The Genesis of Electromagnetic and Gravitational Forces

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Abstract

This paper proposes a new geometrical theory for the formation of subatomic structures underlying electric polarities and gravitation, and describes their interactions at the sub-elemental particle level. The structures are derived from two basic observations and their interpretations. It is observed that spiral motion is a fundamental action of matter and that all material manifestation is a type of crystal. The observed generality of crystalline structures is extended to the so-called vacuum space proposing it to be "crystalline." Vacuum space lattice sites are postulated to be populated with fundamental "energy vortex particles" called Space-Time Array Resonators (STARs). STARs are units of energy tied into a pulsating spiral vortex called a circumvolution cissoid and are the basis for all particles of matter.

The postulated unit cell of the space lattice is a face-centered cube. The space lattice is described as a non-compressible, frictionless fluid comprised of unit cell cubes of energy vortices. Particles of matter arise from the space lattice by absorbing resonant frequencies of electromagnetic radiations. This is exemplified by the formation of the electron and positron, represented by specific vortex structures acting as circulators of the space lattice.

The specific directions of circulating fluid space lattice determine electric polarities. Attraction of free charges is governed by a directional flow of fluid space lattice between the opposite electric poles. A unidirectional flow of space lattice also occurs between separated positive and negative charges, causing a directional motion of the charged object (e.g., an electric condenser). This conclusion leads to an inertialess propulsion and gravity cancellation method, which provides the first experimental proof of this theory. Electrostatic and magnetic fields are defined as space lattice currents, which follow specific geometries, and their interactions are explained.

The second experimental proof of the theory is obtained when electrostatic and magnetic fields are superimposed at an angle provided by a pyramidal structure. The interaction causes a space lattice vortex around the pyramid, which can be tapped. This can potentially become the source of an unlimited supply of electric energy.

A pressure differential of the space lattice between two or more interacting material bodies, a large-scale replica of the flow patterns inside the vortex electron, creates the gravitational interaction. All three forces acting at a distance can operate within the same spatial and temporal domain, independent of each other, in full agreement with experimental observation.

The Theory

This paper attempts to explain the genesis of two elemental particles, the electron and positron, based on geometric or space relationships, and to describe their interactions at the sub-elemental particle level. The advantage of such an approach is that it can be visualized, and not just expressed mathematically. By definition, the word "structure" implies a geometric relationship, and such a relationship must be of great importance in atomic structures even though they are hidden from direct view.

The study of geometric relationships of macroscopic structures of matter may provide important insights into the properties of matter at the microscale. Astrophysics suggests the universe probably started with an energy burst from one point. This "Big Bang" theory is supported by visual and spectroscopic evidence that the galaxies are expanding away from a single center.

In stellar formation, gravitational pull and velocity generate a rotary vortex. Even in the relative absence of such factors, all objects spiral at some given rate peculiar to their special influences. A spiral is created when an object moves forward while rotating. Earth's movement in space is an example of this process. The Earth orbits the sun, while the sun pulls it along towards the direction of Vega in the constellation Hercules. The combined circular and forward motion creates a spiral. Our sun has the same motion in relation to the galaxy center. Our galaxy, the Milky Way, also spirals away from the Big Bang center.

Water going down a drain demonstrates some of the special influences affecting spiral formation. The spiral, caused by Coriolis forces, changes dynamically under the effects of gravitational pull, drain diameter, obstructions, temperature, pressure, volume, viscosity, and stirring. The spiral changes shape and acceleration but maintains the universal shape of a spiral. The water flow is responsive to all possible factors, and so is the spiral.

Remarkably, the spiral vortex has a "memory" of itself. When a vortex is distorted into an ellipse, it spontaneously returns to its original circular form when the distorting influence ends. The vortex is a self-sustaining type of motion; its resiliency is comparable to that of atomic bodies.

Spirals condense energy and sine waves transmit it along a frictional line of force between them (Fig.1). Spirals and waves could be considered complementary aspects of each other. Two opposed spirals form a wave, or a wave produces two spirals. A sine is the producer of waves of spiral forces. Any fluid capable of supporting wave motion can also support vortex motion.

The spiral is the prominent form of organization of matter. The large proportion of spiral galaxies among celestial bodies visibly demonstrates this. On the microscale, even the building block of life, DNA, uses this structure, and spirals are likely to be dominant at the level of the atom and below. This is the subject of the present theory.

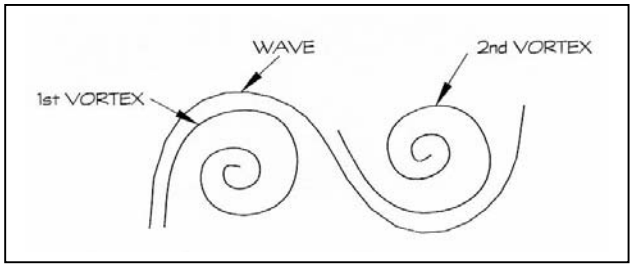

Figure 1. Spiral-wave relationship

I propose that all atoms and all stellar formations use the mutable spiral to adapt to their spiral environment.

Another proposition is that all mediums of matter can be considered a type of crystal. Crystallinity is readily recognizable in the mineral world, but it is also a more general state of matter. By definition, a crystal is a regularly repeating atomic arrangement, such as a chemical element, compound or isomorphous mixture. Besides solid crystals, liquid crystals also exist. Therefore, the term crystal can be applied to material expressions where crystallinity is not obvious, e.g., gases, complex biologics and various life forms, including viruses, bacteria and higher organisms.

Air and water could be considered loose crystals subject to fast molecular drift. At low temperatures where molecular drift is reduced, gases form solid or liquid crystals. Even helium, the most volatile of all gases, can be crystallized under the appropriate conditions. Soil and stone and metal are opaque cryptocrystals with slower rates of molecular drift. On the macroscale, the Earth could be seen as faceted crystal with its mountain ridges as the ridge of a geodesic sphere. Biopolymers such as DNA, proteins or polysaccharides fit the definition of a crystal and are commonly made into crystals for analysis and other purposes. All life can be seen as a crystal. From fish to humans, we are liquid crystals on a skeletal lattice.

Crystals are the shape of discrete units of matter and notably the channelized direction of energy, that is, the direction in which energy flows unforced. Crystals form the basis for corpuscle-wave conversion. Crystals create resonance and conduct the flow of energy between states. Crystals can also be considered lenses. By definition, a lens is a device capable of refracting, or bending light. Light is an energy flow, so on a more general term, a lens can be defined as any object capable of changing the direction of energy flow. By this broader definition, even an electric wire is a lens, as it is capable of changing the direction of flow of electrical energy. Lenses communicate energy as part of the principle that all matter vibrates, all matter transmits, and all matter receives energy. The universe changes energy states with lenses. Following this line of reasoning, the universe could be viewed as a resonant crystal lens.

This observation is compelling because the universe is considered to be largely empty, the largest component of which is the so-called vacuum space. Since Nature seems to use the same geometrical organizing principles from micro to macro, I suggest that the vacuum space must also be “crystalline.” Since the term crystalline is associated with material of which the vacuum space is substantially devoid, I will use an extended meaning of structure when discussing the “crystallinity” of vacuum space.

The theory of “crystalline” vacuum space was introduced by Simhony (1990, 1994). Simhony reasoned that three-dimensional physical phenomena must have three-dimensional physical causes and explanations. He demonstrated that physical reality could be described by the laws of classical physics supplemented by the presence of a

space lattice. This led to the development of the theory of an electron-positron lattice space (epola for short). In the epola, bound electron-positron pairs reside at the lattice sites of a face-centered cubical "crystal" structure similar to that of NaCl crystals (Kennon 1978). The face-centered cube geometry allows the densest packing of spherical particles.

The epola theory allowed a physical explanation of all yet unexplained postulates of quantum mechanics and relativity including the particle-wave duality, the quantized nature of electron orbits in the atom, electromagnetic radiation, the photon, and gravitational interactions as well as the relationship of electrostatic, magnetic and gravitational interactions. Simhony demonstrated gravity to be a derivative of electromagnetism.

There is a large body of evidence suggesting that the vacuum space is not empty at all. Experiments verify that the vacuum space contains an enormous residual background energy (Boyer 1985, Haisch 1994, 1997, 1999, 2000, Rueda 1995, 1999, Matthews 1994, 1995, Casimir 1948, Lamoreux 1997, Sakharov 1968), called zero-point energy (ZPE). The ZPE manifests as a pervasive and vast electromagnetic field called the zero-point field (ZPF) described by Haisch, Rueda and Puthoff (1994). A dynamic field, ZPF is virtual plasma, with particles arising and disappearing of a background energy field serving as a baseline, or zero point, for all physical processes. The ZPE remains even at absolute zero. Simhony has described zero-point energy fluctuations as analogous to

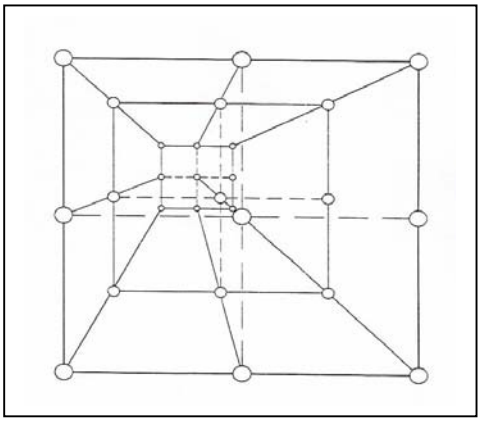

Figure 2. Geometry of the space lattice

Brownian motion of epola particles around their lattice sites. A potential alternative term for the lattice space is the zero-point-field. This area remains an active field of research.

Simhony also suggested that all particles of matter are formed directly from the lattice space (Simhony 1990), the mechanism of which remains undetermined. The present theory intends to answer this question in terms of lattice space.

I propose that the vacuum space has a lattice structure similar to that introduced by Simhony. This structure is a face-centered cube having 27 lattice sites (Fig. 2). On the lattice sites reside the elemental "particles" forming all particles of matter. These are "particles of energy" rather than particles of matter.

I propose that the "particle of energy" of the space lattice, called here the Space-Time Array Resonator (STAR), is a spiral energy vortex tied into itself in the form of a

circumvolution cissoid. The circumvolution cissoid is a spiral turning around an axis converging into an apex, in a self-imploding, self-sustaining vortex motion (Fig. 3). The vortex pulsates and its vibration is a function of $(2\pi\text{ø})^x$, where ø is the Fibonacci series number and x = 0, 1, 2, 3, the number of turns the circumvolution cissoid makes. Once started up, such a vortex would run practically indefinitely inside the space lattice.

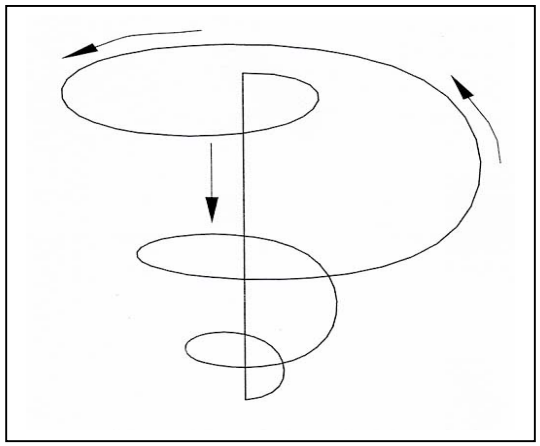

Figure 3. Circumvolution cissoid

The internal friction of such a space lattice must be so low that it would only be noticeable as a red shift in the spectra of distant galaxies. The space lattice, like its constituent energy vortices, must also be a resilient structure with only limited compressibility. At the same time, it must have fluidity since it is capable of transmitting waves with transverse displacement. In the absence of atomic oscillators, the space lattice would be incapable of dissipating energy in the form of heat.

Vortices maintain their circular forms as well as their proportions and dimensions. The adjacent vortices have a coordinating effect that establishes axial alignment and rolling contact between vortices within the space lattice. In that sense, there is a great deal of similarity between crystals of material bodies and the structure of the space lattice. I postulate that the space lattice is an incompressible, frictionless fluid made out of unit cells cubes of "energy particle" vortices. The potential higher order structures of the space lattice will be discussed in a subsequent paper.

We can consider the space lattice equivalent to motion. A space lattice in motion necessarily has inertia. Although inertia is generally attributed to moving material bodies, it is actually a property of motion. Inertia is just the continuity of motion. In the case of vortex motion, the inertia is localized. Localized inertia can also be called momentum. To account for the elemental particles of matter, we just need a space lattice that is capable of moving.

Anderson discovered in 1932 that when 1.02 MeV photon energy is absorbed into the vacuum space, an electron-positron pair may appear. This observation is interpreted here as a glimpse into the formation of elemental particles of matter. To become matter, energy must become more angular. This hypothesis is derived from the observation that all material expression is a type of crystal, and is the compound and derivative of a fundamental triangular shape from which all the seven crystal systems can be derived (Kennon 1978).

The mechanics of this expression at the level of the space lattice are explained as follows: As the energy of electromagnetic radiation propagates through the space lattice, it polarizes the STAR vortices (for analogy see Fig.1). Subsequently, the "energy particles" of the space lattice undergo a phase transition similar to the condensation of gases. This happens at the resonant frequency of 1.02 MeV gamma radiation.

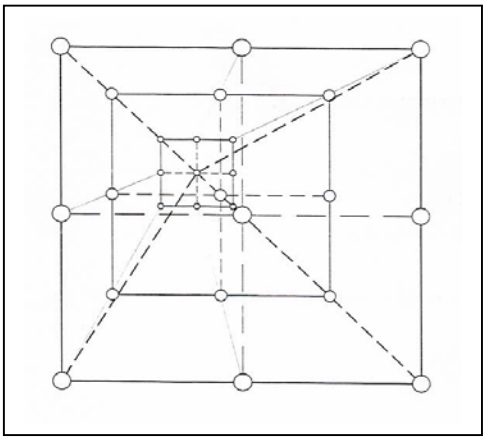

Figure 4. Rearrangement of the unit cell

The 27 STAR "particles" of the unit cell of space lattice rearrange into a pyramidal segment of the cube (Fig. 4) on six levels, forming six circles of vortices. An open-flat presentation of the rearrangement is shown in Figure 5. This structure is the postulated smallest unit of matter. Note that the cube is composed of six interlocking pyramids, making the cube and the pyramid resonant structures. Inside the pyramid, the STAR rings form a vortex capable of circulating the fluid space lattice. The pumping action is driven by the self-sustaining, pulsating vortex motion of its constituent STAR particles (Fig. 3). The overall shape is a cone fitting inside the pyramid. The formation of matter follows the geometry of the space lattice (Fig. 4) and thus we may conclude that the blueprint for matter is built into the space lattice.

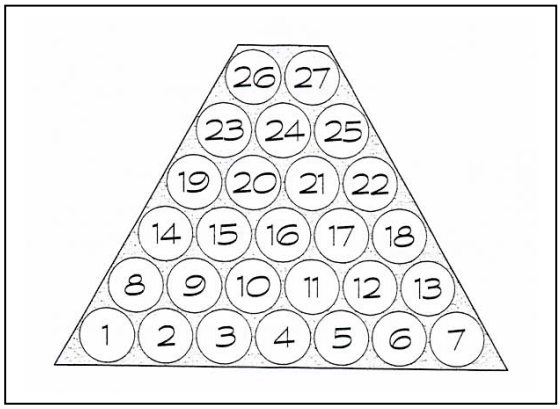

Figure 5. The smallest unit of matter

An electron is produced when two cones are joined in a tip-to-tip configuration (Fig. 6). The positron is made out of two vortices (cones) facing base-to-base. The energy vortices that make up the electrons have a resilient vibratory structure, which should be capable of vibrating at various frequencies and modes. This would allow us to account for the series of spectral lines, a signature of energy absorbed and emitted at various frequencies.

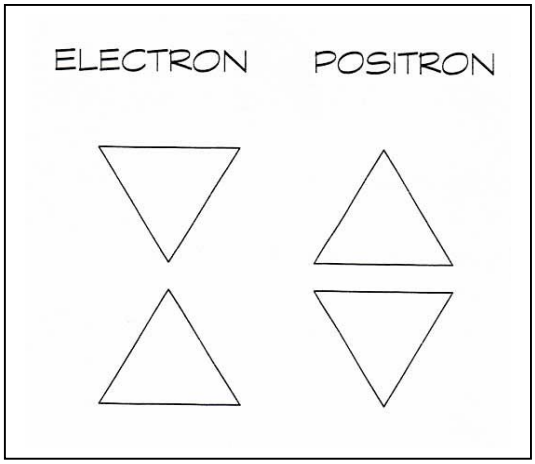

Figure 6. Structures of electron and positron

The pumping effect and circulation of the fluid space lattice by these complex vortex particles proceeds as follows: For the electron, the space lattice is drawn in polarly and expelled equatorially; for the positron, the space lattice is drawn in equatorially and expelled polarly (Fig. 7). The direction of the circulation of the fluid space lattice determines the positive or negative polarities. When in close proximity, a specific flow coupling occurs between the electron and positron (Fig. 7). It is quite probable that a similar flow coupling exists between a proton and an electron inside the atom; such a coupling is stable in the case of the proton. This is likely a result of the different vibratory structure of the vortex proton.

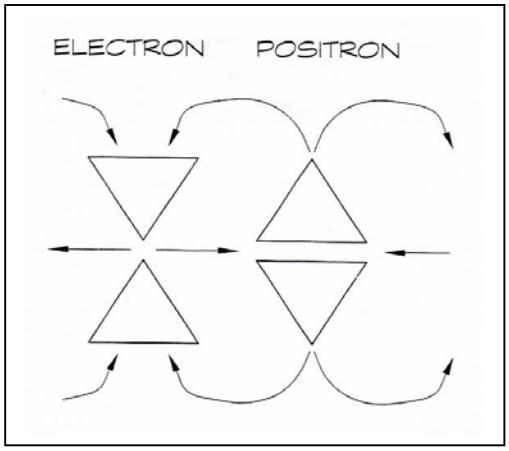

Figure 7. Flow coupling of electron and positron

The instability of the electron-positron pair is also derived from this model. The perfectly fitting, counter-rotating cones of energy extinguish each other instantaneously, releasing a combined energy of 1.02 Mev. This results in the reconstitution of the respective unit cells of the space lattice along with the release of the phase transition energy as electromagnetic radiation.

The size of the STAR "particle" is estimated at 0.005 fm based on the "nuclear radius" of 0.1 fm for the electron. The lattice constant for the unit cell of the space lattice is approximately half the "nuclear radius" of the electron, i.e, 0.05 fm. This indicates that the space lattice is quite dense compared to atomic bodies.

The model explains the attraction of free electric charges as follows (Fig. 8). The movement of opposite charges toward each other is due to the equatorial circulation

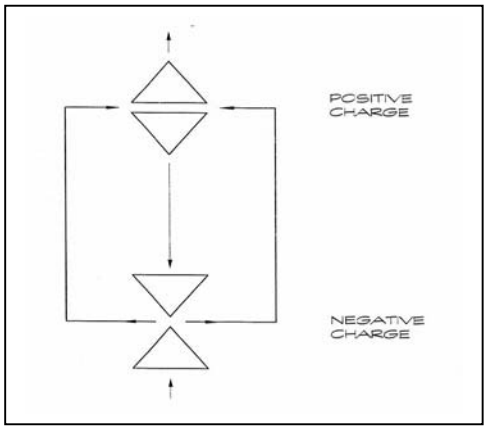

Figure 8. Attraction of electric charges

of fluid space lattice from the negative charge to the positive charge and the polar circulation of space lattice from the positive to the negative charge. The attraction of the vortices pulls the two partners together. The electrostatic field between separated charges is defined as the flow of the space lattice from the protons to the electrons and the outside return flow of space lattice from the electrons to the protons. This explanation will eventually lead to a hydromechanical theory of electricity.

Interestingly, there is a net unidirectional flow of fluid space lattice in the axial direction of the free electric charges flowing in at the negative pole and flowing out at the positive pole (Fig. 8). If the charges have a steady parallel orientation, e.g., as in an electric condenser, then a pressure differential must arise in the space lattice around the opposite poles of the condenser. To fully appreciate the significance of this conclusion, one must first examine how material bodies accelerate through the space lattice.

Accelerating objects encounter resistance, facing an increased pressure of the space lattice at the front end and a reduced pressure at the rear end. This situation is common to all propulsion methods that apply a mechanical force on the physical object. It is logical to suggest that a pressure differential of space lattice at the opposite sides of material bodies is always accompanied by a change in the rest or motion of such bodies. To achieve propulsion, instead of applying force to the physical object we should transfer the space lattice that controls the behavior of the object from the rear end of the object to its front end.

Therefore, a charged electric condenser with its own generated space lattice pressure differential should behave as an accelerating object, i.e., it should move toward the direction of its positive pole. In fact, such an observation was made as early as 1926, the so-called Biefield-Brown Effect (Brown 1928). Biefield and Brown found that a charged electric condenser suspended on a thread moved in the direction of its positive pole. Without a plausible theoretical explanation, the observation received little attention.

However, the Biefield-Brown Effect provides an experimental proof for this theory of electric polarities. Now that the fundamentals are developed, the Effect may provide the basis for a new propulsion and gravity cancellation method, and may give us insights into the mechanism of gravitation. A craft utilizing such a propulsion method could exhibit inertialess acceleration, as it would meet no resistance from the surrounding space lattice.

The theory also allows the development of strategies for tapping into the energy of the space surrounding us. Separated charges in an electric condenser cause a directional flow of the fluid space lattice. Conversely, if we could induce a directional flow of the space lattice, it would cause a separation of charges in material objects. To explain how such an effect could be produced, the physical basis of magnetism must first be discussed.

I have described the physical basis for the electrostatic field as an axial flow of a space lattice current from the positive charges to the negative charges and back along the outside to the positive charges. I shall now explain how these space lattice currents flow in an electric wire. The space lattice flow that connects the electrons to the protons of the atoms in the wire becomes extended along the length of the wire. This is the same direction as the direction of movement of electrons that, in the current, flow in the outer shell of the wire. The external return flow of the space lattice proceeds in the opposite direction in the space around the wire. This flow constitutes the magnetic field.

In a solenoid, the surrounding space lattice flows in the opposite direction relative to the path of the electrons. The magnetic effect will appear as either N or S magnetic poles. The magnetic poles are mirror images of each other. This suggests that a single isolated magnetic pole cannot exist.

In the electrostatic field, the outside space lattice current flows between electrically charged particles. The magnetic field, on the other hand, exhibits a closed circuit flow of the space lattice along the path of a solenoid or a circuit. Movement of the space lattice in spirals or whorls produces electric and magnetic forces.

An electric charge and a magnetic pole interact even though they do not apply any force to each other. A magnetic pole will bring about a directional orientation of the electrons in a charged object, while an electric charge will cause the electric polarization of the adjacent surface of a magnetic pole.

The next question concerns the superimposition of electrostatic and magnetic fields on each other. The practical significance of the interaction of axially oriented electrostatic and magnetic fields is likely to be small compared to their interaction at an angle. A transversal superimposition of a magnetic field on an electrostatic field will cause the distortion of both fields. The axial flow of the space lattice between the electric poles (the physical basis for the electrostatic field) will be distorted, but its circulation

will continue. Similarly, the rotating space lattice, the basis for the magnetic field, will also be distorted, flowing in irregular circuits.

To study the transverse superimposition of electrostatic and magnetic fields, a shaped electrostatic field must be created (Fig. 9).

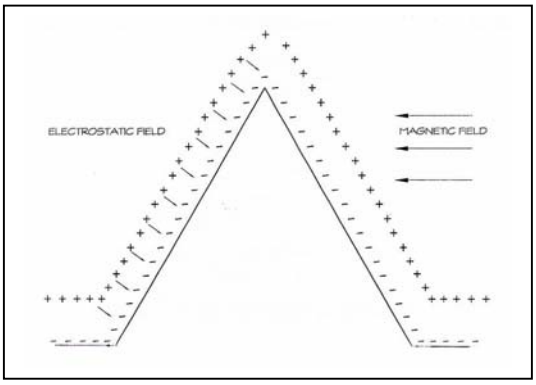

Figure 9. The interaction of a shaped electrostatic field with a magnetic field

When a magnetic field interacts with the shaped flow of the space lattice, it results in the formation of a space lattice vortex at the points where the two currents intersect. This is based on the previous hypothesis that the space lattice is an incompressible fluid, wherein the intersecting currents cannot penetrate, but distort each other's flow patterns.

Expanding this shaped electrostatic field into three dimensions creates a pyramid. I have already discussed the importance of the pyramidal geometry in the formation of matter. The pyramidal geometry may also be important for producing a space lattice perturbation, the equivalent of a magnetic field following a rotational symmetry (e.g., a vortex).

If transversally superimposed electrostatic and magnetic fields on a pyramid would indeed produce a vortex in the space lattice, then the rotational flow of the space lattice should cause the separation of charges and an electric current in material bodies, as predicted by this theory. Simply stated, the pyramid could convert electrostatic energy into magnetic energy. This means that under appropriate conditions, a pyramid could become a power generator.

For power generation in a pyramid, the source of the electrostatic and magnetic fields could potentially be the Earth. The Earth has a high voltage electric field due to the negatively charged surface covered by the positively charged atmosphere (Feynman 1964). The voltage field, believed to be maintained by the Sun's radiation energy and/or cosmic ray energy, extends from the ionosphere to the surface creating a potential difference of about 400,000 V. The Earth's electrostatic field is never depleted despite a constant discharge of energy. The Earth's electrostatic and magnetic fields could be utilized to create a space lattice vortex in and around a sufficiently sized pyramid that could be tapped. Experimental data supporting this conclusion has recently been reported (Grandics 2000).

Lastly, the gravitational interaction is considered based on the circulation of space lattice currents. As discussed earlier, material bodies spontaneously circulate the space lattice with no specific orientation. In the case of a single spherical body, such as a

planet, the space lattice will assume a spherical shape all around the planet, conforming to its spherical symmetry.

This suggests that a bound layer of space lattice surrounds material bodies. The Earth on its orbit around the Sun carries this stationary bound layer along. The gravitational field of the Earth is linked to the gravitational field of the Sun; therefore, the bound layer of space lattice would not follow the rotation of the Earth on its axis.

The gravitational force is generated in the space lattice by interacting material bodies as follows: In the case of two bodies, such as the Sun and Earth, their space lattice currents will organize themselves similarly to the vortex electron (Fig. 7) forming a bipolar vortex, although on a very large scale.

As the space lattice is an incompressible fluid, the currents between the respective bodies cannot penetrate, but deflect each other's flows generating outward flows between the objects. To compensate for this outward flow, there must be an equivalent inward flow through the material bodies. This should create a pressure differential such that the space lattice between the bodies will be at a lower pressure than at their remote sides. The pressure differential will push the two bodies toward each other, eventually causing a collision. However, if they are orbiting each other, the centrifugal force will keep them apart.

The flow of space lattice in electric and magnetic fields is always confined to limited regions, that is, it either flows from positive to negative poles or around a closed circuit, whereas the space lattice flow in a gravitational field has no polarity and thus can traverse vast distances, passing through all bodies in its path.

The space lattice theory provides an answer as to how these forces can act independently of each other within the same spatial and temporal domain. Electric and magnetic forces are caused by space lattice currents in the form of spirals or whorls existing independently of a pressure differential in the space lattice. This explains why electric and magnetic force fields can exist and operate irrespective of the gravitational force field, and vice versa.

A large body of evidence demonstrates that electric and magnetic forces can override gravitation. When electromagnetic effects generate a net flow of space lattice with a direction opposing the direction of flow of space lattice between two gravitationally linked objects, the two flows can cancel out each other's effects, resulting in the elimination of gravitation. An electric condenser could create such an effect. The fundamentals of this observation are now clarified by this theory.

Conclusions

The theory presented here expands upon the lattice space theory introduced by Simhony. Many of the conclusions drawn from Simhony's theory remain in effect in context of the present theory. The space lattice theory allows the development of a fully physical model of reality, and offers a rational basis for tackling elusive physical phenomena, such as gravity or ZPE.

The present theory of electromagnetic and gravitational forces provides a framework for addressing basic properties of matter as well as interactions between material bodies. The theory of a fundamental matrix of the universe (space lattice) leads us to experimentally testable conclusions. The possible outcomes of the theory may

include the basis for an inertialess propulsion method and a method for producing electrical energy from the electromagnetic field of the Earth.

The theory of the elementary "energy particle" of the space lattice, the STAR, leads us further into the mysteries of matter.

I predict that by modulating the vibratory status of the STARs, certain properties of matter could be vastly altered. In ordinary matter, the vibrations of STARs are random. If their vibrations could be synchronized leading to the formation of standing waves, the space lattice pumping action of the elementary particles of matter would be suspended. This could eliminate the physical basis for electromagnetic and gravitational interactions. Gravitation would cease to exist, as well as electromagnetic phenomena. Matter would not interact with electromagnetic radiation, leading to invisibility of matter. This could become the ultimate method of stealth.

Since such an object would not interact with the gravitational or electromagnetic force fields of the Universe, it could be accelerated to velocities in excess of the speed of light. This would open up the avenue for developing interstellar space flight capability.

I further predict, that under certain vibratory conditions, even the dimensions of the atom, the size of the nucleus and the distance of the electrons from the nucleus could be altered. The atom could potentially be expanded or shrunk by modulating the rate at which the fluid space lattice is pumped through the smallest unit of matter (Fig. 4).

All the potential applications of such discoveries are difficult to perceive. An analysis of the potential vibratory modes of the circumvolution cissoid will be presented in a subsequent paper.

The present theory of space lattice establishes a theoretical framework unifying the three fundamental forces acting a distance. The new physics will allow us to probe into previously unreachable domains of nature.

In summary, this paper offers the following conclusions:

1. All expressions of matter are organized into geometrical structures called crystals, a feature shared by the so-called vacuum space.
2. The basic unit of vacuum space is a "particle of energy" called the space-time array resonator (STAR).
3. The unit cell of vacuum space is a face-centered cube having 27 STARs at its lattice sites.
4. Matter originates from the space lattice by the absorption of radiation at certain frequencies. For the electron and positron, this frequency is the frequency of 1.02 MeV electromagnetic radiation.
5. Matter arises in a pyramidal segment of the space lattice by a phase transition of the 27 STARs of the unit cell.
6. The reversal of this process reconstitutes the space lattice.
7. All particles of matter are energy spirals tied into a circumvolution cissoid.
8. All particles of matter are STAR compounds.
9. Energy is expressed in the geometrical form of a spiral, while matter is organized around the structures of spiral and pyramid and the compounds and derivatives thereof.
10. The polarities of electric charges are established by the specific circulatory patterns of the elemental "energy particles" of matter.

11. The rest or motion of material bodies can be altered by creating a pressure differential in the space lattice on the opposite sides of such bodies. An electric condenser is capable of creating such a pressure differential, which could lead to an inertialess propulsion method.
12. Electrostatic and magnetic fields represent space lattice currents of specific geometries.
13. Transversally superimposed electrostatic and magnetic fields cause a space lattice vortex in a pyramid, the energy of which could be tapped.
14. Gravitational interaction is created by a pressure differential of the space lattice between two or more interacting material bodies, which is a large-scale replica of the space lattice flow pattern inside the vortex electron.
15. All three forces acting at a distance can operate within the same spatial and temporal domain, independent of each other, in full agreement with experimental observations.

Acknowledgement

I thank Dr. Dietmar Rothe and Gregory M. Vogel for their thoughtful comments on the manuscript.

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