

A bit of light on

exactly how these

mathematical complexities of

FIELD THEORIES

totally **OBSCURE** & **HIDE**

Attractive and Repulsive

Fundamental Forces

This paper, by Daniel P. Fitzpatrick Jr., brought to you <u>free</u> by R.M.F. founder of <u>MAGPUL Industries.</u>

ABSTRACT

What began with the one **simple** gravitational <u>field</u> theory given to us by Newton — gets worse with time as new <u>fields</u> are added with each new discovery.

You must understand that field theories are complicated things with extremely complex math.

Isaac Newton, in fact, had to invent calculus in order to finish his gravitational field theory.

Albert Einstein, Stephen Hawking and many other theoretical physicists looked for a **simple** explanation of this complicated universe, requiring various mathematically complex <u>field</u> equations to give the exact amounts of all these new different forces, as new things are discovered — with **all** their new field theories added.

In this lengthy but necessary <u>6</u> page abstract <u>alone</u> you will find the **simple** explanation, that these theoretical physicists were looking for.

You will also see **why** — after Newton's gravitational field theory — things got so complicated: it was because more and more <u>field</u> theories were being *constantly* added.

And it continues to get even more complicated with new discoveries adding even more <u>field</u> theories.

However, a **simplification** can start right now with NASA scientist Dr. Milo Wolff's **scalar**, spinning, *standing wave* approach to everything we note as spinning in both micro and macro realms of our entire universe.

This universe — of spinning entities — is far **simpler** than anyone has imagined, providing one, forgets <u>all</u> field theory hogwash, and observes <u>only</u> the <u>relative motion</u> (phase) of all these **scalar** spin frequencies in respect to one another.

If this really is, Dr. Milo Wolff's *standing wave*, frequency universe all throughout, then our old opinions of *space*, *time*, *plus and minus charges* along with *north and south poles* all have to drastically change. Now we must think only, in terms of **scalar relative motion** (phase).

More than half a century ago there was a good article, in *Scientific American* about Ampère's Long Wire Law that made me re-think — and suspect even more — everything I had learned in electronics.

In the 1820s, André M. Ampère took two batteries and connected each to a long wire, with both wires parallel to each other. When the current went the same direction through both wires, the wires attracted. When Ampère reversed one of the batteries and the current went through the wires in opposite directions, then the wires repelled each other.

The unit of electrical current, the Amp, was named after Ampère for this <u>simple</u> discovery — relating the magnetic field **directly** to the movement (current) producing it.

The **simplicity** of Ampère's Law — using **no** *plus or minus charges or north and south poles* — is now totally obscured by the more complicated math and rules of the Faraday-Maxwell field theory, coming half a century after Ampère, that <u>must</u> use *plus and minus charges and north and south poles*.

Faraday was hired by the Cavendish Laboratory as a bottle washer and while there built the world's first electric

motorized device, and Maxwell, a beer truck driver, figured out the complex math for Faraday's **two** field concepts — still in use today.

Faraday dangled a piece of copper wire into a pool of mercury in which was a magnet. The wire would either rotate clockwise or counter-clockwise depending on which way the battery was connected, or which pole of the magnet faced up.

This device made headlines in journals all over the world and made Faraday famous.

To explain <u>exactly</u> how this device worked, Faraday <u>needed</u> and used **two** field theories: an electric field theory using Benjamin Franklin's plus and minus charges and the north and south pole magnetic field theory.

I saw electron spin direction was important, in my first year of high school, and that more magnetic attraction simply meant more electron spins were in-phase with each other.

No plus and minus charges or magnetic lines of force needed to see **why** the attraction!

I knew then that **relative motion** (phase) — itself — played an essential part in giving us these electrical forces.

Ampère didn't know about electron spin, but he certainly saw the same **relative motion** aspect of it that I saw, but why wasn't any of this common sense **simplification** of — **why** we have force — in modern science?

It isn't there because the Faraday-Maxwell field math and rules — need *north and south poles and plus and minus charges* — and show only how to maximize and utilize these forces.

F-M Field theory is not good at getting to the bottom of **why** we have these forces.

The old ALNICO magnets of my youth, where the electron spins could only be concentrated in one direction were a godsend, because they taught me what Ampère had learned: they taught me <u>exactly</u>, that <u>relative motion</u> (phase) <u>itself</u> was causing these forces.

Ampère's <u>simple</u> Law, published in 1825, said: things on **parallel paths** — *later found to be electrons* — going in the <u>same direction</u>, attract each other, and those on **parallel paths** going in <u>opposite directions</u>, repel each other.

I showed in 1966 that this ONE <u>simple</u> relative motion (phase) TRUE concept was far better than using TWO complicated FIELD concepts of *plus and minus charges* and north and south poles, because relative motion (phase) — by itself — shows how electron motion or <u>spin</u> causes magnetic force, thus unifying both electrical and magnetic fields.

Nevertheless, field theory in the hands of people like Charles P. Steinmetz, built this industrial age of electrical wonders. With the popularity of the Faraday-Maxwell field theory, Ampère's amazing, unifying concept of 1825 lost out to this field theory that Einstein warned us about in 1954.

You will see, herein, exactly why field theory led us astray.

And you can read Einstein's exact warning words about field theory and modern science — which this paper now proves were correct.

André M. Ampère's long wire law essentially showed us this: electrons moving on parallel paths, in the same direction attract —— electrons moving on parallel paths, in an opposite direction repel.

How the Britannica could screw up and get this completely backwards for over *five years now* — without even one scientist telling them — is beyond me.

Yes, mistakes are made by credible sources, and myths are thereby created that last, *not only for five years*, but for decades like *phlogiston*: that's a good part of this paper.

A <u>full</u> page (page 29) on 1-18-1967 in the **New York Times Sunday Book Review Section** is about my publication, back in 1966. In that I showed: Ampère's Law was the <u>reality</u>, and it beat thinking in terms of **FIELD Theory's** — unreliable and imaginary — plus and minus charges and/or north and south poles. 1966. html

Now in 2018 I'm showing that **scalar relative motion** (phase) applies — *not only to electrons* — but to all these spinning entities in both microcosm and macrocosm.

Ampère's Law essentially **tells** you: entities that are **in-phase** attract, and entities that are **out-of-phase** repel each other.

This is not only the rule — engineers use — in the electrical world, but it's the rule <u>between</u> all these **scalar**, **spinning** entities giving us <u>all</u> the forces in our entire micro-macro universe.

All forces now have to be seen as being caused directly from that fundamental Ampère's Law *PHASE* rule above, giving us a **simplification** of present science — that both Einstein and Hawking looked for their entire lives — but never found.

Science now becomes a whole new ballgame, **simplified** by Ampère's Law that now shows us, that it's the *PHASE* between all these **scalar spin frequencies** that gives us all the attractive and repulsive forces that build this entire micro-macro universe.

I'll also show you 3 beliefs that have to change.

* end of Abstract *

New discoveries, generally open up a Pandora's box of difficulties: this one greatly **simplifies** much of present science.

The following is going to be hard to believe by many who read it, but it is all absolutely true.

Read this entire paper, and then at the very end you will be one of the few people who understands <u>exactly</u> what causes gravity.

"Science is the key to life" was written under my graduation picture in the 1950 Cynosure of Linden High School in Linden, New Jersey.

Science has, in fact, been the key to my entire life.

I can remember the first radio I ever fixed, as if it happened yesterday! It was either 1944 or 1945, and I was in the 6th or 7th grade and up at Lake Hopatcong where it was over a thousand feet above sea level and a lot cooler and far nicer than in Linden, New Jersey in summer. I was at our neighbor's house, and I found their beautiful big radio didn't work. I went back to our house and got my father's volt-ohm meter. At the radio, I put one meter lead to ground and the other to a grid cap on the top of one of the tubes, and as I tuned the dial I could see the meter fluctuating, so I knew the set was working OK. All the tubes checked out OK this way, so I went to the output transformer that matched the high impedance of the tube circuitry with the low loud-speaker impedance. I had, therefore, traced the sound fluctuations — through the tubes — and then I also saw fluctuating meter readings on both primary and secondary terminals of the output transformer, going right to the loud-speaker — but why was there no sound??? Why didn't the radio work??? I had good eyes back then and spotted a broken loudspeaker coil wire — because sounds from the huge loudspeaker evidently vibrated, flexed and finally broke the

loud-speaker coil to transformer wire. So, I went back home and got my soldering iron, came back and soldered the wire back again, possibly giving the radio another ten years of life. That neighbor woman couldn't believe it when the radio played just like it did when it was new — and she gave me two dollars.

That experience was worth its weight in gold because it showed me the path I was going to take for the rest of my life.

I'm retired now in one of the better retirement places just outside of Austin, Texas where I now have the time to write these science papers that are being read by thousands — every month in more than 50 countries — who wish to get a jump ahead of those in the universities, who are *always* a bit behind what is going on in the science world.

Here's something, the people who read my papers know.

It's really NASA scientist Dr. Milo Wolff's frequency universe — all throughout micro and macro worlds — in which the forces are produced via the **phase** between all these spin frequencies.

This frequency aspect of our universe all throughout — that Milo Wolff saw — is not that apparent, so we entirely missed it: this is the reason we missed the supreme importance of **phase** between all these spin frequencies being the **key** to what is really going on in this entire universe.

I stated in my 1966 publication that André Ampère gave us the **relative motion** law aspect of it that showed us what was really going on, "Things moving on **parallel paths** — in the same direction will attract and in opposite directions will repel".

I used the term **relative motion** and Ampère's law for decades, and even during Milo Wolff's healthier years, before using the term **phase**, as I put more of the pieces of this science jigsaw puzzle together.

I'm certain that if I would have used the term **phase** more, during Milo's good years, then he might have published this before me.

Most people have no idea what phase means, so I knew I should be explaining things using terms like *Ampère's Law* and *relative motion*, instead of using the term **phase**, but now when trying to get folks to look at all these spins of everything in the micro & macro universe, I saw **phase** was the better word to use.

I had considerably slowed down on this puzzle until I heard mathematician Stephen Wolfram explaining to Charlie Rose on TV that mathematics could never help in finding the *correct model* on which this universe was built. I immediately read Stephen Wolfram's book. It was then that I realized why Bohr and Einstein failed: neither had gotten to the bottom of things — but I did, and I had the *correct model* — Ampère's law.

Then I started really working harder, on not only putting *Phase Symmetry* together, but to convince people also.

Now — after getting the message out — it's becoming obvious to a great many that the only thing that spin frequencies have in common, that could cause force, would be **phase**.

Scientists use the word spacetime for a reason: space changes with a change in speed or mass, and so does time. We know when we look through the Hubble telescope through space, then we are also looking back through time. Space changes and time changes but the **spacetime interval** never changes: look it up!

Most enlightened scientists realize that spacetime is a single entity, therefore we use that word. Einstein, more than anyone else, gave us this realization of spacetime.

Our ancestors, however, didn't know about Einstein or spacetime and have given us two *different* building blocks of SPACE and TIME for our present science. Hence the chapter on COMPLEMENTARITY.

This is an exceptionally simple universe — once you understand what is really going on.

But we don't see it for the same reason that we see SPACE and TIME as two *different* things — when they are only ONE thing — as Einstein proved, the **spacetime** interval.

Why we discern both space and time is a riddle wrapped inside an enigma, and it may remain so for quite a while yet.

This paper may, in fact, be the very beginning of unwrapping that enigma.

It's a universe of Dr. Milo Wolff's **scalar**, spinning, standing wave entities all throughout microcosm and macrocosm, whose spins **all obey** Ampère's simple phase law: **scalar** entities (solids) are created <u>between</u> attractive force, **in-phase** concentric binding of spin frequencies — or harmonics thereof.

And then we have the opposite of SCALAR.

Spacetime (Einstein's Cosmological Constant type repulsive force or space) which is produced <u>between</u> **out-of-phase** spin frequencies.

Einstein has to be given credit for being the first to see that all this space also had a repulsive force density to it. However, he missed the spacetime aspect of it all.

In fact, I did myself until recently. People will see that by reading some of my earlier papers.

I don't usually put out a paper unless I have something new to say, and in this paper it's the spacetime aspect of Einstein's Cosmological Constant, repulsive force density in both micro and macro realms: this, I'm trying to convey.

Both our space and our time are produced by

Einstein's Cosmological Constant repulsive force density caused by all these spinning entities being out-of-phase with each other.

Welcome to Dr. Milo Wolff's frequency universe. Milo and I discussed science for decades. We both were into radio early and saw the rapid changes there. In his 80s, he drove me to John Wayne airport so I could return to Colorado. I do miss Milo Wolff. You are reading what he taught me.

It's a shame the establishment hasn't caught on to the utter **simplicity of this entire universe** that both Ampère and Dr. Milo Wolff have shown us.

Einstein's Cosmological Constant repulsive force density exists in both the microcosm and macrocosm, and even Einstein didn't realize its true value as also being spacetime that we somehow mistakenly divide into the two seemingly different concepts of space and time.

What can be divided is the spacetime interval — into two different spacetime realms — the microcosm and the macrocosm, using Ampère's Law in both.

Einstein's repulsive force space can <u>also</u> be seen in the microcosm by enlarging a molecular electron to the size of a pin head: the electron would then be as far from the nucleus as the fortieth floor in a tall building is from the street below.

But this microcosm spacetime is different from ours and uses a different spacetime interval.

The establishment understands that we have all this neutron *Binding Energy* in mass. Really it is *quark harmonic binding of electrons*, making them molecular electrons.

Nevertheless, when these numerous quark-electron bindings are severed — via either fission or fusion energy — then these many, severed items fly off, cork screwing through their realm producing vast amounts of out-of-phase forces or space as we see it, ending up with an element or elements closer to iron.

The iron molecule seems to be at some scalar, harmonic balance point — **why** is still a mystery.

These vast out-of-phase forces are what give us the atomic explosion — which ceases after creating the new element/elements, thereby removing all those temporary out-of-phase forces.

The microcosm — we all know — is a fairly well-balanced realm, where the in-phase forces are balanced well enough against the out-of-phase forces for perfect stability.

It's a shame the establishment hasn't caught on to this either, because the macrocosm has all these identical spins too. Why does the establishment see it differently? And that's coming too, so read on.

There is an energy TRANSFER method that does not affect this in-phase to out-of-phase balance, but in that type of energy creation and transfer method, impedance matching is necessary.

In fact, this necessary impedance matching — where each mass binding had to match an equal mass un-binding — gave us the concept that "energy could neither be created nor destroyed", this was, of course, before the atomic energy era that began with Einstein's proof that E=mc².

An example of this — impedance matching TRANSFER — is the light that comes to your eyes from a star.

If you can remember, in that first radio I fixed, there was an impedance matching transformer that matched the high impedance tubes with the low impedance speaker coil. Well, the universe doesn't have that, but stars have electrons of various impedances ready to emit light and your eyes have red, green and blue receptors to receive the various colored light — providing among other things — their impedance exactly matches the impedance of those light emitting star electrons. Also, both star electron transmitting light and eye receptor electron must be a spin-up spin-down pair — with their closest sides binding in-phase — and their spin axes parallel or somewhat parallel.

And this, my friends — with those other things — is the answer to Olbers' Paradox.

Here's how light from a distant star acts somewhat like alternating current but at a much, much, much higher frequency.

If you look at energy transfer this way, then you will see the relationship between binding with the surroundings (stars) and internal binding; the production of a **quantum** of **energy** is gained <u>after</u> an **in-phase** binding **first** with the surroundings (a star) and then that same electron <u>switches</u> a bond FROM the surroundings (star) to an internal **in-phase** bond in your eye: an example is green light from a star, at 5,000 Angstroms in wavelength (color mid-range), where electrons in our eye cones are cycling bonds between electrons on that star, and <u>us</u>, at the rate of 600 trillion times a second (600 THz).

Only **ONE** of those cycling infinitesimally short period bonds is a quantum of green light.

It takes only about eight or nine of these quanta cycling bonds before you can sense the slightest bit of green light.

This is the way it really works, but if you want to believe in photons go right ahead. However, I do believe that much of quantum theory — along with photons — is going down the drain once an all frequency universe is accepted. We know enough about frequency behavior now to replace much of quantum theory with the frequency aspect of what's really going on, as I've just shown you with starlight and in-phase binding.

Some features of quantum theory will remain because spacetime is not continuous — like field theory — as Einstein warned us. Spacetime comes in chunks and has holes.

Niels Bohr never realized that it was out-of-phase spacetime — not in-phase particles — that were coming from Planck's energy quanta.

Bohr had a 50 - 50 chance in getting it right, and he got it wrong!

Georges Lemaître a Belgian Catholic priest had the same odds in guessing between two words AWAY and AROUND, and he guessed wrong too on that one — even convincing Einstein — and gave us a myth that's believed just as strongly as quantum theory today.

I'll cover that myth later, and I'm glad I am writing this after Stephen Hawking died: much of his work relied on quantum theory, portions of which now have to be seriously looked into.

Even though the electron on a distant star giving you light, is separated from the one receiving that light in your eye — there is **no spacetime** whatsoever between their closest sides binding in-phase.

There is no spacetime — between those sides — because spacetime itself is only created by the closest sides of entities spinning out-of-phase.

Our thinking of a continuous spacetime has to entirely change to pieces of spacetime.

Bohr and Einstein were both original thinkers, nevertheless, neither got to the bottom of what caused these attractive and repulsive forces in this universe.

Now we know!

All attractive forces are caused by things that are inphase.

All repulsive forces — along with spacetime — are caused by things that are spinning out-of-phase with each other.

I've given you the <u>correct</u> building block <u>model</u> of how this universe is built.

That is my contribution — along with a lot of help from others that I learned from.

Mathematician Stephen Wolfram proved — in his *A New Kind of Science* — that all the math in the world isn't going to show how this universe works until you have the <u>correct</u> building block <u>model</u>.

And how true that has been!

This paper gives the <u>correct</u> building block <u>model</u> **foundation** — of this entire universe.

It's a foundation that scientists can finally build on to give all of us a better understanding of our universe and hopefully, a better world. I believe I have given you a glimpse of what the future has in store for us.

And now I must correct Crichton — whose words you will read later in the **C**omplementarity chapter: it was Niels Bohr who gave us photons, not Einstein.

Einstein claimed Bohr's Quantum Theory, that included photons, was not complete.

I passed the tests for the B and then the A amateur radio licenses and then the 2nd Class Commercial Radio License while in high school; from this I learned the importance of standing waves and impedance matching in energy transfers. I also had my pilot's license #1195823 too, before I graduated high school.

I got my 1st Class Radio license #P1-7-13647 after this.

In 1946 I could see, using alnico magnets, that a *relative motion or phase* concept of the electron spin gave correct answers for magnetism 100% of the time while the north and south pole concept didn't.

By 1947 I saw the same error margin using Benjamin Franklin's plus and minus charges that were worse at predicting, than the 100% correct *relative motion or phase* concept.

As I said, I published a book in 1966, about *seeing* this easy "unification of forces" and also *seeing* this amazing simplification of "what the establishment believed" was science. The New York Times had a full page about that

1966 book of mine in the Book Review Section, on Sunday June 18th 1967.

But then it took me several decades <u>more</u> — *while eliminating standing waves and working on the latest things our scientists were able to construct* — to gradually put more and more of the pieces of this complicated science jigsaw puzzle together and then to realize how simple this entire universe, of spinning entities, really was.

Using **phase** along with my good friend *NASA scientist Dr. Milo Wolff's* **standing wave concept** — I found **all** attractive and repulsive forces are merely a "simple **phase** relationship" between all these spinning entities in both microcosm and macrocosm.

What was hard for me to believe, was how hard it was to convince others — who did not have the knowledge of standing waves and energy's impedance matching — to believe in this new way to see what was really going on called *Phase Symmetry*. phase symmetry

Also, in Adobe.pdf - phase symmetry.pdf

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P.S.

To keep this page short I had to leave out many more interesting things, but you will have to click on the following links and spend a lot more time reading to see those.

See: Phase symmetry makes quantum theory more complete. 12-02-2013

Phase symmetry makes quantum theory more complete. 12-02-2013 <u>also</u>, in Adobe.pdf - <u>phase.symmetry.pdf</u>

For the LATEST Click: http://www.amperefitz.com

or http://www.rbduncan.com which was really the very first web page showing us what was actually going on in our universe.

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Daniel P. Fitzpatrick Jr.

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If any of your work seems to correlate to my findings then please write to me at:

Daniel P. Fitzpatrick Apt. 329

Belmont Village

4310 Bee Cave Road

West Lake Hills, TX 78746

Send me your e-mail.