

ON THE UNIFICATION OF THE FORCES

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PAPER 4 OF 4

AN ANALYSIS OF THE MAGNETIC FIELD MODEL AS IT RELATES TO THE FORCES AND AS IT MAY APPLY TO POTENTIAL SYSTEMS AND PROVEN TECHNOLOGIES THAT CAN EXPLOIT THOSE FORCES.

ABSTRACT

This fourth part of a 4-part paper deals with the forces. 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 organizes into 1-, 2- and 3-dimensional strings, 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.

A SUMMARY OF SALIENT ARGUMENTS FROM PREVIOUS PAPAERS

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. A 3-dimensional field assembles as multiples of 2-dimensional fields, positioned on a vertical plane. In response to the immutable imperative this vertical plane then closes to form a torus.

2-dimensional magnetic fields structure the invisible, skeletal frame of the elements. 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 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 to generate these 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 and never created. In contradiction to standard this model proposes that matter itself is structured from a universal and fixed quotient of dipoles, which are fundamental. This dipolar material can

neither be created nor destroyed. In our measurable dimensions these dipoles may be visible or invisible subject to their velocity and size, which is inversely proportional. An immutable imperative compels them to seek out their best distribution of charge in 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 are conjoined to form molecules or complex structures. The conjugation of all elements is proposed to be from these independent and separate 1-dimensional strings that form binding fields. The strings interact with the outer boundaries of elements, very much as a cog in a wheel, (Fig. 16).

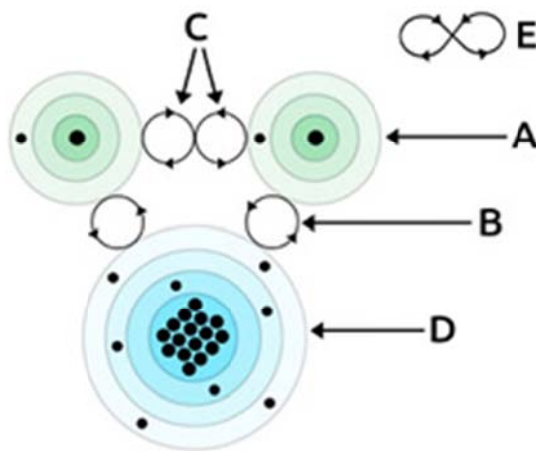


FIGURE 16
WATER MOLECULE

- 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. 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 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 a 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, which structured that universal toroidal field.

In a similar way, thermal energy is also sourced from a decoupling of strings into a chaotic assembly of dipoles. When 1-dimensional orbiting strings break they not only liberate the bound condition of that material, but they simultaneously transmute into big, hot and visible truants. Then the dipoles from those broken strings disperse through space as manifest as fire. 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 conjugation is possibly due to the density of the surrounding material that sustains the transfer of flame. Or, alternatively, the conjugation may be due to some compulsive movement away from a gravitational pull that may not apply to the nebula. 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 that is transferred as fire is sourced from the binding strings that first bound the 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 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.

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 a bond by orbiting and interacting with the outer boundary of that material's magnetic fields. The transfer of thermal energy results in the systematic degradation of the bound state of one body of material, which in turn, corresponds with the re-binding of other material that is proximate and unbound.

As it relates to electromagnetic energy, this model together with the experimental evidence in support of it, have been in the public domain since the publications in 2002 and then again in 2012. Their disclosures are more fully referenced in the conclusion to this paper. The model itself is based on the following arguments, facts and deductions.

All elements that are listed in the periodic table have an equal number of electrons to protons. The possible cause for this equivalence has been discussed in Papers 2 & 3. They rest on the concept of atomic particles that are generated from the decaying structure of some of the strings forming the elements' 2-dimensional magnetic fields.

The standard model has distinguished protons as having a positive charge, compared to electrons that have a negative charge. The electrons occupy discrete energy levels around the nucleus of an atom while protons occupy its central area. The repellent charge resulting from the proximity of the atoms' positive protons results in the generation of neutrons to offset that repulsion. The number of neutrons in each of those elements does not always correspond to the electron/proton equivalence but can both approximate and/or exceed that number.

This model proposes that 2-dimensional strings form an expanding field of concentric circles as the skeletal frame of all elements. These circles may be likened to standardized energy levels but here comprise a material property of dipoles that orbit at a velocity of $2C$. Then binding fields, which have been identified as independent, 1-dimensional strings are proposed to attach two or more atoms to each other at their outer or valence boundaries. These 1-dimensional strings are proposed to interact with those energy levels like a cog in a wheel thereby holding one atom in a fixed position against another or against more than one other element. The interaction is allowed because there is a correspondence in the size and the velocity of the zipons that structure both the 2-dimensional fields and the 1-dimensional binding field.

Also 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 would 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. This additional but artificial charge thereby effectively cancels out, or eliminates, the intrinsically imbalanced charge condition of the mix.

Subject to the proximate addition of 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 open string is aligned to and distributed over the cathode to the anode. The charge that is measured as voltage 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 search for 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 the battery terminals must first be linked to a circuit with the necessary conductive properties. Then the open string across the battery terminals can move through that 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 also determines the rate of current flow. Typically copper is used for the circuit wiring, which has a single valence electron. Therefore only one 1-dimensional binding field would be needed to bind each atom of copper. The thicker the wire the greater the number of those binding fields, which would then enable a stronger current flow. This passage of current flow is managed as the voltage strings develop a localized and alternate justification, or spin, or charge, in their interaction with those binding fields in the wire. 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.

Having closed their strings and neutralized their charges these same strings can then move independently to re-arrange and re-organise their charge or spin in order to alter the bonding and consequently the atomic and molecular state of the mix and/or the battery cell material in order to promote a more perfect and permanent charge balance. This re-arrangement of charge is compelled by the immutable imperative and results in a reduction of the battery voltage.

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, exceed 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, which is an even number and would ensure a balanced distribution of charge. For bonding, the atoms and molecules of this iron would therefore require two binding strings one for each charge, or it would require a single binding string that can reverse its charge, (Fig. 18).

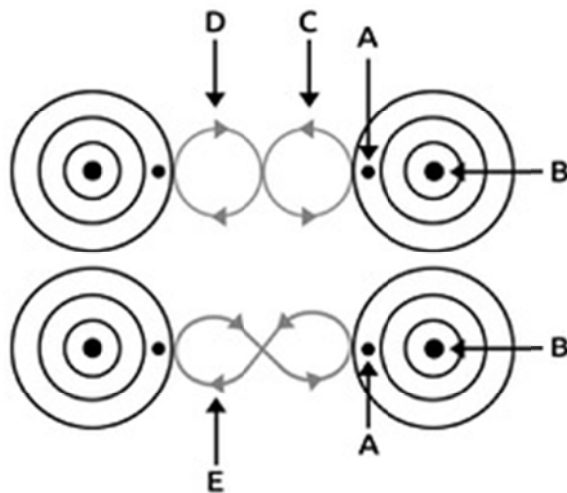


FIGURE 18
BINDING STRINGS HOLDING ELEMENTS WITH VALENCE ELECTRONS

- 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. 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 the two strings that bind the iron's valence electrons. This repulsion, in turn, will force those charged strings outside and across the resistor where it will develop a measurable potential difference. 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 and charge measured across the battery terminals. And the sum of this voltage from both the battery and the resistor will exceed the voltage from the battery alone.

Subject to an interruption of the battery current flow, this potential difference from the resistor will, in turn, induce a reverse flow of current back through the circuit to that battery supply. In this way, the induced current flow will then recharge the battery that first discharged that current. As it relates to thermodynamic laws, the standard model precludes this potential, which was predicted by the model and is discussed in the conclusion to this paper.

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 structure. 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. If so, then theoretically there would 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 proposed to be the consequence of multiple 2-two dimensional fields, which then conjoin to form a complex toroidal structure. The opposite strings would have an opposing justification or charge. They would therefore generate a localized, attractive overall charge at that centre, which in turn would induce the strings to conjoin at the centre of that structure. This structure would then resolve into a complex field that approximates a sphere as material is pulled to its centre, (Fig.19).

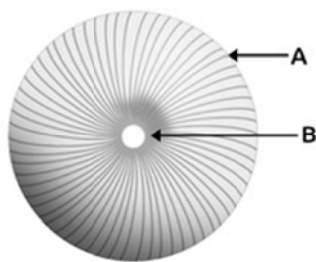


FIGURE 19

A TOROIDAL FIELD STRUCTURED FROM LINES OF FORCE

- a) The outer boundary of that field with lines more dispersed*
- b) The inner boundary of the fields where the lines are concentrated*

This thesis proposes that matter comprises atoms and molecules all of which are structured from 2-dimensional dipolar strings. Elements, too, are bound by 1-dimensional binding strings, which were discussed in Papers 1, 2 and 3. So it is that all matter, in effect, is structured from these dipoles, which are compelled, by the immutable imperative, to organize themselves and position themselves in a condition that mutually promotes a best balanced distribution of charge. However, the overall attraction at the centre of the torus would be the sum of multiple strings, which would overwhelm and compel the generalised movement of matter towards that centre. This would result in a less discriminate distribution of that dipolar material and would then resolve that accumulated matter into a shape that approximates a sphere. In effect matter is propelled to the centre of a toroidal field. Correspondingly, anti matter would be repelled by a strong magnetic field and it would thereby be propelled to its outer boundaries.

It is proposed that the 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

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 or ignored by the academic community, based on the probability of a measurement's error. This assumption was compounded by evidence of a discharge from the battery supply. However the circuit used in the JONP publication is designed to prevent any discharge from the battery supply because the circuit is open at all times. A more appropriate quest would have been to find the source of this measured current discharge, as it could not have come from the battery supply and is more in line with a recharge cycle. In the absence of an alternative supply any recharge could only come from the circuit material itself, which again would categorically conflict with the potential anywhere within the standard model.

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. 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 was open and designed to entirely restrict the flow of current from the battery, (Fig. 20).

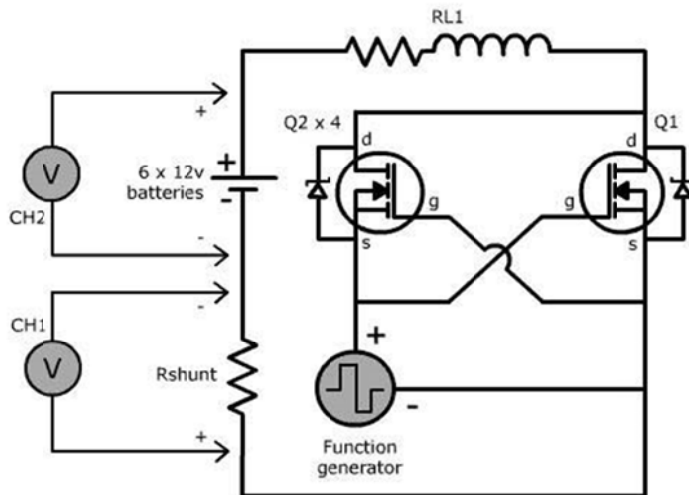


FIGURE 20
JONP CIRCUIT DESIGN

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.

This 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.

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