

In 1880 scientists, all over the world, thought they knew everything there was to know about space and time. But then by the time 1890 had come and gone, that had all been changed, and the world's scientists were convinced by then that they knew virtually little about both space and time.

Even in the 1880s scientists knew that light was a wave and it would go through the best vacuum that one could produce. They knew water waves needed water and sound waves needed air but what was it in a vacuum that could possibly transport these light waves? Scientists more or less agreed that it was some mysterious substance called *aether*.

A simple experiment was done by Michelson in 1881 and repeated with far more accuracy by Michelson and Morley in 1887, that would add the speed of the earth in its orbit to the speed of light and find the drift of this mysterious *aether*.

Well, their experiment **failed**. And it consistently failed as it was done over and over again. No one could understand it! Why couldn't one simply add the speed of the earth in its orbit to the speed of light? It should add but it didn't!

And that shook everybody up.

And since that time nothing has ever really been the same.

Euclid had given us his geometry and it became our foundation for Newton's laws later on. No one found any fault, whatsoever with either Newton's laws nor with Euclidean geometry until Michelson and Morley came and tried to find the *aether* drift.

Then science all came unglued and after that we had people like Lorentz and Einstein telling us that space and time was not this thing we all thought it was and since then it's been a real mess.

You don't think it really is a mess?

OK, go out and buy one of these Global Positioning Units (**GPUs**). It will read out your latitude and longitude.

It works using these satellites that are all around the earth, put up there by the military which they allow us to use although not at quite the accuracy that the military can get from it. But these **GPUs** have to use general relativity tensor math corrections to the Euclidean geometry. Why? And this is what is hard to believe: time goes slower down here on earth because of our higher amount of gravity than it does in those satellites way above the earth where there is considerably less gravity. Up there, time goes faster than it does down here.

Yes, with more mass (gravity) time slows down. And it slows down the faster one goes as well.

How about that!

So I guess, after all, Lorentz and Einstein were both right: space and time are not what they were believed to be way back in 1880.

Since the Michelson Morely experiments, over a hundred years ago, far more evidence has been gathered to show us that time slows with an increase of mass and time slows with an increase of speed.

Space shrinks with an increase of mass and space shrinks with an increase of speed. And Einstein took a

little used tensor math and developed a form of tensor math to show us exactly how much space shrinks (curves) with different mass and speeds.

When this was proven to be correct, beyond a shadow of a doubt, with predictions of the precession of the planet Mercury and the amount that light was bent by a star during an eclipse, this made Einstein's name a household word and all the mathematicians, of the world, then wanted to study tensor math.

Now, what our best scientists use today, in the macro world, are Newton's laws corrected by Einstein's tensor math.

And even this doesn't work in the galaxies where these spiral arms are rotating faster than their escape velocity, which is an impossibility.

So we have developed all these laws and all this math and still nothing works to show us how this universe is built!

A new paradigm shift is needed

An airline owner once told me, "I can get all the shop specialists I want but good line mechanics, that can fix various airliner problems, are awful hard to find."

Not only that but you can have a shop specialist turning out productive work in a few weeks but it takes far longer than a few weeks to become productive solving airliner problems out on the line.

Out on the line was where I excelled because I had my pilot license, my aircraft and engine mechanic licenses, the top radio license and my bachelor of science degree. I have only met one other person with all four of those, in my travels through life, and he too worked on the line fixing various airliner problems.

A person must know all the various systems on an airliner if he attempts to be productive in fixing things on a modern airliner.

Every airline has a system set up where the line folks can get opinions from the top shop specialists and lines of communications are set up so that troubles can be quickly solved. In an airline people who specialize on different things do talk to each other and they **must** talk to the line crews that are having problems with the entire airplane.

A modern airliner is nowhere near as complicated as our universe, yet we have all these specialists, who specialize in their own different fields with their own different **schools of thought**, and I've had a hard time even getting them to talk to one another if they have to do even the slightest bit of different thinking or use different math that lies in the other fellow's **school of thought**.

I'll spell out on these different **schools of thought** throughout this paper.

In this paper of mine, I'm going to place here before you various opinions of various specialists -- who I can't even get to talk to each other because their **schools of thought** differ so much -- and this all eventually adds up to a workable system where all four fundamental forces actually get unified. This might be hard for many people to believe, because it's the *holy grail* of science, but I believe it's true. You will have to make your own decision based on the facts I'm presenting here.

None of these ideas are mine! I'm simply combining these ideas from top people, each who specialize in an entirely different **school of thought**. I'll give credit to each where credit is due.

So all I'm doing is what I used to do while working for the airlines: I'm getting all the necessary specialists on the horn so I can get this airliner flying. Or really, so I can get these four fundamental forces unified and see how this universe is really built.

We use different field laws now for each fundamental force. For instance: We use different math and rules in QCD when we study quarks and the **strong force** than we do in QED when we study electrons and the **magnetic force** because QCD and QED have entirely different fields. This is no good! Therefore let's forget fields and look at motion which must be the same in each realm whereas the fields, as we see them, are not.

We'll talk more about motion and the various **schools of thought** about motion in the microcosm later but right now I want to emphasize that Niels Bohr won the Nobel Prize showing us that different colors of light were obtained via different motions, of the electron, in the microcosm. We can see these effects of motion in the microcosm as different colors, so we know some form of motion is there. Since we have motion here as well, let's start using motion to unify these fundamental invisible forces.

Einstein tried, unsuccessfully, to unify the fundamental forces with math. Let's see if we can do it, using Feynman's suggestion with motion.

So the first expert I want to introduce you to is Nobel Prize winner Richard Feynman. Please click this [QED](#) link [QED](#) (link) to see what Feynman has to say about motion in his famous QED.

I'd been using [Ampere's Laws](#) (link) ever since I heard about them. I found Ampere's motion laws to be far better than the field concept, which seemed to me far too complicated to be useful in electrical trouble-shooting. Not only that but with these relative motion laws you could always easily see which way the electron was spinning whereas with field laws you couldn't. Many times this made all the difference in the world where I solved problems others couldn't.

I was fixing radios even before I entered high school and I spotted the right tools to use early in the game. I immediately saw using Ampere's relative motion laws gave me a distinct advantage over others who used Faraday's field laws to trouble-shoot.

Then, while working on an RCA RADAR Indicator one day at Pan American Airlines, I saw how [Ampere's Laws](#) were also showing me how to unify the fields as Einstein tried to do and I wrote about this in my first book in 1967 [Fitzpatrick's First Book](#) (link) getting approval from Lincoln Barnett and getting blasted by Bob Dicke.

It wasn't until 1997 that I saw the reason Dicke was wrong. It has taken considerable time to work this all out. In fact, I'm still learning!

More later.

Different Schools of Thought and a Scalar, Resonating Universe

Here are three different schools of thought about how fast gravity acts.

Many scientists believe gravity acts instantly. Newton taught this.

Many scientists believe gravity acts at the speed of light. Einstein taught this.

Many scientists believe gravity acts above the speed of light but not quite instantly. This is what [Van Flandern](#) is saying now. He's probably right because light has aberration and gravity doesn't which has to mean gravity is acting faster than light..

The speed of light is 300,000, 000 meters per second or 3 times 10^9 meters per second which would be written 3×10^9 meters/sec.

What I'm trying to put forth in this paper is that gravity and inertia both act, faster than light, at what we see as 9×10^{18} meters/sec and this would be in line with what Tom Van Flandern is saying. It would also account for the factor of c^2 that keeps creeping up in our math.

Most agree, magnetism is caused by the electron spin frequency. If the quark spin frequency is the square of the electron spin frequency then we have not only the reason for the strong force but gravity and inertia can be seen as strong force leakage that we will see as acceleration. Thus, this gives the reason for the principle of equivalence. And with this you also get the reason that a star will bend light. So this explains too many things not to be so.

Now we have two **schools of thought** on whether light is a wave or a particle. It behaves like both.

But Dr. Milo Wolff has recently mathematically proven that the electron is a scalar, standing wave.

So it seems that the electron -- clearly a particle -- behaves as both too.

If we listen closely to these Feynman lectures [Feynman lectures](#) you will see that the electron seems not to be here most of the time. It's gone most of the time. And this is exactly what we would notice if Dr. Milo Wolff is right. These standing waves would act like movie picture frames with the quark sending us faster movie frames than the electron but yet resonating with the electron's slower movie frame rate.

In generating radio frequencies we are constantly plagued with **standing waves** that are always generated with any kind of a radio transmitter. Standing waves do not radiate and they waste power so we try to eliminate them. In this universe it's just the opposite and this universe uses them to build with.

Since these waves, in the universe, come from the surroundings in all directions -- they are scalar -- and they will take a more or less spherical form and they will have spin.

Milo Wolff first discovered that the electron was a scalar, standing wave then later he discovered the

electron's spin frequency was also a scalar, standing wave. Both of these -- electron frequency and spin frequency -- depend on the energy of all surrounding electrons out to the Hubble limit, which is a finite number of surrounding electrons.

Here now is the reason for Mach's principle, gravity and inertia once you realize that the quark too has a spin frequency and is also a scalar, standing wave entity with a finite number of surrounding quarks supporting it.

So the conclusion that we have to come to in this paper is that each electron is composed of standing wave frames, at even a higher frequency, that spin, precess and build a spherical, standing wave electron that gets its power from similar surrounding electrons.

Once you see that Ampere's Laws [Ampere's Laws](#) work in the microcosm as well as in the macrocosm then you see the reason that the spin frequency of all these entities create space and all of them together will give an average amount of space.

Force then become either more space than average -- a repulsive force -- or less space than average -- an attractive force. This is exactly the way the tensor math of general relativity deals with it because there are only tensors for space. There are no tensors for force in tensor math.

Why do Ampere's Laws work? <http://www.rbduncan.com/theALaws.htm>

Look closely. It must be a phase relationship!

Time is caused by a scalar entity's **principal frequency** but space is dependent on its spin frequency.

The further **out of phase** two entities are to each other's principal frequency, the **more time** that will exist between them.

The closer in phase two entities are to each other's principal frequency, the less time that will exist between them.

But **space** is related to the **spin frequency**:

More space than average -- repulsive force -- is being produced between items the more they are out of phase with each other's spin frequency.

Less space than average -- attractive force -- is being produced between items the closer they are in phase with each other's spin frequency.

More later.

Saul Perlmutter's contribution

By 1997 things were finally all falling into place in this concept that I had first started over 30 years before, but I lacked something:

If the Principle of Equivalence showed gravity could not be discerned from **acceleration**, then why didn't this opposite force of gravity, that I saw existed, not also have some form of **acceleration** associated with it?

It was Saul Perlmutter who showed me it did!

Saul Perlmutter headed the group that was first to discover this **acceleration** in this supposedly expanding universe.

My God! I thought. What could be simpler than that.

And then I could hardly believe what I was reading when Saul Perlmutter, himself, stated that we were back to square one again with Einstein's original **cosmological constant**, a force out there equal but opposite to gravity that was holding all the stars and galaxies apart.

This could only mean one thing: I had been harping on this for 30 years. **We were in a steady state universe!**

Because: if there is this force out there that Einstein called his cosmological constant (a repulsive force equal but opposite to gravity) then -- because of the *Principle of Equivalence* -- we would not be able to discern it from an accelerating, expansion.

How simple an explanation!

How unique!

It is the quark spin *force* that is the square of the electron spin frequency that gives us gravity, inertia and this *Principle of Equivalence*.

And it is this same quark spin repulsive *force* on the opposite side, of gravity, that gives us Einstein's cosmological constant as well.

Planck's constant h and h/π (h -bar) are both telling us that we live in this space time realm of the electron's orbital motion and spin motion. **We are tuned to this particular frequency band!**

We therefore see this out of phase situation (space), that these electron spins are producing, as space.

Since we have no similar constant for the quark then we are not tuned to this frequency and cannot see this extra quark produced space, as space. We must see, this extra amount of quark space, instead as acceleration.

I've been in radio all my life and there is no doubt whatsoever in my mind that we, like any radio or TV receiver are only tuned to one **band** and that is to the electron spin/orbital frequency.

We are set up much like the ordinary superheterodyne radio receiver circuitry.

Yes, my good friend Dr. Milo Wolff is absolutely right.

We are part of a frequency or wave universe; we are part of a scalar, **standing wave** universe!

Oh yes, I almost forgot to tell you the most important thing about **standing waves**:

Standing waves reproduce themselves!

This means that this quality of reproduction may also be inherited by the complicated things these **standing waves** build into -- like us.

More later.

What our scientists DON'T see

They do know the smallest unit of magnetism is the spinning electron and they also know it is the **spin** of the electron that causes magnetism.

Some scientists see this **spin** also gives the binding energy for sigma and pi chemical bonding but most scientists are still unaware of this. Ampere's Laws immediately show this!

Scientists refuse to use Ampere's Laws that show there will be no space (attractive binding) created between the closest sides of all **Spinning, Scalar, Standing Wave Resonances**, moving the same direction on parallel paths at the same frequency, no matter how distant they are from each other.

Scientists don't see that it is the quark spin that, much like the electron spin, gives us the strong force between all the really close quarks; gravity between the next nearest quarks and inertia between all quarks and the most distant quarks in the far distant stars.

From this it is apparent why we have *Mach's Principle*.

These attractive binding forces, of both electron to electron and quark to quark, do not dissipate with distance, in the macrocosm but electron binding force extends only to the Hubble limit. We do not yet know the extent of the quark binding force.

The number of units that bind together is what falls off with the square of the distance, in the macrocosm. This is why gravity falls off with the square of the distance in the macrocosm.

Use Ampere's Laws [*Ampere's Laws*](#) to see how important spin is both in the microcosm and in the macrocosm as well.

It's the spin, of these scalar wave resonances, that creates space. Or to be more exact, it's the out of phase relationship between these spin frequencies that determine space.

We detect much like a superheterodyne radio circuit detects. We have electrons inside ourselves that are like the oscillator in a superheterodyne receiver. The only thing that we can detect are frequencies close to our own oscillator frequency.

We detect things that are more out of phase with our own electron **spin** frequencies as being further away

from us in **space**.

We detect things more out of phase with the main frequency of our own electrons as being further away from us in time.

I'm afraid that this is what scientists don't see. And it is so terribly important too.

All **Spinning, Scalar, Standing Wave Resonances** have a form of gyroscopic behavior.

And it is this phase relationship pointed out to us by Ampere's Laws plus the 90 degree gyroscopic reaction of each **SSSWR** to their nearest neighbor that give us this repulsive force that balances out and keeps every unit at a safe distance away from each similar unit.

Look closely using Ampere's Laws and you will see this is the reason all these spinning entities **repel** in the microcosm as well as in the macrocosm.

And we can travel back in time again to 1915 when all of us, including Einstein, thought we were in a steady state universe.

We do not have an expanding universe but only an **apparent** accelerating, expanding universe because the *Principle of Equivalence* tells us: with that repulsive force of Einstein's, out there, between all the stars and galaxies that we can not discern Einstein's repulsive force, out there, from an accelerating, expanding universe.

More Later

Predictions this new concept makes

This new concept does make predictions:

One prediction is that all binary stars of the same mass must have opposite spins.

Another prediction is that in binary or tri star or other numerical groups where these stars are going around each other in a sort of planetary group, then these stars will all be spinning more prograde with each other rather than more retrograde.

Another prediction is that all other stars -- not in these groups -- will be spinning more retrograde with their closest neighbor.

Another prediction is that controllable nuclear fusion will **not** be possible using any of our present science or math.

Controllable nuclear fusion **will** be possible with this new frequency concept coupled with a new type frequency math.

What this new concept **TELLS** us:

Centrifugal force is really a form of binding with the surroundings.

We find the idea behind *Mach's Principle* is correct.

The spacetime interval is only invariant inside **one** spin/orbit frequency realm. And one of the things that this means is we can only "see" motion in our spin/orbit frequency realm. In other spacetime realms we can only detect evidence that motion is/was there. We can't actually "see" motion in other spacetime realms. Neither can we see the correct distance in other spin/orbit frequency spacetime realms. It's different from our distance. And its time is different from our time.

This concept also tells us String Theory is correct about its multiple dimensions because by using this new concept, we can actually now see these *different dimensions* must be different spin/orbit frequency spacetime realms.

This concept tells us that this universe is not what we think it is:

There is no such thing as one particular type of space, per se, for this entire universe.

There is no such thing as one particular type of time for this entire universe either.

We now can see exactly what space is and what time is and we also see that motion can not be this thing we always thought it to be because if it was then we would be able to add the speed of the earth in its orbit to the speed of light and we can't.

Space, time and motion all have to be seen simply as phase shifts.

This concept not only proves that general relativity is right but it shows you exactly how it works as well.

This concept shows you that special relativity is only good in special situations where there is absolutely no force. Since these places are few then special relativity is of very limited use to us in figuring out this universe.

This new concept proves the fact that energy can neither be created nor destroyed is related to the impedance matching transfer of energy. Without a form of impedance matching, found in radio theory, no energy transfer is possible.

The most important thing that this new concept shows you is that all of our present various sciences are merely subset rules and none of it is any type of universal science whatsoever.

We find, using this new concept, that Dr. Milo Wolff is right and this is indeed a **Spinning, Scalar, Standing Wave Resonant** universe.

How can this universe be built where space and time changes?

It has to be a scalar, resonant, standing wave universe!

Quarks, electrons, galaxies have to be scalar, standing wave entities, close enough to each other in frequency to be linked harmonically together so such a universe can actually be built.

The smallest unit of magnetism is the spinning electron and the spin frequency is the important element giving us this magnetic force.

There is no tensor for force in general relativity so we see a repulsive force can be equated with more space than average and an attractive force can be equated with less space than average.

Tensors enlighten us that if the quark spin frequency is the square of the electron spin frequency then we would indeed have the principle of equivalence if gravity was strong force leakage with the quark spins attracting other quark spins like electron spins do in magnetism.

It also shows us why we get the acceleration to this so called expansion of the universe and why Saul Perlmutter is correct telling us we are back to square one again with Einstein's cosmological constant, a force equal but opposite to gravity holding all the stars and galaxies apart.

Space and time would then change exactly like we see it changing if what we see as a change of time is really a phase shift of the principal scalar frequency and a space change is really a phase shift of the spin frequencies.

So Dr. Milo Wolff must be right!

FITZPATRICK's MODEL: or How We Have To Look At Our Universe

We must visualize our entire universe as **Spinning Scalar Standing Wave Resonances** (Quarks) inside of orbiting lower frequency **SSSWRs** (Electrons), which themselves are inside of orbiting lower frequency **SSSWRs** (Our Solar System), which is inside of orbiting lower frequency **SSSWRs** (Galaxies), which are inside of orbiting lower frequency **SSSWRs** (Super Clusters) ad infinitum in both lower and higher

frequency directions.

And we must look at these as obeying only one law -- our in phase, out of phase rule -- which we can more easily see as motion in these separate spin/orbit frequency realms.

We are not exactly dismissing all new theoretical science and returning to the Halcyon days of Niels Bohr because we understand it is not motion but our phase differences that really determine spacetime.

Since we are tuned to the electron's spin orbital frequency (shown to us by Planck's constant h) then all frequencies higher than this (h) will be seen by us as point sized (dimensionless).

Any conglomerations of these dimensionless points of matter -- our h frequency -- we will see as solids.

By the same token, all frequencies lower than this (h) will be seen by us as larger (galaxies) and even lower frequencies, than that, will be seen by us as even larger super clusters.

We are tuned in to these frequencies similarly to the way a superheterodyne radio receiver is tuned to the frequency that it receives.

The Mysteries are then explained

Why are stars that are further from us in space also further from us in time?

Because, as Dr. Milo Wolff has pointed out, it is the **wave density** that determines spacetime. The same wave density will be between both spin frequency phase shift (that determines space) and the principal scalar frequency phase shift (that determines time). If one is separated by a certain wave density then the other must be too unless force is involved. And the forces between all the stars are balanced in a steady state universe.

Why can't anything go faster than the speed of light?

Under this New Concept the question must be rephrased as: Why can't anything composed of atoms and molecules, or even the electron component thereof, go faster than the speed of light?

First we must ascertain exactly what speed is: The whole concept of **speed** is arbitrary and capricious because there is nothing in this entire universe, microcosm or macrocosm, that remains at rest. So what can you measure speed against?

What we are actually doing in physics, as we measure speed, is measuring the displacement of translational motion of the spinning quarks, if we are measuring the speed of atoms and molecules and things built from atoms and molecules.

It takes force to displace this translational motion of these quarks a certain amount.

Acceleration is a continued displacement of the translational motion of these quarks that build atoms and molecules.

The more this displacement then the higher the inertial force.

When you look at the speedometer on your car it is only telling you how fast the car is going down the highway. It is not telling you how fast the highway and the earth are going, as fast as a cannonball, around the sun because you don't care about that anyway. It doesn't affect your driving. That is speed too but in this instance we only want to know the difference between your car's speed and the road. This is easy to measure by measuring the force that it takes to displace the translational motion of the quarks or what we understand in physics as inertial force.

Exerting this inertial force, by either spinning faster or speeding faster, is like pushing against a strong spring and the graph for this force is not a straight line but an asymptotic curve. To go twice the speed you must exert slightly **more than twice** the energy. The reason that nothing can go faster than the speed of light is that it would take all the energy available in this entire universe just to move the smallest atom at this theoretical speed of light.

Why do we have plus and minus charge?

For the same reason, essentially, that you have positive and negative attractions in magnetism, because of relative motion (phase shift).

But that phase shift for magnetism is at the electron's **spin** frequency where the phase shift for charge is at the electron's orbital frequency, which is a lower frequency.

In both charge and magnetism it's more space than average being repulsion and less space than average being attraction. And this is the same as in the tensor math of general relativity.

Why do planets, stars and electrons all orient their rotating axis perpendicular to the direction they are going?

Yes, and the faster they go the more force is generated to orient the axis of rotation perpendicular to the direction they are moving so that with the greatest force the line of direction will lie inside the spin/orbital plane.

This is especially important in the translational motion of the higher frequency **SSSWRs** inside as well. The quarks, for instance, inside an item that is being accelerated or spun must now do the same

Theory of Everything

Milo,

He has given us what Stephen Wolfram said we absolutely had to have: He's built a magnificent model of how these fundamental forces are integrated.

Bringing the gravitational force in was the epitome of genius. We all knew that the sun's gravity bent starlight but this model shows us exactly the spinors involved. It's one of the truly great science achievements.

And he's done it all in our spacetime realm here where we can see it without having to use other dimensions in other spacetime realms. I never thought I'd see that done in my lifetime.

What you have been saying, Milo, fits in beautifully and what Saul Perlmutter has been saying about the cosmological constant is there and as more people analyze it they will see that what Van Flandern and I am saying is correct as well.

Here is a link for the theory itself in pdf.

http://arxiv.org/PS_cache/arxiv/pdf/0711/0711.0770v1.pdf

Cheers

Daniel P. Fitzpatrick Jr.