ON THE UNIFICATION OF THE FORCES

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THE FIRST PART

INTRODUCING CONCEPTS THAT SUPPORT A MAGNETIC FIELD MODEL WHICH FIELDS COMPRISE AN UNDERLYING MATERIAL STRUCTURE OF DIPOLES

ABSTRACT

This first part uses the dialectic to argue that a primary magnetic force may comprise an underlying dipolar material. These dipoles include varying sizes and form the basic building blocks of matter. Here it deals with their field assemblies, which are enabled through their compulsive aggregation into strings. It is argued that these strings, in turn, generate a localized, orbital velocity in excess of light speed and it is this velocity that places those fields beyond the reach of an interaction with photons. This, in turn, renders them invisible. This first part details the philosophical tools used to develop the concepts related to this field. It includes the use of the principle of correspondence to determine that magnetic fields comprise dipolar particles, which principle, in turn, is founded on an over-arching Immutable Imperative. It argues that this imperative compels the interaction of one dipole with another to promote their best charge balance and it also potentiates their re-assembly as dipolar composite particles and as fields.

INTRODUCTION

The arguments in support of this magnetic field model are, of necessity, developed outside any standard frame of reference. This requirement is due to the unusual nature of the field's concepts, which have no precedents within the standard model and this paper therefore precludes citations.

It argues that magnetic fields comprise an underlying material structure of dipoles that have a fixed quotient of charge. These dipoles come in an infinite variety of sizes with an inverse proportionality constant, the bigger the dipole the slower and vice versa. Their field assemblies are based on Faraday's lines of force that are exquisitely structured to generate an orbital velocity in excess of light speed. This puts their material outside the reach of an interaction with photons, which renders them invisible. The fields aggregate in any one of three dimensions, which are variously responsible for the force of electromagnetism, the nuclear forces and gravity. This fundamental, dipolar material spans 10 dimensions all of which operate in one of three alternate time frames but all of which share a commonality in space.

This submission is advanced with a hope that the field's fuller potentials can then be enabled through a systematic unravelling of their mechanisms in line with these insights. The model is not complete, as critical aspects of both the strong nuclear force and the gravitational force require development and/or proof. Arguments in support of this model have been developed with the use of logic and reasoned accordingly. This should enable a wide dissemination of these

concepts against a broad range of specializations and as required. Questions are resolved as they conform to principles of correspondence or to experimental measurements or both.

THE ARGUMENT

Standard laws of induction determine that changing magnetic fields induce electric fields and that changing electric fields induce magnetic fields both of which have measurable, localized, force strengths. However what is not addressed in that model is the interaction of two or more magnets with each other that may induce changing magnetic fields without the induction of any measurable electric field. Especially in instances where magnets interact exclusively with other magnets the existence of a localized, interactive, magnetic force is unequivocally associated with changing magnetic fields as and when it initiates the movement and repositioning of those magnets. But, without the simultaneous induction of a corresponding and measurable electric field, those magnetic interactions fall outside the definitive scope of induction laws.

Conversely it is not possible to induce an electric field without also inducing a corresponding and measurable magnetic field. This study proposes that the electromagnetic force, the weak nuclear force, the strong nuclear force and the gravitational force, may be under-pinned by this fifth, primary and localized, magnetic force.

The standard model precludes any particle with mass being able to exceed, or even equal the speed of light being 186 000 miles per second, (C). In line with this argument it makes the assumption that the photon has no mass, which enables its velocity at C. Theoretically therefore, if a magnetic field was structured from massless particles they too may have a spin velocity that is equal to, or in excess of C.

An object's visibility requires an interaction with photons, which then reflect that object's colour and material structure. And because a magnetic field is invisible it suggests that there is, in fact, no material structure to the field. However, if that field were structured from particles that moved at a velocity in excess of light speed, then light would not be able to reach that particulate material to enable a full interaction. This may account for the magnetic field's invisibility.

Because of its invisibility, the size and scale of a magnetic field can only be inferred from its effects on magnets and on ferromagnetic material. The whole is always greater than the sum of its parts. Conversely, but correspondingly, the sum of those parts constitutes that whole. So it is, for example, that a bar of gold comprises atoms of gold. If indeed a magnetic field comprises dipoles, then in line with that example, the material properties of that greater magnetic field may also correspond to the material properties of each of its smaller parts. This study makes extensive use of this principle of correspondence as a tool to unravel the properties of a magnetic field.

The first most obvious feature of the greater magnetic field from a permanent bar magnet is that it comprises two distinct but opposite polar properties at its

extremities. These are typically defined as a north and a south. If sufficiently proximate, the north of one magnet will attach to the south of another. Conversely, and also subject to proximity, the north of one magnet will repel the north from another as will the south of one repel the south of another. In this way the polar attributes of a magnet correspond to the laws of charge where unlike charges attract and like charges repel. This polar magnetic property therefore corresponds to and is interchangeable with terms of charge where a magnetic field comprises two distinct and opposite charges. The constructive interaction, whereby opposite charges move together, is here proposed as one of many complex responses to the immutable imperative that governs all magnetic interactions.

Iron filings that are placed on the surface of a piece of paper can be exposed to both poles of a permanent bar magnet in order to determine the structure of the field itself. In response to such a magnetic force those filings will then organise into lines, which Michael Faraday described as lines of force. The resulting pattern and shape of those lines of force enable a two-dimensional representation of an underlying, invisible, three-dimensional, toroidal, magnetic field structure that is thought to extrude from the body of the magnet.

A permanent bar magnet has a bipolar property where two opposite charges are positioned, one at each end of the magnet's extremities. The principle of correspondence would require the smaller magnetic part to reflect that same charge property of the greater magnet with its two separated charges, thereby forming a dipolar particle. The inferred boundary of that dipole would then correspond to a typical bar magnet where its charges would also be distributed at its polar extremities.

Then, just as two magnets attach to each other, north to south, so would the north of each dipole attach to the south of another thereby resulting in the structure of a line of such particles. For perfect balance each line would attach at either extremity, thereby forming a semi-circle. The assumption is then made that the line intrudes into the structure of the magnet thereby forming a full circle. And then, in line with correspondence principles, the patterned assembly of many of such lines and many such circles could indeed comply with, and conform to, the lines of force that structure a magnetic field, (Fig 2).

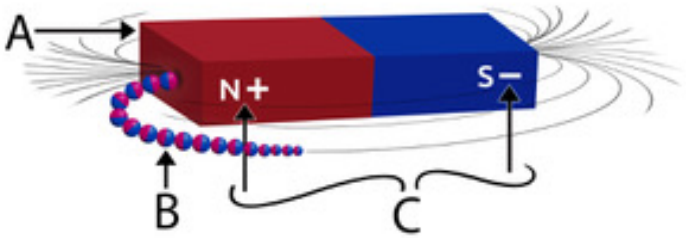

FIGURE 2
A TYPICAL LINE OF FORCE PROPOSED TO COMPRISE MAGNETIC DIPOLES
(a) Permanent bar magnet
(b) Depiction of a Single line of force structured from dipoles
(c) North or positive charge and south or negative charge of the magnet

The nominal characteristic of a field condition would be the sustained and coherent distribution of force measured over a localized area of space, and over time. For durability the particles in a field would need to be structured from photons, electrons or protons, which are known to be infinitely stable. Photons are neutral and irradiate through space, outwards and in straight lines, from a source. Protons are positively charged and repel other protons. And electrons are negatively charged and repel other electrons. An aggregate of any one of these three particles would therefore disperse through space as a result of their known charges and patterns of movement as none of them would be able to generate a coherent field condition.

However, a field that is structured from magnetic dipoles may indeed be able to cohere as lines of force as they would be guided by a magnetic attraction. But that field coherence would only be sustainable if the assembly of those lines were managed with a perfect distribution of charge. This requirement for stringent standards of perfect symmetry is an unequivocal condition to the construction of a field. Else variations to its symmetry would initiate instabilities that would be unsustainable and lead to the field's ultimate collapse.

Donovan Martin discovered a balanced assembly of dipoles from an initial looped string of six spherical dipoles each with an identical radius, and each attached to the next, with their opposing charges arranged, negative to positive. Then a second string fits perfectly around that first string with the addition of six more identical spheres and so on. All that is required to perpetuate that balanced charge distribution, as the field aggregates, is the addition of six more identical spheres to each new string. Then each string is positioned on the horizontal plane, in an expanding structure of concentric circles, hereafter referred to as M+6, (Fig. 3).

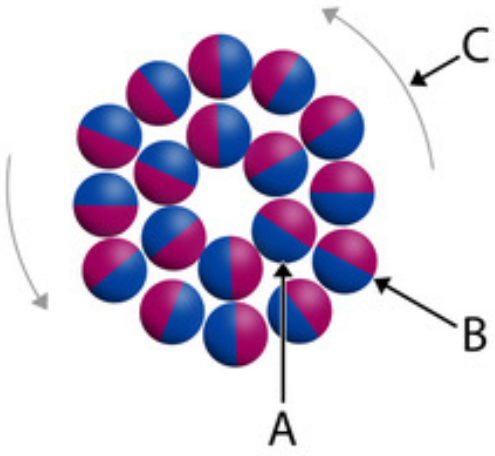

FIGURE 3
THE ASSEMBLY OF THE FIRST TWO STRINGS OF DIPOLES IN A TWO-DIMENSIONAL FIELD

- ***a) String of 6 at the centre of a magnetic field***
- ***b) String of 12 assembling in line with M+6***
- ***c) Arrows showing justification of the field***

Effectively and over time a one-dimensional string of dipoles would then aggregate into a two-dimensional plate, a field structure that, theoretically, could be infinitely big. To generate a three-dimensional field, structured from a finite, two-dimensional plate would simply require the construction of many such plates positioned on either side of that first plate. For perfect balance each end of these field structures would move towards each other to ultimately resolve in the shape and form of a torus. (Fig. 4)

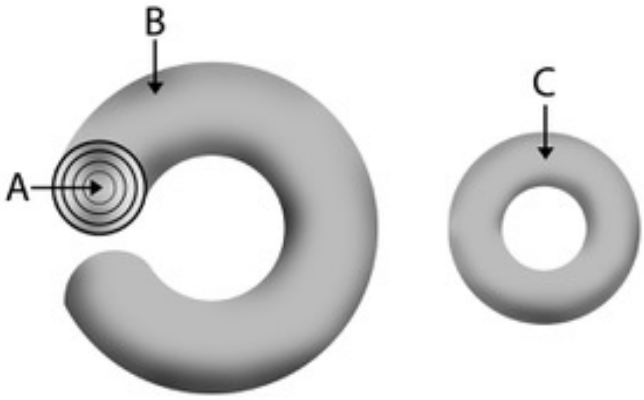

FIGURE 4
A TORUS OF DIPOLES STRUCTURED FROM 2-DIMENSIONAL FIELDS

- **a) 2 dimensional fields**
- **b) 2 dimensional fields stacked one on top of another**
- **c) 2–dimensional fields close in on each other to form a torus**

In a magnetic field, therefore, each string would be juxtaposed to at least one other string. As determined by the laws of charge, opposite charges attract while like charges repel. Each string would comprise dipoles, and because of the variation to the length of those juxtaposed strings in a 2-dimensional field, both attractive and repellent charges from proximate dipoles would remain partially exposed to each other. This nominal and momentary charge imbalance would induce a repositioning of the dipoles in each closed string. And, due to their attachment to each other in each string, the repositioning of all the dipoles in that string would then be an inevitable consequence.

The sum of these spatial adjustments of the dipoles in each closed string would result first in a partial and then in a complete orbit of one string. And through exposure of their charges to neighbouring strings, these changing positions would then each progressively influence all those closed strings in that two-dimensional plate. And these spins, in turn, would be expressed with a shared justification, as this would minimize the exposure between the dipoles' like charges in a field in line with the compulsions of the immutable imperative.

Within a toroidal, three-dimensional, magnetic field structure those same adjustments would then influence the two-dimensional plates on either side of that first field. Therefore, ultimately, all the strings of that three-dimensional

torus would spin. And, while those spins would be with a shared justification, the field itself would retain a coherent string structure with an equal and balanced distribution of charge. In effect the culmination of the immutable imperative would be a coherent orbit of all the strings of that entire, toroidal, 3-dimensional magnetic field, thereby sustaining a balanced charge distribution.

This study proposes that dipoles are, indeed, the material structure of strings that resolve the shape and form of all magnetic fields and which can assemble in 1-, 2-, and 3-dimensions. And the invisibility of the field is proposed to be due to the orbit of its dipolar string material at a spin velocity that is greater than C. The justification of each orbit would be coherent throughout each field and would effectively define a single charge, or justification, at each localized position of that field. This single charge would then also be counterbalanced by an opposing charge at the mirror opposite side of each of those orbiting fields. In effect the entire field would be balanced, comprising two opposite charges. But each part of that field would have a localized, single charge or justification. Such a vast, containing, universal, toroidal field structure may determine the scope of an ultimate finite magnetic field that holds all universal material. This concept, of fine magnetic strings that form the hidden structure of a universal toroidal field structure, approximates an earlier concept of aether that was assumed to fill all space.

The question then is, what would happen in the event that one or more of those toroidal universal strings broke? The break itself may result from an aberration in the field or it may be the consequence of a greater purpose. Whatever the cause of a singularity, one broken string would unravel adjacent strings, which in turn could compromise either some part, or all, of a two-dimensional field.

A magnetic field is here proposed to comprise dipoles and dipoles, in turn, are proposed to be simplified magnets. Magnets cohere, one to another. Therefore if they tumbled out of that highly structured field condition of the aether, they would spill out into a localised area of space. Their assembly would then result in a chaotic distribution of their charges. And now, because they are relatively stationary in space, they would be able to reflect or perhaps even emit light. In line with correspondence principles the deduction is made that this spillage is the singularity that forms an early nebula. This would then result in the initial chaotic exposure of an underlying material structure, which previously was hidden inside the aether as a finely structured field and as a consequence of that field's orbital velocity, (Fig. 5).

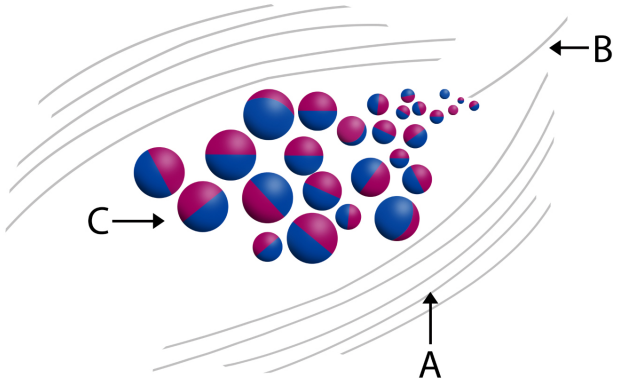

FIGURE 5
A BROKEN STRING OF DIPOLES FORMING AN EARLY NEBULA
'MORE OF A CLATTER THAN A BANG'

- ***a) Strings of dipoles – ZIPONS forming a universal toroid***
- ***b) A broken string chaotically spilling dipolar truants into a localized space***
- ***c) Chaotic truants forming a nebula***

It has been argued that the dipole in the spinning string structure of the universal torus moves at a velocity that equals, or even, exceeds light speed. It cannot therefore interact with light to become visible. This particle is termed a zipon. Conversely the dipole that has broken away from that stable string condition, which is now within the nebula, is in a relatively fixed position in space and it would therefore have the potential to reflect light. This particle is termed a truant. Both particles are dipoles. But an explicit ratio between them determines that the bigger the dipole the slower while the smaller the dipole the faster. Each dipole type would, thereby, express an inverse proportionality to the other.

If multiple toroidal strings, which structure that universal torus, were somehow chaotically and haphazardly interspersed with the dipole spillage from that broken string structure then the consequent localized charge imbalance might generate a cascading catastrophe of breaks in all those adjacent strings. This, in turn, would degrade the critical charge balance required to sustain the structure of that greater toroidal field, which would be reduced to chaos in short order. In terms of correspondence principles and because such a level of field disorder is not universally apparent it is proposed that those universal field strings may bend around the spillage of dipoles and contain them as a nebula, rather like the seeds contained in an invisible seedpod.

As mentioned this constructive interaction would be generated by each dipole's response to the immutable imperative, which requires a satisfied charge balance with neighbouring dipoles. Effectively without this congruent impulse, compelled by that imperative, there would not even be the chaotic assembly of truants from dipoles to structure the early nebula. Rather they would have dispersed freely and arbitrarily throughout space.

And due to the immutable imperative and with conditions allowing it, it is argued that the dipoles from the nebula would therefore systematically and over time, move towards other dipoles rather than remain in a rest position. This would result in an arbitrary re-assembly of their field conditions.

CONCLUSION

Correspondence principles may be adequate in developing the argument to support the concept of magnetic fields that are structured from dipoles. But this first part only offers an apparent and superficial conformation in principle, which points to the concepts of a magnetic field construction from dipoles. It then argues their potential to re-assemble those fields from within the nebula.

Follows is the second part, which includes a broad introduction to the concept of particle composites from these same dipoles, and to their superficial correspondence to the known properties of stable particles.

All illustrations done by Daniel Wright

THE SECOND PART

AN OVERVIEW OF DIPOLAR COMPOSITES TO FORM THE BASIC STRUCTURE OF STABLE PARTICLES INCLUDING THE SCOPE OF THEIR INTERACTIONS WITH MAGNETIC FIELDS

ABSTRACT

This second part explores possible composite dipole structures. The correspondence between dipoles and known particles is partially resolved requiring, as it still does, a thorough measure of their size and velocity relationships, which is concluded in the third part. The concept of a standard magnetic moment is introduced as a measure of the time it takes for one dipole to replace another dipole in a magnetic field's spin. This measure is applied not only to the velocity of a field's spin rate but it is also used as a profound measure of distance, time and frequency. It concludes with a broad introduction to a proposed localized material source of stable particles from dipoles, extrapolated from the magnetic field itself. These dipoles form composites that transmute into photons, electrons, protons and neutrons, thereby generating increasingly complex elements.

INTRODUCTION

The positioning of particles in the elements is in line with the interaction of their charges against a proposed and invisible 2-dimensional framework of magnetic fields that are structured from zipons. These strings form the atomic energy levels. The composite dipolar particles, in turn, form photons, electrons and protons. A distinction is drawn between size and mass where the standard model determines mass in line with an object's weight inside a gravitational field. Here the size of the particle is the primary determinant. It is then argued that the particles' sizes and frequencies determine the rate of their interaction with the 2-dimensional and 3-dimensional magnetic fields that were detailed and described in the first part.

THE ARGUMENT

All interactions between the particles and that field are confined to magnetic moments when there is a correspondence in the size of one or more of their composite dipoles with the zipons in the field, that size correspondence having been defined as a boundary constraint.

The immutable imperative would resolve the dipole's shape as a sphere as this would enable the required and perfectly balanced distribution of its charge. It is argued that the quantity of charge is fixed regardless of the dipole's size. Only its distribution would vary in accordance with its size, the bigger the dipole the thinner the spread and vice versa. In line with principles of correspondence, all dipoles would comprise equal values of two opposite charges localized near or on an inferred skin, or boundary. An imaginary equator would separate each charge, (Fig 6).

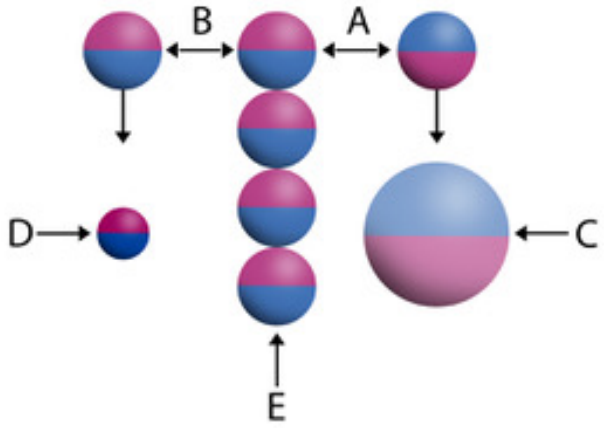

FIGURE 6
INTERACTION OF A SINGLE TRUANT WITH A MAGNETIC FIELD

- ***a) Truant that has transmuted to a zipon that is attracted to the field***
- ***b) Truant that has transmuted to a zipon that is repelled by the field***
- ***c) Transmutes back from a zipon into a truant***
- ***d) Transmutes from a zipon into a quark***
- ***e) String of zipons in a magnetic field***

So, while the quantity of charge of each dipole is proposed to be identical, the size of the dipole may be variable, having first been determined by the amount of energy transferred to that dipole when it first broke from a universal string to populate the nebula. Thereafter, further and subsequent random interactions with chaotic dipoles in the nebula would also transfer more or less energy all of which interactions and exchanges would result in variations to that dipolar size. This, in turn, would affect the distribution of its charge over a larger or smaller area depending on that size, while the quantity of that charge of each dipole would, nonetheless, remain invariable.

But, for any interaction between the field and that dipole to take place, there is first an implicit requirement for some correspondence in their sizes, which would also represent a correspondence in the concentration of their charge. The following analogy is used to partially explain this concept.

If a machine that is positioned inside a vacuum catapults stones with a constant force then the rule would be that the smaller the stone the further would be the distance thrown. Equally the bigger the stone the shorter would be the distance thrown. But beyond a certain size, or boundary constraint, there could be no interaction. Too small and the machine would not detect the stone. Too big and the machine would be unable to throw it. Alternatively it would be enveloped or crushed by that stone. In this way, all repeatable interactions are limited to a boundary constraint.

As argued the truant's size is variable but is determined by its velocity. The slower it is the bigger, and vice versa. Conversely, both the zipon's velocity and size are fixed and expressed in its orbiting structures of magnetic strings. A standard magnetic moment is used as the measure of that velocity, which correspondingly is also a measure of the zipon's size. This measure is based on

the time it takes for one zipon to replace another zipon in its orbit in a magnetic field. The following is an example of this complex interaction.

A single, isolated truant from the nebula may be compelled to move through space and in time towards a hidden, structured, magnetic field in response to the immutable imperative that is, here, based an a magnetic attraction. Then, in this example, say 5 zipons in those strings replaced each other in the same time that it took for that dipole to decay in size and to increase in velocity and to move through space in order to reach the zipons in that string. At the exact moment of its point of contact with the field that isolated dipole would effectively have transmuted from a truant to a zipon and it would now be within the boundary constraints of the zipons that structure that field. And also at that moment its velocity and size and distribution of charge would equal that of the zipons in the field.

However, the dipole's interaction with the zipons in that magnetic field would be partially unsatisfied, as it would not be able to break that coherent string structure in order to attach and thereby satisfy its charge requirements. It would, nonetheless, have expended energy in this partial interaction with the field, which was both initiated and compelled by the immutable imperative.

The amount of energy transferred would be inversely proportional to its reduction in size and to its increase in velocity as it approached those magnetic field strings. Then as a result of that attractive but partial interaction with the field, and because of the inevitable and momentary proximity of opposing charges from the field zipons, the dipole would be attracted and would slow down. As mentioned, a decreasing velocity results in an increasing size. Immediately thereafter the dipole would again begin a transmutation back into a truant. And ultimately, its size would resolve to be as big, and its velocity to be as slow as, when it first began its movement towards the field, or when it first emerged in the nebula, whichever was the latter.

The time taken for this dipole's re-emergence into the nebula, as a truant and after its interaction with the field, would be precisely equal to another 5 standard magnetic moments. But this does not represent any further displacement of the dipole through space. In other words, the dipole remains within the location of its earlier interaction, albeit that the field continues to spin.

Therefore the truant used in this example, would be 5+5/2 magnetic moments big. It would have moved 5+5/2 = 5 magnetic moments' distance through space. And the length of time taken for each interaction with the field, would be 5+5/2 = 5 magnetic moments frequency. In this way the size of that dipole, the distance travelled and the frequency of its interaction with the magnetic field would be synonymous measurements.

Alternatively, and as a result of the dipole's movement towards the field, it is also possible that the momentary charge presented to the zipons in the field's strings may be repellent. In which case, at the time that the dipole moved within the boundary constraints of the field, its velocity would continue to increase and its

size would continue to decrease as it transmuted into something even smaller than a zipon. Such a dipole is here termed a quark. Its size and velocity would then put the quark outside the boundary constraints of both the magnetic field and the nebula, both.

By definition truants and quarks and, through the process of transmutation into those particles, even some zipons here represent single dipoles, here referred to as nuances. And it points to the possibility that there is no defined potential limit to the size of either the quark or the truant on either side of the magnetic field. Theoretically they could each transmute into an almost infinite variety of sizes with an infinitely varied velocity, which combinations would only loosely relate to the initial force at which each dipole was first expelled from the field. But without having another dipole to anchor it, or some partnering dipole with which it could both interact and orbit, its interaction with the field and with other dipoles would be arbitrary, chaotic and random.

In line with the immutable imperative dipoles could attach to each other to form composites. As composites they may then express a stable orbital interaction both with each other and with the field. We start with a 2-dipole composite from the nebula. Each of those dipoles would have two charges, the sum of which would then neutralise that particle's charge, being 2 + 2 dipoles/2 charges = 2, with the field having a localized single charge, making that composite imbalanced against a field, (Fig. 7).

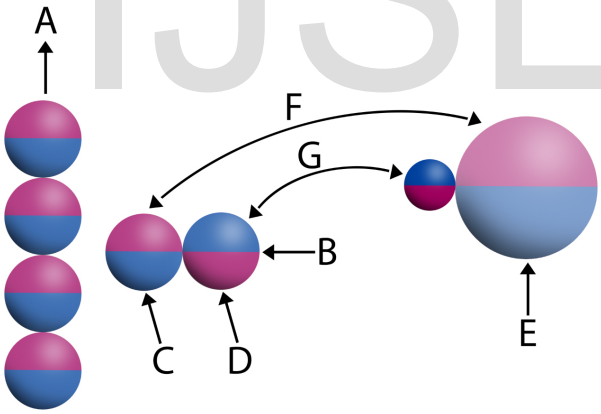

FIGURE 7
INTERACTION OF PHOTONS WITH A STRING

- ***a) Justification (spin direction) of the string***
- ***b) Justification of the photon***
- ***c) Zipon attracted by proximate field zipons becomes a truant***
- ***d) Zipon repelled by proximate zipons in the string becomes a quark***
- ***e) Dipole composite at the extreme of their interaction with the string***
- ***f) Dipole transmutes from a zipon to a truant***
- ***g) Dipole transmutes from a zipon to a quark***

Both attached dipoles would transmute into zipons as they responded to and moved towards magnetic fields hidden inside the nebula. Having reached the

boundary constraints of that field, they would then interact with the zipons that structured the strings of those fields. The two composite zipons may span more than one string in the magnetic field. The one zipon of that composite would be attracted and become bigger as it transmuted into a truant. To balance this, the other zipon of the composite would be repelled and become smaller as it transmuted into a quark. Then both dipoles would reverse those conditions, transmute back to zipons and then back into a quark and a truant respectively, subject to their exposure from more and varied charges from that orbiting field. In effect those two dipoles would have swapped lattices with each other in a rudimentary form of an orbit.

The sum of the standard magnetic moments, taken to reach each interactive moment with the field, would determine the scale, or size, of that composite as well as its velocity and frequency. These measures would also be synonymous with the distance covered through the field. The neutrality of that dipolar particle would compel it to move through the only neutral zone of the field, which would be at right angles to the field's orbit. This would carve out a straight line through that field, which would then radiate outwards in a line from a localized point in space, (Fig. 8)

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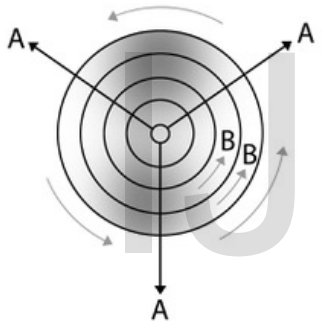

FIGURE 8
THE NEUTRAL ZONE IN A TWO-DIMENSIONAL MAGNETIC FIELD
Neutral zone

- ***a) Alignment of zipons in strings***
- ***b) Justification of the field***

As mentioned, the two dipoles of that composite would transmute and interact with each other at times that are determined by the number of magnetic moments that separate them from their interaction with the field. Therefore there may be significant variations to the 2-dipole composite's size, velocity or frequency. Theoretically there is also the potential to fractionalize its initial composite size thereby increasing the scope of that variation. This variable would be determined by the initial size of the two dipoles in the nebula and as they responded to the hidden fields.

In line with correspondence principles, therefore, a composite of two dipoles may form a photon, as these listed properties are consistent with the singular direction, the frequency variations and the constant velocity that is typical of photons. This model therefore also depends on the theorised structure of a universal, three-dimensional, toroidal, magnetic field that is proposed to

structure space. This would provide the material to enable the photon's interaction and to determine the range of that interaction through space.

A 3-dipole composite may also be stable. This stability would depend on their two peripheral like charges being separated by a central unlike charge. While this arrangement would balance the charge distribution of that composite as required by the immutable imperative, the sum of its charge would, nonetheless, remain odd, or imbalanced, being 3 x 2 dipoles/2 charges = 3, with the field having one localized single charge, potentially allowing that composite to be balanced against the field, (Fig. 9).

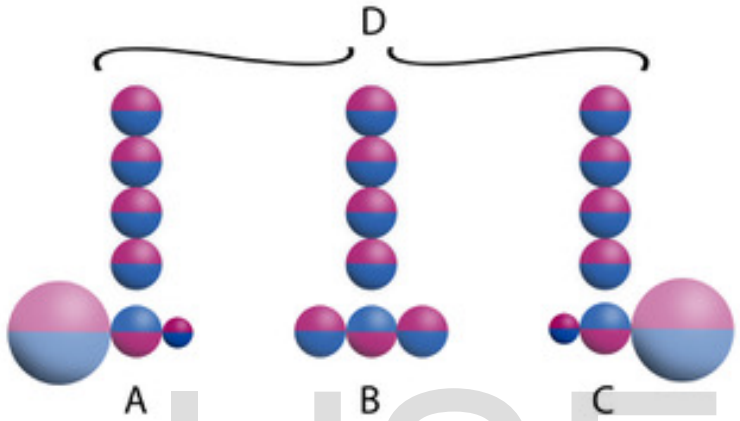

FIGURE 9
3 STAGES OF AN ELECTRON'S INTERACTION WITH A STRING

a) Truant zipon quark
b) Transmutes to 3 zipons
c) Transmutes to quark zipon truant
d) Three stages of the dipole transmutations in an electron

Initially, as with the photon, and also in response to the immutable imperative, all three attached truants would transmute into zipons as they moved towards the two-dimensional magnetic fields. Having reached the boundary constraints of that field this particle would be three zipons long and may therefore interact with zipons from more than one of the strings that structured that field. They would then transmute into a quark, a zipon and a truant respectively, in line with the immutable imperative. Within their own 3-dipole composite structure, the truant and the quark would each be attached to and continuously swap lattices with their central zipon, thereby describing a rudimentary orbit. The two peripheral dipoles, in turn, would also be variously attracted to and then repelled by the field's strings, which would induce their alternating transmutation into truants to zipons and then to quarks respectively.

The central zipon in that 3-dipole composite would in turn, develop a continuous orbital interaction against the zipons in that magnetic field string, which string is, effectively, an elemental energy level. It would then become locked in that orbit, inside that energy level's boundary constraints and against its justification. And as a result of this interaction, it would then also be able to offset the localized

charge imbalance resulting from the single justification of that string field and its own charge imbalance.

As mentioned, the two peripheral dipoles of that composite would transmute and interact with the central attached zipon at each alternate magnetic moment. The interaction of its zipon with the field would, correspondingly, be at every magnetic moment giving it a velocity of 2C. Therefore having no frequency variation there would also be no variation to its composite size. Theoretically, however, as with the photon, there may be a potential to fractionalize its initial composite size depending on the initial size of the three truants in the nebula as they responded to the hidden fields. But a listing of the extent of that potential is also beyond the scope of this thesis, (Fig. 10).

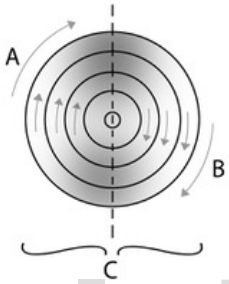

FIGURE 10
TWO-DIMENSIONAL MAGNETIC FIELD
- ***a) Arrows show the field justification or charge***
- ***b) Arrows show the opposite spin of that shared justification or charge***
- ***c) The two opposing spins that balance the entire field***

Therefore in line with correspondence principles a composite comprising three dipoles may form an electron. This is because these listed properties would fully account for their single negative charge value and for electrons' localised orbits at discrete energy levels within elements. Strings within the 2-dimensional magnetic fields, in effect, would relate to and correspond with the atomic energy levels that may then trap one or more electrons in a continuous orbit.

4-, 5-, 6-, 7- and 8-dipole composites would all variously subdivide into nuances, photons and/or electrons. However, a 9-dipole composite may be stable. This is because it would, essentially, comprise three electrons, which have been determined to be stable, (Fig .11).

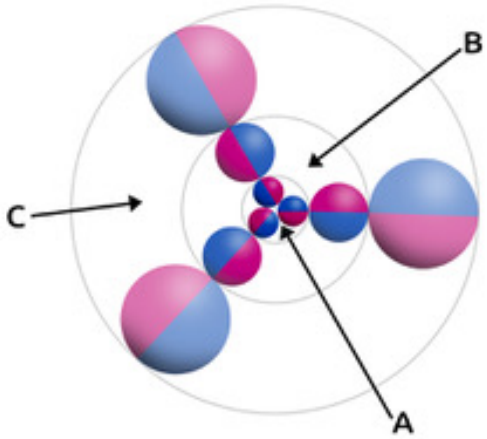

FIGURE 11
THE STRUCTURE OF THE PROTON
a) 3 x zipons
b) 3 x truants
c) 3 x bosons

Three strings of three truants each may be randomly generated inside the nebula. They would each move towards a common point of a hidden 2-dimensional magnetic field in response to the immutable imperative. Then the size of each truant would be forfeit to a corresponding increase in velocity until each truant transmuted into a zipon as they reached the boundary constraints of the field. At which point the two peripheral dipoles of each of the three 3-dipole composite strings, would transmute into three quarks and three truants conjoined by a zipon at their centres. The quarks would be within each other's boundary constraints and would conjoin to form the anchor of a 3-branched 9-dipole composite. This would then form the basic structure of three electrons conjoined at their smallest peripheral dipoles.

It was determined that, in line with M+6 the very centre of a stable 2-dimensional magnetic field comprises a string of 6 dipoles, attached to each other's unlike charges. This is also, therefore, the only point in the field where there would be two localized charges resulting from the exposure to both sides of the field's justification through a single orbit. The complex charge of that 9-dipole composite would therefore propel it towards that 2-dimensional magnetic field's centre where it could adjust its alignment to correspond to the two charges of that field as required.

The charge, or justification, of the three quarks of that 9-dipole composite, would correspond to and therefore oppose one of the charges or justifications of the central magnetic string. This quark structure may then be catastrophically repelled from that composite because of its proximity. Then the two peripheral quarks of that repelled structure would transmute into a zipon and a truant respectively while the erstwhile zipon would transmute into a quark thereby forming an electron comprising a quark, a zipon and a truant.

As mentioned, an electron has a defined charge, and because that detached composite is now, effectively, an electron, it would conflict with one of the two charges at the field's centre. It would therefore be repelled away from that centre only to become caught and trapped in a continual orbit against the first coherent orbiting string of the magnetic field which string would represent one of many energy levels. Here it would experience a localized single charge from the field as described. This orbit is consistent with the observed behaviour of electrons and, therefore, in terms of correspondence principles this potentiality could also account for the emergence of one electron with every proton in the formation of elements, (Fig. 12).

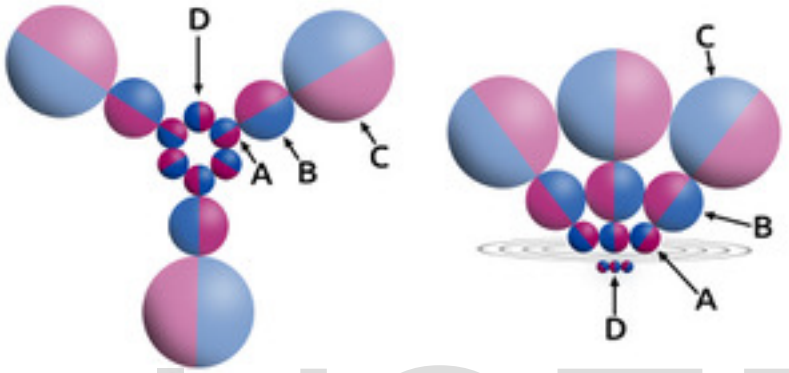

FIGURE 12
THE STRUCTURE OF THE PROTON'S ATTACHMENT TO THE FIELD
Left option

- ***a) 3 x zipons from the zipons in the field***
- ***b) 3 x truants from the erstwhile zipons***
- ***c) 3 x bosons from the erstwhile truants***
- ***d) 3 x zipons making a string of 6 at the base of the field***

Right option

- ***a) 3 x zipons from the zipons in the field***
- ***b) 3 x truants from the erstwhile zipons***
- ***c) 3 x bosons from the erstwhile truants***
- ***d) 3 x quarks from zipons from the magnetic field***

Potentially and also in line with the immutable imperative three of the six zipons in the centre of the 2-dimensional magnetic field may then transmute into and replace those three lost quarks thereby adding three more particles to that composite structure. This string may then also require a localized orbit, which would be enabled as the quarks gained momentum and moved out of the boundary constraints of the field. However the transmutation of the field's zipons to quarks, which then attach to that composite, is speculative and is only referenced because it would generate an even stronger bonding of that particle to the field. Which bonding, together with the composites' attachment to the very strings of the magnetic field, may contribute to the properties of the strong nuclear force. This hypothesis is referenced in fourth part.

After the exclusion of the three quarks to form an electron the remaining 6-dipole composite would include 3 x zipons and 3 x truants. The 3 x zipons would

oppose the field's charge and be attracted and would therefore attach to three of the zipons in that field. The three zipons in that 6-dipole composite would then lose their orbital velocity and become bigger to transmute into 3 x truants. The three erstwhile truants from that 6-dipole composite would oppose the charge of these new truants. They too would then each lose their orbital velocity and transmute into an even bigger particle, which is here termed a boson giving a total of 3 x bosons.

These transmutations would result in a complex dipolar composite possibly including a quark at its base formed from three of the zipons in the field's centre. Follows would be the 3 zipons from the field now attached to the 3 truants, which transmuted from the zipons of that erstwhile 6-dipole composite. And attached to the three truants would be the 3 bosons that transmuted from the truants of that erstwhile 6-dipole composite.

CONCLUSION

The indications are that these three stable particles, being the photon, the electron and the proton, may indeed be composites of dipoles but this is still subject to a reconciliation of all their properties including the size ratio of the proton to the electron and to their known velocities in relation to C. This deeper analysis is required and resolved in the third part. At this stage the argument simply points to an outline of their known characteristics and their movements in space, which correspond accordingly and respectively.

The argument, related to the transmutation of nuances into photons, electrons and protons, has been advanced based on the concept of probability and of random conjugations of dipoles. However, the need for symmetry is a critical condition, required to underpin the stability of all universal and material constructions. And this symmetry may be challenged by the arbitrary and random nature of dipolar attachments from truants in the nebula. Rather there is the possibility of a greater orderliness if the magnetic field itself generated its particulate material from dipoles extrapolated from that field and from its own magnetic strings.

This concept is persuasive, the more so as, not only would it result in the generation of varied elements, but it would also explain the inevitable reduction to the atomic radii as the elements gained in complexity. So it is, for example, that the hydrogen atom spans a far greater area than the iron atom. If the 2-dimensional strings comprising the magnetic fields of that element sacrificed their structures to supply the dipoles required for those elemental particles, then indeed, the number of their strings would be forfeit and the diameter of the element would shrink correspondingly.

Again, in terms of correspondence principles, this conclusion may be correct as the more complex atoms are, typically smaller in diameter than the less complex elements. In which case, there is a potential to develop the periodic table from an algorithm applied to those 2-dimensional strings, which structures are proposed to form the hidden skeletal frame of the atom. This study is outside the scope of this thesis but is a desirable consequence and would constitute

proof of hypothesis beyond the correspondences that are exposed in these arguments.

The composite of the neutron has been omitted from this paper as the neutron is not strictly a stable particle, having a half-life of 10.3 minutes outside of the nucleus. Its size is, however, also resolved in the third part.

All illustrations done by Daniel Wright

THE THIRD PART

MEASUREMENTS APPLIED TO DIPOLE COMPOSITE STRUCTURES WHICH CORRESPOND TO KNOWN RATIOS BETWEEN STABLE PARTICLES

ABSTRACT

This third part of a 4-part paper details the sizes of composite dipoles. These composites are compared to the size measurements of stable particles that are identified within the standard model. This range is here limited to photons,* electrons, protons and neutrons*. The interactions of dipoles with each other are restricted to boundary constraints, which, in turn, delimit spatial dimensions.

INTRODUCTION

It was argued that nuances, or single particles, are intrinsically unstable but that composites of the dipole can, conversely, generate stable interactions with each other and with the field. Essentially the bedrock of this argument depends on the potential existence of an atomic or an elemental 2-dimensional magnetic field structure. This structure then determines the location, interaction and movement of 3- and 9- or 12-dipolar composites with the single charge of both electrons and protons correspondingly. Also argued is the correspondence of 2-dipolar composites with the neutral charge of photons, based on an analysis of their movement through toroidal magnetic fields.

These arguments therefore rely on the existence of an etheric material of invisible magnetic strings that structure both the elements and space into exquisitely coherent, invisible fields as a skeletal framework. An even greater and all-encompassing 3-dimensional toroidal magnetic field structure was then argued to hold all smaller, sundry and varied 1-, 2-, and 3- dimensional magnetic fields as well as all particularized material, within this toroidal, universal and finite boundary. Due to a variety of possible singularities it was proposed that the strings of this universal torus could unravel thereby decoupling the dipoles from that erstwhile, coherent string structure. This results in the generation of a nebula.

A 1-dipolar particle was argued to be inherently unstable and is here termed a nuance. Nuances manifest in a potentially infinite variety of sizes, which, in turn, correspond to variations in their velocities through space. But the nuance has the potential to attach to other dipoles, which is argued to then profoundly re-organise them into dipolar composites, three types of which would be infinitely stable. These include a 2-dipole composite, identified as a photon, a 3-dipole composite identified as an electron, and either a 9- or a 12-dipole composite, identified as a proton.

Within the context of this thesis, the biggest and slowest of these dipoles is termed a boson. The next smallest is termed a truant. The next smallest is termed a zipon, which is proposed to have the distinction of being the only dipole that can structure a field. The next smallest and correspondingly also the

fastest particle is here termed a quark. The velocities and sizes of each dipolar particle type are inversely proportional to each other.

It argued that a boundary constraint relies on a coincidence in velocity and size between one or more of these dipoles to enable an interaction. All interactions are compelled by an immutable imperative and, in turn, result in sundry energy transfers. But the boundary constraint ensures that one or more bosons can only interact with other bosons. One or more truants can only interact with other truants. One or more zipons can only interact with other zipons. And one or more quarks can only interact with other quarks. In dipolar composites any combination of those bosons, truants, zipons and quarks first need to transmute to and thereby correspond with the size and velocity of the attached bosons truants, zipons or quarks of that composite. This transmutation then results in an elementary orbit of the dipolar composites with each other.

For simplicity of concept, it was argued that the formation of the proton is from the transmutation of conjoined truants sourced from the nebula. However, in the conclusion, an alternate argument was proposed that better conforms to a required symmetry compelled by the immutable imperative. This states that, at a critical size, a 2-dimensional magnetic field may actually be responsible for generating its own protons, electrons and neutrons that define the different elements. These additional particles may be sourced from the dipoles forming those strings and would then result in the strings' systematic degradation. The strings themselves would therefore contribute the required dipolar material from its own decaying structure. If so, then this would certainly result in a reduction in the size of an element as it increased in complexity, which is consistent with the fact.

THE ARGUMENT

As stated, outside of a critical distance, or a boundary, one dipole cannot directly interact with another but can only broadly interact to the charge presented by a localized field or by another dipole, which is then either attracted or repelled. To correspond with standard measurements, the extreme and critical difference in their dipolar sizes were assessed and found to be precisely four. Therefore a truant must be four times greater to transmute into a boson. A zipon must be four times greater to transmute into a truant. And a quark must be four times greater to transmute into a zipon.

The velocity of a photon is C. If the photon's velocity is C, then its size must be 1 because E=MC^2. It was argued that a photon comprises two dipoles, which resolve as zipons at their interactive moment with the magnetic field. Therefore at the transmutation of each of those two dipoles into a zipon, at a discrete moment during their orbits, each dipole would be half the size of the photon, being 0.5. The velocity and size of dipoles are proposed to be inversely proportional. Therefore, if the photon's velocity is C and each dipole is half the size of a photon, then the velocity of each of those two dipoles would be 2C. The magnetic field is argued to comprise zipons. Therefore the velocity of the field would correspond with the velocity of the localized spin of that magnetic field at 2C.

Both dipoles that form the photon would have a limited orbital interaction with each other. But this could be from an infinite number of their potential transmutations including but not limited to bosons, truants, zipons and quarks. The rate of their interaction with the field would then correspond to the magnetic moment as they alternately transmuted to zipons to interact with the field and as each dipole developed a rudimentary orbit with the other. The variety of their sizes, in turn, would afford each photon an infinite number of potential frequencies, but with a velocity through space that is limited to C.

Again, zipons in the magnetic field were determined to have a velocity of 2C, and a size of 0.5. Velocity and size are inversely proportional. The electron was determined to comprise a quark, a zipon and a truant, all of which develop an elementary orbital relationship as they swapped lattices with each other. But, unlike the photon, the required coincidence in velocity and size of the magnetic field's zipons and the single zipon at the centre of a 3-dipole composite of the electron would restrict the potential for a variation to the overall size of the electron.

The electron's 3-dipole composites each orbit or swap lattices with each other. The velocity of the electron's quark would be indeterminate but at something greater than 2C with a relatively smaller size. The velocity of the electron's truant would correspond to alternate magnetic moments before it transmuted into the zipon of that 3-dipole composite, to interact with the field. Its size would therefore be 2 magnetic moments of 0.5 each = 1, being the sum of its size and frequency and velocity. The electron's zipon would be locked in an orbit as it continually interacted against the justification or charge of the field transmuting into a zipon from both the quark and the truant at each alternate magnetic moment. Its velocity would therefore resolve at 2C, which corresponds with the velocity of the field. And its size at the moment of that interaction would also correspond to the zipons in the field at 0.5. Therefore the velocity and size of both the quark and the zipon would be greater than C, respectively and they would therefore both be invisible and beyond the scope of finite measurement. Only the truant would be measurable and then only at alternate magnetic moments before it transmuted into a zipon, which would give the electron an apparent size of 1 or C, (Fig. 13).

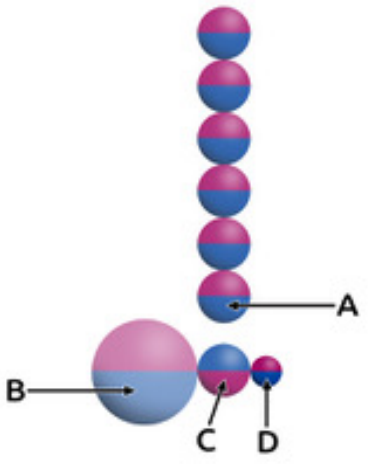

FIGURE 13
ELECTRON SIZE AND ALIGNMENT TO THE STRING

a) Zipon string from the field
b) Truant = 2 x 0.5 =1
c) Zipon > C
d) Quark > C

Again, zipons in the magnetic field were determined to have a velocity of 2C and a size of 0.5. Velocity and size are inversely proportional. The proton was determined to comprise 3 quarks, 3 zipons and 3 truants in three open strings. It was argued that the 3 quarks of the three conjoined strings formed an electron, which broke from that composite and repositioned itself in a continual orbit against the justification of one of the strings of the element's 2-dimensional magnetic field. Then, after release of the electron formed from those 3 quarks, the dipole composite at the centre of the 2-dimensional magnetic field would comprise 3 zipons and 3 truants.

The erstwhile zipons of that now 6-dipole composite would oppose the justification of the zipons in the field. They would then transmute into truants, which would put them outside the boundary constraints of the zipons from the field. The size of each of the three truants is proposed to be four times that of the zipons to put it outside the boundary constraints of the zipons in the magnetic field. Therefore each of the three truants would have a size of 1.5 x 4 = 6. The erstwhile truants of that 9-dipole composite structure would then transmute into bosons. The size of each of the three truants is 6. The size of each of the three bosons is proposed to be four times that of the truants, which would put it outside the boundary constraints of the truants. Therefore each of the three bosons would have a size of 6 x 4 = 24.

The three truants would have an equivalent size of 6 each, ^2 (as they occupy a single dimension of space), x 3 truants = 108. The three bosons would have an equivalent size of 24 each, ^2 (as they occupy a single dimension of space), x 3 bosons = 1728. The 3 zipons at the base of that composite are immeasurable because their velocity exceeds C as would the 3 quarks – if indeed they transmuted from the 3 remaining zipons in that central string. Therefore, where

the size of the electron is 1, the size of the proton is 108 + 1728 = 1836, which is precisely the measured difference between the size of the proton and the electron, according to the standard consensus, (Fig. 14).

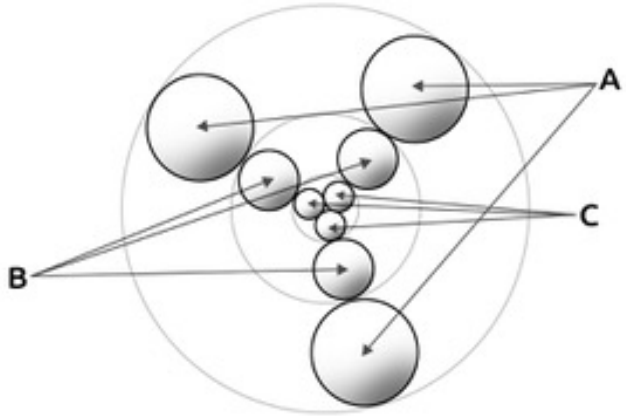

FIGURE 14
A 9-DIPOLE COMPOSITE PROTON LINKED BY 3 ZIPONS FROM THE CENTRAL STRING

a)	***Boson = 24^2 x 3***	***= 1728***
b)	***Truants = 6^2 x 3***	***= 108***
c)	***Zipon is immeasurable***	
	total	***= 1836***

A composite comprising these dipoles may form a proton because their listed properties would include an opposite charge to the electron, an alignment at the centre of the element and a measured size difference that is consistent with the measured size difference between a proton and an electron, which features are consistent with the known properties of a proton. This model would then also account for the emergence of an electron with the creation of each proton, both of which particles are considered to be numerically related and interconnected.

The neutron is proposed to have exactly the same structure as a proton but with its zipon, truant and boson at reversed positions on each of the 3 strings of that 9-dipole composite. This would allow a neutralized charge and a balanced interaction with all the dipoles of the proton to conform to the immutable imperative. Because the zipon of that 9-dipole composite neutron is restricted to an orbit of itself rather than of any field, its three dipoles would possibly be able to alternatively transmute into a quark, zipon and truant. Therefore theoretically its truant could interact with light to become measurable. The size of the neutron would therefore be exactly the same as the proton but with the addition of the three measureable zipons of 0.5 x 3 = 1.5. The size of the proton deduced to be 1836 + 1.5 = 1837.5, for the size of the neutron. (Fig. 15)

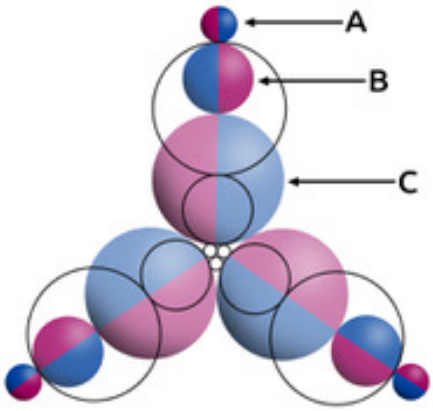

FIGURE 15
NEUTRON
a) 3 x zipons
b) 3 x truants
c) 3 x bosons

CONCLUSION

It was argued that stable particles, here identified as photons, electrons and protons, interact directly with the magnetic fields that structure space and the elements correspondingly. This interaction is measurable in our manifest universal dimensions, all of which operate at speeds that are slower than C. Anything that moved at a velocity that was faster than C would place that material outside the range of measurement.

So it is that our measurable dimensions include length, breadth and depth of all universal material that has a velocity that is equal to or slower than C. This is proposed to be the primary reality, comprising 3 dimensions of space and 1 of time. The secondary reality comprises the magnetic fields which structure space and which move at a velocity of 2C. This also comprises 3 dimensions of space but its spatial dimensions share the same dimensions as the primary reality. The distinction is that this secondary reality operates at a velocity that is greater than C, which puts it in an alternate preceding time frame. The tertiary reality comprises the quarks, which have a velocity that is greater even than 2C. This particle is proposed to forfeit its size to velocity, thereby giving it only one dimension of space and its own dimension of time, which time dimension precedes even that of the magnetic field. So, 4 dimensions to the first reality, 4 to the second and 2 to the third makes a total of 10 dimensions, including 7 shared spatial dimensions and 3 separate time dimensions.

All illustrations done by Daniel Wright

THE FOURTH PART

AN ANALYSIS OF THE MAGNETIC FIELD MODEL AS IT RELATES TO THE FORCES AND IT CONCLUDES WITH REFERENCE TO POTENTIAL SYSTEMS AND TECHNOLOGIES THAT MAY EXPLOIT THOSE FORCES

ABSTRACT

Standard concepts that are related to the transfer of energy are based on immaterial force fields. In contradistinction to standard, this paper argues that the forces themselves are structured from a dipolar material that organize into 1-, 2- and 3-dimensional strings and which form orbiting, invisible, fields. The force from a 1-dimensional magnetic field is proposed to underpin the weak force and the electromagnetic force. The force from a 2-dimensional magnetic field is proposed to underpin aspects of the strong nuclear force. The force from a 3-dimensional magnetic field is proposed to underpin the gravitational force.

INTRODUCTION

The following is a summary of the salient arguments applied to this thesis.

Because of boundary constraints one zipon can only interact with another zipon. In the same way and subject to proximity one magnetic field can also only interact with another magnetic field.

It was argued that magnetic fields assemble in 1-, 2- and 3-dimensional string structures comprising zipons. The 1-dimensional field assembles as a single, closed string. A 2-dimensional field assembles as a series of closed, concentric strings, positioned on a horizontal plane through M+6. A 3-dimensional field assembles as multiples of 2-dimensional fields, positioned on a vertical plane. In response to an immutable imperative this vertical plane then closes to form a torus.

2-dimensional magnetic fields structure the invisible, skeletal frame of the elements. This framework is the underlying structure of the atom's energy levels. At some critical size, or tipping point, localized strings within these fields first dis-assemble their string structure into dipoles, and then re-assemble them into dipolar composites that form neutrons, protons and electrons. Essentially therefore these atomic particles would be generated from the dipolar material of decayed string structures from the 2-dimensional fields. What is not yet determined is the point at which the strings in the field dis-assemble that dipolar structure to generate their atomic particles. But, because of the critical charge balances compelled by the immutable imperative, this tipping point is probably not arbitrary and would need to be determined.

THE ARGUMENT

According to the standard model all energy is proposed to be sourced from the strong and weak nuclear force, the electromagnetic force and from gravity, which energy can only be transferred but never created. This model proposes that matter itself is structured from a universal and fixed quotient of dipoles,

which are fundamental as it is this material that can neither be created nor destroyed. In our measurable dimensions these dipoles may be visible and measurable or invisible and immeasurable, subject to their velocity and sizes, which are inversely proportional. An immutable imperative compels them to seek out their best distribution of charge in a shared space where they assemble and/or dis-assemble as nuances and/or as composite dipolar particles and/or as fields. Energy is the product of that re-assembly.

As it relates to thermal energy this model proposes that 2-dimensional magnetic fields form the basic, invisible, skeletal structure of the elements. Measurable material is generated when these elements aggregate into complex structures. And that assembly is managed by independent and separate 1-dimensional, binding strings, which orbit. The strings interact with the outer boundaries of elements' energy levels, very much as a cog in a wheel. And this interaction is enabled because both they and the atoms' energy levels are structured from zipons. They therefore share the same boundary constraints. (Fig. 16)

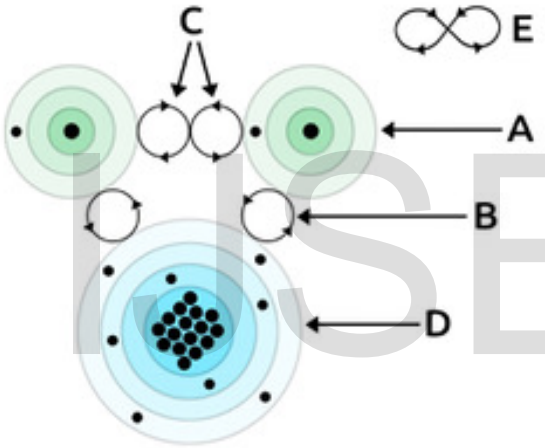

FIGURE 16
WATER MOLECULE
a) 2 hydrogen atoms with valence electrons each bound to the oxygen atom by a string
b) 2 separate strings for the hydrogen and the oxygen atom
c) 2 strings as an example of covalence bonding of two hydrogen atoms
d) 1 oxygen atom
e) Plait or twist could replace C

Figure 16 is an example of the potential bonding of a water molecule. The hydrogen atoms each have a valence electron, which results in an intrinsic charge imbalance. To obviate this and for symmetry it is suggested that the binding string between these atoms would form a plaited or twisted orbit as shown. Also as illustrated, the binding fields of the hydrogen atoms to the single oxygen atom, shows only one of many potential options, all of which could maintain a required symmetry. Of interest is that these variations to this bonding may cause changes to the assemblies of the water molecule as vapour, water and ice. That study extends beyond the scope of this paper.

A nebula was argued to be generated from an arbitrary break to one or more of the strings of a 2-dimensional magnetic field within the 3-dimensional field that structures the universal torus. In effect the dipoles that spill out from these broken strings and into space are chaotic, hot, big versions of their previously cold and small states as strings of zipons. In a similar way thermal energy is also sourced from a decoupling of binding strings into a chaotic assembly of dipoles. When these 1-dimensional orbiting strings break they not only liberate the bound condition of that material but these binding strings simultaneously transmute into big, hot and visible truants and/or bosons. Then the dipoles from those broken strings manifest as fire and disperse through space. These are the same dipoles that, in their previous string state, were correspondingly orderly, cold and small zipons.

The difference between the two manifestations of the truants in the fire and the truants in the nebula is that the truants in the fire are intimately conjoined. This conjunction may be due to the density of the surrounding material that sustains the transfer of flame. Or the conjunction may be due to some compulsive movement away from a gravitational pull that may not apply to the nebula. Or, indeed, there may be some distinction in the size of the dipoles where fire is a consequence of bosons and the nebula the consequence of truants, or vice versa. The following example was used to describe the manifestation of fire.

A ceramic bowl is placed over wooden logs. Inside the bowl are iron filings. The material, which is transferred as fire, is sourced from the binding strings that first bound that wood. These strings are broken by friction, which initiates an imbalance in proximate strings. They also break in an exponential and cascading sequence. The dipoles that comprise these strings tumble out of their ordered assembly in the field and inside that wood. They are visible as flame as they become hot and big and chaotic, transmuting from zipons into truants. Then the immutable imperative compels them to move through space as fire, to search out alternate unbound atoms. Having found such structures in the iron filings, that same imperative then compels these truants to bind that iron material. And to manage this binding they transmute from truants back into the highly structured 1-dimensional strings of zipons, which are again cold and small, immeasurable and invisible. Then the binding of the filings is completed at an exquisitely precise level by these 1-dimensional strings to generate the characteristic and crystalline features of iron. In effect the binding of the wood has now been transferred to the binding of the iron atoms while the wood carbon itself is transformed into the loose ash condition of its unbound state.

So it is that 1-dimensional orbiting magnetic strings are proposed to restructure the bound state of all matter at the atomic level thereby binding or unbinding atoms or molecules into alternate measurable material structures. These binding strings sustain that bond by orbiting and interacting with the outer boundary of that material's magnetic fields. In this way the transfer of thermal energy results in the systematic degradation of the bound state of a source body of material, which in turn, corresponds with the re-binding of other material that is proximate and unbound. Heat is measurable during that transfer while the truants are manifest.

Within the context of this model a valence imbalance refers to the outer boundary of any element that has an uneven number of electrons. This imbalance may be due to an artificial or chemical removal or addition of one or more electrons to that element and/or it may be the result of an uneven atomic number. When this charge imbalance results in a complex mixture of elements and molecules, this model refers to that combination as a mix. And when binding fields attach these complex elements it may then be compelled to modify its orbit to include an alternate spin. The extra spin, in turn, would correspond to and introduce an alternate charge to that mix to hold it bound in a more balanced suspension. Depending on the vagaries of that mix, this additional but artificial charge thereby and effectively lessens, or cancels out, or it may even entirely eliminate, the intrinsically imbalanced charge condition of the mix.

Subject to the addition of proximate cells and of battery terminals to a mix, this artificial charge introduced by the binding fields can assemble in space and outside the mix and across the terminals of that battery. This results in a localized and open string where the charge of that string is aligned to and distributed over the cathode to the anode. This charge is measured as voltage and is the sum of the potential difference from the material in the mix.

Voltage imbalance can only be discharged when and if that open string finds a path to move through space to first close the string to balance it. Then it will be able to move to a suitable alternate proximate material to bind. The molecular re-organization is then managed through the re-bonding of the mix and the cell material into different but balanced molecules and/or atoms.

But to manage this redistribution of charge the battery terminals must first be linked to a circuit with the necessary conductive properties. Then the dipoles, in that open string across the battery terminals, can move through the circuit material with an appropriate justification in order to close the string at the opposite terminal. Thereafter it can realign the atoms and the bonding of the mix and reach the appropriate material of the cell as required. And the measured voltage imbalance across the terminals will then systematically deplete as this charge balance is achieved through the re-arrangement of the molecular bonding in the mix and in the battery cell material, and over time. In effect this model contradicts the standard model, which claims that current flow comprises the flow of electrons. This model proposes that electric current comprises the material flow of these 1-dimensional open strings of dipoles.

The circuit material that connects the battery terminals enables the current flow. Typically copper is used for the circuit wiring, which has two valence electrons and therefore two associated binding fields. The thicker the circuit wire the greater the number of those binding fields, which would then enable a stronger current flow. Current flow itself is managed as the source voltage strings move through that wire, expelling one of the two binding fields that has a like charge. And then too, this expelled field also develops a voltage source outside the copper. So it is that the voltage strings that constitute the material of current flow move through the circuit material to the opposite terminal thereby both

closing their strings and neutralizing the charge that is associated with that string.

This broad description of current flow exceeds the standard model as it would better account for the rate of current flow. According to standard, current flow comprises the flow of electrons. Electrons have a like charge and resist proximity to other electrons. Therefore, not only would it be insuperably difficult to move electrons in a shared path, as is requisite for that model, but the rate of that movement would, of necessity, extend beyond the instantaneous evidence of a current discharge. Alternatively the standard model refers to current flow as the flow of charge. This term is vague and does not attest to a material property related to that charge.

Broadly, the standard model has determined that a changing magnetic field will induce an electric field and that a changing electric field will induce a magnetic field. This is most clearly evidenced in the flow of current through a resistor that may be placed between the wires and in the path of current flow. Typically iron is used in that compound which has two valence electrons. To bond atoms of iron, therefore, would require two binding fields to generate a balanced charge. (Fig. 18)

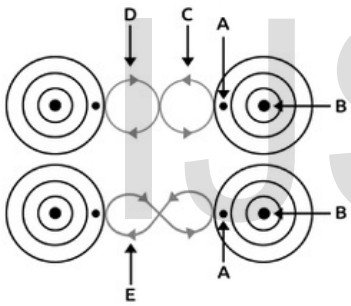

FIGURE 18
BINDING STRINGS HOLDING ELEMENTS WITH VALENCE ELECTRONS

- ***a) Valence electron***
- ***b) Nucleus***
- ***c) 1 left justified spin or charge on a binding string***
- ***d) 1 right justified spin or charge on a binding string***
- ***e) 1 string with a plaited or twisted charge including 2 justifications***

Current flow has a single justification and can only generate a single optional charge as required by the circuit material. This was referenced in the copper wire example. Iron, also having two valence electrons, would then also require its binding fields to generate two charges. Therefore as the single charge from the battery's current flows into the iron material of the resistor it will inevitably repel the charge from one of those binding strings. This will force those expelled strings outside and across the resistor where it will develop a measurable potential difference proportionate to the strength of the voltage originally applied from the energy supply source. So it is that these strings are measured as voltage and extrude from the resistive material very much as they first extruded across the battery terminals. The measured voltage and its charge will

equal or approximate the voltage measured across the battery terminals. And the sum of this voltage from both the battery and the resistor will therefore exceed the voltage from the battery alone.

Subject to an interruption of the battery current flow, this potential difference from the resistor will then induce a reverse flow of current back through the circuit to that supply. In this way, the induced current flow will recharge the source that first discharged that current. As it relates to thermodynamic laws, the standard model precludes this potential, as it would result in a measurable increase to the energy dissipated at the resistor over the energy delivered by the supply. This is discussed in the conclusion to this paper.

The potential difference induced and measured as voltage across the resistor, is thereby effectively and entirely conserved. What is not conserved is the thermal energy that is released from these binding fields in the iron resistor, as a consequence of that break to one of their two binding strings. Here the zipons will transmute into the typical chaotic conditions of truancy and become hot and big and slow. And in this state they have the potential to separate from that resistive material and to move through space to find alternate material to bind. This event is not as dramatically apparent as with the evidence of flame. But, while it may occur more slowly than compared to the catastrophic conditions of fire, over time it too will result in the systematic degradation of the bound condition of the resistor.

The cause of the strong nuclear force has not been resolved. It may be the consequence of the 2-dimensional skeletal frame of the atom as it produces the atoms' particles and then regulates their distribution. The hold of the protons at the centre of the element is established on a critical basis, which probably forms the anchor of that atom. Also suggested is the possibility that the 3-truants of the proton may attach directly to zipons in the centre field of the atom. And there is also the numerical potential in the M+6 structure of the strings, for the field itself to generate a quark. This would then interact with the proton, transforming the particle from a 9-dipole composite to a 12-dipole composite. As a consequence, the orbital interaction of that 9- or 12-dipole particle would be re-enforced by its association or orbit with the actual structure of the atom's own energy levels.

But it was suggested that the catalyst to the transmutation of these elements into more complex atoms is to do with the numerical ordering of the dipoles in those 2-dimensional strings, which make the atom's energy levels. If so, then theoretically there would also be the potential to dis-assemble the atomic particles back into strings. This question will probably be resolved by the application of algorithms and is beyond the scope of this paper.

The gravitational force is proposed to be the consequence of multiple 2-dimensional fields, which then conjoin to form a complex toroidal structure. The opposite strings of that structure would have an opposing justification or charge. They would therefore generate a localized, attractive overall charge, which in turn, would induce the strings to move closer together at the centre of that

structure. The toroid would then resolve into a complex field that approximates the shape of a sphere.

The gravitational pull is the result of atomic matter being propelled to the centre of that toroidal field. Again, this thesis proposes that atoms are largely structured from 2-dimensional dipolar strings that orbit and comprise the atoms' energy levels. The atomic particles then interact with these fields and 1-dimensional binding strings, in turn, bind this atomic material. So it is that all matter, in effect, is intimately connected with these magnetic strings, which strings are compelled to orbit. The essential feature of an orbit is that it moves through two directions and, technically therefore, it comprises two charges. But at each precise and localized position of an atom inside a larger toroidal field, matter only ever experiences one charge, or one justification, from that field. Therefore there will always be the inevitable and intrinsic exposure of the elements' energy levels to one opposing charge from that toroidal field. As with the photon, the immutable imperative will then compel the atom to find a relatively neutral area of the field. In the torus, this would result in a movement at an angle of 90 degrees to the field, which would resolve as a straight line towards the field's centre and across its strings. It is this movement that is seen as a gravitational pull and is typical of the Earth's gravitational field.

Of interest is that the downward direction of this gravity field is then reversed inside that planetary sphere, due to that field's reversed or opposite south/north spin. In effect that same material is pushed from both sides, thereby forming a material crust to the sphere. Also, the magnetic strings of the torus that orbit inside the globe do not have the same access to space to disperse any inherent conflict of charge as do the strings outside the globe that moves in the north/south orbit. These inner fields are therefore likely to partially repel each other and this may then result in their forcing a hollow area at the precise centre of that toroidal field. This hollow, in turn may be equivalent to that which is evident in permanent magnets that are structured under heat. The molten lava that is within the earth's crust would be due to the rupture of the binding fields of the iron in that core. This binding would be compromised as one of its two charges would conflict with the single charge from the toroidal orbit through the centre of the globe, which would then induce the zipons to transmute into truants in exactly the same way that a resistor would be heated and as described herein.

Broadly this thesis proposes that star structures rest on the design of the atom, which was discussed in the second part of this paper. As argued there is a proposed and compulsive development of strings from the dipoles in the nebula to generate a 2-dimensional plate through M+6, thereby forming 2-dimensional magnetic fields. This same structure is echoed in the shape of solar systems where multiple strings form energy levels around the sun's equator. And, as with the transmutation of dipoles into stable particles, so these invisible solar rings can interact with and transmute material from exploding suns into an infinite variety of planetary bodies. It is this solar energy level that interacts with the Earth's magnetic field to induce both an axial orbit and a rotational orbit around the sun

In the nebula itself the atomic development is largely restricted to the hydrogen atom. But it is the pattern of that assembly that is significant. Hydrogen has one valence electron and one proton both of which particles are localized to specific areas within the 2-dimensional magnetic fields that form its energy levels. Within that nebula, the immutable imperative assembles these simple elements in multiples, which are then conjoined by binding fields. And due to the valence condition of that atom, the binding field would require a second artificial charge or spin, which was described as a 'plait'. (See Fig.18)

As the star spins out of the nebula and into the universal torus, it is exposed to the localized and single charge or justification of that toroidal and orbiting string structure. Inevitably therefore, one of the two charges from its binding fields will conflict with that single charge. Then, while one of the atoms' binding fields would be retained, the other would be expelled. But the retained field would also now be catastrophically unbound, or detached. The strings of these binding fields would catch fire as they tumbled out of their discrete field condition to transmute from zipons to truants and/or bosons. The compulsion for flame is to search out alternate material to bind but around the star and in the void of space there is no such material. There is only the universal toroidal field that is out of reach of the truants. And this condition, this detachment, then compels that string to burn continuously and the star itself lights up. Meanwhile its expelled binding fields form multiple string structures that circle that sun's equator as a vast but invisible solar voltage source. And as with the atom, these fields then assemble as the sun's 2-dimensional energy levels. And they, in turn, foster and hold any planets that may be spawned by that unstable sun.

Next, the galaxies would be structured from the machinations of clusters of stars all responding to that same immutable imperative all with the same elemental design. Then the constellations would form. And so this pattern would be repeated, getting exponentially more complex and more pervasive. And, while the details of that assembly are beyond the scope of this paper, the pattern itself would persist.

Then, over time, all those constellations may move together, small steps in a cosmic dance. It would be a slow and compulsive drift as they circled a single point in space slowly aligning their centres to each of their black holes. And then, at some critical size, coupled with improbably perfect timing, at some predetermined moment in those great constellations' destinies, the synchronicity of their spins may resolve. At which point all would unravel. And in a moment that vast structure would then systematically transmute back into dipoles. Those dipoles, in turn, would be sucked back into the gaping black hole as it restructured a string. And the string, in turn, would inevitably rope around the entire, finite universe. And so this new assembly of dipoles would then darn the break, which first created the nebula.

It is proposed that the gravitational attraction from this toroidal field structure can be resisted in the careful design and placement of permanent magnets where, theoretically, this artificial magnet construction would be able to exceed

the attraction from a toroidal field. But to prove these concepts experimentally is beyond the budget and scope of this paper.

THE CONCLUSION

This field model has the real merit of resolving outstanding anomalies in the standard model including the size ratio of the proton to the electron and the source of measured dark energy. It has not entirely resolved the field patterns of solar systems nor all the factors that combine to structure the elements, which are proposed to be associated with the 2-dimensional structure of magnetic fields. The scope of this study is potentially vast and inclusive as it defines the underlying property of matter and the nature of its assemblies. It may, indeed, hold solutions to manifold questions that the standard model has been unable to answer including a method to defeat the gravitational force. Most particularly it discloses an electric energy technology that shows clear evidence of over unity efficiencies, which technology would then be exploitable.

The electromagnetic force was broadly described in the second part of a 2-part paper published in the Journal of Nuclear Physics, (JONP) in 2012 and titled 'Proposed variation to Faradays' Lines of Force to include a magnetic dipole in its structure'. Experimental evidence of this was published in the first part of that paper and titled 'Experimental evidence of a breach of unity on switched circuit apparatus'. A variation to this circuit was earlier published in 2002 in Quantum Magazine in South Africa and titled 'Transient energy enhances energy coefficients'. The experimental evidence in the Quantum publication was tested against a control that proved a battery performance exceeding its watt-hour rating by a factor of 17. In an extraordinary departure from standard protocol the editor who reviewed the paper, Professor Jandrell of the University of Witwatersrand, made it a condition of publication to exclude the results of that control test.

In effect, the claims of over unity results that were made by the authors of these papers have been dismissed, contradicted or ignored by the electrical engineering fraternity, based on the probability of a measurement's error. This wide assumption of error was also compounded by a test where there was evidence of a positive discharge from the battery supply notwithstanding a circuit designed to preclude any current discharge at all. A more appropriate on going quest is the need to research the source of all measured current discharge. If the energy on that circuit does not come from the battery supply source then it would need to be from a recharge cycle sourced from the circuit material itself. And such a conclusion would not only categorically conflict with any potential anywhere within the standard model but it would also be exploitable.

Also significant is that all measurements taken around the battery supply indicate an anomalous negative wattage which value is also precluded within the known parameters of scientific measurement. As illustrated, the circuit is open and is designed to entirely restrict the flow of current from the battery, (Fig. 20). The implications of all this and of these circuit measurements are extraordinary as it relates to efficient energy delivery and it points to potentials that have not, thus far been exploited or, indeed, even explored.

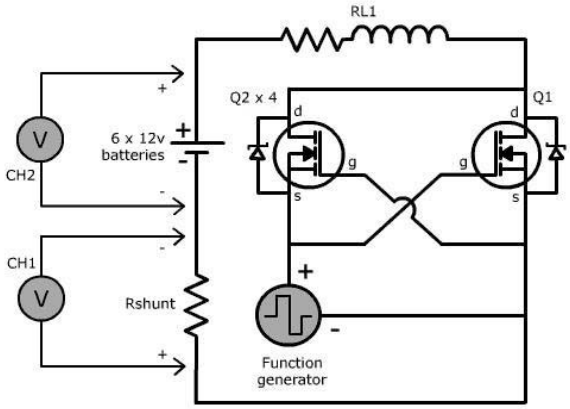

FIGURE 20
JONP CIRCUIT DESIGN

Significantly this study has adhered to the protocols required by standard practice in the advancement of science. Papers have been published, and the range and scope of the science itself is fully disclosed including the experimental evidence where available. It is hoped that these results and findings will encourage further research the more so in the light of rampant carbon pollution resulting from our carbon based energy sources, which pollution is claimed to adversely impact our weather patterns.

All that is required to advance these technologies for the generation of household and vehicle electrical applications is the development of robust transistors. There is also some need to research the distribution of magnetic fields from artfully designed permanent magnets to test the gravitational hypothesis that relates to these fields. And, due to this 4-part paper and to the preceding publications listed, the broad scope of this knowledge and its insights are now within the public domain. It is also thereby entirely free from patent restrictions, which may encourage a wider reach to advance its applications.

All illustrations done by Daniel Wright