More on Gravity

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[Added October 25, 2022: I have now let this new theory of gravity sift for a few years, and it still sits well with me. My initial feeling—that all we needed was a reversal—has turned out to be true, I think, though as usual I overcomplicated the problem and solution at first. None of my previous papers needed to be rewritten at all, since all the field math I did there still stands. It only requires a re-assignment of a couple of major variables.

A few months after this paper came out, I published a new paper on light pulling electrons back at a boundary. It addressed an experiment by Strait et all at *PRL*. It may clarify this gravity paper for you, since it not only addresses this sub-magnetic or charge reconnection mechanism again, it lists all the papers where I previously analyzed the mechanism, including Cool Moonlight, Raman Scattering, Raleigh Scattering, The Pushing Force of Light, Blackbody Radiation as an Attraction, What Rutherford Really Proved about the Electron, and Additive Color Theory and Antiphotons. It was those papers that gave me the new idea about gravity. Through those papers and the analysis below, you will see that gravity is just another result of what has been called magnetic reconnection. It is charge reconnection on a galactic and universal scale. In subsequent papers we also saw this magnetic reconnection causing the extremely high temperatures in the atmospheres of Uranus and Jupiter, showing just how powerful this mechanism is. It would have to be, wouldn't it, to cause gravity as well.

Nothing I say below is wrong, but it could have been said more concisely. I was making my way into the dark for the first time, so you have to forgive me if I wasn't as clear or efficient as I could have been. I was basically thinking out loud. For that reason I leave it as it was. It may be of interest to historians.

Some will say the main idea below is charge binding, so isn't that wrong? Not really. It is just another way of saying the same thing. In a way, you ARE charge-bound to the Earth. The majority of the charge around you has come up from below, and you are bound to the Earth by it. But after sitting on the field mechanics for a couple of years, I decided the simplest way to explain it wasn't with charge binding, but with charge augmentation and a spin-up. If you look at it from the point of view of the photons, instead of your own point of view, there is no binding going on. Binding implies an attraction, and I have been saying for decades there is no real attraction, so it is probably best to explain it as energy potentials. That is how I have been selling charge for years: as a photon wind that creates potentials. We just have to remember we have spin potentials as well as photon densities.

Following *The Pulling Force of Light* paper and magnetic reconnection, all we have to do is redefine every field as a dual and interpenetrating field of photons and antiphotons, with real spins. We then sum those spins based on my new charge recycling channels through nuclei, matter, planets, and stars, finding gravity as one major result. You aren't stuck to the ground by a pull or a force down, you are bound by a charge-spin differential. In short, there is a large spin augmentation near any large object, due to emitted charge (moving up) meeting ambient charge (coming down). This augmentation creates an energy increase, which acts the same as an attraction in the field and in the math. It is a high-

pressure area of charge spin, if you will.

At first I had thought it would be a low-pressure area of charge spin, with objects falling into it by default or entropy. I had thought it was a spin-cancellation. But that doesn't fit with other papers where I have shown increases of temperature and EM in such a meeting of fields. See Rayleigh scattering, through charge in Period 4, etc. So why would spin augmentation create an attraction? Because spin doesn't act like density. A body will move into an area of lower density, due to entropy, or simply because it can. More room. But spin doesn't work like that. Why? Because charge moves *through* all bodies. Photons aren't just pelting you from the outside, they are moving through every atom in your body. The more spin there is in the vicinity, the more it will affect you or any other object. And the way it affects you—supposing you match its spin—is by pulling you toward its source. Why? Because this situation doesn't really match magnetic reconnection or Period 4, does it? In those situations we have two charge fields meeting head to head. We have that here, **but we also have a macro-body involved.** The gravitating body. It also has a field. *So we don't have two fields here, but three*. The macro-body moves toward the field of higher charge and spin <mark>because it is feeding off that charge and spin</mark>. It is the same reason the planets inhabit the plane of highest charge in the Solar System, the Solar Equator. They are feeding off the charge coming from the Sun. You will say that is not a strictly mechanical explanation, having an organic residue, so I will hit another way. *Why* does matter move toward richer charge and spin? Because matter is itself spun-up charge. The nucleus, like the Earth, can be treated as a spinning sphere recycling charge, with a low potential at the poles and a high potential at the equator—due only to differences in angular momentum. Charge is pulled to the poles, and the nucleus responds in kind, turning its poles to facilitate these charge paths. It is all a matter of field potentials, and there is nothing necessarily organic (living) about it. It is a straight response to input. As charge moves into the pole, the pole moves toward the charge. Equal and opposite reactions, if you will. Given only that, we have **a movement toward charge**. As charge moves toward matter, matter moves toward charge. Therefore, matter will seem to be attracted to areas of high charge and spin. The only thing that will keep them out of such areas is density. Other matter.]

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People are having trouble with my latest paper, so I am back for some clarification. For those just getting here, we will start at the beginning. What was wrong with Newtonian gravity? Well, as math, very little. Once extended by the Lagrangian, Newton's equations worked quite well as raw field equations. Except that. . . they were never field equations. They were heuristic equations that had no field, and still are. Newton never had a field particle like a graviton, photon, or other corpuscle to mediate forces. He had mysterious action-at-a-distance. Newton himself knew this was a problem, but he never got near solving it. This was a theory-ending problem, and Newton knew it. It meant his solution would remain mathematical only, but as a *mechanical* theory it was threadbare.

What was wrong with Einsteinian gravity? Again, as math, very little. By incorporating time differentials and Relativity, Einstein was able to fine-tune the equations, making them match new data in cosmology and particle physics. But Einstein didn't solve Newton's problem at all, since Einstein's math is still not based on field equations (although they are *called* field equations). There is no field or field particle, so field differentials and curves are based on nothing. They come straight out of the math and have no theoretical or mechanical underpinning. Rather than having action-at-a-distance, Einstein had a curved field, but if you asked him how the bodies were curving the field at a distance he still had no answer. He started with a given field curvature, but never explained its mechanical genesis. Basically, he chose a curved math, and the math curved the field. But that isn't mechanics. Math can't curve a field.

What was wrong with push gravity? Well, although it was a field theory, using a corpuscle, it didn't tell us what that corpuscle was or link it to other theory. It didn't tell us the corpuscle was a photon, and that that photon was the same photon used in EM theory. It was always **light**. Most theorists tried to create a second "ether", and that couldn't be worked into Newton's equations.   Even if they *had* linked their corpuscle to the photon, charge, and EM, they still couldn't say where it fit into Newton's equations or the Lagrangian, because they didn't understand the Lagrangian was a unified field equation. So they couldn't do either the math or the theory.

An even bigger problem was that push gravity never incorporated recycling of that ether by the Earth. They did not have the ether pulled in at the poles and recycled, coming *up* out of the Earth. Without that mechanism, they again couldn't do the math or theory. Why? Because with a photon or charge ether, the Sun has to be the main supplier of the field. Which means that in naïve push gravity, you should weigh considerably more during the day. Charge pressure on the night side of all bodies should be measurably less. And not in the thousanths place, say, but far more obviously. You will tell me that using my new mechanics, we have charge coming in on the night side from the big planets, as well as the galactic core. Yes, but that still isn't enough to explain the data. I have run the equations (in my papers on tilt, eccentricity, Bode's Law, etc.), showing that although the planets return charge, and that although that charge is compressed in the return, it still doesn't equal charge going out from the Sun. If it did, the Earth and other planets wouldn't show any tilt or eccentricity. For this reason, the theory of push gravity never could explain why we don't see huge weight variations. Yes, we now know there *are* weight variations, but they are far too small to be explained by push gravity.

The third big problem of push gravity is that it never graduated to spin mechanics. It had an ether, but didn't understand the basic mechanics of that ether. In other words, it didn't have an antiphoton. It didn't have a field of real particles with real chirality. To solve the problem of gravity, you have to have real spinning field particles, and you have to understand how they are recycled and how they respond to one another's spins.   Without real spin and antiphotons, you can't explain charge, magnetism, *or gravity*. Without spinning photons and spin mechanics, you can't explain the plusses and minuses of any field theory.

Some will say that my theory of gravity still uses push gravity and charge pressure, so why not admit it? Well, I do admit it. In a way, my theory is push gravity *plus a whole lot of other things*. But there are so many other things that my theory no longer has much in common with what has previously been called push gravity. I want to give Le Sage and the other people credit, *but not too much credit*. As you are seeing, they didn't get that far into the problem, so when their students come to me now and claim they knew it all along, I just shake my head. Yes, they were roughly on the right track, but they knew very little. When they claim they were right all along, they just sound to me like the mainstream stuffed shirts, who can never admit there is something they don't know or didn't already think of. They are always looking for a way to give me *far too little credit*.

But let's move on. As you try to comprehend my theory, begin with the charge recycling of the Earth. You have to understand why it was necessary to the solution. In recycling charge through the body of the Earth, the problem of night/day variations is bypassed. Why? Because, given a field that is pulled in through two polar vortices, it doesn't matter if it is night or day. The recycling equalizes night/day differences, doesn't it? And it doesn't just equalize in one way, it equalizes in several. To start with, it equalizes because the spinning polar vortices pull in the same charge day and night.   The poles are roughly perpendicular to the Sun, and if one pole is pulling in more the other is pulling in less. Secondly, the charge is equalized by passing through the Earth, where the charge streams from the

poles cross. So they tamp down one another again.

Thirdly—and this is what some are missing—the Earth is recycling on two schemes at the same time. It recycles charge pole-to-equator, but it also recycles pole-to-pole, the second scheme being what I have called **through charge**. The second scheme is the lesser of the two, but it is still considerable. In that scheme, charge passes straight along the magnetic pole, coming out the other end.   Only charge that enters the vortex in the right way can channel on this scheme, since it has to enter close to perpendicular, but we know from recent data (see high energy photons coming out the poles) that this happens. Because the charge channeling is a mix of the two schemes, we don't see huge weight variations at the poles.   Again, we *d o* see weight variations—and I suspect the magnitude of the variations at the magnetic poles is being hidden—but we normally see them with fine tuned gravimeters, not with rough bathroom scales.

And there are other equalizing mechanisms at the poles. We will see them below when we look at the nucleus.

Now we get to the hard part. Spin mechanics. We take the photon to be a spinning sphere. It can be spinning in any direction, but once it enters a pre-existing field it will be made coherent to that field. How? By collisions. Photons are colliding all the time, and due to their small size they tend to hit edge-to-edge. Edge hits cause spin changes rather than speed changes. Hits can either cause spin-ups or spin-downs. Photons can collide side-to-side, moving in the same direction; or head-on.

When a photon enters a new field of any appreciable density, it will be spun up and down and up and down.   When it is spun down, it is weak, and in any hit the weaker particle always takes on the characteristics of the stronger particle (for obvious reasons).   If a weak particle spinning on axis-a hits a stronger particle spinning on axis-b, the axis of the weaker particle will move toward b. In this way, over time, the spin axes will be made coherent. It is the same with linear motion, and this isn't just a rule of spin mechanics.

So although photons can be spinning on any axis, we can assume a certain amount of coherence. To simplify the math and mechanics, we then average the field and assign all particles either a left spin or a right spin. The left spin is photon, the right spin is an antiphoton, say. If a photon and antiphoton are moving in the same linear direction and edge-hit, they spin one another down. If they meet head-to-head, they spin one another up. **So you have to keep track of spins and linear motions at the same time**.

To add to the complexity, most interactions we will be looking at aren't photon-photon collisions. We will be looking at matter fields, so we have to look at how photons interact with matter. As we have seen with the Earth, they are recycled by matter. But they aren't just recycled at the macro-scale, as with a large body like the Earth. They are—at the same time—recycled by protons and neutrons, and thereby atoms. And they also move through matter on two schemes. They move through protons on the pole-to-equator scheme; and they move through neutrons on the pole-to-pole scheme. Since atoms contain both, photons move through the nucleus on both schemes. If the nucleus has a strong carousel level, the main scheme is pole-to-equator. If the nucleus has a weak or non-existent carousel level, the charge also moves pole-to-pole. So this is another factor you have to be aware of. As we saw in my papers on Rayleigh scattering, depending on the elements involved, your spin expectations can be

flipped. Nitrogen or Potassium may give you a different field than Tin or Silver, say. That is where we get into conductors versus insulators, but we won't have to include that in gravity. The only way we include it is as above, where the Earth is recycling on both schemes. Pole-to-pole, the Earth is acting as a gigantic conductor. Pole-to-equator, it is acting as a gigantic insulator.

Since I made an analogy to atomic binding in the previous paper, some have thought I meant gravity is a straight analog of the strong force. That isn't what I intended. Although there are similarities, they aren't the same. The nucleus isn't just a little Earth, so while it is good to see the similarities in the mechancial fields, you have to be aware of the differences as well. As I have shown in previous papers, protons and neutrons *don't* repel one another in the nucleus, so you don't need a force to counteract that. Charge repulsion is caused by photon bombardment upon matter, and although you get that between protons outside the nucleus—where they aren't recycling charge in defined streams— inside the nucleus you don't. There, the photons are kept on proper paths, and they don't keep the particles apart. So in the first instance, the nucleons are bound simply because there is no force to unbind them. Also, they are bound because stars or galactic cores previously bound them with pressure and heat. But there is more to it than that, of course, since they are bound in several other ways. Yes, they are bound by charge pressure from outside, which is a pure sort of push gravity. But more importantly, they are bound by their own charge recycling. You will say that the photons are moving as much out as they are in, which is true. But you are missing the fact that the recycling is always moving in both directions. The nucleus isn't just recycling pole-to-equator, on an in-out scheme with a half-turn. It is recycling from *both* poles, with charge and anticharge meeting and crossing. As charge and anticharge meet along the pole, they not only spin eachother up, creating current and magnetism, they also create a bond. How? Again, by pressure differences, or field potentials. The same pressure differences that cause the vortices cause the bind, you see. The spin of the proton and nucleus creates a semi-spherical field with polar angular momentum weaknesses. The force in at the poles creates the vortex, and the same force creates the "gravity" or "strong force". And, as you can see, we can use the same mechanism to create more gravity at the poles of the Earth, despite the fact that the field there is opposite in other ways to the field at the equator.

You will say that in that case, the nucleus would dissolve along the equator. The nucleons on the carousel level should be flung out into space. Yes, we would expect a binding weakness at the equator, one that we cannot make up with straight charge pressure.   So the nucleus must have a similar effect at the equator as we will see on the Earth, with opposing photon fields creating another sort of bind. In other words, the charge pressure at the nuclear equator is vastly increased by the spin mechanics at the boundary.   The incoming photons of the ambient field are spun-up by the exiting photons of the channeled field, giving them more energy. So when they impact a nucleon, they have more force than they would have, causing a net force in.

You will say that, in that case, when the photons moving along the nuclear pole meet and spin one another up, creating current and magnetism, they should also be energized. In which case they should create a force *out*. True, except that to create a force out, they have to collide with a nucleon. . . which they *do not*. Those photons move on down the pole and exit, without hitting a nucleon. That is because they are being *channeled*.   But the ambient field photons coming *in* at the equator are not being channeled, are they? No, so they are free to collide with a nucleon there, creating a force in.

I told you, these problems are complex, but with spin mechanics an answer is always there if you dig deep enough. We have many degrees of freedom that the old theories missed, and all of them are mechanical.

So, does the Earth's gravity work just like that of the nucleus? Roughly, but as I said the analogy is loose. We can't just scale up and quit. The Earth doesn't just have two main channels and a limited number of nucleons. Photons are channeled to all places on the surface of a very large sphere, and suffer a huge number of collisions along the way. So we are summing up and averaging in ways far beyond what we had to do with the nucleus. This is the main thing that equalizes the pole to equator variations.

The field is far more complex on the Earth, and so the "gravity field" here isn't strictly the same as the "gravity field" of the nucleus. I have run numbers in previous papers to find the "gravity field of the proton" and such things, but that was just a scaling down of the math to show how the equations were working. As a matter of field mechanics, gravity is no longer a "universal force". Neither is charge. Although charge is, in one sense, a universal force, it doesn't work the same at all levels. It has different math and mechanics depending on the scale and the specific interaction, so tagging it "universal" can sometimes be counterproductive.

You will see what I mean when we answer the question, "But are you bound to the Earth like the nuclear pole or the nuclear equator?" Because the answer is, "neither". Unless you are standing right at one of the two magnetic poles, you won't be feeling the vortex pull. And since you aren't channeling charge as simply as a proton, we can't treat you as standing at the nuclear equator. Charge isn't moving through you as purely as through a single proton on the carousel level.

[Later: I have removed a section here, since I was proposing charge up was being channeled and therefore was not creating a force up. That contradicts the previous paper, where charge up was binding, creating the force down and therefore gravity.]

As I dug more deeply into this charge as gravity solution, I continued to tweak it to fit the Lift on a Wing paper. I mentioned one possible tweak previously in passing, and now I have another. The slightly more detailed solution outlined above could be imported there if fast sideways motion interfered with your ability to channel upcoming charge. If the charge channels of objects on the surface of the Earth are set to "up", then fast sideways motion would make channeling more inefficient. It would be like trying to fire a bullet through a quickly moving hoop. Charge that isn't channeled would impact atoms, driving them up.

What about the Atmospheric Pressure paper? I keep that one in mind as I proceed, because there I found a beautiful match in the math, where effective weight down matched charge up. If charge up is being channeled, and is therefore binding, what is causing the force that keeps the atmosphere up? Well, that one can be saved in the same way. You aren't moving very fast, so you don't interfere with the up channels. But atmospheric molecules, being a gas, are, and do. Again, the force up isn't a push, it is a ==loss of binding==. A loss of binding will look and act just a push in a unified field, you see.

I know that some readers will be asking why I would ruin a perfectly good set of papers by putting them all into question again. Why not leave well enough alone? Well, to solve the gravity problem I would do anything. I have always admitted that my theories weren't "final" theories. They were moves in the right direction, that is all. It may be that they all needed to be tweaked in this way. Or not. Regardless, it is nice that we have the freedom to think out loud like this, isn't it? Or, at least

those of us not in mainstream physics have that freedom.

Some will say, "However you solve this binding at the surface of planets, I still don't understand how this new theory fits into your old equations. Take your paper on the Moon, where you showed gravity was a function of radius alone, with no tie to density. You have used that idea in lots of papers to great effect. So it must be true in the math. How does it work now in this new mechanics?" Well, it works the same way it ever did. I am not changing any of that math, and that won't be part of the rewrite. The only question has been, how do we assign certain mechanical effects in the field to that math? What I have heretofore called **solo gravity** will continue to be assigned to that part of the math that varies as the radius, because it is dependent on size alone. It is determined by the surface area that charge has to move through as it escapes the body, so we can scale up from the quantum arena without consulting densities. But since we are dealing with unified field equations, that isn't enough to solve most problems. To calculate forces and motions, we have to include charge densities, and that is the part of the equations I have given to charge proper. That is the part of the equations I assign to density.

So, given what we have discovered here, strictly there is no such thing as solo gravity. Gravity is itself a unified field effect of compound or complex charge fields, so it can't really be tagged the way I was tagging it. "Solo gravity" is now just that part of the unified field equations that doesn't rely on charge density, so it is up for a rename. Think of how I rewrote the Lagrangian, to see what I mean. Previously, they had assigned one term to kinetic energy and one term to potential. I proved those assignments were wrong. The equation was (mostly) right, but the term assignments were wrong. The terms couldn't be split that way. The "kinetic energy" term was just a field correction to the other term, and had nothing to do with kinetic energy. It fooled everyone because it looked like a kinetic energy term in its form. Well, in a way I am doing the same thing again here with my own equations. I am keeping the math, but re-assigning the terms. Remember how I split the mass variable in Newton's equation, writing mass as density times volume (or radius). $M = DV$. I then assigned the volume term to gravity and the density term to charge. Well, it looks like I may have been wrong. They *both* now look like charge terms. One term is correcting the other. Or, one term is *scaling* the other.

"But is G still a scaler between gravity and charge, then?" you will ask. No, because it never really was. It is still a scaler between those two parts of the equation, so it is more a scaler between nucleon and photon. It has always been that sort of scaler in my math and theory, from the beginning, and I say it that way over and over. It scales the photon field to the matter field, allowing us to directly import photon field math into matter field math. Specifically, it allows us to put known velocities and accelerations into the same equations. As I have proved, velocities and accelerations don't automatically scale, since the accelerations rely on curves in the math, while velocities don't. Velocities automatically scale only with accelerations they directly create. But the accelerations of other bodies—larger or smaller—don't automatically scale. So any time you are dealing with field accelerations, you need scalers like G.

What about orbits? Do we have to make changes there as well? Yes, though the math won't change, some of the assignments will change. If we keep gravity as a concept, it will apply only to the unified field binding effect caused by overlapping and interpenetrating charge fields. There is no longer any solo gravity there, either. Mechanically, the centripetal vector isn't caused by mysterious action-at-a-distance or by magically curved fields, it is caused by real charge motions and spin mechanics. In other words, planets inhabit orbits where their incoming and outgoing charge fields balance. They are pushed out by the Sun, and pushed back in by returning charge from outside planets and the galactic core. They are trapped by a complex Solar vortex. Even their sideways motion is explained by the Solar vortex, and not by "innate motion". There is no innate motion. All motions—in, out, and

sideways—are caused by the charge field. But the charge field—although all of a piece—is a veritable honeycomb of influences, from the galaxy, Sun, planets, and moons. These are the only perturbations in the field. Perturbations are never caused by "remaining inequalities" or nonsense like that. Just as in Relativity, math cannot be the cause of motions. All motions are caused by the influence of other bodies.