion of space. (The whole space-time measurement reference frame expands, so that any distance measured, or distance a light beam is timed over, or any cumulative wavelengths that is measured, will remain the same). The extremely local expansion of space "pushes outwards" on the rest of the universe. For each force there is an equal and opposite reaction. The rest of the universe pushes back of course!

Space is expanding because time is decaying (time's one way arrow). The rest of the universe pushes back with a force that we all feel. This force is pushing us towards the earth. We think gravity is pulling us towards the earth, but in fact, the rest of the universe is pushing us towards the earth! This means that there is no gravimetric attraction force, but a "rest of the universe pushing" force! Gravity waves would not exist!

With the photon being a spinning helix (like all the other fundamental particles) it would always have wave and particle properties simultaneously. No randomness in property. No freedom of choice! (According to some theories.)

[8] Eighth concept

### **Entropy of Dimensional Expansion**

[8a] Another everyday start. Boiling a kettle. As heat is added the water molecules move around faster and faster. At 99 degrees centigrade 18 grams of water has a certain amount of energy. At 101 degrees centigrade 18 grams of steam has significantly more energy. Most of the extra energy is because of the change from the semi-ordered structure of water to the random structure of steam with the molecules being unattached to each other and much further apart. The phase change from liquid to gas requires the input of energy. This is called entropy energy. When the gas turns back to liquid that energy is given out. The steam gets hotter because some of its molecules have given out entropy energy and returned to their liquid state. There is a thermal or radiation legacy in the steam -it is hotter.

[8b] There are two effects worth noting that is caused by the expanding universe .

[8b1] Firstly, as it expands it gets bigger! The distance between galaxies would increase. The time for light to travel between the two should increase. I say SHOULD because again there is two possibilities. [A] All cosmic "constants EXPAND at the same rate as the expansion of the universe. (This would give different lengths of histories and properties, than if the other possibility is the truth) [B] All cosmic "constants" are constant throughout the evolution of all universes.

A common event throughout the universe is an electron in an orbit around a nucleus drops from a high energy state to a lower energy state. When this happens a photon (or packet of) electromagnetic energy is emitted. The orange light from a sodium street light is an electromagnetic energy radiation caused by this change. (This obviously shows that not all radiation is harmful!).

Now if we look at an atom in the distant past compared to one from the present we could see that our present one is much expanded compared to the old one. This would mean that the energy levels are further apart in the newer atom. This would further mean that more energy would be given out when the electron dropped from the high to low energy in the newer atom. This would mean that the various relative bands of light in a spectrum from the past would appear to be moved towards the lower energy, red end of the spectrum. This effect is also caused by objects moving away from an observer at faster speeds!



I said that the energy levels are further apart in the newer atom. Well, another option is that the wavelength of the photon emission is tied to the differences in the distances between the energy levels. If this is so, the older atom has the electron orbitals closer together, so the wavelength will be smaller. This would mean that the various relative bands of light in a spectrum from the past would appear to be moved towards the shorter wavelength, blue end of the spectrum! This effect would counteract the redshift caused by objects moving away from an observer at faster speeds.

[8b2] An expanding universe is adding more space! Where does it go?

The expanding universe can be likened to a balloon expanding. A square area expands, by filling in space in the centre, pushing the older part apart to the edges. Another two dimensional example is the way ripples expand on the surface of a lake when a handful of pebbles are thrown in the water. The same is really happening in the universe, but in three dimension. Background radiations imprinted on the cosmos in the far distant past show up as fragments separated by large angular distances. They would also be more feeble, more dispersed, more even and moved to longer wavelengths, and higher frequencies.

The omniverse (which contains all the multiverses, each of which in turn, contains a number of universes) - the omniverse, had a starting energy and causal direction. (The order of cause & effect.) (More subtly, that sentence can also be read as there being a "starting energy direction".) The starting energy and its distribution "drives" the existence & evolution of EVERYTHING!

One of the laws of physics states that energy / matter cannot be created or destroyed. The laws of physics state that entropy energy is created when something breaks up into smaller pieces.

The laws of physics do not state that time / space dimensions cannot be created or destroyed. The laws of physics do not state that a universe cannot have more than one time dimension. The initial multiverse is very entangled & coiled up. There is an enormous "untangling & uncoiling pressure". This would be the source of the "starting energy" and the "driving energy" existence and evolution of EVERYTHING!

A universe changing into two new ones would need an enormous amount of entropy energy!

[9] Ninth Concept

### **The Big Bang**

Our multiverse level was created from energy after the last inflationary period. As the energy cooled, energy to matter conversions occurred, at first very briefly, before turning back to energy. The speed of light energy would quickly distribute the energy to minimise any energy differentials. Eventually, there would be an almost instantaneous "phase transition" from energy to plasma matter, when the whole universe had cooled sufficiently. There would be a much slower "phase transition" from plasma matter to atomic matter because the universe had expanded by an enormous amount in the interim.

There should be a residual radiation signature for each type of particle of plasma matter created from the energy and it should be displaced by the angle corresponding to the amount of expansion of the universe that had occurred between creations.

There should also be a residual radiation signature for each type of particle of atomic matter created from the plasma and it should be displaced by the angle corresponding to the amount of expansion of the universe that had occurred between creations. There should be relic background radiation signatures for lithium, helium and deuterium (a hydrogen isotope) as well as the well known microwave radiation from the phase change from hydrogen plasma to neutral hydrogen.

The expanding universe can be likened to a balloon expanding. A square area expand, by filling in space in the centre, pushing the older part apart to the edges. The same is really happening in the universe, but in three dimension. The thermal heat energy gets "left behind" as the expansion occurs, but the wavelength of the radiation expands with the universe, showing up as apparently colder radiation. The older radiation is also displaced angularly from the newer expansion created parts of the universe.

The evolution of the universe after the creation of the cosmic microwave background radiation is fairly well explained elsewhere on the internet.

[10] Tenth Concept

### **The matter and gravity**

Matter, inertia, the weak and strong and gravity forces were created along with our multiverse. The most logical conclusion would be that matter was equally divided amongst the three universes, but it may be more strongly associated with time (or space) dimensions. Similarly, the effects of the co-tangled universes may be more strongly "felt" nearer large masses in our own universe. Two-thirds (or more) of the matter may be in the other two co-tangled universes.

There is nothing in the laws of physics to prohibit the effects of gravity from the "extra-universal matter" being "felt" in our universe. This could be a dark matter candidate.

[Another dark matter possibility (more well known). The virtual electron-positron pairs created have mass during their lifetime. (Properties:- mass, "cold" and dark.) What is this mass contribution?]

[11] Eleventh Concept

**The Holographic principle.** [As mentioned in the introduction on assumptions]

The holographic principle states that the description of a volume of space can be thought of as encoded on a boundary to that region. For black holes the description of all the objects which have "fallen in" can be entirely contained in surface fluctuations of the event horizon. The universe could be "fully described" by the holographic information on the universe's "event horizon boundary surface!". The "information" on the "event horizon boundary surface" would not be influenced by the thoughts of an individual on the planet Earth.

A black hole gives off Hawking radiation from its surface, because of electron - positron radiation annihilation near the surface of the event horizon. From the equivalence of mathematics and physics the inner surface of a black hole, as "viewed" from inside the black hole must also be giving off Hawking radiation. From the same equivalence point of view our universe's "event horizon boundary surface" as seen from our point of view must also be continuously emitting Hawking radiation. The "event horizon boundary surface" would be rushing away at (a fairly constant) almost the speed of light. There should be a (very) long wavelength radiation which is extremely evenly angularly distributed. It will be near the limits of redshift.

[12] Summary

**The consequences & conclusions.**

NOTE: As most of these concepts are of a "jigsaw puzzle type theory", be aware that if one concept is flawed the others can remain valid.

[1] A stringy universe.

[2] Small even-sized particles of energy & matter.

[3] Multi-dimensional, multi-universe nature of matter.

[4] Energy forces between energy universes.

[5] Matter forces between matter universes.

[6] Other universes limited in number by "quantum numbers".

[7] Within galactic strings the older galaxies will be towards the centre, because of the "seeding effect" of the break up of the original cobweb structure.

[8] Local expansion leading up to creation of the next multiverse level. No dark energy required, it is just the natural evolution of the multi-dimensional, multi-universe!

[9] Gravity and / or mass can be hidden from us out of our universe.

[10] Forces can be hidden from us out of our universe.

The string theories tie up with degrees of freedom for groupings of universes containing our universe and its "ancestors" or "children". String theories for 11, 16 and 26 dimensions exist

[1,3]+[2,2]+[3,1]=12 dimensions - (12-1) degrees of freedom

[2,1]-[1,1]+ above=17 dimensions - (17-1) degrees of freedom

[3,2]+[4,1]+ above=27 dimensions - (27-1) degrees of freedom

There are string theories for 11, 16 and 26 dimensions.

Where does the energy come from originally, for the entanglement, expansion and universe splitting, "entropy of dimensional expansion"? (Still a difficult question for cosmologists)

### [13] "Results and analysis"

#### **The phenomenon to be explained by any theory of the universe (& quantum mechanics and gravity if possible) (& the value constraints where appropriate)**

This is like most scientific results, there is a degree of variability in the "results". Some of the "possible results values" would overlap with the other results to different extents. Occasionally a YES and a NO result would overlap, because there is so much uncertainty!

This is unlike most "scientific" results, because it has no numerical values, but only qualitative results.

For the most part, even with the well established "standard physics viewpoint" I do not know how definitive the explanation is and how much room there is for alternative theories to explain the observations.

NOTE:- Some of the listed items for explanation apply only to the "cobweb theory". The "cobweb theory" merges into the "big bang theory" very soon after the big bang starts, so the "standard physics viewpoint" of the two theories then merge. The "standard physics viewpoint" really covers many theories, which may not mesh together compatibly.

The "phenomenon results" have been roughly grouped by similarity.

The number of "cobweb theory" items are not added to the list to increase the count number for the theory, but to highlight areas where more thought and work is required.

### [13a] Parameters

NOTE:- Some of the listed items for explanation derives from the "cobweb theory" only.

[1] Universe cobweb structure

[2] Causes of inflation and expansion

[3] Matter/energy creation

[4] Virtual particle creation => virtual energy creation => virtual universe creation

[5] Virtual anti-universe creation made of anti particles to "balance out" our particle universe

[6] Pre-inflation conditions

[7] Universe early inflation

[8] Universe expansion

[9] Locally enhanced expansion of universe

[10] The destiny of our universe

[11] The past of our universe

[12] The origin of our universe

[13] The arrow of time

[14] The possibility of time travel

[15] Universe constants

[16] Creation of fundamental forces

[17] Age of stars

[18] Origin of vacuum energy

[19] Origin of dark energy

[20] Origin of dark matter

[21] Origin of cosmic microwave background

[22] Origin of cosmic microwave background energy distribution (spatial structure vs. expansion vs. angular resolution)

[23] Other background radiations

[24] Newtonian mechanics at macroscopic & astronomic levels

[25] The possibility of every event creating a another additional universe

[26] Coexistence of other universes of the same dimensionality

[27] Coexistence of other universes of different dimensionality

[28a] Multidimensional string solutions of 10 or 11 dimensions

[28b] Multidimensional string solutions of 16 dimensions

[29] Multidimensional string solutions of 26 dimensions

[30] Radial structure of "cobweb" elements

- [31] Radial matter movement of "cobweb" elements
- [32] Space-time mixing between universes
- [33] Space-time mixing within a universe
- [34] Dimensional folding of space-time quantum cubes
- [35] Space-time quantum cubes interconnection to form cobwebs
- [36] Initial statistical variation and runaway (simple) harmonic (motion) start of creation
- [37] Age of globular clusters
- [38] Black hole properties
- [39] Reason for values of subatomic particles properties
- [40] Quantum mechanics at atomic levels
- [41] What are the mathematical solutions of the cobweb theory

[13b] **"Results" codes**

"cobweb theory" unavoidable	YES	(includes: inevitable, consequence, most likely, probably, as for "standard theory")
	*NA*	(includes: not part of this theory)
	MAYBE	(includes: possibly, uncertain, unclear, unknown, unmeasurable, unprovable)
	NO	(includes: unlikely, improbably, never)
"standard physics theories"	YES	(includes: inevitable, unavoidable consequence, most likely, probably, as for "standard theory")
	*NA*	(includes: not part of this theory)
	MAYBE	(includes: possibly, uncertain, unclear, unknown, unmeasurable, unprovable)
	NO	(includes: unlikely, improbably, never)

[13c] **Theory applicability**  
**cobweb      standard**

YES	YES	[4a] Virtual particle creation
YES	YES	[8] Universe expansion
YES	YES	[14] The possibility of time travel
YES	YES	[15] Universe constants
YES	YES	[17] Age of stars
YES	YES	[24] Black hole properties
YES	YES	[28a] Multidimensional string solutions of 10 or 11 dimensions
YES	YES	[29] Multidimensional string solutions of 26 dimensions
YES	YES	[37] Age of globular clusters
YES	YES	[38] Reason for values of subatomic particles properties
YES	YES	[39] Quantum mechanics at atomic levels
YES	YES	[40] Newtonian mechanics at macroscopic & astronomic levels
YES	MAYBE	[1] Universe cobweb structure
YES	MAYBE	[2] Causes of inflation and expansion
YES	MAYBE	[9] Locally enhanced expansion of universe
YES	MAYBE	[10] The destiny of our universe
YES	MAYBE	[11] The past of our universe
YES	MAYBE	[12] The origin of our universe
YES	MAYBE	[16] Creation of fundamental forces
YES	MAYBE	[21] Origin of cosmic microwave background
YES	MAYBE	[22] Origin of cosmic microwave background energy distribution (spatial structure vs. expansion vs. angular resolution)
YES	MAYBE	[23] Residual entropy energy background radiation
YES	MAYBE	[27] Coexistence of other universes of different dimensionality

YES	MAYBE	[28b] Multidimensional string solutions of 16 dimensions
YES	NO	[6] Pre-inflation conditions
YES	NO	[7] Universe early inflation
YES	NO	[13] The arrow of time
YES	*NA*	[4b] Virtual energy creation
YES	*NA*	[30] Radial structure of "cobweb" elements
YES	*NA*	[31] Radial matter movement of "cobweb" elements
YES	*NA*	[32] Space-time entanglement between universes
YES	*NA*	[33] Transition phase between multiverses
YES	*NA*	[34] Dimensional folding of space-time quantum cubes
YES	*NA*	[35] Space-time quantum cubes interconnection to form cobwebs
YES	*NA*	[36] Initial statistical variation and runaway (simple) harmonic (motion) start of creation
MAYBE	MAYBE	[3] Matter/energy creation
MAYBE	MAYBE	[5] Virtual anti-universe creation made of anti particles to "balance out" our particle universe
MAYBE	MAYBE	[18] Origin of vacuum energy
MAYBE	NO	[20] Origin of dark matter
MAYBE	*NA*	[4c] Virtual universe creation
MAYBE	*NA*	[41] What are the mathematical solutions of the cobweb theory?
NO	YES	[26] Coexistence of other universes of the same dimensionality
NO	MAYBE	[25] The possibility of every event creating a another additional universe
*NA*	NO	[19] Origin of dark energy

#### [13d] Results summary

This is just for summary purposes only, because the numbers include aspects where one of the theories do not apply & there is a "surplus" of "cobweb theory" aspects.

"cobweb theory"		"standard physics theories"	
35	YES	YES	13
1	*NA*	*NA*	11
6	MAYBE	MAYBE	15
2	NO	NO	5

The YES to MAYBE ratio would seem to indicate more certainty with the "cobweb theory" than the "standard physics theories" but that could be biased by my knowledge and understanding.

#### [14] Testable aspects

For the items below "Cobweb universe" creation result would show up as is shortened to "Would show up as"

- (1) Seeding of galactic strands of matter from the initial break up of entangled universes  
 Would show up as older, redder galaxies towards the centre of the strands  
 [FOUND]
- (2) Expansion into a new multiverse  
 Would show up as, initially, a localised increased expansion rate of the universe  
 [FOUND]
- (3) Initial stringiness of initial structure  
 Would show up as stringiness in final structure  
 [FOUND]

(4) Initial clumpiness of initial structure, at the nodal points of the cobwebstructure

Would show up as clumpiness in final structure

[FOUND]

(5) The degrees of freedom for groupings of universes containing our universe and its "ancestors" or "children" should have a "reality solution" in string theories for 11, 16 and 26 dimensions

Would show up as viable solutions to string theories for 11, 16 and 26 dimensions

[FOUND]

(6) Expansion of atoms compared to the past. Should everything expand at the same rate as the galaxies? There are transformations during the expansions of the omniverse. Initially there are packets of energy. These transform to plasma ions. These, then, transform into neutral atoms. These 3 types have different properties, which, in turn, means they have different interactions with their surroundings.

#### Item

Item	mass	charge	properties
energy	mass=0	charge=0	velocity=speed of light (c)
plasma	mass yes	charge yes	velocity= thermal plasma mass speed
neutral atom	mass yes	charge=0	velocity= thermal gas mass speed
[galaxies	mass yes	charge=0	velocity= thermal gas mass speed]

#### properties

mass=0 charge=0

velocity=(c)

charge yes

mass yes

#### interactions

none

energy is deflected very slightly by large masses

is deflected by electrical & magnetic fields

is deflected by other masses

The initial energy in high energy particle accelerators are very quickly transformed into (plasma) particles. The energy state would have been much longer in the extremely high temperature and pressure of the early universe. There would only be a brief period in the energy state. The time spent in the plasma state depends on two oppositely charged particles colliding at the right velocity and orientation. The earliest universe had the highest density and therefore the highest chance of collision. The plasma particles would then also have the highest velocity (or temperature) between collisions. The velocity (or temperature) of the plasma was much too high for neutral atoms to form, but initially it suited the fusion of atomic nuclei of atoms to form hydrogen, deuterium, helium and lithium. Only when the plasma had transformed into neutral gas was it in the same form as the galaxies and subjected to the same forces in the expanding universe. Only in extremely isolated pockets would the neutral gas atoms be isolated from the interactions of other masses during the evolution of the universe.

Generally the neutral gas atoms would be intermixed with recession speed of galaxies. It would be difficult to know what atoms have **not** been externally influenced during the expansion of the universe.

Would show up as neutral atoms having trajectories that are the same as galaxies and are

[1] independent of galaxies, and

[2] have a galactic strand core origin at the beginning of the universe

[unknown]

(7) Initial fusion product (formed within the cobweb) ratios along different strand the cobwebstructure (It would be a very small variation. The variability might be as little as that of the cosmic microwave background. The variability would spread in regionalised waves.)

Would show up as fusion product ratios differences along strands of the final cobweb structure. A similar effect from a supernova would have a much smaller effect than is possible from the cobweb theory origin and is more likely to push gas outside the "strand envelope". (difficult to know what is "unchanged since the big bang" gas.)

[unknown]

(8) Relic energy signatures of the different inflationary phase expansions may still be visible.

Would show up as the older the expansion, the more angularly dispersed and the weaker the signal and the longer the wavelength will have been stretched.

(hypothetical example:- a 5 km wavelength radiation, dispersed at points 170 degrees apart and a billion billionth of the signal strength of the cosmic microwave background would be difficult to detect!)

[unknown]

(9) Relic energy signatures of the plasma to non-plasma phase change should be present for all fusion products of the big bang.

Plasma ions of lithium and helium should be present as well as deuterium and hydrogen.

Would show up as the older the phase change, the more angularly dispersed and the weaker the signal and the longer the wavelength will have been stretched. This should coincide with Big Bang Theory creation of the initial elements.

[only hydrogen mentioned in context with the cosmic microwave background.]

[unknown]

(10) Hawking radiation from the inside surface of our universe's "event horizon boundary surface"

Would show up as the strongest signal from the "almost speed of light" stretched radiation from the electron - positron radiation annihilation near the surface of the event horizon at the end of the stage where photons and matter were recycling in the universe, to the much weaker red shifted signal nowadays. there would be no "dark period" for the Hawking radiation from our universe's "event horizon boundary surface".

[unknown]