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The person who wrote this kept it under wraps
for several years.

Was this because of the British MI-5 or MI-6?

Unvarnished & uncolored, this is just the way we got it .

a

Cambridge

Theory of Everything

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Dedicated to Dr. Frank R. Caputo who is still very much with us and who lived his long life as American as John Wayne and as honest as Pericles.

1. A Unified Field Concept is now a Fait Accompli.

In Cambridge University there is—or at least was—information that substantial progress has now been made in the unification of the four invisible forces.

Magnetism, Gravity, the Strong Force and the Weak Force all stem from one thing and one thing only. Einstein was correct in looking for a simple answer and saying, "God doesn't gamble": It is indeed all based on an extremely clear and concise principle and it seems that all scientists totally missed it until now.

Even though the basic principles are extremely simple, practical use of this new concept is the reciprocal of simplicity because it is as if the universe's rules are written entirely in Bill Gates's P.C. operating system and our minds along with thousands of years of our math are all written in the Macintosh operating system and only now have we gotten our very first copy of Sun's JAVA Universe to Humans 1.0 Beta version.

However, along with this latest theory may possibly have come the very tools needed to fully develop and utilize this new revolutionary concept. A few years ago we would not have had the necessary computer hardware, software or even the indispensable basic new mathematics to begin to exploit such a tremendous concept. Although there are laws preventing me from explaining certain computer hardware, software and mathematics, there is no law preventing me from giving you **my ideas** about a concept that I received from things created prior to anything being classified as secret. So although I will be pointing out the hidden, precious well to you, it is you who will have to do the engineering necessary to obtain the water from that rather deep well.

I am not the very best person to write this book because I can only put forth a preponderance of the

evidence and my writing style is far from formal but you will have to do with me because I suspect all the others who could do a much, much better job of writing this are either too patriotic or else are too afraid of the old lion to even contemplate writing it. To all of my good friends yet in England I can only say that I'm not the one who is wrong for writing this but the people **you** are working for are the ones who are wrong for preventing any of you from writing about it. It's been nice being with all of you and seeing this come together but I shan't be returning to England anymore.

When I saw that this new concept showed me **why** we have symmetry and exactly **what** inertia was and when I could finally see **why** radio and light waves worked and **why** $E = MC^2$ and then especially when I could actually visualize what the "string" was in these promising superstring operations, then I knew that I had no alternative but to write this. You'll see it's all very similar to inertial forces once you comprehend what inertia really is.

All of this, that you will be learning as you read on, is something brand spanking **new** that a chosen few of the brightest minds now finally realize must be happening.

What you are reading here is strictly my interpretation of something that was written **before** it could possibly be classified as secret. I am, thereby, not plagiarizing nor violating secrecy laws of any type.

My legal counsel insisted that none of the mathematical proofs could be included in this and that I also insert the following disclaimer:

The papers herein described as the "Cambridge Papers" or any word "Cambridge" in the following have been so named because of the type of paper I so admired while in Cambridge, Massachusetts and have absolutely nothing whatsoever to do with anything that is or was in Cambridge University, England.

England has secrecy laws whereby you can be prosecuted even if what you reveal is the truth. It is not my intention herein to violate the laws of any country. I am not passing on any math to you nor is it my intention to ever do so. What you read here is all my own formatting. These are all my own statements. These are all my own ideas, sentences and paragraphs. Absolutely nothing in this are direct statements of any British secrets.

However, I do believe Britannia may intend to rule a lot more than the waves. England should not be the sole possessor of this new Unified Field Concept. This knowledge belongs to **all** of us. I will do the best I can to explain it all and what it is that makes this such an extremely powerful tool especially if one nation decides to keep it under wraps and develop it entirely on its own. Since I have been around this world many times and on both sides of the equator and I have been treated well wherever I went, this makes me feel I would rather trust all the people of the world rather than let one group hog the trough on this one.

Despite my failure to be able to convey everything to you, which I very much regret, I do believe that other sources will soon provide you with other things and even more proof that all this is correct. I can state unequivocally that there is absolutely no possible way that even the best agents will ever obtain the necessary software for this but since I am spelling out a good portion of the theory to you herein, computer programmers and physicists—with a little luck—could be able to produce that. I do know, however that the inroads that have been made on the intricate mathematics needed for the proper functioning of the theory itself—especially as it pertains to the microcosm of the atomic world—are still very much in their infancy but as progress is made this might will eventually turn into a powerhouse for

the nation that gets it all down pat first. With what others give you and from what you get here I'm certain you will see the importance of all of this. If that happens then I have accomplished what I initially set out to do and I feel that by writing the book in this manner I can safely say that I have done the same thing that Daniel O'Connell said he did a long, long time ago: "I have taken a coach and four and driven it straight through their English law."

It took me a bit of time—because I did not get the facts as fast as you will in this—to realize that this could indeed possibly be the final answer to everything. I will explain it all to you and I'm sure that even though it takes a while to totally sink in, you too will then agree that this seems to be the best answer yet to a Grand Unified Theory.

Now that all this has been accomplished, what exactly is this entirely new concept of our universe telling us?

It shows us that from the quark to the atom to the solar system to the galaxy and on even to the super-galaxy that all use the very same principles. These same laws work in both the microcosm and macrocosm. It shows us that in some respects each of these layers could be considered a different wave guide layer in which the different frequencies contained therein determined different symmetries for each layer but not different laws.

This defines new parameters for us—a bit narrower than we previously thought—within which Einstein's tensor calculus of General Relativity will be perfectly accurate.

This new Unified Field Concept shows us that both Ernst Mach and George Berkeley were correct in assuming that inertia is caused by all the rest of the universe acting on things to cause this inertia.

We can see now that the tensor calculus of General Relativity is an exceptionally good mathematical shorthand that can only be accurate when the surrounding universe is homogeneous and isotropic and light years away from the objects being measured. We now see if the surrounding universe is anything less than this then General Relativity will not be perfectly accurate. **Now** we can correct it when it is not like this.

We wouldn't have known any of this before the unification of these four invisible fields. There was no possible way to have known such a thing before that.

The late Robert H. Dicke seems to have been correct in his assessment that this image of the universe mainly based on Relativity might not be all that Einstein thought it was cracked up to be. Einstein may lose a tail feather or two with a few of his ideas but not with his General Relativity tensor calculus mathematics. Relativity math still remains intact if used within the boundaries described above and his "Principle of Equivalence" comes out OK providing you are not examining things with some future improved electron microscope because here you **might** be able to determine the difference in an atom that is being accelerated or if it is in the vicinity of more mass. Gravity and acceleration cause two entirely different things to happen inside the atom. But these two different things are things that turn out to be **practically** equivalent. All this we go into in the section on the Principle of Equivalence. Other than that Einstein is correct and you will never be able to tell the difference. This by the way was one of the most incredible observations that I have recently perceived. I wish I could tell you the entire discovery story and not merely the results. Dicke may have been right about some of Einstein's concepts being wrong, however, Dicke was absolutely wrong himself by claiming that gravity could not be caused

by relative motion. His reasoning was that with relative motion he would detect frequency mixing with a null test and he couldn't get a null test. Neither Dicke nor anyone else realized that the relative motion was not where they thought it had to be. And it would be the relative motion of **specific**, non-mixing, standing wave **frequencies** all well outside of Dicke's measuring abilities that would be of paramount importance in the unification of the four fields.

In retrospect we now can see that it had to be something in the realm of relative motion because this is the only thing that these four invisible fields have in common. Sir Arthur Conan-Doyle had it right: If after you have eliminated all of the possibilities whatever remains, however improbable, must be the correct solution.

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2. What Scientists should have been actively looking for.

Neither Newton nor Einstein's tensor calculus improvements upon Newton were telling us why we had inertia. With this new unification of the four invisible fields we instantly have a concept of the universe that clearly and concisely explains inertia.

George Berkeley and Ernst Mach saw that while the gyroscope's precession is always 90 degrees to an applied force that this also might mean that every time the gyro was upset it was merely following its **new found** path as projected on the fixed stars in space that had helped cause it. Evidently they have been proved entirely correct.

Einstein held this idea earlier too but later discarded it even though Foucault had demonstrated with his 200 ft. long wire pendulum in 1851 that Berkeley and Mach should be right. General Relativity simply "sees" the rest of the universe as being homogeneous and isotropic and not having anything but a possible fixed inertial effect. A big problem for General Relativity will develop where the surroundings—of the items being measured—are **not** homogeneous and isotropic and light years away all around. We now know that since surroundings will act **along with** or in some cases **instead of** the rest of the universe then even though Relativity has had an immaculate record so far, this **will not** continue where you have complex orbiting surroundings such as we find in the Pulsars. But now we know how to correct for this and it even looks as if Einstein has hedged enough in this respect where he still can be seen as being right.

If this theory proves to be 100% accurate then Einstein's tensor calculus formulations will be with us for many, many generations yet. Everything in this universe, in this new concept, is tied to everything else. This is definitely not the answer that scientists were looking for or even wanted. At the present there is simply no math that can handle this; possibly the math for this won't ever be entirely developed. Only the very latest super-computer models can utilize **some** of this new information and even this must be processed in an entirely new way. Only a very few nations have these computers.

Once we do have even better super-computers that can plot the paths of all the electrons in the elements then humans will have the ability to make immense scientific strides the likes of which science has never seen; then and only then will we leap frog way ahead of where we now stand. Once this is done, however, then there will be a far, far different world simply because at this point science won't be able to

improve things much further. Scientists will then be able to design the strongest materials or the lightest materials or the best lubricants or the best weapons and the list goes on and on.

At least that's what this new information is telling us.

Niels Bohr proved these locked spinning electrons with their slight amount of mass are causing magnetism and if you read on you will see the following will show it is the asymptotic freedom of these dense spinning quarks that allow them to lock on for a much wider angle than the electron and these quarks then cause inertia and also provide us with the answer to Einstein's Principle of Equivalence.

As you read this you will begin to see exactly how you can actually change the inertial surroundings—thereby changing the inertia of electrons—using magnets but you cannot change the inertial surroundings of quarks that are causing 99% of regular inertia.

Scientists should also have seen that the two hundred year old idea of charge could also be duplicated by something far less magical and far more easily understood in the realm of relative motion. **And** they mistakenly changed a vector quantity into a scalar.

Another very bad mistake was in keeping the hundred and fifty year old idea of magnetic lines of force because this kept everyone from seeing in which direction electrons were positively spinning; this and the electron's dimension both now become of **paramount** importance in this new theory.

When I first saw exactly how this all worked, I was carried away with awe of how the pieces of the puzzle all finally fell together but now that thrill is long past and I have to sit here at this keyboard and presently ponder at what scientists should have seen.

It's ironic that Michael Faraday, who gave us these magnetic lines of force—that undoubtedly have set us back—was also the first to propose that magnetism and gravity could be unified. He suffered depression for over a year when he failed to do it. We now know he couldn't have done it but a sufficient amount of evidence needed to solve this entire puzzle was finally in place by 1925 when Goudsmit and Ulenbeck saw the electron was spinning. After that even more pieces of the puzzle all fell slowly into place and it seems the last big piece of the puzzle was the observation of the rotation of the galaxies in which it was discovered that the outer arms of these spiral galaxies were rotating at the same angular speed as the central portions. This implied a far greater total gravitational mass and attraction in this universe than was hitherto supposed.

How does that enter into it?

Read on and you'll see.

One more thing that should have aroused suspicions of scientists but didn't was the "tuned circuit" aspect

where individual and far away frequencies of radio or light could be tuned in. No one asked **why** it was possible. Now with this unification the **why** is perfectly clear.

What's plain now is that the reason for inertia should have been immediately seen once it was realized that the mass of an atom was less than the combined masses of its constituent electrons, protons and neutrons. The section on Inertia should open your eyes. Don't jump to it first though. Read everything in order for the best comprehension. Moreover, inertia is a sort of friction with the rest of the universe.

When it was realized that the electron's charge energy was the source of the electron's mass then this proved that these spins of all the locked electrons in a powerful magnet would change the inertia of those domains of spinning electrons brought near it. I'm afraid eventually the press is going to have a field day with all of this because not one iota of this was developed in either an English or an American University. Cambridge obtained it from another country: The main rules are **not** theirs and this is why I can safely relate it to you herein. But remember, in this I am only telling you what they **got**. That was in the **past**. Even you can plainly see this wouldn't be where they are now.

An important part of this theory is balancing. This entire universe tries to continually stay in balance. Iron is at the very end of the fission and fusion road and the iron atom has some difficulty getting balanced. We have gained energy by hydrogen fusion and by uranium fission. If people can stay here forever (which I very much doubt can or will happen) then theoretically all the elements lighter than iron could be made to give off energy by atomic fusion. All the elements heavier than iron could be made to theoretically give off energy by atomic fission. But iron is the atomic energy ash heap. You can get atomic energy—theoretically—out of everything except iron. You are at the very end of the atomic energy road once you have iron. There is no way to gain any more atomic energy once everything is converted to iron. The universe just has to close up shop then and wait for another Big Bang, I guess.

The elements cobalt and nickel, that are right next to iron on the Periodic Table both have one electron that is unbalanced but the iron atom that is at the very end of the road has the most trouble staying balanced and it has **three** electrons unbalanced.

All the heavier atomic particles stay perfectly balanced out. It's only here at the very end of the road where the lightest particle—the electron—gets into trouble balancing out. How many theoretical physicists do you think have gotten the message implied herein?

None——until 1998.

In Section #4 that tells about frequencies, you'll see that by 1925, scientists should have caught on to what was really happening. Even well before 1925 two of the greatest mathematicians of the age, Poincare and Hilbert, had given ample warnings about the math. Even Einstein didn't see the full implications of this: Niels Bohr and his Copenhagen group did: That's why they took the development of Quantum Mechanics down an entirely different path so they could somehow try to slip by and avoid all the old mathematical brick walls that they saw had been set up all around them.

Hilbert warned that there was no such thing as a **point** in geometry. Hilbert showed the limitations of geometry. If you, such as George Gamow's "Mr. Tompkins", could get smaller and smaller and could examine the microcosm then what would happen to this point and say a three degree angle that you brought down with you as you got smaller? Geometry falls all to pieces then. Any geometry that uses points, angles and lines is absolutely worthless when trying to examine this **entire** universe. Geometry is

only good if you are examining things your own size in your subset world of particles. Besides that, geometry is restricted to very narrow parameters in this subset world of particles too. Einstein extended these limits with Relativity but he forgot some other parameters of size. You cannot use the same geometry when examining too far into both the microcosm or macrocosm: See Einstein's gravity wave prediction in Section 16.

Even Einstein—when working on his Unified Field Theory—failed to heed Hilbert.

The very foundations that Quantum Mechanics is built on is that basically this is a world of waves.

All of this clearly points to the fact that this is a universe of waves—of exactly what we dig into later—and that this so called "real world" of human experience, that has developed over thousands of years, is merely a **subset** world **inside** this vast world of waves.

For instance, when you hit a nail with a hammer—both scientists and homo-boobus have done that—the human experience tells you these two things **touched** each other rather hard.

Aren't all those iron nuclei surrounded by electrons that never touch each other?

I'm afraid that when you whacked the nail with that hammer, what you thought you saw never really happened because nothing came close to even touching. The nail electrons repelled the hammer electrons long before anything could possibly touch.

This thousands of years of human experience universe, I'm sorry to tell you, is not the real universe.

Although our concept of waves **must**—and will—drastically change, this will remain a wave universe. The world of the particle is only a **tiny subset portion** of this wide ranging universe of waves. So too is **all** the mathematics that describes this subset world. You need to use the math that describes waves and forget **all** the particle math if you want to ever get even close to some type of a workable Grand Unified Theory.

Most of your mathematics is nothing more than subset math. It has taken you as far as it can in the particle world. You now need something entirely new **if** you plan to decipher this new universe of waves.

All of this was widely known by 1922. How many billions of people, millions of scientists and thousands of theoretical physicists took serious notice of it?

None.

Not until 1998 anyway.

You will have to admit that this does not portray an intelligent type of human creature who will continue a lengthy existence in this universe, does it?

But we see this all in hindsight. We have to move on and forget our past mistakes.

* * *

3. *After the Big Bang*

Evidently George Gamow was correct and there was a Big Bang in which many of our elements were created. There was a terrific expansion too. But there was something else Gamow didn't know. I guess when he was in Copenhagen with Niels Bohr, he never read too much about what Ernst Mach and Berkeley believed. But now we know for certain that everything in this universe is really tied to everything else—how this works comes much later—and now we see that if everything is tied to everything else then all these particles will act like yo-yos thrown out with strings attached and the expansion energy will eventually be **totally** absorbed into the angular momentum of all the spinning and orbiting particles and larger spinning and orbiting masses until we end up with a steady state, non-expanding universe.

"Wait," you say, "we've got this Red Shift!"

And that you do my friend but what about that last piece of the puzzle that we were talking about earlier?

We already know that an increase in gravity at the **source** of light, shifts light toward the red: It lowers the frequency. But **in addition**, as proved several years after Einstein predicted it, **stars in the transfer zone**—in this particular case our own sun—will also slow light down enough to bend it. Even though these observations were done in 1919, 1922, 1929 and 1951 and all proved that light in the **transfer zone** from a star to the earth was **being slowed** down by gravitational force—our own sun—yet no one (until 1998) realized that if these rotating galaxies were responding to all this unknown mass then **all** light coming to the earth from distant stars also must be slowed down by this same unknown gravitational force during its lengthy trip in the transfer zone.

This tells us that we also must take into consideration the total amount of gravitation felt in the area of the **light transfer zone**—not merely from our sun but from all the **other** stars as well—and the time that light is in the transfer zone, doesn't it?

The total gravitational attraction that light experiences in the transfer zone from all the stars will lower the frequency of light **in addition to** the gravity of the light source.

While this might have seemed negligible and/or inconsequential before, now with this added gravitational attraction that we find we have in our universe, this gives us the **exact amount** of "Red Shift" we find that we have in our universe today.

When you find this is the reason for 100% of the Red Shift then an expanding universe is no longer even a remote possibility.

The following gives you even **more proof** that you couldn't have this Red Shift unless you had a steady-state universe:

In fact there are two more proofs: Let's look at them:

- The **First proof** centers around Olbers' Paradox.

Let's start with this **proof**: Remember Olbers' Paradox? Olbers wrote about it long ago before anyone even heard of that Belgian cleric Georges Lemaître and his expanding universe. Olbers lived in that blessed age long before 1927 when everyone, including Einstein, thought we had a steady-state universe.

Olbers showed that since the volume of a sphere is $\frac{4}{3} \pi R^3$ then even though light falls off as the square of the distance, that as one looks out, stars are adding up all around us at a **faster** rate than the square of the distance. Olbers then asked, "Why are we not blinded by all of this light?"

Olbers is showing you that you have all this massive gravitational attraction, not because of all this "missing mass" but simply because you have a steady-state universe. It **has to** keep adding up in a steady-state universe but you also have another sort of a gravity type red shift that keeps the total gravitational attraction from being overwhelmingly strong.

While Olbers didn't know about the Red Shift and the curvature of space caused by gravity, he did see the implications that things added up all around us much faster than they were decreased by the square of the distance. Now this pertains to gravity too. We know that we are limited to a certain distance out that we can see stars. Gravity—we now see—has to be felt from a much, much further distance away.

One reason that gravity must be felt from a much, much further distance away than we can see light is because it's a far, far lower frequency which will be covered where we talk about waves and later we'll also discuss another reason: This is "Angular lock on".

You will also see—and very plainly so I hope, as you read on—that Einstein was absolutely correct when he said space-time is curved. It is basically this curvature of space-time that is the real reason for the red shift **we** sense and nothing else.

Not only light but **all** frequencies throughout this universe everywhere, not only in the macrocosm but in the microcosm as well, will be shifted in frequency as seen from another observer's point of view simply because the observer resides in a different space-time setup. The macrocosm's *seems* the reverse of the microcosm's to us in between.

You simply wouldn't have this much gravitational attraction in Lemaître's expanding universe: That's why the expansion people are looking for all this "missing mass". So what this all seems to boil down to is that the way these spiral galaxies are rotating is proving that we are in a steady-state universe and there is no such thing as all this "missing mass" that you would need to find in a Lemaître type expanding universe..

In the macrocosm the stars will shift the frequency of light to the red. In other words by the time their light gets to us we find the frequency of that light has lengthened in wavelength or shifted to the color red which is already a longer wavelength than all the other colors.

The heavier the star, the more the red shift. Acceleration will also cause this red shift in the macrocosm and the more the acceleration the more we see light red shifted too.

Hubble discovered one more reason for a red shift and he found the further away stars were from us the more we saw them as red shifted too.

This led Georges Lemaître to pronounce that we were in an expanding universe and he was swiftly joined by Gamow who then predicted we would find the background radiation from this violent sudden building of our universe. Dicke started looking for this background radiation and discovered that it had already been found but its discoverers hadn't realized what it was they had actually discovered.

Einstein, at first, told Lemaître that this assumption of an expanding universe was absolutely wrong but

then as time went on even Einstein changed his mind and got on board this new expanding universe ship. With Einstein now on their side this expanding universe idea took on a new life.

I realize that against such formidable opposition I will have a problem claiming this is really a steady state universe but please listen to what I now have to say.

If there actually was such a tremendous expansion such as Gamow's background radiation seems to indicate then is there any possible way to explain how it could **not** still be expanding and steady state now?

To give you the answer to that here's a little something I snipped out of one of my earlier books and I then adapted it to fit here.

The problem then becomes one of getting an explanation for a Big Bang without us having an existing physically expanding universe. The solution was shown to me in the last week of December of 1950 at the Miami Air Show when I saw William T. Piper, who founded the Piper Aircraft Corporation. God knows how many airplanes he built from 1929 'til he died in 1970 but he built over 5,000 of his Piper Cubs just for the Government during World War II. He was about a week shy of his seventieth birthday when he demonstrated a short field landing at the Miami Air Show with one of his Piper airplanes. I used what I saw that day to save myself once. Piper brought his little Piper airplane in and touched down on the runway. Then as soon as he was down he immediately hit the right brake as hard as he could and I have never seen anything like that in all my life because now here was this Piper airplane that was suddenly transformed into a fast spinning top right in front of my eyes. That airplane went no further down that runway. All that energy now suddenly went into spinning that Piper airplane around like a giant top and it zipped round and round and round: it was the most incredible sight that I have ever seen. It was announced that he was going to demonstrate a short field landing but I had never expected to see anything like that. Piper lived almost another twenty years after that too and died a year short of his 90th birthday. I was ushered in to flying being trained in one of his yellow Piper Cubs and I almost exited this life early because of one of them too.

Yes, linear speed can be changed into angular momentum and the "Big Bang's" expansion would have eventually completely **stopped** and that is exactly what must have happened. We'll go into the whys and wherefores later.

To all this I must add that the latest Britannica says ". . . while an actual physical expanding universe is, indeed, the popular view, it is not the accepted scientific view."

Einstein—who first conceived of General Relativity during the era of the steady-state universe—saw that such a steady-state universe must have a certain unknown repulsive force—just the opposite to gravity—that exactly cancels the effect of gravity and keeps everything in the universe firmly in place. Einstein called this repelling force his "Cosmological Constant". Later when Einstein thought we had an expanding universe he called this a blunder. Now we see that Einstein's "*Biggest Blunder*" was in listening to Lemaître.

My science reading began at the end of that raging, lengthy, argumentative Gamow-Hoyle debate where Gamow would hurl unkindly epithets toward Hoyle and Hoyle—the steady-state universe's champion—would always respond with derogatory but yet printable remarks about Gamow's "Big Bang" which were two words, at the time, that were supposed to ridicule Gamow and which did in fact do so for

a while until they at last became a veritable picture in themselves and gave to the common man the shortest best phrase expressing the entire idea of Gamow and Lemaître's Expanding universe.

Now as I sit here at my computer and contemplate those "good old days" when I was young, I will now be the very first arbitrator who settles that great confrontation:

Gamow was right about the Big Bang but Hoyle, who expounded the steady-state universe, wins it: Look at a rock that also has spinning and orbiting electrons inside it and the rock gives you a perfect model of the way our universal new rules work in both the microcosm as well as the macrocosm which is also just as steady-state as the rock.

So now that we are again back to the steady-state universe, this new Unified Field Concept beautifully removes Einstein's "Cosmological Constant" from that of unknown origin to one whose origin is now as clear as crystal. You'll see this first in Section #7.

It took the world about 40 years to accept Newton's idea of gravity. I guess it will take another 40 years to bring us all to a steady-state universe again. With all this new information It certainly looks as if we are headed back again in that direction though.

There is a red type frequency shift for **all** frequencies including inside the microcosm. It's the tremendous density of the quark—close to a black hole—that red shifts and holds in all its energy. This is to be expected if space-time is curved and **all** frequencies are red shifted. You should be glad that this is the method the universe uses to insure stability because this is what keeps energy from leaking out of your universe and stops a catastrophic amount from entering. Angular lock on—which we'll be talking about later—also seems to be reversed as well.

This red type frequency shift in the vicinity of the quarks gives you the reason for the quark's asymptotic freedom. This is covered in the Quark section.

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4. We are built out of nothing but frequencies.

This entire theory starts off with something Einstein was the first to publicize: This is the de Broglie wavelength.

We will only go into a part of this now and that part is the fact this theory agrees with Einstein and de Broglie that all particles can be thought of as waves or frequencies.

Frequencies of what comes later in this section.

This theory envisions this universe as being entirely a universe of something that our mind can only recognize as waves. These waves are at different frequencies. Think of it somewhat like keys of a piano going from high pitch (high frequencies) to the low tones (low frequencies). Our tangible universe is composed of only a few of those piano keys. In other words our visible universe—the entire universe that we could see if we could possibly get there—is made up of particles of only a few of the many frequencies that probably exist in some type of vast unknown super-universe of nothing but frequencies. These few frequencies here are our little world. This is our limited frequency spectrum. Perhaps our visible universe is only an octave or so of all the available piano keys. We can see this octave of ours but

we have no way of knowing about all the other keys to the piano. We don't even know how many keys this piano has.

One important part of this picture in this theory is that it gives us an explanation to where the energy for the Big Bang could have come from.

It could have come from higher or lower frequencies than our spectrum that we can't in any way even discover.

The critical part of this theory is that there must be a reason that these frequencies (that compose us and our universe) remain here and we see these as particles.

In this theory all particles are nothing but **spinning standing wave** entities.

These can possibly remain here for several reasons:

- One reason is if there is nothing at that frequency or a close harmonic of that frequency to absorb them then they can remain here.
- Another reason they could remain is if they keep their front to back standing wave ratio equal then they simply cannot radiate away their energy.
- A third reason would be that they could, in fact, be supported by waves of a certain similar frequency that these spinning standing wave particles—by positioning themselves—would always be able to emit or absorb in the correct amounts to maintain their initial amount of mass-energy.

Now comes the interesting part: If you have this universe of various frequencies then you might have any number of frequency conflicts and since we've had all the time in the universe to keep having Big Bangs of every conceivable type then you can eventually have one Big Bang that sets up things so the various new frequencies produced can actually stay here in a form of spinning standing wave entities, that we see as particles.

This Big Bang of ours may have finally done it in such a way that everything could stay here for a while. And this reminds one of Darwin's natural selection that keeps trying until it finally arrives at what we have now.

In essence, the reason all this space is needed between everything in atoms is that it keeps these spinning standing wave entities far away from other similar frequencies that might absorb them. Or maybe by keeping on definite orbitals these electrons can keep their front to back standing wave ratio equal and therefore cannot radiate their energy away. Or maybe this way space-time is curved just enough for them to remain here

Anyway, even if we see things as particles we must agree that Einstein and de Broglie were correct in assuming that the cornerstones of all of this are really nothing but waves of something that—these papers show—must also be inertial products that are themselves made up of much smaller inertial products that are themselves made up of much smaller inertial products—and this could possibly go on and on and on and on. Does it continue ad infinitum?

Anti-matter in this new theory is possible but the waves that are needed to reinforce it won't be here or waves that **can** absorb it **will** be here so it simply won't last long. Different frequencies of waves exist in the neutron than outside the neutron therefore particles that can exist inside the neutron may or may not exist outside the neutron: Continued existence of something depends if it continues to be supported by the correct surrounding waves of that layer. Each layer is a certain size wave guide. (Radio analogy)

In 1922 Arthur Holly Compton gave us a formula that proved beyond a shadow of a doubt that waves can act exactly like we see particles of matter acting. Once scientists knew this and then they also saw de Broglie's evidence in 1924, then in 1925 when the electron was found to be spinning, the very next step—that no one took until now, seventy-three years later—was to say that if particles are really composed of nothing but waves and we know we can tune certain frequencies in, then if we spin similar particles all at the same speed, aren't we going to end up with new shorter, higher frequency waves from these particles that are **all at the same frequency ?**

The effectiveness of any of these waves will increase with the frequency.

Max Planck proved that didn't he? The voltage that a quantum of blue light produces is about twice that of a quantum of red light because the frequency of blue light is about twice that of red.

The fastest spinning particles will all have the strongest reactions.

So this would mean then that we could expect to see something far, far different from our fastest spinning particle (the electron) providing—such as in iron—that we could find some that remained unbalanced.

These waves are going to act one way when they are in phase and another way when they are out of phase. This we find with the smallest magnet, a locked electron.

We see the above is true because the spin-up electron behaves far differently with another spin-up electron than with one spinning the other way.

This is the reasoning that should have been given once we knew we had a spinning electron. Then we should have immediately discarded Faraday's lines of force and concentrated on the spin.

We will do this in Section #6.

Remember, in this theory an item cannot and must not be considered a particle unless it is a spinning standing wave entity that also must have some type of inertial qualities. This theory substitutes something entirely different for all those other non inertial particles. By doing so it renders a type of superstring operation far more palatable. Before we close this section let's do some hard thinking now:

The belief—before these Cambridge Papers—was that these were waves of some esoteric substance that carried this magical thing called charge.

Since we've unified everything, all this magic has to go and we now have to come to a down to earth realization: The only things we are allowed in our particle universe now are these spinning standing wave entities that have either inertia or inertial qualities. This new concept is not going to change much right away but it certainly will long term.

Later you will get the rules but remember that the only forces you are allowed to use are **inertial** forces

and the General Theory of Relativity mass increases for these inertial forces. Absolutely nothing else is valid in this new concept. Later in Sections #8 and #13 we will explain exactly **why** we get these General Relativity mass increases.

This doesn't mean that **anything** spinning at close to radio frequencies will produce radio waves—Section #11 shows why this is—but it does mean that something that could spin as fast as an electron could cause magnetism and it also means that if we spin something at a close harmonic of the electron's spin it too will act like a magnet.

I want to say there is one slight problem with a universe made up solely of waves and that is there might only be extremes of higher and lower frequencies. There may not be any such thing as larger or smaller even though we think there surely has to be. It is indeed possible that we may have equated size with some frequency aspects in our universe. Our macrocosm, for instance, **we** see as large and the more massive things in it shift the frequencies **we** see toward the longer wavelengths but the more massive things in the microcosm shift the frequencies, that **we** see, in the other direction.

* * *

5. The space-time interval

Most of you who read this will know what the space-time interval is. If you do then you can skip this section. All this section does is explain the invariance of the space-time interval.

Galileo was the first person to note that on a smooth moving ship on glassy water a person inside a cabin on the boat who could not see out would never know if the boat was moving or not. This he equated with the earth moving and his public statements that the earth was moving the same as the boat and we could never know it caused him many problems way back then. Never-the-less he started Relativity. He started people thinking about the relativity of space. Before Galileo, everyone thought there was only one place at rest in this entire universe and that solitary place at rest was this earth.

Two people then showed that time is relative too. Einstein, seeing the problem with Maxwell's field equations, did this in 1905 and Poincare, using an entirely different approach in 1906 proved that time will be different to different moving observers.

Einstein explained it this way: Since light travels at the same speed which is independent of the velocity of either the source or the observer then if you had one observer on a train moving about half the speed of light and another observer standing next to the train tracks and if the observer on the ground saw two lightning strikes at the front and rear of the train at the exact same time as the person on the train was passing closest to him then the person on the train would see the lightning strike in the front of the train first and the one in the rear of the train a bit later.

In other words the man on the ground saw the two lightning strikes as being simultaneous but the man on the super fast moving train surely won't agree with him.

Both of them will agree on the space-time interval being the same though.

Draw a straight line on a piece of paper and label it "Interval".

Now this is the longest side of any right triangle you want to draw. This is the hypotenuse. The other two sides of **any** right triangle you want to draw to this hypotenuse will represent space and time: As the space side gets smaller the time side gets larger and this is how space and time—the other two sides—can change in relation to one another as seen by different observers.

Like the hypotenuse, the space-time interval is invariant. It's the same for both observers even though they both will see space and time differently.

* * *

6. The magic key to it all: The Aufbau Rules

First of all you must treat even the smallest of particles as having a dimension like the earth where the earth's diameter determines the tides: For instance, if the earth's diameter was larger, then the tides would be larger also. The electron too—in this theory—has a size ("string")* and it too is important as you will soon see.

* The "string" or "effective diameter" of the electron is that diameter of an imaginary uniform ring in which the entire mass of the electron could be considered entirely contained when determining the electron's gyroscopic inertia. This Planck length would be 10^{-33} cm. and is less than the real diameter of the electron. It is the full diameter of the electron that will determine these "bad quarters" that we will be referring to later.

Your geometry is telling you the electron is point sized and that's all you need know but your old style geometry has **failed** you because you have taken it beyond the parameters for which it was designed. The electron does have a size and that size of 10^{-33} cm. becomes vitally important to us as we resolve to see how everything really works.

The beauty of this theory is that since everything is built out of waves then all particles **must** be reasonably similar. All particles **will** be similar: They will all have some type of inertial qualities. The only differences that we will allow between particles are that particles can vary in size; particles can vary in linear speed or spin speed.

Remember, no magic: Inertia and the General Relativity mass increases, that's all.

The only invisible forces allowed with these following rules are inertial forces such as angular momentum.

None of the old magic is allowed: Since this theory is not even going to concern itself with what gravity, magnetism or charge is then—if we want to see the **big picture**—we have to divorce all these old things from our minds and entirely concentrate on following these new rules that we know do work when examining both micro and macro worlds.

Here's the catch, although we see a certain space and time, this isn't the way these spinning particles "see" it. The space-time interval to them is **frequency conscious**.

For instance a spinning electron does not "sense" anything at all like this space and time that we see. The spinning electron only senses the space-time interval produced by its narrow spin frequency and orbital frequency and absolutely nothing else.

To get an idea of how these two laws work, think of Ampere's Long Wire Law: In parallel wires electrons going the *same* direction cause the wires to *attract* but if electrons are going in opposite directions in the two wires then the wires will repel.

This is the way two particles will react if their **closest sides** are spinning this way.

Everything in this theory is understandable **if** we use the following Aufbau Rules.

- The First Aufbau Rule:

The space-time interval is diminished between any two particles the closest sides of which are spinning in the same direction at the same frequency or a close harmonic thereof. You can also say these two particles will attract.

- The Second Aufbau Rule:

Both space and time are created between any two particles the closest sides of which are spinning in opposite directions at the same frequency or a close harmonic thereof. You can also say these two particles will repel.

The universe from microcosm to macrocosm uses only these two rules to build.

These Aufbau Rules show **exactly** how the universe is built but this shows a universe over billions of times more complicated than anything previously worked on. There seems to be no practical way to use these two new rules with any of our present math.

Here's where the brilliancy of the English innovation comes in:

Nevertheless, now for the first time ever we can finally build a super-computer working model of our entire universe using Einstein's General Relativity tensor calculus where things are too fast or too

massive and using these two new Aufbau rules to correct our old laws of gravity, centrifugal force, magnetism and the strong and weak forces.

The most important thing to remember is that from now on space and time become frequency conscious. The space and time you perceive is the result of this space-time **mixture** of all these other **separate**, non-mixing spin and orbiting **frequencies**. This is something radically new that no one had ever thought about. This was the really big Cambridge Paper's break through. Even Einstein would have been taken aback by something as radical as this. The principle Einstein was looking for was indeed simple just as he had supposed it to be but the result of this utter simplicity of these ground rules produces a simple universe that becomes almost mind boggling to mathematicians.

What these two Aufbau Rules are telling you is that the space and time that you see is **not** the space and time that these individual spinning particles "see".

This is why the electron's diameter becomes so important as we realize that it is what the electron "senses" and not this tiny point that we sense that becomes of paramount importance. In Section #7 you'll see how the gyro spin is mistaken for the scalar charge.

Both angular momentum (gyroscopic action) and the surroundings that furnish this angular momentum will be different for things spinning and orbiting at different frequencies. While this may not make sense to you now, it will later on. I have to put it here though because it belongs up here right along with these two Aufbau Rules.

It's entirely up to you, the observer, to build the picture in your mind and hence it's strictly up to you to make the distinction between space-time **elimination** with the 1st. Rule or a force of **attraction**. When you contemplate the 2nd. Rule you may consider all this to be either a **creation** of space-time or a force **repelling** the objects apart.

Einstein claimed that gravity was not a force as Newton described but Einstein claimed that gravity was merely a distortion of space and time. Now, with this unification, it is plain to see that it's up to the individual to decide for himself. As Einstein indeed proved, different observers are going to see it differently.

If you see these rules as determining forces then you must also assume that a unit of a certain mass and a certain size, spinning at a certain frequency that produces a certain attracting force in the 1st. Rule will produce an **equal** repelling force in the 2nd. Rule.

But even though these two rules seem equal and opposite they are not. The force exerted by the 1st. Rule can be a **locking force** whereas the repelling force in the 2nd Rule never **locks on**. This factor is an extremely important one. It is this factor that provides us with congealed masses separated by eons of space between them in both the microcosm and macrocosm.

There's one more addition to our two rules and that is you can substitute the word "traveling" or "orbiting" for spinning in those two Aufbau Rules and both of those rules still hold and then here's essentially an extension of what Ampere found.

- Ampere's Law: (Ampere was a lot closer to the real answer than Faraday.)

The aforementioned forces, or space-time intervals, between two electrons

will vary proportionally with the cosine of the angle of their paths and they will have a torque that will tend to make the paths parallel and to become oriented so that electrons on both paths will be traveling the same direction.

This is essentially Ampere's Long Wire Law but it works for electrons on orbitals and you can substitute "orbitals" or "plane of spins" for the word paths in the above.

All these previous rules in bold print—including Ampere's Law—pertain to **everything** in our universe too. Since the electron moves and spins so much faster than other particles and objects we can easily see how it pertains to the electron but it still works for other particles even though somewhat more weakly—because their spins are slower—and even to the planets and sun as well. The sunspot cycle is a relationship between the spins and orbits of the planets together with the spin of the sun.

Those Rules in bold print are essentially all you need to know in order to unify the four fields and to completely understand this entire universe. From the microcosm to the macrocosm those preceding rules in bold print tell you how it all works.

It sounds incredibly simple but it's true.

This also shows you why the speed of light can never be exceeded because it's essentially these various speeds of rotation that are in effect structuring this arrangement of space and time that you sense, so you simply can't go faster than the structure itself is being built.

You can begin to see what Einstein first saw. You can see why mass would have to curve space-time because mass is actually building and producing this space-time.

Can you see now why you get the "Lorentz Contraction"? If you don't then hang in there because it will be covered later.

Only at some distance away are electrons sensing some close harmonic of some type of vibration or oscillation inside the protons as these electrons spin at some harmonic of this frequency and make their orbitals around the neutrons and protons.

Because of the density of the neutron and the red type frequency shift, the electron seems only to "sense" this harmonic relationship where it establishes its orbitals.

Symmetry then becomes a simple matter of defining all the frequencies plus all their red type frequency shifts and then figuring what can fit where to determine the basic building structure. In fact, you begin to see what symmetry really is.

Everything begins to make sense.

The problems develop with the variables.

Even though you may understand the basic principle that hot air rises, this doesn't mean you can understand the weather that is subsequently caused by this basic principle. There are too many other variables involved.

Along with those basic new Aufbau Rules you have to learn all the variables too.

In the remainder of this little book I will show you how these rules work and I will try to get you to forget all the other laws you have been working with all your life because these simple rules, I have shown you above, work and the ones today's scientists are using simply don't do it nearly as well **if** you are trying to see the entire big picture.

For the final part of this section I want you to ask me the following: Why would this universe have such rules as those you have just seen?

Because these are the **only rules** that can establish a symmetry of construction consistent with life even. They can establish a building pattern for every layer or level from microcosm to macrocosm While 99% of these symmetries are used for construction purposes, the remaining 1% are unbalanced and are used both for construction and to distribute energy throughout the symmetrically constructed realm.

The electron must be spinning at a frequency or harmonic that the proton is vibrating or has some sequence of spin, orbital arrangement that act as a proton vibration, in fact, this may be the sole difference between the proton and the neutron: The only difference could be a type of vibration. Vibration, spinning and orbiting are all forms of gyroscopic inertia and hence mass. These proton vibrations could very well be the oscillations of certain type quarks inside the proton.

The minus charge is a merely a pattern of movement of electrons that are all free to spin, wobble, precess or roll in any direction. The next section explains this.

The positive charge is also a pattern but it is a far different pattern of both electron spin and pulsing ion movement into which these spinning electrons can enter and after they do enter then all the closest sides of all the new partners will be spinning in the same direction and in the lowest energy state this pulsing movement will be exactly in phase with the spinning. After these two merge, it is neutral simply because there is no further excess of spin or orbital movement in any one particular direction.

* * *

7. Let's look at the electron first.

Niels Bohr showed us that magnetism in iron is caused by the spin of the electron. The orbital motion of the electron should really be the largest cause of magnetism but in iron this gets mostly canceled out so that the electron's orbital motion only contributes about 2% of iron's magnetism.

They get canceled because multiple inertial vectors will align themselves up so as to cancel the direction of the total angular momentum. As stated before Balancing is a big factor in this new concept. Directional balance is the key.

Nature continually tries to balance all movements of all particles. The electron is the only particle we know of that has problems getting its spins and orbitals totally balanced out. The worst unbalance is in iron where one atom will have three more electrons spinning one way than in all the other directions. These three electrons will line up with the same three electrons in many more atoms of iron and form a domain in which **all** the electrons in the domain flip either spin-up or spin-down all at the same time as if one snapped a single light switch.

There are electrons in atoms that are locked either spin-up or spin-down. There are other electrons in metals far from the nucleus that are not locked. These are called conduction electrons.

Electrons that are locked behave entirely different from those that are free. While scientists of today do give this lip service, they do not seem to **believe** this simple fact.

We are going to look at both locked and unlocked electrons but first let's look at these electrons in iron that are locked. These are the ones in iron causing the magnetism. They are the tiniest elements of magnetism. Each one is essentially a tiny powerful magnet.

Let's forget the old laws of magnetism we have learned and use our **new** rules instead.

Our First Aufbau Rule tells us that we will get the most attraction when the poles of these locked electrons are lined up with the poles of other locked electrons all spinning in the same direction because then—as with two magnets—we have the full mass of each electron going in the same direction at the same frequency. We know this is correct.

Now let's look at the **sides** of locked electrons. Let us remember too that electrons have a dimension. One absolute proof shows it has to have a radius of **more** than 1.4×10^{-13} cm. Also we know if electrons have spin then they must also have a dimension even though all we have detected so far is an object the size of the smallest point.

We see from our First Aufbau Rule that these electrons will attract if their **closest sides** are spinning in the same direction. We also know that their other sides are both going in opposite directions but they are much further away so they will have far less effect. We now likewise know that a spin-up electron will **attract** and even lock in with a spin-down electron because their closest sides are spinning in the **same** direction.

This will be additive too so you can now see why a magnet with one pole one way will attract a reversed pole magnet when their sides are brought together and this also shows you why this side to side attraction will not be nearly as strong as the polar attraction. In the polar attraction the **entire mass** of the electron is spinning in the same direction as every other entire electron. The polar magnetic attraction is stronger than the side attraction in magnets simply because then there is far **more** electron **mass** moving in the same direction at the same frequency.

Faraday's magnetic lines of force don't even tell you half this much.

Now we are going to take a look at the **conduction** or **free** electrons that are far from the nucleus and therefore "not locked". These have mass and they spin so they have gyroscopic inertia. Because they spin extremely fast, they have plenty of gyroscopic inertia. Later we'll see exactly how much but for now we only need to know they do have it. We also know that any force acting on a precessing and moving spinning electron must make such a gyroscopic electron precess 90 degrees to the acting force.

Were it not for this gyroscopic force and Ampere's law then two free electrons could—according to our new rules—easily join together when they line up so that their tops, bottoms or sides are all spinning in the same direction. Ampere's law tells us they will begin to attract **well before** they are perfectly aligned; the resultant force at 90 degrees to each starts them both precessing in a new direction so they can **never** possibly entirely attract each other. In fact they will **always** be forced into the opposite of an attraction whenever they do happen instantly to attract simply because of gyroscopic action, so our new rules show us they will **always have to continuously repel** each other.

Every free spinning thing in the universe has **similar** gyro qualities too. This is the reason that—like the electron—everything in the universe keeps everything similar at a certain distance. This repelling force is precisely Einstein's "Cosmological Constant" that Einstein said had to be exactly equal and opposite to gravity. You not only have Einstein's "Cosmological Constant" in the sky but in the atomic world as well.

These rules are not only for particles but for everything that has inertial qualities.

You can also see that these two rules give us the reason for the Pauli Exclusion Principle and now you can see why the electrons obey Hund's Rule that states that if two orbitals are open then the two electrons that settle in will both be spinning the same direction. On two separate orbitals these electrons would never "sense" each other's sides and whichever way the prevailing magnetic moment would be, it would affect them both so they would spin the same way.

In 1905 Langevin gave his proof of why we have paramagnetism and diamagnetism. You can use basically the same reasoning to see why we have a positive charge. Any item that has positive charge is an item in which the symmetry of construction allows a certain spin to orbital combination that does not have complete freedom of movement like the free electron but it has a **certain, defined, restricted**, movement and it spins or orbits or vibrates at the frequency or close harmonic of the electron's spin frequency and lines up **in phase** with the electron's spin.

Just as a sailboat can sail against the wind so also can you have paramagnetism, diamagnetism and charge. The symmetry of construction in the atomic world, however, limits the angle that any of these particular sailboats can point into the wind.

Normally two free electrons will repel each other simply because of their gyroscopic torque that always has to twist them away before they can even come into a full attracting position but this gyroscopic torque has to be on **both** for them to keep repelling each other. If one gets somewhat locked, or its orbital vibrates at the proper harmonic then it can most certainly lock-in and **attract** a free electron just the same as a magnet attracts another magnet. A locked electron has to be considered a magnet.

* * *

8. Forget about magnetic lines of force and electron charge.

With our new rules you really have no more need for magnetic lines of force or electron charge **if** you want to try to see the big picture.

We will however use Rachel Carlson's explanation of the "bad quarter" of a hurricane. The "bad quarter"

of a hurricane is that quarter in which the directional speed of the storm **adds** to the circular wind speed. Since electrons both spin and move directionally like hurricanes then they must have a "bad quarter" too. This "bad quarter" is the very thing that causes a mass increase with motion.

When these units, being moved, are tied to the rest of the universe then you can plainly see why you will get a mass increase as the unit is accelerated and if a certain speed is maintained then the mass increase is also maintained. This "bad quarter" is the thing that increases in mass according to Einstein's General Theory of Relativity.

The "bad quarter" of the electron is that area approaching the speed of light because of both the electron's spin speed and its forward speed adding together.

Now if the outer periphery of the electron is going at 1/10 of the speed of light because of its spin and the electron has a forward speed of 8/10 of the speed of light then it is easy to see that some point of that "bad quarter" of that electron will be going at 9/10 of the speed of light.

The problem is that if we try to increase those speeds by a bit more and drive that "bad quarter" of one tiny electron at the exact speed of light then we would need all the energy in the universe to **almost** do it.

Now you can begin to see the electron's problem. It meets a terrific resistance at this "bad quarter" section as the speed of this section approaches the speed of light. There can be two results: First, when the force is perpendicular to or in the spin plane and the second when it is not. In the first instance you totally avoid gyroscopic reaction but in the second instance you do have gyroscopic reaction. We see both of these with electrons. The Quark has asymptotic freedom so it also has these "bad quarters".

What is absolutely critical is that you understand which way the electrons are spinning. You must know which way they are spinning or you are wasting your time trying to comprehend the following explanations as you check this out while moving from the magnetic theory to this theory.

When viewed from the top of the North Pole of a magnet the electrons causing the magnetism will all be spinning and orbiting clockwise.

Caution—the North Pole of the Earth is a South magnetic pole. You eliminate all this confusion when you forget those old magnetic laws and only look at spins, orbitals and these new Aufbau Rules whenever you are trying to get the big picture of everything. In Section #19 we cover a gyro action motor but next we'll look at the non-gyro action.

In both a motor and in a generator you have spinning electrons that also have been given a forward speed. In the motor the electron is given a forward speed down the wire and in the generator the electrons in the wire are physically moved forward. In a simple non-gyro motor both of these forces act in the spin plane and there will be no gyroscopic reaction so the electrons in these will pivot exactly like a Frisbee that is grasped at this "bad quarter" and they will try to pivot at this point. This pivoting is what pushes the wire in the motor and moves the electrical current in the generator. There is absolutely no doubt about this either. Make a simple model of both and see for yourself.

The magnets in a motor are actually giving these moving electrons in the wires **more inertia** but in a

way that is highly directional and **not** homogeneous and isotropic such as we experience with our inertia that is caused by the quarks in all the fixed stars.

The transformer works somewhat differently: First we are only going to take the electrons that will be attracted and repelled exactly in the **spin plane** and in which there will be no gyroscopic reaction. Since all the wires are wrapped around the **sides** of the iron core and not the top of the core, then no wires will be facing the poles of all these type electrons. We now **know** that transformer action will **always** be an action of the **sides** of electrons. Also in radio or in light it will never be a polar action such as inertia—which we will cover later. These electrons in the secondary winding that are also **exactly** sideways aligned must either be pulled toward or repelled from the iron core, won't they? As these electrons are either forced toward or from the iron core of the transformer depending on which way they happen to be facing when the first cycle of the primary current begins to flow in the transformer's primary windings, this initial movement toward the skin of the wire gives all of these a new speed that results in this "bad quarter". If you make a model of this and the direction of spin then imagine the spinning electron to be a Frisbee and when suddenly grasped at this "bad quarter" these electrons—both the ones repelled and attracted to the core—instead of heading directly through the wire to the side skin will now all pivot end over end thus producing a current flow in the secondary in the exact opposite direction as the primary current. All this stops, however, when these electrons hit the skin of the wire. They have to stop here: They can't go any further. Here they wait for the next half cycle where they travel the full thickness of the wire again going to the skin on the other side of the wire.

Now we'll look at the other electrons where there will be **gyroscopic action**: It is plain to see that all of these will be repelled from each other and the center axis of the wire—the 2nd Aufbau Rule—and all will move to the skin of the wire all around the wire. But, here's the clincher, all of these will also pivot so they end up going opposite to the current in the primary. Since each will have different amounts of gyroscopic torque at different points then they will end up at different points on the skin of the wire. Here they too wait for the next half cycle where they too head to the skin on the opposite side. This gyro action is **different**: The surroundings are **not** homogeneous and isotropic.

Remember—Make a diagram and check it out yourself—in every one of these the side movement toward the skin also makes this "bad quarter" that pivots them and sends each one of them in the opposite direction down the wire as the primary current.

You can also see in this explanation why you have "skin effect" at radio frequencies.

* * *

9. Light

The transfer of light is also a side to side pull of one electron for another electron a distance away. So, as far as this is concerned, it is similar to the transfer in a transformer.

This is a universe that **tries** to stay in balance. It's never able to do it but it is constantly trying. Energy will always flow from an area of high concentration to an area of low concentration but the method of transfer is what limits the amount that is precisely transferred. You will see exactly why energy is delivered in quanta. There is a later section about Quanta.

If your eye—when looking at a far away star—receives one quantum of light from that star then that one

quantum was also released from the star and came to your eye with no energy loss whatsoever no matter how far the distance. We used to think that energy dropped off with the square of the distance but Quantum Mechanics proved that wrong.

One fine day in Copenhagen, Niels Bohr proved that when an electron on that distant star drops to a certain level then an electron in your eye goes up that same amount giving your eye the one quantum of energy the electron on the star lost. No energy whatsoever was lost in that vast distance.

You saw a vast distance to that far away star but not both of those electrons that only "see" quarks and other electrons that are lined up properly. Those two electrons "see" none of this time or distance that the slower spinning things produce that you see.

The way the square of the distance comes into it is shown by the Cambridge Papers in the following:

When you burn your hand on a hot stove you may think it is easy to transfer energy but it is not. It is a good thing it is not too because if it was quite a bit easier then you would not even be here.

Before that far away star could transfer its one quantum of energy to your eye—your sight threshold is about 11 quanta—it had to have its orbital plane lined up exactly in the same plane as the orbital of the electron in your eye. The Cambridge Papers show us there is more: The mass of both those electrons must be exactly the same. Since speed changes mass then this means that both orbitals have to "sense" a certain equality of being at the same speed which is not at all simple. Furthermore each electron has to "sense" that the other is orbiting exactly out of phase with it—on the opposite side of the orbital—and also precessing (wobbling) exactly 180 degrees out of phase with it and remember as we said in the beginning, in the same orbital plane with it too before that quantum of energy can be transferred. Few electrons will be exactly lined up like this: This is why you have energy falling off with the square of the distance.

The number of electrons that are lined up properly and are available to immediately transmit is what falls off with the square of the distance.

We will go into this transfer in detail in the Quanta Section #11.

* * *

10. Inertia and Binding energy

Binding energy and Inertia are essentially the same thing and both are attractions of the various spinning and orbiting particles. Binding energy is the attraction to close neighbors and inertia is the same type of attraction to far away objects—(fixed stars).

It is only to you that the rest of the universe looks far away: To these tiny particles it doesn't. All particles "see" is that their "**angular lock on**" gets narrower—Section #13.

These spin and orbital attractions are the glue that holds everything together. The 1st. Aufbau Rule shows you why you have binding energy, and why you have inertia. The 2nd. Aufbau Rule shows you why we have all that space between everything (Cosmological Constant) and both rules show you why we have

symmetry.

Particles **must** either bind with close neighbors or they can bind with particles far away—in the fixed stars—to cause inertia. They cannot go without binding on something and they cannot use the same spins to bind with both near and far objects at the same time. Some can rapidly and repetitously switch their binding to the best aligned objects whether near or far but that near-far percentage mostly stays constant.

What you have to remember is that as you increase the speed of an inertial object then you are increasing the speed of those "bad quarters" of the spinning objects that make up the unit you are accelerating. This means these "bad quarters" have more mass the faster the speed is increased. According to the 1st. Aufbau Rule, using mass as per Section #7 and this #10, if a quark has more mass in one of its "bad quarters" then this quark will have a stronger inertial "lock on" with things in the universe. This is the reason that gyroscopic inertia increases as you increase the speed of a gyroscope.

When you see an atom has less mass than its constituent components, then that almost tells you outright that these electrons, protons and neutrons have a choice: They can either bind with each other to make the atom or—as individual unbound units—they can use that same amount of binding energy to additionally add to their individual inertial binding with the rest of the universe. If they all suddenly bind inward instead of outward, well, then that's mass turned into binding energy isn't it?

So these Cambridge Papers actually **show** you exactly why $E = MC^2$.

It also shows you that the initial Big Bang did not start at some central spot and travel outward doesn't it? What this is telling you is that you need to have the rest of the universe out there even before you can have any type of outward explosion. Before this new approach came along only those working in General Relativity could understand this but now everyone can with this new theory.

The time and distance you see is exactly like the white light that you see. A laser cannot produce white light simply because there is no such thing as white light. There is no such thing as monochromatic white light and there is no such thing as monochromatic time and distance either. As your white light is nothing more than the combination of all the colors so is your time and distance nothing more than the combination of all the space-time intervals of all those various frequencies produced by all those spinning and orbiting particles.

There is no such thing as the human idea of one all purpose type of distance anymore. The distance we see is a composite of all of these various spin frequency distances. Distance has to be frequency qualified. Time does too because remember, it's the space-time interval that is frequency conscious. Each frequency "sees" its own type of distance. These Aufbau rules use mass, with a General Relativity type increase in **every level**. Mass for each frequency, however, will be **different** along with surroundings. We'll see later on, that even though we can only see light from a certain distance away, we can, however, feel gravity from a much, much further distance away mainly because of the quark's wider angular lock on and slower harmonic spin. Einstein's curvature of space, it turns out, is also different for different spin frequencies.

Binding energy can be converted into mass even with chemical bonds. When an item binds with a close neighbor—instead of with something in the universe—then it stores energy in the binding and loses mass in the proportion given by Einstein's famous formula $E = MC^2$. When you consider that $C =$ the velocity

of light then this formula shows that you get a tremendous amount of energy from a tiny bit of mass.

These attractions can be both from spins and orbitals and unlike magnetism a sideways attraction of one spin up and one spin down neighbor can be more powerful than a polar attraction if it is for a longer time duration such as in δ (sigma) bonding. All chemical bonds are fleeting but repetitious. The polar type of π (pi) bonding can, at the most, only happen for the briefest span of time once each orbital. Two spin-up and spin-down δ (sigma) bond electrons, even though from different nuclei, can and do occupy the exact orbital plane of each other. In a δ bond where one is spin up and the other spin down then their closest sides will be attracting each other thereby greatly extending both orbitals. Not only will each of these be revolving around its own respective nucleus but both of them will also be revolving around one imaginary δ spot because of each pulling the other. Even though the polar attraction is always stronger than a side attraction, since the side attractions are attracting each other for most of the orbital then the δ bond will necessarily be much stronger than the π bond.

The electrons in the outer orbitals are the ones that bind the strongest. What does that tell you? It adds proof that this entire concept is correct and that the electron is composed of even smaller spinning inertial entities because it is the binding of more and more of these the closer it gets to the nucleus that gives the closer electrons a higher binding. This difference in electron bonding also validates this theory because since they are far from the nucleus and binding less with it than the other inner electrons, then the outer electrons have more binding power left over to bind with other things won't they? Binding is an either or process: The binding that it does with one thing can not be used—at the same time—to bind with something else.

Ionic bonding is different from covalent bonding because the ion is vibrating at a harmonic that the electron is spinning and the vibrating ion will attract either pole of an electron or even the side of an electron. This is why ionic bonding is not as directional as the covalent spin to spin bonding. As soon as an ion does attract an electron then the attracted electron can affect the same ion so much by its new closeness that the ion now changes its vibrational frequency and can even lose this electron that it originally drew toward it. This is common in ion solutions.

* * *

11. Quanta—Planck's Constant

Entropy is a balancing act with this universe continually trying to spread the energy from high energy areas to areas of lower energy.

Max Planck taught us that this is done by moving these quanta of energy.

Niels Bohr was the first person to show that an electron has to drop to a lower orbital in order to give off energy.

The Cambridge Papers teach us quite a bit more.

Not only are electrons moving on these orbitals but because of their fast spin they are like the earth and

like many Americans: They are fat around the middle. Similar to the earth, the electron is an oblate spheroid and thus exactly like the earth, it is subject to wobbling. We will "sense" a microcosm wobbling frequency to **increase** near more mass.

Very much like the two electrons in δ bonding that are orbiting two distinct nuclei, an electron in a high energy area binds with an electron in a low energy area using their closest sides with both their orbitals in the same plane and each 180 degrees out of phase in both orbital and wobbling

This wobbling then becomes even more intense and *seemingly faster* as the high energy electron drops to a lower orbital giving the low energy electron an exact mirror image of its more intense wobbling and orbital increase for its own orbital drop. In other words not only is the quantum of energy exchanged as a mirror image but each distinct wobble is exchanged as a mirror copy of the emitting electron.

Bohr showed that an electron will not radiate unless it falls to a lower orbital inside of its original orbital geodesic.

A geodesic is the path of least friction with the surroundings or of least mass.

Each distinct wobble is one wave of light because this energy emitting electron is now excessively wobbling both inside then outside its slowly collapsing orbital geodesic and the electron must not only radiate whenever it exceeds its orbital geodesic line but it must also reciprocate and receive energy when it is inside its orbital geodesic line.

Both transmitting and receiving electrons have set up a rhythm where both are participating in this wobble **rhythm** of exchange. You could say energy is actually passing back and forth as each wobbles inside and outside its respective orbital geodesic. As this is happening the orbital of the emitting electron is collapsing and the orbital of the receiving electron is building up.

Neils Bohr was absolutely correct in arguing with Einstein that the quantum of energy that is being sent out is not this neatly packaged photon described by Einstein. Instead it is a distinct radio frequency **alternating current signal** of a certain quantum of energy that is being transferred from electron to electron as if there was no space whatsoever between them. If they are lined up properly they probably don't even "see" any space between themselves. Energy transfers are **not** standing wave type particles.

A particle must always be a spinning standing wave entity and this is not, so in this new theory Einstein's photon package is ruled out and Neils Bohr who said "No way." to Einstein about this, wins this argument hands down. Energy transfer is a wave **only**.

Before this, absolutely no one had closely examined all these spin-up and spin-down electron pairs that are everywhere. Why didn't they? Why haven't scientists asked why we had so many of them?

The two 180 degree out of phase electrons we see on normal orbitals with one spin-up and the other spin-down and the two electrons in δ bonding and the electrons transferring a quantum of light **all** are similar spin-up and spin-down electron pairs that constantly stay in the same plane but 180 degrees out of phase with each other during both precession and orbiting and attract each other and lock using their closest sides.

It does not matter in the least if they are rotating around the same nucleus or not: It's the spin-up, spin-down; both in the same plane and both 180 degrees out of phase that matters.

Four things—frequency, impedance, phase and alignment all have to be correct when an orbiting electron transfers energy to another orbiting electron just the same as it does in a radio circuit. Impedance in the electron to electron transfer meaning that both "see" each other as exactly the same mass: Of this we are absolutely certain.

Perhaps, only three things—frequency, phase, and alignment have to be correct to produce either magnetism or inertia. Perhaps impedance **is** necessary here too though.

Everything in this universe is tied in a similar way to everything else through the attraction, or if you want to put it "the space diminishing process", that comes because of our new 1st. Aufbau Rule.

Now we come to Planck's Constant and its vector equivalent $mh/$.

Planck's Constant is nothing more than the angular momentum of the electron.

The term $mh/$ is the energy emitted by the gyroscopic inertia of the electron as it drops one complete orbital as viewed by an observer here on earth and as we need and obtain even more accuracy we will also have to set up a standard latitude and altitude of this standard place on earth where such observation is made because there is no such thing as a standard place of rest so we must eventually of necessity define one.

* * *

12. The de Broglie wavelength plus mass and acceleration

The de Broglie wavelength of an electron can vary with acceleration. An electron accelerated in a vacuum by a pressure of 1 volt has a de Broglie wavelength of a bit more than the average X-Ray while one accelerated by 40,000 volts would have a de Broglie wavelength of 1/10 that of the average X-Ray.

Einstein's "Principle of Equivalence" appears in the main to be unassailable and the de Broglie wavelength seems to increase with both mass and acceleration proving Einstein was correct but what is this telling us as we view this in respect to our two new Aufbau Rules and in respect to what we have learned?

First of all we have learned that a light and a radio wave are nothing but two spin-up and spin-down electrons attracting each other with their sides using the 1st. Rule.

Later in "Inertial Qualities" and "The Quark" you will see why inertia is 99% caused by the spin of the quarks just as magnetism is 98% caused by the spins of electrons.

The de Broglie wavelength of the electron may be telling us the electron is composed of waves of something far smaller and our theory tells us then that these must also be objects of inertial qualities with far more space than mass around each unit.

Using all your old laws you could put all the people presently on this earth to work along with all the computers presently here and there is no possible way you could ever come up with the spins of all the

planets and the differential spin of the sun.

However, now we know that everything is connected to everything else in this universe; we know how it's connected and we also see that because of all this galaxy and super galaxy rotation that a coriolus field exists here making the planets go around this massive sun of ours. With enough money and enough people and with one of the very best computers, you most certainly can come up with the differential spin of the sun and all the planets using these two Aufbau Rules.

Why doesn't your present theory accurately account for all these spins?

I don't think I even have to give you the answer to that do I?

Before we get carried away here we want to emphasize that these tiny spinning items only produce either binding or mass and inertia that are created similar to magnetism which is not really a wave. Gravity, however, could be termed an inertial wave and it has an exceptionally long wavelength. This is covered in Section #14. Gravity.

* * *

13. Einstein's Principle of Equivalence

Everyone agrees it's so but as of this writing no one knows **why** it is so. This is the first publication where people will find out exactly **why** it is so.

Thinking about what we said in the last section, we have to ask ourselves exactly **why** does gravity act like acceleration.

As something accelerates then you are increasing the **forward** speed of all the electrons and quarks in that direction that you are moving the object, aren't you?

This increases all their "bad quarters" and hence their mass doesn't it?

This means now when they lock with the objects in the universe to cause inertia they are locking with more mass doesn't it? You have a mass increase don't you?

Now let's look at the other side of the coin.

The General Theory of Relativity shows that when a unit approaches an object of ponderable mass then this unit gains mass.

According to Einstein's Principle of Equivalence this mass increase would be equivalent to that gained by the same unit accelerating instead of being brought close to the ponderable mass.

Now that this is settled all we have to do next is show you how this equivalent mass is given to the unit as it is brought close to the ponderable mass, don't we?

OK, remember me saying before in the beginning of this that what fell off with the square of the distance was the way electrons lined up to transmit light?

Something very similar is now happening in the unit that is now close to the ponderable mass.

The closer the unit gets to the ponderable mass then the greater is the amount of inertial **angular lock on**. What is this amount of inertial **angular lock on**?

OK, we said that all these spins and orbits (of quarks mostly) locked on other far away quarks to cause inertia just as electrons locked on to cause light transfer.

In inertia though they could be in either exact parallel planes or the exact same planes. The next question is how exact is exact? Even though we don't precisely know this, we do know that since this same type line up of planes always falls off with distance then we must assume that surroundings more than two light years away will have an **angular lock on** of far less than a closer ponderable mass.

Angular lock on is one of the things that falls off with distance in light and inertia as well. At a certain distance for light and a much, much further distance for inertia this **angular lock on** gets so small that "lock on" is no more and it ceases altogether.

The spinning and orbiting things in the unit have the same strength of "lock ons" to far away things in the universe that they have to the ponderable close object. Not only that but they must lock with something. When they lock with things far away these are fast momentary "lock ons" because the **angular lock on** is very narrow. This is not so when they are forced to lock on with things inside a nearby ponderable mass.

The quark has asymptotic freedom so it can lock for a wider angle than the electron and this **angular lock on** with close objects is even wider. Close things lock for a **wider angle**. You could also say close things lock for a **longer time**. What does that mean for these "bad quarters" of the electrons and particularly the quarks inside the unit?

You know it has to disturb the balance of both the electrons and especially the "bad quarters" of the quarks inside the unit more than a fast momentary lock. Incidentally this wider **angular lock on** of the quark is also one of the reasons gravity is sensed much further away than light.

When you disturb the balance you are essentially moving all these "bad quarters" of these electrons and quarks closer toward the speed of light or you can also say you are increasing the mass of all these "bad quarters" aren't you?

Therefore the amount of mass increase in these "bad quarters" when the ponderable object is close, is equivalent to the mass increase you also get by accelerating something and giving the electrons and quarks added speed which also increases a similar "bad quarter" in both the electrons and especially quarks that give us 99% of our inertia.

Einstein's Principle of Equivalence is just that because the "bad quarter" increases inside the atoms in the unit are **equivalent** whether they are caused by a close ponderable object or by acceleration.

* * *

14. Gravity

Any unit that has inertia also will have atomic particles inside it that have their own spins and orbitals and thus mass. This mass will always try to find a geodesic path where its total mass is the least. It tries to find the path of least resistance. Remember, an increase of mass is an increase of friction with the rest of the universe and remember too that now you must work out similar tensor calculus formulations for everything else now that we know all these other old magic forces are identical to gravity.

Gravity versus centrifugal force is the old way of looking at why the earth stays in its orbit. The new way of looking at it with the 1st. Aufbau Rule is similar:

The closer the earth stays to the same speed and frequency and direction that the sun is traveling the more it will be attracted to the sun.

This sounds like gravity doesn't it?

And then again with the 1st. Aufbau Rule

The closer the earth stays to the same speed and frequency and direction that the rest of the universe is traveling the more it will be attracted to the rest of the universe.

This sounds like centrifugal force doesn't it?

You are being attracted to this earth simply—according to the 1st. Aufbau Rule—because you and this earth you are on are both traveling in the same direction at the same frequency.

So you are using the same rule now for gravity that you previously used to determine magnetism aren't you?

And that's called a Grand Unified Theory isn't it.

It works the same way with the strong force as well. The weak force and magnetism have already been unified.

So that's the whole ball of wax right there.

The skeptics are going to say, "so what? He's given us something that resembles centrifugal force and gravity, that's all."

And that I have but the force I have given you is far more complicated because in it you have to take into consideration **all** these spinning things too.

Right away you see you are going to need a computer and a team to do this. And I don't mean a bunch of people with some IBM mainframes either. That's not going to hack it. But I can tell you that a big dedicated team with a late model Cray **can** do it.

The payoff is not in the macrocosm but that's where you have to start because there you know all the spins. At first it will be crude but then you will get better and better.

You build a model of our galaxy and the super galaxy outside of us—you will even have to fudge a bit with what's beyond that—and you get our solar system working. You'll see gravity comes from much

further than you previously thought. You don't need any great minds to do this. All you are doing is refining the old gravity and centrifugal force now and plugging in new values for all these spinning things at various masses and frequencies. This takes an awful lot of human effort and a massive amount of computer space but that's all it really takes. You keep refining it and refining it.

I can tell you that you will learn as you progress. You will learn where you must be very careful and where you can let things go. But this is where you have to start. You must start by refining both gravity and centrifugal force using those two Aufbau Rules and building a computer model of the macrocosm. The payoff comes later.

Once you have done this—and have it working well—then and only then will you have learned enough to even attempt the microcosm but here's where the big rewards are.

Once you start on it then you can truly say you are now in the big marathon race.

It is going to be quite a race too.

You have to realize that even though Quantum Mechanics allowed you to leap frog over Einstein's preferred math methods, Quantum Mechanics has no direction.

These Aufbau Rules may not be what you've wanted but they sure give you direction.

Frequencies in this abode of the universe are going to be pretty low but the amount of mass involved is higher and you will see exactly how that affects things. But this is the arena in which you have to learn exactly how these two Aufbau Rules function.

All these various sizes of free spinning masses in the universe repel each other for the same reason electrons repel each other except these big masses move slower. The thing that the General Theory of Relativity tensor calculus is showing you is the non-linear increase of mass generated by these "bad quarters" because of super-fast acceleration or in the neighborhood of a super dense ponderable object **and** this is only the beginning:

You now have to extend Einstein's methods to **all** these other layers too along with the tensor math for when the surroundings of each are not homogeneous and isotropic.

Keep in mind that Compton showed that waves can produce things like particles that have inertial qualities. Undoubtedly this is what we have layer after layer after layer but with each layer of inertial objects totally different from the underlying layer. The solar system, for instance, is far different from the atomic world but you have to remember the same rules hold for both: The two Aufbau Rules do this while all your old scientific rules simply do not. Even your concept of what waves are, must change from level to level.

The one thing that will always remain in all of these various layers is the immense space between the individual inertial units such as we have both in the atomic world and in the universe as well.

Another thing you will always have in each layer are objects that will have some type of inertial qualities.

Remember, these spins and orbitals of these binding atomic particles are at too **high** a frequency of spin for Dicke's null test and the frequency of gravity—where one complete rotation of our galaxy may be

considered one cycle—is too **low** for Dicke's null test.

With this new concept not only does each single spinning particle have its own frequency space-time interval but each spinning and rotating object in the sky does as well. From this we can assume the following:

Gravity, magnetism, the strong force and the weak force are all caused by relative motion.

* * *

15. Symmetry

Symmetry is important in the particle world but its importance increases tremendously in this world of waves. We have this thing called symmetry because this is, in fact, a world of waves. We have symmetry because we have waves: It's as simple as that.

Everything you build with Tinker-toys will take on a certain symmetry of construction because your method of construction is limited: You have the very same thing in this world of waves too. Each atomic particle because of its spin and orbital will only fit properly in certain spots.

Just as a child learns to construct things with Tinker-toys so do the folks in Quantum Mechanics learn the symmetry of construction by learning where the pegs can go and where they can't. What this theory now is going to do—as their computers learn all these spin and orbital frequencies—is to show all these folks how to utilize this limited method of construction to the best advantage.

What this new theory says is that we will have layer after layer of these spinning and orbiting things with tremendous space between all of the inertial objects that make up the layer. Each layer or level though will have **different symmetries**.

This is why parity is not observed when you drop from the atomic layer to the Quark layer. This is why charge does not extend to the solar system layer and changes to color in the Quark layer. It is the different shaped Tinker-toy building blocks in each layer that determine the symmetry of construction of that particular layer. Our Aufbau Rules and inertial qualities are the only things that we can, with certainty, carry unchanged to all layers. All other concepts—including wave type concepts—must change as layers do.

Things that spin and orbit at different frequencies have a different construction not only because the wavelengths are different but because each layer is bordered by different type symmetry layers so this mandates each layer having different type symmetries.

* * *

16. *You, Forces, math, etc.*

You know you are not the same person you were in the first grade. You know you are not the same person you were several years ago either. You **think** you are the same person you were a second ago but you are being changed many times every nano-second. This is really similar to a movie projector that is running so many frames per second but you are running your frames a lot faster.

Because of these frames you see yourself as this solid thing continuing through time but you must remember this is absolutely not what this universe "sees" because this is an all wave universe and your particle world is only a subset world inside the wave world.

As we saw earlier all these spins and orbits are building this space-time structure and they are also building you at this same rate. So this thing that you are calling the speed of light is in all actuality the speed that both you and space are changing isn't it?

Then this speed that both you and the universe are being built—or changed—should be independent of the velocity of something that emits a light signal and the observer that gets the light signal shouldn't it?

If you have just answered "yes" to those two questions then you have finally solved the age old mystery of the "Lorentz Contraction" then haven't you?

Since some of these forces have been believed for thousands of years and because millions of people have developed the math needed to deal with them then we have a considerable investment in the old mathematics that we use with these old forces of gravity, magnetism, the strong force and the weak force.

We have absolutely no alternative but to continue to use this old math along with these obsolete forces of gravity, magnetism, etc. that we now know do **not** really exist.

But that does not preclude beginning to develop **new math** with which we can start to utilize this brand new knowledge.

All the old math is only good for the old worthless theories that never did work properly.

I most certainly went a bit too far saying those old theories are worthless but I had to make you see that they really are **if** you are trying to see the complete big picture.

Gravity, magnetism, the strong force and the weak force are what you see on the television screen. They are not what is happening inside the television set itself. These old forces are like a picture of the world that is printed on flat maps. Flat maps are 100% OK for a motorist who never has to worry about a curved earth but we also have flat airline charts that are also OK too—sometimes. But every airline captain knows if he has an 8 hour jet flight to some place on the globe then he had better not rely on some flat map. He knows if he does so and fails to follow a great circle route then he will run out of fuel before he even gets to his destination. A straight line on a flat map is **never** the shortest route and for motorists it doesn't mater in the least but to the airline captain it certainly does.

Gravity, magnetism, the strong and weak forces are all courses printed on flat maps.

It is OK to use them **providing** you are not taking too long a trip into the microcosm or macrocosm.

All this is certainly going to come as a shock to some in this world.

Resistance to change all this and to produce the immense amount of new math now needed will be tremendous. This resistance will no doubt even come from the universities.

To do otherwise than accept this change is suicide because if one nation in this world can truly develop such math and all the others fall asleep at the switch then that one single nation that has developed all the math necessary for those two Aufbau Rules that I have given you will undoubtedly be easily able to make slaves out of the rest of the world. The nation that found itself with this tremendous advantage would then undoubtedly decide the world was too overpopulated and there was only room for them and the others would all shortly be easily removed and then they would all be gone forever. That's how much power this could give one nation if they are allowed to develop it on their very own.

Do not underestimate what this knowledge is eventually going to do.

You are going to have to realize that from now on there will always be **two** ways of looking at things: You will have to decide whether you want to see it the flat map way or if you want to fly the great circle route through the microcosm and macrocosm.

This shouldn't be any problem. Jet pilots all over the world have learned to watch their indicated air speed as they land because then it's the best indicator to be watching to see how fast the aircraft is going.

But as the same jet airplane is cruising at altitude then the Mach indicator is the one to watch because the most efficient power settings that are set at one altitude and temperature will always be the same percentage of the speed of sound for any altitude or temperature. So by watching the Mach indicator while he is flying, instead of the indicated airspeed, the pilot can more easily maintain his most efficient power settings.

Then there is a third indication of how fast the aircraft is going and this is another indicator called the T.A.S. or True Air Speed indicator.

And then on top of all that there is a Ground Speed readout.

So it seems to me if pilots all over the world have not had any problems whatsoever with four different indicators in front of them giving them four different indications of how fast their aircraft is really going then I would say having only **two** different indicators in front of us for determining these things that we are looking at shouldn't be any problem for us at all.

What you have to realize is that the motor, generator and all these electrical devices are working because of inertia really.

Your inertia is caused by your surroundings but your surroundings are homogeneous and isotropic but the surroundings of these electrons in these electrical devices are **not**.

This—and spin frequency—are the only differences. Inertia is caused by spinning quarks in your surroundings just the same as these electrical devices work because of spinning electrons in their surroundings. Similar spinning elements that give you your inertia also cause them to function as well. Now, let's move on to something else:

Einstein claimed that gravity was a wave and it could be polarized.

He may have jumped the traces on that one. I am not going to give a yes or no to that statement because in time with some esoteric measuring device he could eventually be proved correct. But what are these things called waves? What did Niels Bohr show us? He showed us that you only got this wave or this quantum of energy when an electron fell from one orbital geodesic to a smaller orbital geodesic.

These we see are the methods electrons use to try to balance out energy throughout this universe. Sometimes they can and sometimes they can't but they keep trying.

Let's put that into perspective with the rest of the universe that we know consists of our solar system which is a part of a huge galaxy of rotating stars which is a part of a massive super rotating galaxy chock a block full of other galaxies the size of our galaxy.

We have knowledge of four layers: We can see, the tiny quark layer, the larger atomic world, then our galaxy and then this huge super galaxy. In each we have inertial objects that all must be using our two rules because they have rotation and spin and seem to congeal together in bodies that are spread far apart from each other. But there's a problem when you consider gravity as being a wave: it is not quite like what people considered a wave at the electron's spin frequency. You saw how light was transmitted using these spin-up and spin-down electrons. But you simply can't transfer knowledge gained in one layer to another different layer: The closest analogy to a spin-up and spin-down electron pair in this layer is Venus and Earth where one could be considered spin-up and the other spin-down because Venus is the only planet spinning retrograde and both Earth and Venus are about the same size but we rotate much faster. However, when you see the rotation of Venus as a harmonic of the Earth's then this becomes part of the reason it always shows the same face toward the Earth at its closest approach.

Now even the reader can see with his gravity wave prediction, Einstein made a quantum leap—between two different symmetry layers—perhaps where he shouldn't have.

Since we don't have anything in this solar system layer similar to a spin-up and spin-down electron pair then I simply do not think you can transfer that exact **same type** wave concept to this layer of spinning and rotating objects in the solar system.

Studying Pulsars may require new math and some directional use of these Aufbau Rules and I suppose if need be we can patch Relativity and get away with it for a while.

I know that many of you reading this will feel that I have degraded Einstein throughout this but I want to assure you that I have the utmost respect for him and what he has done. Einstein not only came a lot

closer to this answer than anyone else but he also built the road and the bridges toward this final answer: It couldn't have been done without Einstein paving the way. He also saw it had to be a simple solution.

Even though the earth is on an orbit this is really a geodesic in which its total angular momentum is in exact balance with the rest of the universe—as best as it can do at the time.

So what is this earth's orbit then?

It is the "geodesic" path in space where each of these "bad quarters" of those rotating particles that the earth is made up of has the **least mass**.

This seems to be the lesson that the entire universe seems to be telling us too because every inertial object from the smallest particle to the galaxy all seem to prefer to travel on these geodesics in which they have the least mass. Not only is this so in the gravitational field but in magnetism, electronics and the strong and weak forces as well.

* * *

17. Inertial Qualities Isotropic and homogeneous it is not.

Newton's Law of Gravity and Einstein's General Relativity both require surroundings that are homogeneous and isotropic. While this has been true for our gravitational problems so far, it unfortunately is not true for the other invisible forces of which you not only have to work out all the math for but you also have to extend to these forces Einstein's tensor calculus as well. What Einstein started you now have to finish.

Gyroscopic inertia for a spinning electron will never be the same as for a regular gyro because of the different surroundings. The spinning electron only "sees" the other spinning electrons in its surroundings so when you place strong magnets near a spinning electron this changes its isotropic and homogeneous surroundings into something entirely different. You have to keep all this in mind as you use these Aufbau Rules.

To get inertial qualities the surroundings must have sufficient things spinning at the same frequency as the unit in which these inertial qualities are measured. We are not certain whether the individual quarks can pick out their far off neighbors through "wormholes" * or if they are responding to the same resultant quark frequency standing wave setup well outside the neutron that the electron is responding to that sets up the symmetry of construction for the atom.

* The electrons "see" other far away electrons through "wormholes". Electrons do not "see" other far away electrons as you see them. Electrons "see" distance more like some impenetrable tissue paper that has small "wormholes" in it where the **angular lock on** is narrow—as we see it far away. The electrons "see" their neighbors through larger "wormholes" when their **angular lock on** is wider—as we see them closer. The electrons don't "see" all the space that we do between ourselves and those distant stars nor do they "see" all that time between the stars and us that we see either.

The free electron conducts and is responsible for energy transfer via radio waves. The electron that has

limited freedom of movement and the ability to "lock on" gives us magnetism. The quark that also has limited freedom of movement and the same ability to "lock on" gives us inertia. In the first instance the surroundings are **not** homogeneous and isotropic but in the second they generally are.

All these inertial "lock ons" are always with similar spinning or orbiting items that "see" each other at the same frequency in the fixed stars and that possibly also have **similar** "bad quarters" in the correct phase. This last part is entirely possible but at this time we do not really know if these "bad quarters" have to be in the correct phase.

* * *

18. Incidentally, who are you?

Space is somehow equivalent to time. Does our mind separate something it simply cannot cope with—the space-time interval—into two things it can cope with?

Our mind doesn't understand the space-time interval so maybe it separates it into space and time. The way it does this may be relatively simple. You know you are not the same person you were in the first grade in school. What you don't seem to realize is that you also are not the same person you were a second ago or even a micro-second ago. Your mind is a continuous system though and it **makes you think** that you are the same person that is existing over all these separate frame periods of time.

This is one more reason that our particle world can not give us the entire picture.

You are living in a world of waves that the mind doesn't "see". Your mind has been developed slowly over millions of years for survival. Human's minds had to be able to impress humans that larger things could eat them while they could easily kill and eat smaller things themselves. The human mind has been designed especially for this subset particle world and it has undeniable problems with an all wave universe. It simply wasn't designed to contemplate an all wave universe.

Even though we may have finally gotten a Grand Unified Theory, this isn't the end.

We still haven't even scratched the surface of this universe yet.

The unification of these fields clearly shows us we have absolutely no idea whatsoever of how this much larger universe of waves is really constructed.

But since this will not enable one to produce better weapons then I'm afraid not much emphasis will be placed in that area. I'd say a lot of emphasis is going to be placed on the investigation of the microcosm though because the change that will be wrought in that area will produce spectacular wonders both good and bad.

The days of the rare smart loners like Newton, Kepler, and Einstein look like they will end

approximately with the millennium. Now the heroes will be those in command of teams working at massive computers who will discover **all** the forthcoming surprises.

These Aufbau Rules will probably be the last major breakthrough where you can say one single individual working alone took the major part in creating and even they would not have been done without the computer so the handwriting is on the wall.

* * *

19. Strictly Supposition. The "What if ?" paragraph.

In the beginning of this I said that it was not possible for Faraday to have gotten this but even though that is almost true, it is not quite true because Faraday was pretty sharp and in fact he was the very first person to put a pole up magnet in a dish of mercury and he dangled a wire over the center of the magnet with the free end of the wire dipping into the mercury and when Faraday put a current through this wire the wire moved continuously around the magnet. News of this rapidly spread world wide. Faraday must have known that these things being pushed through the wire would all have to have their poles oriented the same way the magnet's poles were when they began their trip just above the magnet and they would have to have their poles entirely **reversed** at the point they leave the wire and emerge into the mercury. The thing Faraday did not know was that they were spinning. I'm not saying he should have guessed it but he **might** have guessed it, if he had only thought they could be spinning and the force that these electrons are being pushed down—or up—the wire that now because of the gyroscopic inertia of the electrons, as they had to flip 180 degrees, makes this continuous stream of electrons precess 90 degrees into the side of the wire thereby pushing it around and around the magnet.

Churchill always contended that the American Civil War would have ended differently had Stonewall Jackson not been killed mistakenly by some of his own men. I can at this time only surmise that science could have turned out far unlike what we have now, had Faraday only thought things through a bit differently. He came within a hair's breadth of being on the correct road to his main goal of unifying the fields of gravity and magnetism. He probably wouldn't ever have gotten to his main goal of unifying magnetism and gravity though because it is doubtful that he would have figured out that time was relative. Only an Einstein or a Poincare could have figured that out.

Let's go on to something else now:

From our new view of things as we look at this de Broglie wavelength in this Aufbau world there is indeed a suggestion that the electron is composed of these de Broglie waves coming from even smaller inertial entities. Other objects beside the electron also seem to show that the more massive the particle then the shorter is the de Broglie wavelength but this could **seem** be so if these other particles were **all** built of the very same tiny inertial particles that the electron was constructed from.

This is a far, far different way of visualizing it than de Broglie and Einstein pictured it. Are these waves you are measuring from one thing or from many smaller things you don't know about? It makes all the difference in the world.

Bohr showed that to get a transfer of energy something had to leave its geodesic and now I want to know exactly what is leaving its geodesic for us to be able to get this much shorter de Broglie wavelength. The only answer that I can come up with is something much smaller than the electron—smaller component parts of it—have to be doing it.

If this is so then the wobbling electron produces light and when these tiny inertial components of the electron wobble then they produce this much shorter de Broglie wavelength.

Which one of you out there is going to either prove or disprove this?

Finally, here's a concept that shows us the limitations of our thousands of years of human experience. **Now** in this theory when an electron and positron pair are created not only have they been created but also their innumerable underlying layers of waves and smaller particles with smaller inertial qualities. As I asked before, does this continue ad infinitum? Even though this runs counter to our experience that the smaller things build to make larger ones, the implications are here that the symmetry of the microcosm depends on the symmetry of the macrocosm. This shows you that whenever you turn energy into space-time mass then your entire surroundings—both your microcosm and your macrocosm—are determining the symmetry of the space-time interval that you will be producing and you are producing a space-time interval **within** a space-time interval: If your super computer program is not correspondingly designed to allow for this then you will never get it to properly run and give you the correct results.

* * *

20. Cosmological Constant

Since we do have a steady-state universe then we do need to emphasize once more the cause for this "Cosmological Constant" that Einstein so wisely saw was necessary with a steady-state universe.

This "Cosmological Constant" is not only needed to counteract gravity but since in our brave new "Aufbau Rules" world all these invisible forces are now unified then we also need this "Cosmological Constant" for the atomic world as well.

Can you remember earlier where I said the two Aufbau Rules were not quite even and the First Rule locked things together and the second rule didn't?

Hold two magnets together and you can feel that when two **unlike** poles are brought together—or as you now view it, two poles where the electrons "see" themselves spinning the **same** way—you can really feel this lock.

When poles repel they never lock but even try to twist away from each other. When this occurs in magnets then you are bringing the electron's gyroscopic inertia into action and you are feeling some of the same type of inertial torque that keeps your bicycle up. I believe I have also mentioned that this twisting away is the reason that two free electrons can never come together and they will always repel. Too many unbalanced electrons is also the reason that you can never levitate anything with ferromagnetism.

The reason that graphite **can** be levitated using diamagnetism is because of all these spin-up and spin-down electron pairs again. You simply can never have any gyro torque at all with one gyro spinning 180 degrees to its opposite "locked on" paired partner. Therefore graphite with its **strong** spin-up and

spin-down electron pairs can be levitated.

Why does the atomic world have so many spin-up and spin-down electron pairs?

The answer is simple, because the elements that use this for a building block have the least internal gyroscopic inertia and therefore do not try to pull themselves apart if moved. They can be moved in any direction with the least internal disturbance so this is the strongest method of construction when things are tied to the rest of the universe.

All of this is sending the message out loud and clear that the electron does not have this thing called charge but instead it does have tremendous gyroscopic inertia but absolutely no one has seemed to have seen the significance of all this until 1998.

One more final item before we finish this section: Our two rules also show we should have about the same amount of **total** attraction as **total** repulsion in both the micro and macro worlds don't they?

We do and this is **why** the "Cosmological Constant" must equal not only gravity exactly but the similar attracting forces in the micro world as well.

If only Einstein could have seen that his "Cosmological Constant", that after only a few years he wrote off as being absolutely worthless, would not only continue to exist in a steady-state universe—that he also had written off—but in all levels of the micro world as well probably as long as the human race exists.

* * *

21. The Quark

The quarks have something similar to charge that is called color. Unlike charge that has two—a plus and a minus—there are three quark colors. Like charge they also obey symmetry but its a symmetry of three. It's probably three different internal orientations.

We saw what the electron's charge really was and with the quarks it's a threesome gathering around to bind together. Their internal construction must be changeable.

The telling thing about the quark is how compressed this thing is. It's a hundred or a thousand times more compacted and dense than these neutron stars and you know how much they can slow down frequencies so these quarks must even slow their own spinning frequencies down considerably and this must be why they have this thing called asymptotic freedom. When a red, blue and a green quark come together their combined frequencies must all be exact harmonics at maximum attraction a certain distance away from each other but as these three come together even closer then, because of the density of the quarks, these frequencies change enough so they do not "see" themselves spinning the same rate as at that maximum attraction spot the further distance away. These three quarks then are free close together but this attraction together becomes strongest when they are spread away a bit. There are no particles such as gluons in this theory.

Nothing seems better designed for giving us inertia than these three spinning quarks that compose both the neutron and proton. You need something free like the electron that undoubtedly is spinning at a faster rate than the quark frequencies as seen from well outside the nucleus. The three quark spin frequency or

frequencies are not similar to the electron's or else gravity and magnetism would be interacting and it is not. The quark's asymptotic freedom makes it a perfect fluid drive inertia machine.

All those "bad quarters" we spoke of while we were explaining the Principle of Equivalence were mostly—probably more than 99%—located in the quarks.

Remember while the quark's spin produces mass—which is the measure of inertia—it does not produce this new force of ours that is very similar to the old force of gravity. In addition our new force depends on the **path** of that mass.

* * *

22. To whom it may concern

Remember, I have only given you a few of the very basic building blocks in all of this. I have close relatives yet in England. This is **all** I can give you.

It should be enough though to start you on your way. While Superstring will help you immensely, you must remember the warnings of Poincare and Hilbert. You cannot go down the old well defined mathematical road to solve this one. This is one that can only be solved with a gigantic computer model the Cambridge way. When math can't solve it but a new concept can then you have no alternative but to go with the concept.

Keep in mind we must work out various new General Relativity rules for mass which now must be carried to all levels. And **each spin frequency**—because its surroundings are different—will use an **entirely different** modified tensor calculus mass rule: This is one of the factors that will make the Aufbau Rules a veritable mathematical nightmare.

If I'm wrong and your country does happen to luck out and your agents do obtain the correct Cambridge software and you are able to run this in a **recently** manufactured Cray super-computer then when your people start to get the spins of things in the solar system then I can tell you first hand that there will be great rejoicing among all of those physicists who have been engaged in this project setting your program up.

You can fudge with the macrocosm a bit to get it all working properly but with the microcosm you will have to get the spins, orbits and even the correct precessional paths of everything down pat before you see results there and this is what is going to take many generations of people to do. This is going to be no easy task.

But when your super-computer people do start and after they tinker enough with the "Cosmological Constant" and get a fairly good computer representation of the solar system and the galaxies and find that the spiral galaxy arms are now also moving at the same angular rate as their centers and they see on their computer screens the sun and planets are all spinning and rotating at their correct rates and as they keep adjusting the consistency of the Sun, Jupiter and Saturn and they are able to discern that the sunspot cycle is really about 22 years and not 11 years then you will get that same sublime feeling I got when I

first saw it all come together for the very first time and unlike J. Robert Oppenheimer, who quoted a most dreadful passage in that ancient Indian manuscript when he saw the future erupt before his very eyes, I knew that I was going to awaken as many people in this world that I could. I knew many of these people would rise to the occasion so I had happier thoughts and I thought of this poem:

For I dipped into the future

Far as human eye could see.

Saw a vision of the universe

And all the wonders that would be.

You will also think of this ode when you see it all come together for the first time but then remember to mark down the date and subtract from it December 1998: My opinion is this will then give you a fairly good estimate of how many years and months your country is behind.

Remember, my good friend, that in this race there are absolutely no 2nd place awards. There is only going to be one grand prize for those who finish in **First Place**.

Good luck.

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