

Relationship of the Photon to Cosmology and Origin of the Universe

by

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Abstract: This paper covers the second half of my theories, these concerning things on a more cosmological scale. The theories presented herein stem ultimately from what is going on with the photon, so an understanding of the first half of these theories presented in my paper “Relation of the Internal Structure of the Photon with Field and Charge” is required (<https://vixra.org/abs/2301.0148>), so please read through that first paper before proceeding; any references involving that paper will be referred to as “my first paper”.

I said in the closure of my first paper that you cannot understand Infinity until you know the Infinitesimal. This is quite literally true since the bulk of these cosmological theories begin by scaling up the previous discussion of the photon, the concept of force comprising energy, and the rest of it, to cosmological levels. In this paper we will see a new theory of the origin of the universe to replace the Big Bang and Inflationary models, one that does not require Dark Matter or Dark Energy to work, discuss how the model presented of the photon and the field of force emanating from it can scale up to stellar-sized gravitational fields yet still without the need for curved space, have a briefly related discussion of the problems with using the Red Shift to verify the curvature of space, put frame-dragging and time dilation into a new perspective, and discuss a theory as to what came *before* the so-called origin of the universe. We will also discuss the origin of force itself, and the inclusion of parallel universes into the overall theory.

Introduction

In presenting an alternative to current theories of the formation of the Universe, we begin by first assuming the Big Bang theory to be correct, then reason backwards, always asking what came before, until we are at a point where that question can no longer be asked. This then is our primal foundational point. At that point we then reason forward again, basing our analysis as to what comes next on the assumption of this primal foundation being the one correct point. If the Big Bang is correct then we should arrive back at the same point at which we began, but if it is wrong then we will arrive at whichever point that logic dictates.

To begin then.

New model for the Origin of the Universe

The Big Bang states that the universe was one big incredibly dense ball of matter just waiting to explode. However, other theories say that any lump of matter that dense collapses down into a Black Hole. So, this means that our big ball of matter was really a black hole. However, since this was all the matter in the universe and

therefor all the universe itself, then the whole universe was actually the substance of a universe-sized black hole. Since the only difference between one parallel universe and the next is the value of its gravitational Field Density, then this result must be the same for all universes, in which case if all universes were one big black hole then they must have all come from the same cosmic lump.

However, this would not be a black hole as we know it, nothing with a singularity point-source, but rather an infinitely large multi-dimensional soup of force. Since, according to my first paper, force comprises energy then we thus have all of reality being a multi-dimensional field of force, with gravitational lines of force coursing through a single large multi-dimensional existence. There were no separate three-dimensional universes as we would call them. Or rather more correctly, we have an infinitely large three-dimensional space suffused with fluxes of gravitational field densities ranging through all values and hence not yet separated out into different parallel realities.

With this as our new starting point, let us now reason forward in time again. If everything was basically a large black hole, then this would tend to imply that the Big Bang could not have happened; another origin is thus required. Referring to my first paper that all energy is made up of force, just as matter is made from energy, then all the interacting fields of force would be the origin of the universe. Each time two or more field-lines cross and interact it creates an element of energy (i.e.: a photon). As more and more lines of force interact, more energy is created, each photon of energy being created from one of the fields of a given random Gravitational Field Density, resulting in a photon of its corresponding Energy Density (which is to say, an appropriately valued Planck's Constant). These energy creations would obviously happen at random points throughout the entire universe, thus giving no center, no source of a Big Bang, and no pattern.

Except for maybe one. The presence of one given unit of energy would, by its very nature of being a contained ball of concentrated force, attract more and more of the lines of force around it, as it moves through them (since it is in the nature of photons to move), that correspond to its own gravitational Field Density. Thus the very presence of a photon moving through these raw fields of force would cause that force to concentrate in on it and interact even more strongly and more frequently than they would if it wasn't there (recall from my first paper what I said of particles moving through fields of force and how that would generate more photons of its same frequency). So the presence of a single unit of energy would cause a cascade of creation, as the concentration of more and more energy in turn causes the creation of even more. The initial creation of a single unit of energy causes a cascade reaction that quickly balloons into a miniature "Big Bang", expanding outwards in patterns randomly determined by the geometry of the arrangement and trajectories of the previous photons when they were first created (though these patterns might generally resemble fractal patterns). With several pockets of creation twisting around this implies that the universe definitely cannot be homogeneous, but would result in the cosmic fractal patterns of galaxy distribution that we see now.

As for the speed with which this would be happening, remember that any initially-created photon at a given spot would be moving at the speed of light, and so in the space of a very short amount of time have caused quite a long trail of cascade-creation in its wake. This process would be repeating throughout innumerable

locations across Infinity.

To very briefly address some claims that the cosmic distribution of matter is homogeneously distributed if looked upon in a large enough scale, those star maps published to show this are flat two-dimensional snapshots of three-dimensional space, and hence would be covering up any gaps and voids appearing along any given direction in the intervening billions of light-years.

To go from concentrations of energy to concentrations of matter, those created photons that happen to be of one of the two frequencies corresponding to the stable particle sizes for that given Energy Density would then begin entangling and forming into protons and electrons, and from there matter (as according to my first paper). We thus have expanding globs of matter. However, not all of these photons (and hence any resultant particles) would be created from the same Gravitational Field Density (F_{DG}); photons of dissimilar values of F_{DG} would be effectively unseen and unfelt by any other values, as discussed in my first paper.

Our original multidimensional soup, then, is “layered” with a span of values for F_{DG} , though layered is the wrong word. They all exist together in the same three-dimensional space but unaffected one another. Much like how a wall socket at 60hz will shock the living heck out of you while one at, say, 40-50hz will dance pretty harmlessly across your body. Each value of F_{DG} is like a ghost to all the rest. They are better termed as “vibrational layers”, each taking up the same three-dimensional space as the other but at a different F_{DG} (or ‘dimensional frequency’, if you prefer that nomenclature). Then when a given “layer” begins spawning energy and from that matter, it is unaffected by any of the others. Each such layer has its own F_{DG} , its own Energy Density, its own value for Planck’s Constant or c^2 . Particles of different Energy Densities, their density of force being different, cannot see each other, cannot interact with each other, and basically don't exist for one another. Only particles of the same Energy Density can interact with one another.

Now, since force makes up both energy and matter, this implies that each unit of energy (and matter) emanates a residual field around it; picture it like a bell-curve depicting the concentration of force, where the center high-point of the curve is the photon itself and what we call ‘energy’, while the trailing edges expanding out in all directions about it is the field of force emanating from it. Now, more and more particles of the same Energy Density imply a greater and greater residual field, of the same corresponding Energy Density, around the concentrations of energy. Since these residual fields correspond to the different Energy Densities, only fields of the same such density can see or interact with each other, the others being there but unreactive. Since the matter and energy is being created throughout the entire universe, that implies the fields would have spread and interconnected throughout all the universe. This would happen for all fields of all possible Energy Densities, resulting in an infinite number of different such fields, each spreading throughout the universe and all existing in parallel with the others, each containing its corresponding field of matter and energy. Each such field is a different alternate universe, all stemming from the same multi-dimensional soup.

Thus, each universe has its own unique density of gravitational force (F_{DG}) that makes up its energy and matter, and from that the Energy Density (E_D) for that universe; these in turn then determine the values of the other constants that comprise the standard electromagnetic and force equations that describes the nature of its

fields (so, you can still use the same electromagnetic equations as usual, it's just the values of such things as 'h' and 'c' that will change according to the value of F_{DG} , again all as given in my first paper). This density would be a constant throughout a given universe, measurable as a so-called "universal constant", though one which actually changes its value with different universes. Thus Plank's Constant is actually a variable giving measure for a given universe's Energy Density (E_D) for all matter and energy contained within it. From here we connect with my first paper on "Relation of the Internal Structure of the Photon with Field and Charge".

There is nothing saying, by the way, that this original multidimensional soup doesn't still exist. It would exist as a dimension at the dimensional center of all the other dimensions; a 'vibrational layer' mixing together all values of F_{DG} before they separate out, still with its soup of force spitting out new energy and particles (which would then immediately appear in the universe of its own corresponding Energy Density), and perhaps even spawning whole new universes. Such spontaneous particle and energy creation may even be observed, as either the simple unexplained appearance of particles (which has been observed through telescopes), as white holes, or other such. In fact, since these Fields are still around us, omni-present throughout all of space, they could be used to generate more energy at will, given the appropriate technology; an unlimited source of energy (space being infinite and all). Or perhaps even a source of other more exotic capabilities (stellar travel, communication, and other such, but that's getting ahead of ourselves).

At this point some new nomenclature is in order. This central 'multidimensional' soup of force contains all layers and is the sum total of all values of F_{DG} and hence all universes; it is like the hub for each of the dimensional spokes that are the alternate universes. Though again, we are still talking all this within the same three-dimensional space, not other alternate three-dimensional spaces such as would be for a hyper-cube. At any rate, this entity needs a name. Since it is the sum total of all Field Densities then let us use the term "Hyper-Field". Then a given "layer" of this Hyper-Field, with its own value of F_{DG} , comprises a self-contained universe, or more correctly a "Universal Field", to introduce a clearer naming convention. A Universal Field has its own unique value for F_{DG} and is infinite in extent, while the Hyper-Field contains an infinite set of Universal Fields.

This would be something akin to the way the photon sets itself up. The photon can vibrate at any frequency of energy and interact with matter and other energy at any of these frequencies, but there are only two values to which the photon would entangle with another and form matter. This Hyper-Field would 'vibrate' at any value of the Gravitational Field Density, but sections of itself would only interact with other sections also generating the exact same F_{DG} . A given "universe" thus forms from the preponderance of matter, energy, and force all stemming from the same value of F_{DG} . Or perhaps you can view it as each universe being at a different "frequency of force", just like energy comes in different frequencies.

My theory of Universal Origin at this point may be more rightly called the "Big Trickle", since it more resembles the result of popping a balloon full of water. This theory will be referenced by some of my other theories, as it in itself implies and supports many other theories to explain things from particle physics to elements of relativity and quantum mechanics.

Since this model allows for the simultaneous creation of stars and galaxies many billions of light-years

apart, we do not need the Inflation Theory to explain how it all got there, nor such things as Dark Matter and Dark Energy to explain how it's all moving around. Simply abandon the tired old exploding point-source model of creation and it all falls into place.

But we are still missing one detail that logic demands. In my first paper I gave this small sidebar:

“Between all these universes of differing densities then would be a sort of central nexus from which the rest spring. This is where things connect up to my theory on the origin and structure of the universe, which is the subject of a different paper. To briefly complete the thought here, though, let us say this in brief: This central dimensional realm (some would be tempted to call ‘hyperspace’ but I would hesitate to) would also have a constant speed. Since it is the source of all energy and universes, it is at one extreme end of creation; its speed would therefore be at one of two extreme values for the speed of light (i.e.: if you could graph out speed vs. universe, this would have to be at one extreme end of the graph): either zero or infinite—no other values would be possible. Well, zero speed implies zero energy potential, which is impossible, not to mention that a field moving at zero speed could not have interacted to produce energy in the first place. Therefore, the natural speed of that central dimension must be infinite! (Some might have other terms to wrap around this concept.) If one could shift a specially shielded vehicle to that dimension, then one could go anywhere instantly (big understatement), not to mention to any universe.”

Now it is time to flesh that thought out. Given that there would be one Universal Field for each and every value of F_{DG} , it stands to reason that there would exist one such Field for which F_{DG} goes to infinity and at which the speed of light would likewise be infinite. Since an infinite Field Density makes little sense, it is time to expand upon this. First off, a term for this particular Universal Field where F_{DG} is infinite: since it seems to be at one central extreme for all values of the Gravitational Field Density, then “Core Field” would seem to be a passable enough name for now. Now to tackle that infinite density.

The easiest way to handle such an infinity is to reframe it. In this case, according to the equations in my first paper linking the Field Density to a corresponding particle entanglement frequency, F_{DG} and photon Frequency are inversely proportional, which means that an infinite Field Density would have a zero frequency, which also makes no sense. But if we express it in terms of a wavelength, wavelength and F_{DG} would be *directly* proportional which means that an infinite value for F_{DG} implies an infinite wavelength. This is more tangible as it means that we have a wavelength the size of the entire universe; essentially a flat line, for which a frequency would be zero or at least a meaningless measurement. This would, naturally, be a fully three-dimensional volumetric wave that we’re talking about. This Core Field, then, is comprised of a field whose effective wavelength is the same infinite size of that entire “layer”, which for all practical purposes means that this Core Field is basically akin to a single infinitely large photon. This Core Field would be a source from which to draw out force and from that create energy, but it would be a realm in which no matter would be able to form since you would need a photon smaller than infinity for that to occur.

As far as the infinite light-speed issue, then, that too can be reframed. Since every point within this Core Field is a part of this same single infinite-length wave—essentially a part of a single infinitely large photon— they

can be treated as all pointing to the same point, even if in this case that point does stretch all the way to infinity in all directions. From that single point you can then exit back to whichever of the other touching points that you wish to. One single wave for one single infinitely large photon, itself essentially a very large point. It is not so much infinite speed then as simply stepping through to another place. I am sure, though, that there are those that at this point would invoke “entanglement”, though I do not as there is nothing else for this single wave to be entangled with (unless it is treated as being entangled with itself).

The full picture of our Hyper-Field then is this: Picture an overlapping of three-dimensional waves ranging from a flat line to increasingly shorter wavelengths, each one being a Universal Field with its own collection of matter and stars.

Scaling Up To The Gravitational Field

One reason why using curved space as an explanation for gravity is so popular is because it explains how gravity can have such a long range in space. This then would seem to be the last element that needs explaining from the point of view of what I provided in my first paper.

In a word the explanation is “entanglement”.

A photon is a kernel of energy formed by compressed force, but that force still radiates out from the photon, ready to interact with other fields of force. It decreases with range according to the square of the distance law (which is pure geometry) until it is too faint to matter. Thus each photon has its own radiant field of force with a given shape and range. This part is pretty much common sense.

Entangled photons form particles with a singular charged field appropriate to that particle type. However, it is now worth pointing something out. Photons within a particle are entangled at the given Field Density/frequency that is normal for that particle, *however*, they– or rather their fields surrounding them– are also entangled at a second Field Density, that of gravity. Thus, even as the photons combine to form and act as a single particle, their separate gravitational fields also entangle to form a single greater gravitational field. The dimensions of this singular field are now determined by the resultant size of the particle as a whole and not of the photons as collective individuals. The gravitational force radiates from the whole particle as its center, entirely consistent in strength within this center, decreasing with the square of the distance from there as usual.

Now we scale up another level. Particles interact with one another in another form of entanglement to form molecules, but their gravitational fields will likewise entangle to form a single whole field the size of the molecule now as its center, entirely consistent in strength within that new larger center, radiating out from there with the usual square of the distance.

This process scales up with bulk matter, with overlapping interacting fields combining into new larger singular fields, consistent in strength throughout the volume of the bulk matter as its new center, then radiating out from its outer edges with the square of the distance as per usual.

To restate an observation from the early part of my first paper, it should be noted that the gravitational

field from any such object will not simply radiate from its geometrical center, but equally from its entire body and shaped by the geometry of its surface. Thus, the gravitational field of a star emanates from all points of its surface, which is what affects a photon's travel to give the mistaken appearance of curved space; it's the star that's curved.

By the time you get up to a star, you have a singular connected object many hundreds of thousands of miles across, and as such its outer field will be proportional in size to this new enlarged geometry as well as the density of force within the star. With so many entangled photons within the structure of a star, this extends its fields to incredibly large levels, with the combined force of all those photons radiating as one within the confines of the star. Thus, even at the edge of a star's influence, its gravitational field is still strong enough to interact with other stars, though at a much weaker level than as it started out with on the level of the photon.

The question next arises as to the maximum extent of this field. That is, for a stellar body of a given size, with its gravitational field decreasing with the square of the distance, how far will this field extend before it can be considered as coming to an end. Popular theory and curved space says that all gravitational fields are infinite in extend, but this is not so. How far then? The field of a given body would keep decreasing with distance until such time as its force of gravity would come down to a minimum value equal to the gravitational field of a single photon, after which it loops back to source to complete the circuit. While this is not infinite, it can be easy for one to confuse it as being such. Just doing a thumbnail estimate for our own Milky Way Galaxy, with its trillions of stars and given radius, this final end of its gravitational field would be about on the order of the radius of the known Universe. Of course the practical limit as to what it can attract would be far less, but this is a great enough range for it to interact with the fields of other stars and galaxies in a complex web of interacting gravitational fields.

Thus entanglement is the explanation for why gravity on the macroscopic level has such a great range. Gravity may be a very weak field of force, but by the time you add in uncountable photons entangled in interactions, it adds up quite a lot.

A brief note on "Gravity Waves". Gravity now being seen as sourced from fields of force, a gravity wave is simply a ripple of force (like any force field), sent out from its originating bulk matter as a disconnected force-wave, to undulate through space until it interacts with other fields. No curved space ever needed.

Errors in the Big Bang Theory

Having now given my own alternative, and seeing that it works quite well, let us now tear apart the old Big Bang model with just a little bit of logic. Many would say that there is a lot of supporting evidence in favor of the Big Bang Theory, so these must be addressed.

The Distance Problem:

To begin with, the furthest known object is about 15 billion light-years away (actually closer to 13 billion,

but I'm going for simpler numbers to work with, and in the cosmic scheme of things they're not really too far off from one another) so if we assume the most extreme case of that being the radius, then the size of the known universe is twice that, or about 30 billion light-years across. Leaving out Inflation Theory for now, assuming the Big Bang's explosion is about in the center of that expanse, the matter in the universe would have had about half that— round up and say 15 billion light-years— to cross since that time. Even if all matter was traveling at a generous 1% light speed (and it's more like (1/10)% light speed), it would take 1500 billion years to do so (or more like 15 trillion years if for (1/10)% light speed).

But the estimated age of the universe is put at about 15 billion years (again, rounding up for ease, but it won't make any difference). So, either you believe in the observed age of the universe and therefore conclude that the Big Bang Theory is wrong, or you conclude that the facts of the age of the universe is wrong and the Big Bang Theory is right.

It gets worse when you assume the size of the universe actually extends out well past the 15 billion light-years into infinity, in which case the questions become 1) How do you expand something across to an infinite extent in a finite amount of time, and 2) such an explosion implies a finite amount of matter (no matter how immensely large) so how then does a finite amount of matter expand out to the infinite amount of matter implied for an infinite universe?

Or one could assume that the Big Bang Theory is still right and just figure that the estimated age of the universe is way off. In that case the universe would have to be well over 15 trillion years old, or about a thousand stellar generations old. In such a case, the finite (if rather large) amount of matter given off from the Big Bang would have all burned off into coal by about the tenth generation at best, in which case by now all the matter in the universe would have been reduced to lead and be crashing back in on itself in the Big Crunch. Not a particularly great alternative.

Myself, I go for the Big Bang Theory being wrong, especially since my own previously given theory of how the universe was formed doesn't clash with its predicted age.

Then there's this: That stellar object that's 15 billion light years away was already there 15 *billion* years ago when its light left it. That means that just when the Big Bang happened, anything that far out that we're seeing now had already existed that given distance away *and* at the apparent age that we're observing it at right now. So, if you're observing a galaxy that looks to be, say, a mere billion years old and it's at 15 billion light-years away at the very edge of what we judge to be the radius of the Big Bang explosion, then 15 billion years ago it was already a billion years old while the center of the Big Bang was still some 15 billion years away from it.

Of course then there's that Inflation Theory, which states that the expansion could have happened in an eye-blink then slowed down for some reason, the reasoning here being that there is really no equation that limits the expansion of space itself. That is because there is no equation or science concerning any manner of spatial expansion at all, much less why it would suddenly happen then stop or slow down. Inflation Theory is merely a kludge to prop up a deficient theory.

What's Wrong With The Red-Shift Measurements:

The major piece of evidence that people give in support of the expansion of space, in the form of Inflation Theory, is the Red-Shift, so let's examine that one next.

Red Shift is used as a means of telling both how far away a stellar object is and if it is coming or going, and as a measure of how fast space itself is stretching. As a measure of universal expansion, the theory goes that as space stretches it stretches light as well, thereby shifting it to lower frequencies; a red-shifted spectrum indicates that the stellar object is moving away while blue-shifted ones are approaching Earth. Then the fact that everything seems red-shifted indicates the entire universe is constantly expanding in all directions, which would include the ones behind us in the direction of the "Big Bang" explosion which would have us accelerating the farther away from the explosion one gets.

But for distances, the red shift is used as a measure of if an object is retreating (red-shifted) or advancing towards us (blue shifted), which would seem to fly in the face of its other use as a measure of space stretching. The first use says that light can only be red-shifted because space itself is stretching, but the second says that the red shift comes from direction of travel, but if the first usage is correct then something can never be blue-shifted even if advancing towards us since space is expanding, but there are objects that are observed to be blue-shifted, but— Yeah, a few contradictions going on here.

But that's not the big problem with the way that the red shift is being used.

As a measure of space expanding, people will say that the red shift comes from light being "stretched" into longer wavelengths, so the spectrum slants down towards the red a bit. Problem: besides making light seem like taffy, this sounds like an assumption dating back to before we discovered light to be comprised of discrete bits called photons. It assumes that a beam of light is a continuous entity that can be stretched only by space itself (which is again in contradiction to its use as a directional stellar speedometer, but moving on). But a beam of light is not continuous, not a single object, but rather a collection of individual discrete photons that are not entangled and not necessarily even of the same frequency. As individual bits, a photon does not have its own spectrum, but rather a single pinpoint frequency; add or subtract energy from this photon and its frequency changes, but still no spectrum, since a spectrum is comprised of a whole lot of photons spread across a range of frequencies.

An elementary fact, but it seems as this needs pointing out.

Red is a lower frequency of light, and hence indicates a photon of lower energy. As an individual photon, light can have energy sapped away from it by *anything* it interacts with: magnetic fields, gravitational fields, gas clouds, planetary or stellar atmospheres, and so forth. Anything it passes through or by will affect its energy. If that something takes away energy then its one individual frequency will shift to a lower energy (red-shifted), or if it adds energy to it then that photon will go to a higher frequency (blue shifted). That said, any photon that reaches us has gone through uncountable light-years of interacting with stuff until it hits us at whatever its current frequency has come to. Note that it is impossible to tell what that photon's frequency was when it was first emitted by whatever its original source was some umpteen million light-years ago.

Any photon traveling for any appreciable distance through space, much less billions of light-years, will have thus been red-shifted because of the high chance of multiple encounters and the omnipresence of fields. *All* light emissions would thus be red-shifted.

Thus, while the red shift is useful for estimating distances, it is useless for determining if something is approaching us or moving further away, as from far enough away all light will be red-shifted no matter what direction it's moving in.

Of course, with the new theory that this paper presents of how the universe came to be, there's nothing expanding from an explosion that never happened in the first place; just a case of cosmic Brownian Motion.

It is also worth noting that a photon will only gain or lose energy by interactions, not from merely traveling through empty space. If you could somehow construct a space absolutely empty of fields, matter, and other bits of light, then a photon will go on in a straight line, never losing or gaining energy, for the lifetime of the Universe. Mere distance does not affect it, which means that all a red or blue shift measures is how many things it's bumped into along its journey.

Now a spectrum is comprised of a few zillion photons, each at its own frequency. The range of frequencies depend on the nature of what originated it. Elements, for instance, emit photons at certain specific frequencies, so a spectrum of light contains the entire range of frequencies emitted by whatever elements as comprise the stellar body from which it came. Tracking this beam of light then, anything along the way that can absorb or emit energy will do so into all photons in that beam's spectrum of light relatively equally. Thus, for a range of photons, all of their energies might be shifted, say, about 20% down and be seen as a red-shift; they're all shifted by the same relative amount simply because they've all followed the same path since their origin. And once again, we have no way to tell what this beam of light looked like when it was first emitted, how much it was changed along its journey, only the way it came out looking to us.

The stretching of space, or lack thereof, does not come into play at all. Nor does any illusion of coming or going, since there is plenty of interactive bits between even our closest interstellar neighbor for an easy-going photon to interact with. Gas, magnetic fields, and yes Virginia even gravitational fields. In fact, according to my first paper, especially gravitational fields. And since stars cluster together in galaxies which in turn very loosely clump together in groups, that seems reason enough to assume that there is no area of space free of even a minute trace of gravity for a photon to interact with.

So, what does that mean for space expanding? Well, it pretty much kills off that idea. But what about using it as a measure of distance and direction? Problematical at best considering everything that a photon might have come into contact with (both seen and unseen). The red-shift is more a measure of the history of a photon's journey and cannot be used to see if space expands or not.

Olber's Paradox:

This old paradox states that if the universe is homogeneous, infinitely large, and infinitely old that the sky should be ablaze with the light from an infinity of stars, and since it is not then the Big Bang Theory must stand

in. Here's what that paradox ignores and why you do not need universal expansion.

First off, it assumes that the universe is inherently homogeneous; the theory presented in this paper indicates that it is not. That alone would prevent a uniform radiance of bright lights, but there is more. Just as the problem for the red shift, given an infinite distance for a photon to travel, it has an absolute chance of bumping into something else; being absorbed into a lump of matter, combining with other photons to form fewer but higher-energy photons, a few photons of the right frequency combining to form particles, being snared by gravitational or magnetic fields, or any number of possibilities. In fact, the process of entropy would indicate that many photons would be forever trapped in an irreversible state, such as a lump of coal or cinder of a burnt-out star. Basically, the mere presence of matter prevents a uniform bright night-sky, and the mere presence of photons in turn guarantees the creation of matter. Then, of course, there is the fact that not all photons traveling the universe are visible to the human (or any) eye; even for photons originally emitted in the visible spectrum, uncountable interactions along its path could well have decreased its energy into invisibility.

The Cosmic Microwave Background (CMB):

Just to be complete, I feel I also have to cover this topic, at least in general. I believe that I have already given enough evidence to support the case against the Big Bang and in favor of what has herein been presented, but that then would leave the CMB to explain. It is a uniform glow coming from all directions of the depths of space that is attributed as being the residual heat from the Big Bang. There's a few problems I have with this.

First off, in the history of explosions, no explosion has ever been completely uniform; just ask any demolitions expert. But then, for the Big Bang if you include the Inflationary model where space just suddenly expanded, leaving a giant void for all the energy of the universe to go rushing into, it gets even more chaotic; the bits of energy would have been stretched along with the fabric of space, ripping everything apart into little shredded photons with rather low energy, and in effect making *everything* into background radiation unable to get up enough energy to form particles, which would make for a more observable CMB but no one to observe it.

It is said that the CMB has the perfect spread of frequencies to correspond to a Blackbody, thus 'proving' that this blackbody radiation is leftover from the Big Bang. The problem here is that blackbody radiation requires, well, an actual body. Space, by definition, is the very absence of a body; it is a void filled with other bodies that would themselves have their own individual radiation profiles. Space itself can neither heat up nor cool down, it can simply allow things to pass through it. When an actual physical body has been heated up then starts to cool down, it is emitting photons of a frequency appropriate to its temperature, the frequency going down as the object cools. Then there is the fact that photons themselves do not 'cool'; they can only have energy added to or taken from them via such fields and bodies as they pass through or interact with. Set a photon to travel for a billion years with nothing to interact with and it will never "cool". Thus, if there is blackbody radiation it is not coming from space, for space itself can emit nothing.

Then the CMB is *too* uniform. With stars and galaxies whizzing through space the last few billion years, there would be plenty of time for a universe full of stellar objects to be leaving wide trails behind them nearly

empty of any CMB. Quite visible swaths, at least for the nearby objects, since for anything overly farther way any such empty swaths could get overshadowed by such radiation coming up from behind it by other stars some distance removed (since space *is* three-dimensional and all). The point is, that there would be trails empty of any CMB left in the wake of every galaxy around– and I have heard of no one observing such.

And after 15 billion years, any original photons from such an explosion would not simply be hanging around vibrating in place; they would have long since moved on, interacted with matter or gravitational and magnetic fields.

This implies that the CMB may be constantly produced by something a lot more recent than the Big Bang.

The CMB is omnipresent, more or less uniform, being constantly renewed, and so would have to originate from something just as omnipresent and uniform, as well as being constantly produced. Two possibilities come to mind. First, this radiation could somehow be a result of some interaction with hydrogen, that element being at least as omni-present in the universe as the CMB. Another possibility is that our solar system may be surrounded by a large magnetic field (emanating from the Sun, of course) which is interacting with particles from the solar wind which, when they hit it, let out a weak burst of microwaves that, in part, reflect back to us. This latter explanation would explain why the CMB is coming at us from all directions. The outer magnetic border of the solar system itself would thence be our “blackbody”.

I do not have an exact answer for the CMB as that is outside the scope of this paper and a bit out of my specialties and interests, I simply realize that it cannot be from any explosion of creation billions of years ago and present other possibilities.

Some Loose Ends

Frame Dragging:

And now a note on relativity’s Frame Dragging. Frame Dragging results simply because Relativity assumes that gravity is not a force. However, as shown in my first paper with gravity actually being a force from which all others source, you can now have such things as ‘torque’. The motion of a spinning or rotating body will then similarly affect its attached field of force, whipping it along behind it with an effect exactly like Einstein’s frame dragging. Thus, once you realize that a photon has mass and emanates a field of gravitational force that can affect things just like any other kind of physical force, then frame dragging reduces to simple torque between macroscopic objects. Picture it like a ball upon which is attached a number of long hairs; as the ball whips around, the hairs drag along behind it, and when the ball changes course into a curved path then the hairs will likewise be whipped around behind it; the ball is the photon while the hairs represent the gravitational field emanating from it, with the “frame dragging” then being a measure of the ‘whip-like’ nature of the more flexible long hairs and the snap they give behind the path of the ball.

Time Dilation:

Time dilation is another result from Relativity that connects up with cosmological concerns and as such another item that needs to be covered, if briefly. It is a known fact that the measure of Time and the measure of Frequency are inversely proportional to one another. Thus what we call ‘Time Dilation’ can actually be seen as frequency dilation. And since frequency and wavelength are inversely related to one another, then we have the following relation:

$$T \approx 1/\nu \approx \lambda$$

and thus,

$$\Delta T = 1/\Delta\nu = \Delta\lambda.$$

Now while muon decay is often sighted as evidence of relativistic time dilation, anything that dilates a photon’s frequency would therefor move its mass up or down the graph of the sine-wave term in my Field Density equation, thus altering its lifetime as it moves away from the more stable entanglement frequencies of a proton or electron. Also remember that faster particles means more photons means more mass, which for a ‘particle’ not entangled at a stable frequency (i.e.: protons or electrons) could also affect its brief lifetime (more gravitational force between the increased number of photons to hold the particle together a little bit longer than normal).

For other arguments, I have already seen counters to experiments involving GPS satellites and atomic clocks on airplanes and will not repeat them, save to say what I have already said above and to be wary of ‘corrections’ to the raw data taken.

The Matter of Dark Matter:

To be blunt, Dark Matter is a bit of a bugaboo, in that its sole purpose seems to be standing in as a cosmic fudge-factor. There are many unknowns out there, there is no need to assign some mythical material to it all, but for now let us stick with the facts and consider this: I have heard it said that the way astronomers estimate the mass of a distant galaxy is, in part, by treating it as a point source then going on from there. That’s all fine and well except for the fact to be a point-source an object must be roughly spherical in shape, and your average galaxy is shaped kind of like a pregnant pancake. The Milky Way, for instance, is about 30,000 light-years thick at its central bulge then tapering off from there, while its diameter is about 100,000 light-years. Now, if some distant astronomer were to treat our Milky Way as a point-source, he would be using that 100,000 light-years as the radius of the sphere, in which case his estimate of our galaxy’s mass would be off by a factor of about *ten*.

You cannot treat any irregularly-shaped stellar object as a point-source for any type of calculation. If you want to get more accurate measurements then one must eliminate this propensity for overly approximating. In short, the reason why I have not covered Dark Matter before is because it does not exist. Dark Matter is a math error.

The Matter of Dark Energy:

By now, if you have read my first paper and the contents of this one then you probably know where I’m

going to go with Dark Energy. Dark Energy is that mythical beast which supposedly maintains or at least influences the expansion of the universe; that is its only reason for existing. Yet, as I have proposed in this paper, the universe does not expand, the red-shift measurements cannot be trusted as proof for such expansion, and there is therefor no need for Dark Energy. The model for the origin of the universe that I have presented herein, instead of a Big Bang, presents a way in which matter and energy are born all across the reach of the cosmos without the need for a centered explosion to get it all there, so again Dark Energy is not required. Since, again according to the theory presented herein, there is no cosmic inflation of space, then again there is no need for Dark Energy to exist.

In short, a different Origin theory obviates the need for Dark Energy.

Before the Origin

We now seem to have a complete theory to replace the Big Bang and its relatives, and we could very well leave it here and be quite happy. However, you can never really be said to have the final answer until you can stop asking questions, and there is still one question that we have yet to ask. I have explained all energy and universes as coming from a single multidimensional field of force: the Hyper-Field. But where did this force come from? No matter how many layers of creation we tag onto this, of one theory being the source of the next and so on, sooner or later we come to some basic layer of creation that had to have originated from nothing (because if there was another 'something' then we would wonder where *that* came from).

Thus, we postulate that this original Hyper-Field came from nothing. Incredible and counterintuitive perhaps, and I'll admit this is the part that's a bit incredible and over the top, but please bear with me as we derive the properties of 'Nothing'.

First, assume a basic unit of Nothing, some basic element of it that we may work with. Next, since we are talking about the creation of all multiverses, then we must assume that the framework that we will be talking in shall be on a multidimensional level, that is, the basic element of Nothing is multidimensional in nature as well as is the field or coordinate from on which it operates. Note that 'multidimensional' in this case refers to the same three-dimensional space in which all values of F_{DG} simultaneously exist.

With this in mind, we now postulate two basic states for this unit of Nothing; for lack of any better names we shall call them "Positive" and "Negative". Assume that each such element of Nothing is in either the "positive" or the "negative" state, then assume that the original nothing of space is filled with these elements of Nothing, randomly, each such unit of nothing oriented in a random such state. For something to come out of nothing, we must next assume that the state of these units of Nothing to be extremely unstable, therefor meaning that each such unit randomly shifts from one state to another, with uncountable numbers of these elements of Nothing spread throughout multidimensional existence. Then, when any two of these units of Nothing are brought together, they annihilate and form, of course, Nothing. But, if you can pry any two of these units apart, then you'd end up with something. If this sounds confusing or circular, it shall all be clear momentarily.

The first question is how this connects up with our Hyper-Field. Well, what if there is more than one Hyper-Field? One would be our arbitrarily named “positive” and the other our “negative.” Each would be resonating through the full range of all its values of F_{DG} , but with opposing polarities (if that is the correct term here), and in this sense be considered to have a sort of ‘multidimensional frequency’, or collective frequency range. Both would still exist within the same three-dimensional space but separated by a buffer; a state of force-density for which $F_{DG} = 0$ for both Hyper-Fields. This, then, would be our ‘Nothing’. Let us then define a ‘distance’ between these two Hyper-Fields, effectively the breadth of this ‘Nothing’; the units would then be something along the lines of “Field Density per unit Space” or perhaps “Field Density per unit Frequency-range”. At any rate let’s just call this distance between Hyper-Fields as the “Span”.

Now, for something to come into existence, we must assume certain properties for this Nothing. The properties of our unit of Nothing would then react over this Span. Assuming this Nothing to be a sort of force (or force component), with various properties of interaction, then we must now give those properties. Perhaps a table is the best way to give these properties, listing all the possible combinations of interaction between the "positive" and "negative". The distances mentioned in the chart are Span Distances. Note that this “distance” is not one that measures the amount of linear space between them but rather more like a hyper-frequency range through which there is no energy or force.

interaction	interaction result
positive-positive	attracts at short Span, repels at long Span
negative-negative	attracts at short Span, repels at long Span
positive-negative	repels at short Span, attracts at long Span

When two elements of Nothing attract to each other and make contact, they become nothing, but if any two units flip so as to produce a positive-negative interaction, then they immediately repel, traveling some Span away from each other until their long-distance attractive force starts to take over, then they attract, trying to get closer again until their short-range repulsion sends them back. These two units have now reached an equilibrium, staying at a steady Span away from each other. But now what has happened? What are the two units when they are separated? They are now two units of something. When these two units are separate, they are two units of something; when they are together, they become one single unit of nothing. When separate, each unit of something is now a unit of force; one half can be called force, the other half called anti-force. Force and anti-force meeting means mutual annihilation; no residual radiation, no big explosive reaction, just the two units of force disappearing into Nothing; opposing ‘polarities’ of force. The separation of these two units then causes the creation of two units of force, popping up out of nowhere, but each separated by a given amount of Span.

Back to before anything existed again, when such a unit of Nothing flips its state, it affects any of the other units of Nothing, causing some of them to flip their own states as a result; sort of like that old kid’s game of flipping magnets. This implies a rapid cascade effect, the flipping of the state of one unit of Nothing resulting in an expanding ripple of creation of force and anti-force across the full range of both Hyper-Fields.

Extending this interaction to view the multiverse as a whole, we see a multitude of units of Nothing

spontaneously becoming force and anti-force, each repelled away into its own separate reality. Assuming that all of the force will collect in one dimensional spot, and the anti-force in another, we now have two parallel multiverses; one constituted from force, the other constituted from anti-force. Each multiverse is then a multidimensional field of force– a Hyper-Field– the same one as described at the beginning of this paper. A "positive" multiverse (giving rise to its own infinite set of alternate universes, or values for F_{DG}) and a "negative" multiverse (giving rise to its own infinite set of alternate universes, or values for "negative" F_{DG}). Note that this set of multiverses goes far beyond the normal concept of "matter vs. anti-matter".

Also notice something else. There is still an amount of Nothing between these two multiverses (or more correctly, Hyper-Fields), implying that the spontaneous creation of another pair of Hyper-Fields is now possible, this new set coming to equilibrium at a given Span from each other but also separated by a certain Span from the first two Hyper-Fields. This still leaves an amount of Nothing separating the new pair, sending us back to the beginning of the loop. This repeats ad-infinitum, resulting in an infinite number of force/anti-force Hyper-Field pairs, each separated by a layer of Nothing from the others.

Aside from finally explaining Creation, this brings to mind two main possibilities for a new kind of technology:

- 1) The ultimate free lunch; the ability to make something out of nothing.
- 2) Observing the fact that each unit of Nothing has two states, then the state of a given unit of something can be reversed, implying the ultimate ability to destroy anything by reducing it back to the ultimate Nothing.

It can be seen that Nothing is inherently unstable. Assuming that at one infinitely long time ago that there were yet no multiverses, no Hyper-Fields, with the randomly shifting states of the various units of Nothing, it would only be a matter of a very short fraction of a second before the pair of units would have separated out and caused the creation of the first pair of Hyper-Fields.

At one time, a friend had suggested a name for this theory, calling it "Chaos-Tech" (when asked, his reason for the name was "Why not?"), but that name has since been taken up by a certain branch of mathematical theory (although, no one but me will probably ever know that I had it first). So, for lack of a better name, I guess we could probably call it "Creation Theory", its practical implementation being "Creation-Tech".

Conclusion

My attempt here has been to provide a complete alternative to other theories of the origin and nature of the universe, one that derives from and connects up with the concepts presented in my first paper as to the nature of energy and force. From an understanding of the nature of the photon, how it forms, and its connection to all other fundamental forces, we can scale up to explain the effect of such forces on large cosmic scales, and from that derive how such forces must have originated and how that would have influenced the creation or origin of, not only our universe, but to extend to all universes in a complete multiverse, or more accurately stated Hyper-

Field.

The theories presented, together with my first paper “Relation of the Internal Structure of the Photon with Field and Charge”, now form a complete view of the cosmos, inside and out. Beyond mere understanding for its own sake, however, in the final analysis what we have before us is the basis for a range of technologies of incalculable reach and the means to at last leave our little world and explore the stars to see for ourselves how much of what we theorized is correct.