

UNDERSTANDING THE ELECTRON

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Action is the product of the Qualities inherent in Nature.
Bhagavad Gita

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INTRODUCTION

This essay is a part of the nether (dynamic ether) unified theory. It is an important part because nether cannot be understood without understanding the electron and its role in our civilization. What follows is only a small part of nether electron theory. More can be found at my website, in the series of books *Behind Light's Illusion*, and perhaps in future essays for the *General Science Journal*.

The electron hole brings nether (dynamic ether) into the 4th dimension. The nether forms a vortex as it enters the hole on the side called its "mouth". This hole appears as a circle in our three-dimensional space and, speaking geometrically, is in a plane which will be called the "plane of the hole". The mouth of the hole can point in any direction found within our three-dimensional space because it is a hole into a dimension that is at 90 degrees to each and all of our three spatial dimensions.

A straight line drawn from the electron center through a point outside is called a "radial".

A line that is perpendicular to the radial and in the same plane as the electron hole is called a tangent.

The electron is a tiny gravity funnel. However, at the level of the electron, gravity is very small in proportion to the other forces. The vortex called the electron is composed of an inward nether flow which is, at any point, 45 degrees from a radial drawn through that point. This inward nether flow is what has been termed "charge". The inward radial vector of this flow is termed "micro-gravity". The tangential vector of this flow is the cause of electromagnetic radiation (usually called "light", although the octave of visible light is only a part of the complete spectrum).

The flow into a micro-gravity funnel is composed of elements of nether coming from an infinite distance to the hole where they turn 90 degrees into the 4th dimension. Each element begins widely expanded, and compresses as it approaches the hole. It is like a long strand with a square cross-section that is infinitely small near the hole and quite large at a far distance from the hole. It is actually an element of nether flow into the hole and moves inward slowly when far away and at the speed of light near the hole. So, as it nears the hole it compresses in its two tangential directions and expands in its radial direction. It does not exist except as a means of helping the mind to understand the behavior of the nether moving toward and into the hole. There are an infinite number of these elements moving toward and into the hole all the time. They are analogous to drops of water in an ocean in that they are part of the nether ocean, but have no boundary to maintain individual integrity as a separate units.

Water Out of the Bathtub

Often, people wonder why these elements of nether moving into the holes of subatomic entities do not

empty our space of nether. The truth is, they are actually doing exactly that. However, each electron hole has a radius that is about 10^{-57} meter. According to most textbooks on physics, the radius of a typical atomic nucleus is approximately 10^{-15} meter, and the radius of a typical atom is approximately 10^{-10} meter. This leaves an ocean of nether between the electron holes in a typical atom that is 10^{47} times as large as the radius of the electron hole. The distances between atoms is even greater than the distances within atoms.

Therefore, the electron resides in a sea of nether in which it and the nearest neighboring electrons, protons, and neutrons in a typical atom have approximately 100,000,000,000,000,000,000,000,000,000,000 times more of this ocean of nether between them proportionately than is between our sun and the nearest star in our galaxy. There is much more danger of us losing nether pressure too quickly via the accelerating expansion of our universe than from what little leaks out through the holes. Besides all that, as the explanation of nether theory progresses, one can see that thinning of the nether, as the universe expands, is not likely to affect the basic physics of the universe.

Micro-Gravity vs. Gravity

The force of micro-gravity (gravity of the single electron for example) is very small as is that of the single proton and the single neutron. The other forces at this level are also small but greater than the force of micro-gravity. However, when large groups of subatomic entities come together to form a sun, a planet, or some other celestial body, the many micro-gravities unite into a very large average force while the other forces oppose one another and average out to essentially zero.

Rotation, Revolution, and Precession

Light is caused by vibrating electrons. A single natural photon, one that is not limited by our *one-second rule, is the result of multiple comings and goings of one electron. First the electron moves in one direction. Then it reverses itself to move in the opposite direction. It reverses itself again and continues to do so until it has lost the energy that initially prompted it to move. At the end of each of its little journeys back and forth, it rotates to point its mouth in the new direction of travel.

[* Our contemporary theoretical physicists give a photon a frequency that is "n/t" where "n" is the number of events of energy "h" in the photon. So "h(n/t)" is the supposed energy in a photon even though the "t" limits the number of events to one second. Most natural photons are not one second in duration, nor are they all of the same duration, so the one-second limitation is misleading.]

Electrons move in the direction that their mouths are pointed. If forced to move in a different direction, they turn their mouths toward the new direction of travel. Usually, their mouths pull them along because of the inertia of the incoming nether. It is more energy-efficient to move in the average direction of the

incoming nether.

Rotation refers to the aiming of its mouth in a different direction. When speaking of light, this will usually be a rotation that is 180 degrees, and occurs when the mouth reverses its direction at the turn-around point within a light-producing vibration.

Revolution refers to the circular movement of the vortex. Each revolution of the incoming nether is one 360 degree turn around the electron center.

Precession refers to the gyroscopic action of the electron. Due to its nether revolution, it must rotate at ninety degrees to the force causing it to rotate - and rotate in the direction of its revolution. You see the same thing happening when a child's top begins to lose its spin momentum.

The nether is moving inward at the speed of light at the Schwarzschild radius for the electron.

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THE ELECTRON OR POSITRON CENTER

The positron is the mirror-image of the electron. Technically, both are vortices that extend to infinity. Both the electron and positron centers are portals into the fourth dimension. The fourth dimension is at 90 degrees to our three dimensions of space, so when nether turns into it, a vortex is created with gyroscope-like properties. This creates another measurement that affects the use of the electron as a gyroscope-like entity for medical research.

The appearance of an electron or positron as seen in the mind's eye would be that of a circle hanging in space. On one side of the circle is the mouth which is a vortex hungrily taking in nether. On the other side is the usual activity within the nether, with essentially no regard to the vortex on the opposite side. If one could see the edge of the vortex where the incoming nether has approached the speed of light, the electron or positron would appear as a hemisphere (the "mouth" side) resting against a circle which is the hole into the fourth dimension.

The hemisphere is slightly flattened when the vorticle is at rest and more concave when the vorticle is in motion. When it is in regular vibratory motion, its shape changes more drastically (at double the frequency of the motion). Because the electron has very low mass, it is always being moved by the forces around it. The chapter on light in Book Four of *Behind Light's Illusion* gives a more detailed explanation.

If we were to liken a vorticle (vortex that is considered a "particle") like the electron to a whirlpool, it would be open at the top and less open at the bottom. This has to do with the necessity of the radius to be reduced if the centrifugal force of the Mass in the vortex is to remain sufficient to hold the rent in

space open. [Mass refers to the Mass of of the nether itself which is the fundamental Mass of the universe. What mainstream science now calls "mass" is the Mass per unit of time that flows into a subatomic entity.]

[Mart Gibson noticed that the area of a sphere is the same as the area of a circumscribing cylinder whose height equals the diameter of the sphere. This is important as the cross-sectional area of the vortex is where the nether must enter and it should not change appreciably when the vorticle changes character.]

When a vorticle moves at higher speeds relative to the nether, as it approaches the speed of light (it never actually reaches lightspeed relative to the nether) the inflow moves from the equator of the hemisphere toward the pole, which is pointed in the direction of travel. The "hemisphere" of the vorticle becomes more elongated as the flow of nether from the sides is reduced considerably. On the other hand, the nether that enters is being scooped up from the front and has appreciable velocity relative to the nether around it, so the vorticle might be said to resemble a disc the size of the entry port into the fourth dimension.

The existence of a fourth dimension is logical because of the creation of a mirrored anti-matter vorticle whenever matter is created. This implies two directions, the existence of another dimension. [Every dimension has two directions from a point. For instance, north and south are the two directions of a single dimension.]

Although difficult to "prove", there seem to be a number of things that make sense regarding the nature of the electron. First, whenever there is electron flow along a single dimension in our three-dimensional space, there are two other dimensions at right angles to the direction of flow which show a cross-section of the flow - and the cross-section has a circular "flux field".

The conservation of momentum of the incoming nether causes it to move in a circle and turn gradually into the "hole" it is entering. This makes the mouth (incoming part) of the flow nearly hemispherical in its theoretical shape (like the hemisphere of incoming air at the foot of a flute). When the incoming flow finally enters the "hole" that constitutes the flow along the single dimension, it is moving in a helical manner.

[The theoretical hemisphere at the foot of a flute is a cross-section where the incoming air turns to increase in velocity to enter the flute barrel. Here there is a vortex which acts like an extension of the flute barrel and can be calculated as such to arrive at the correct theoretical length for the flute barrel.]

The hole into the fourth dimension seems to be a hole which can turn in any way in our space and still have the same cross-section because the fourth dimension is at right angles to all of our dimensions. The hole acts as if it were a circle in which nether enters on the apparent hemispherical side and exits into the hole itself which appears to be flat. The edge of the hemisphere is where the radial vector of the inflowing nether is approaching the speed of light. So one side of the center of an electron or positron vorticle looks like a very small hemisphere with a flow entering on the convex side.

At the edge of the hemisphere, the majority of the nether turns toward the hole into the vacuum. To make this turn, the tangential velocity must be reduced while the inward velocity is increased (the resultant stays the same). The reduction of tangential velocity disturbs the balance between the centrifugal and centripetal forces, so that the radius of the vortex is reduced and the resulting shape is like a short whirlpool. The actual hole is simply a circle which appears flat.

Just a short distance from the center, it would seem that the nether would appear to flow in from all directions, so that the vorticle would tend to resemble a sphere made of abruptly accelerating nether. However, I do not believe that this is what happens. When a portion of nether is removed from the space it occupies, the nether that replaces prefers to come from the opposite side of the original nether's direction of travel. This is because the nether is "energy conscious" which is to say that it does things with as little energy expended as possible (it is "lazy"). Less energy (acceleration) is needed for movement from the opposite side than from other points because flow from other points requires more nether acceleration.

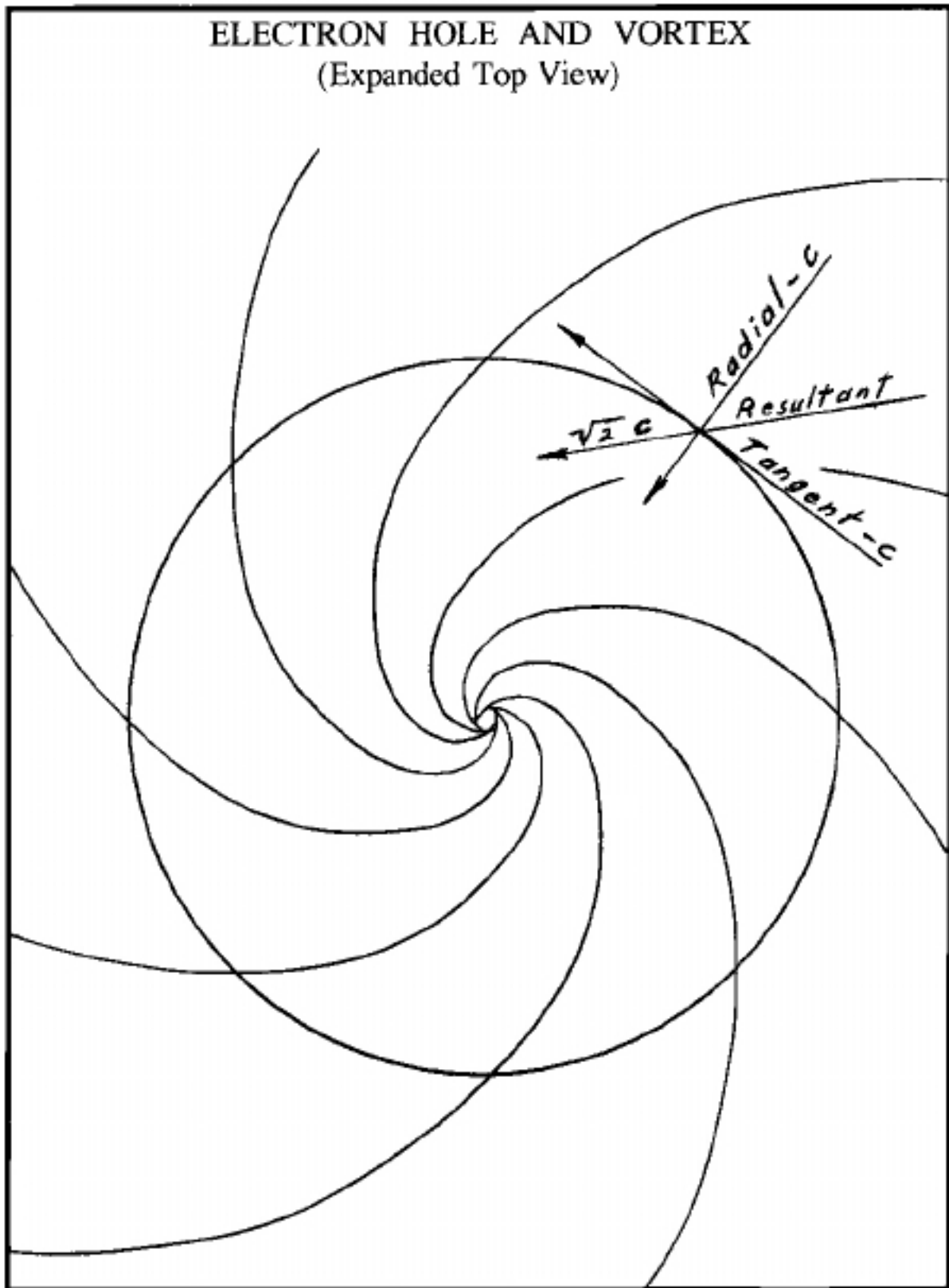
When the hole rhythmically changes direction as in the case of it generating a photon, there is more nether flow from the front and slightly less from the sides during its mid-movement between turns, and less nether flow from the front with slightly more from the sides as it slows either before, during, or after a turn. During this rapid periodic movement, the "mouth" of the electron can vary its shape between a near cylinder and a dome.

The nether moving toward the vorticle is being accelerated. The acceleration stops without a vacuum to power it. So it has less inertia to rely upon than would otherwise be the case to continue toward the vorticle center. The vacuum must be there for the nether to accelerate inward. When an electron moves along a radio antenna or within an atom, it collects nether as "low-energy strands" because nether prefers to use as little energy as possible. The electron velocity in the antenna is low relative to the velocity of the incoming nether, so each electron keeps its same flow inward without interruption. The flow bends as necessary to keep up with the electron.

The vector of the reaction acceleration of the nether in the radial direction of inward flow is the speed of light. This is the maximum speed that nether can attain in this direction, and the speed that it does attain in a very short time during the creation of a vorticle. Remember that inflow is limited by inertia because inertia opposes acceleration. Nether is accelerated to flow into the center of the vorticle.

At the electron center, the actual flow of nether is greater than lightspeed because the radial direction is only one component of the resultant of the inflow. The other component (vector) is tangential.

The inward nether radial velocity vector at the center of a vorticle is lightspeed. The tangential nether velocity vector is also lightspeed. The resultant is then $(2^{1/2})c$.



The mass-equivalent energy of the electron may be found by adding the kinetic energies from the tangential velocity vector, "c", and the inward velocity vector, "c". The equation for kinetic energy, "E_k", is

$$E_k = (1/2)mv^2$$

When $v = c$, the equation is $E_k = (1/2)mc^2$

So the equation for the sum of the two energies is

$$E_k = (1/2)mc^2 + (1/2)mc^2 = 2(1/2)mc^2$$

which is

$$E_k = mc^2$$

Using the resultant as the kinetic energy of the incoming nether, the equation is

$$E_k = (1/2)m[(2^{1/2})c]^2$$

$$E_k = (1/2)m(2)c^2$$

$$E_k = mc^2$$

Which is the $e = mc^2$ that Einstein made popular.

It is the product of the electron mass and the resultant velocity squared that is the energy released from an electron annihilation.

When an electron and a positron meet, both are annihilated and two gamma rays emerge with same energy that equates to the masses of the electron and positron according to

$$e = mc^2$$

The positron is like a mirror-image electron, so the energy of the two gamma rays and the energy released in the annihilation of the electron/positron pair is

$$e = mc^2 + mc^2 = 2mc^2$$

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KNOWNNS

These were the published values in the 1960s or somewhat later. They may have changed by now. They are presented here so that one can see the input values for the equations which follow.

Speed of Light = $c = 2.9979 \times 10^8$ meters/second

Electron Mass = $m_e = 9.10956 \times 10^{-31}$ kilogram

where the *kilogram is a unit of mass

Planck's Constant = $h = 6.757704 \times 10^{-35}$ meter kilogram second

where the *kilogram is unit of force

Gravitational Constant = $G = 6.6742 \times 10^{-11}$ meter³/kilogram second²

where the *kilogram is a unit of mass

[* The metric system has the same name for force as for mass, unlike the English system which uses pounds for force and slugs for mass.]

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THE ELECTRON SCHWARZSCHILD RADIUS

Because the electron has an inward-moving nether velocity at its center that is "c" (the speed of light) the light that the electron itself creates moves outward at a very low speed until it is much farther from the center than the electron's Scharzschild radius. Initially, light must move slowly to overcome the inward nether flow velocity, but as it moves outward it moves more and more into the regions of slower nether inflow - and light eventually begins to move outward at speed "c" relative to the observer (the velocity we see for light in a vacuum where nether is still).

The equation for the Schwarzschild radius, "r_s", is

$r_s = 2Gm_p/c^2$ in which "G" is the gravitational constant (which is not really a constant technically speaking), and m_p is the mass of the body that is preventing light from escaping. When applied to the

electron, m_p becomes m_e , the electron's mass, and the equation is altered accordingly.

$$r_s = 2Gm_e/c^2$$

This radius is about $1.3529559 \times 10^{-57}$ meter - which is the approximate radius of the electron hole into the fourth dimension. So we have a new "known" that is, when rounded off 1.3530×10^{-57} .

New Known

The electron radius at "c", which is its Schwarzschild radius = $r_s = 1.3530 \times 10^{-57}$ meter

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THE RUDIMENTS OF LIGHT CREATION

When Planck derived his constant, other scientists began to use it in their calculations. Wilhelm Hallwachs and Heinrich R. Hertz discovered that light waves sent at an angle to a metal surface can eject electrons from the metal. The velocities of the ejected electrons were proportional to the frequency of the incident light rather than the intensity of the light. It was the number of ejected electrons which was proportional to the intensity of the light. Einstein proposed the theory that this phenomenon, in which light appears to be concentrated in packages of "hf", means that each package can be absorbed only as a whole by an individual electron, so that the receiving electron is given an additional kinetic energy of "hf".

In 1923, Arthur C. Compton showed that X-rays scattered from matter have an equation that can also be derived by postulating photons with a momentum of "hf/c", where "c" is the speed of light.

Energy has the usual units of "mv²" and "mad", where "m" is mass, "a" is acceleration, "d/t" is distance/time and equals "v" which is velocity, and "f" is frequency which equals "n/t" which is number of events per second. Therefore, dimensionally,

$hf = h(n/t) = mv^2 = mv(d/t)n$. "n" is simply an integer. "n/t" is the frequency. So "h" has units of "mvd". Photons have an energy of "mv²" and a momentum of "mv" in basic units of mass, velocity, distance, and time. There will be more about this when light is discussed in detail. [Kinetic energy is $(1/2)mv^2$, but the foregoing is using dimensional analysis which does not require numbers in the equation, so the units are simply mv^2 .]

The electron "vibrates" to create a natural "photon" of light. It moves back and forth along a path. The electron moves along the path with its "mouth" forward to conserve energy. At the end of the path, after each time that it turns to go back, it creates a wave of nether acceleration that we call a light half-wave.

During the turning, the vortex is taking in nether at the speed of light and, at the same time, moving the nether tangentially at the speed of light. Of course, the resultant velocity is $(2^{1/2})c$.

In other words, as it vibrates to create a series of electromagnetic waves (EM), the electron accelerates in one direction with its "pole" or "mouth" turned forward. It next decelerates (accelerates in the opposite direction) to a stop and begins to accelerate in the opposite direction while rotating 180 degrees so that its mouth is pointed forward again. As it accelerates and decelerates in its directions of movement, it is still taking in nether at a constant rate at 90 degrees to its directions of movement. The number of coils of incoming nether, " n ", just after it begins to accelerate each time are what cause a half-wave of light to have its particular value for Mass.

Let " t_s " be the time of nether direction change during the electron turn-around when creating a light half-wave.

At the Schwarzschild radius for the electron, " r_s ", the tangential speed of nether is " c ", the speed of light. Velocity multiplied by the time taken during a journey yields distance traveled. [For example, moving at 60 miles per hour for half an hour gives us a distance traveled of 30 miles.] So the distance traveled in during time " t_s " at " r_s " at speed " c " is " ct_s ".

The circumference of the electron hole is $(2\pi)r_s$ - from the common equation for the circumference of a circle. If we divide the distance traveled by the circumference of the circle with " r_s " as its radius, we have the number of times that a tangential vector of nether goes into the fourth-dimensional hole in time " t_s ". Or from the viewpoint of a typical contemporary theoretical physicist, we have the number of revolutions of an electron in time " t_s " - the number of times the electron appears to spin around in time " t_s ". So

$n = ct_s / [(2\pi)r_s]$ which is the number of vortex revolutions (circumferences) which can move into the "hole" in time " t_s "

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VORTEX "COILS" AND MASS

The term "mass" that is used in physics today is actually the amount of nether "Mass" entering the hole into the 4th dimension in a unit of time. In most calculations for the same type of vortex, the particular unit of time is not very important because mass is a measure of flow. So mass can be equal to any value of " M " for the correct time in which it enters the hole. For example, if " M_g " enters in time " t_g ", $m = M_g /$

t_g . If the time " t_g " is doubled, then so is " M_g ", and the value of " m " does not change. During each time some of the incoming nether moves once around the vortex circumference at " r_s ", more Mass enters the vortex. This means that the "mass" of an electron is a flow that does not change due to it happening within any particular period of time. If the mass (flow rate) is limited by time, then the "mass" or "Mass" for that time can be used as a unit. For instance, for one second of time,

$m = (M/t)$ multiplied by one second = Mass or mass for one second of flow.

At " r_s ", both the radial inward and the tangential velocity vectors of nether equal the speed of light, " c ".

This means that the resultant of the two is equal to $(2^{1/2})c$.

The electron is a hole into the fourth dimension. It may be visualized by its construction. First think of a circular hole - just a circle hanging in the nether. If we look at the circle from its side, so that we see an infinitely thin line, on one side of the line nether motion is essentially normal. On the other side, nether is flowing into the circle in the form of a vortex. The side with the vortex is the "mouth" of the electron.

The hole moves nether through it into the 4th dimension, so the mouth of the electron may point in any direction within our three-dimensional space and does so. When entering a magnetic field, the hole orients itself for minimum energy expenditure and its mouth pulls it to the right, left, up, or down, according to the way the magnets are set up. Less energy is expended in moving the electron toward the inflow than is expended in pulling all of the inflow toward the electron mouth. So in most cases, the electron moves in the direction that its mouth is pointed.

The vortex is formed of fluid elements moving at 45 degrees to any line (radial) from the vortex center. The speed of these elements, when near the electron center, is $(2^{1/2})c$, which is the square root of two multiplied by the speed of light.

Near the electron center the nether element velocity vectors parallel to the radials have a magnitude of " c ", the speed of light. The nether element velocity vectors perpendicular to the radials are also equal to the speed of light. Kinetic energy equals $(1/2)mv^2$. So the kinetic energy of the incoming nether at " r_s " is $(1/2)m_e(2^{1/2})c^2$ where m_e is the rest mass of the electron. When simplified, this becomes $m_e c^2$. This is based upon what would happen were the hole to close - which stops the inflow and releases the energy.

The speed of light is the incoming nether velocity because it is a vector pointing at 45 degrees from the resultant. The resultant of $(2^{1/2})c$ is caused by the reactive acceleration of the nether moving from a place of nether higher pressure to place of nether lower pressure. In the kinetic energy equation, " m_e " is a measure of Mass flow and $(2^{1/2})c$ is the actual resultant velocity.

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THE LIGHT EQUATION

Energy

The equation hf/c for momentum implies that hf is photon energy. It is $E = hf$ that I call the "light equation". The light equation and the mass/energy equivalency equation, $E = mc^2$, are kinetic energy equations. It is true that $E = mc^2$ is supposed to show the "rest" mass/energy for the electron, but the only thing that is resting in this equation is the movement of the vortex relative to the nether around it. The vortex itself is very active as it sucks in the nether.

There are two ways to show kinetic energy, shown here as "E". The way that we are taught in school is with the equation

$E = (1/2)mv^2$. This equation is very misleading. Nothing that is moving ever squared its velocity. A baseball in flight has kinetic energy due to its velocity we are told. The fact is, that velocity is relative and the energy in the ball can only be known when the ball hits something like a brick wall. Due the fact that motion is relative, it is just as proper scientifically speaking to think of the brick wall the ball hits as moving toward the ball while the ball is "at rest".

The energy that is supposedly due to the ball's velocity squared is removed when the ball hits the wall. The removal of the energy is a change. Change in this universe is accomplished only by acceleration, jerk, or a higher derivative of motion.

When the ball hits the wall it suddenly decelerates. Looking at it from another standpoint, the ball accelerates to a stop. The distance through which this acceleration occurs is very short, but nevertheless there is a distance through which it occurs.

The equation $E = (1/2)mv^2$ is a mathematical shortcut that is handy to use, but extremely misleading when it becomes a supposed major fact. It came from the more "truthful" equation $E = mad$ where "m" is mass, "a" is acceleration, and "d" is the distance through which the acceleration is applied. The mass of the baseball was accelerated to a stop through a very short distance.

If we carefully examine $E = mad$ with dimensional analysis, we can see what happened to make it become

$$E = (1/2)mv^2.$$

So beginning with $E = m a d$,

acceleration is distance divided by time divided by time ($m d/t/t$). By substitution

$$E = m d/t/t d = m d/t^2 d = m d/t d/t = m v v$$

"v" is velocity which is d/t . But the second velocity is not the same as the first. It is the average velocity during the ball's acceleration to a stop. It is the first "v" plus the ball's velocity after it stopped, all divided by two: $(v + 0)/2$. This can be shortened to $v/2$ and the equation looks like this.

$$E = m v v/2$$

This, of course, is $E = (1/2)mv^2$.

It is easier to use this shortcut when calculating because one need not worry about acceleration or distance. One need only worry about the mass and the velocity, both of which are much more easily measured.

The Mass/Energy Equivalency Equation

$E = mc^2$ is another energy equation that is a mathematical shortcut. It is derived from the fact that nether is moving at its maximum velocity at the electron vortex center. This maximum velocity is caused by the reactive speed of the nether when it accelerates from a vicinity of higher nether pressure to a vicinity of lower nether pressure. Because we are dealing with a vortex, this maximum velocity is at 45 degrees to the inward velocity vector that creates the mass of the electron. It is also at 45 degrees from the vortex tangential velocity vector which is also "c". So the resultant magnitude of the vortex velocity is the product of the square root of two and "c".

$$v_{\text{maximum}} = (2^{1/2})c$$

The mass of the electron is actually a flow rate of nether Mass (with a big "M"). What we call "mass" is "Mass" per unit of time. A flow rate is a little different from a other quantities. Mass is flowing into the hole that creates the vortex. If we choose an amount of Mass that flows into the hole in one second as a standard, then our electron mass, " m_e ", can be measured by "M" divided by one second.

$$m_e = (1)M / (1) \text{ second}$$

Dimensionally, this is $m = M/t$

Now if we double the amount of mass going into the electron, we have:

$$m_e = 2M / 2 \text{ seconds.}$$

Tripling the amount of mass, we have:

$$m_e = 3M / 3 \text{ seconds.}$$

The Mass changes and time changes, but the flow rate, m_e , does not change. The fact that the mass is flow rate is important in understanding the equations of the electron.

The maximum inward velocity vector at the electron center is the speed of light "c". This is what creates the actual flow rate rather than the resultant velocity of the nether at the electron center. But this velocity vector is merely part of the mass flow equation, $m = M/t$, and does not enter into the energy/mass equivalency equation, $E = mc^2$, except as part of "m".

It is best that we remember from the discussions on gravity, that the nether flow into the electron is actually an acceleration at all points within its little gravity funnel. The Mass has accelerated from zero velocity at a nearly infinite distance, to a velocity of $2^{1/2}c$ at the electron center. So the average velocity is zero plus $(2^{1/2})c$ all divided by 2.

$$v_{ave} = (0 + 2^{1/2}c)/2$$

$$v_{ave} = (2^{1/2}c)/2$$

$$d = (v_{ave})t$$

$$d = [2^{1/2}c)/2]t$$

$$d = 2^{1/2}ct/2$$

$$a = 2^{1/2}c/t$$

Now we can better examine the energy equation for electron rest mass.

$$E = m a d$$

$$E = m (2^{1/2}c/t) (2^{1/2}ct/2)$$

$$E = m 2c^2/2$$

$$E = mc^2$$

The reason that electron mass can become energy according to the above equation is that the hole can

close under certain circumstances and the kinetic energy of the incoming nether can be converted to electromagnetic energy (gamma rays), temporary smaller vortices, or other entities such as neutrinos. This energy is very different from the energy in the light equation because one is a stoppage of inflow and the other is a transverse acceleration of the inflow over a very short time.

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FINDING t_s

Let:

a = acceleration

c = the speed of light

d = distance over which the acceleration of c/t moves nether inflow

f = frequency

h = accepted Planck's constant (dimensionally $h = \text{madt}$)

E_k = kinetic energy

m_e = Mass flow into an electron

m_s = Mass flow into an electron in time t_s

t_s = time of nether direction change during the electron turn-around when creating a light half-wave

v = velocity

The equation for kinetic energy can be either

$$E_k = (1/2)mv^2$$

or

$$E_k = mad$$

Planck's constant, "h", divided by time is the energy in one light wave. The number of waves in one version of a "photon" (if waves can be considered) is the frequency of the photon - and its energy is given by the product of "h" and frequency "f". For the half wave, the measure is "h/2" multiplied by "f". Frequency is the number of waves (cycles) divided by time. So hf is h multiplied by the number of waves divided by time, or (h/t) multiplied by the number of waves. This means that one wave has the energy of h/t multiplied by one. We can eliminate the one and call it simply h/t and the energy of the half-wave is simply h/2t.

Repeating in different words, the quantity "hf" uses a frequency that is an integer "i" divided by a time of one second, "i/t" which is the same as "h(i/t)". So a frequency of one, which is a single wave, can be presented as "h/t" because an integer of one is involved and will not show in the result. The half-wave energy is then half of "h/t" or "h/2t".

The kinetic energy equation $E = h/2t$ is the result of an electron rotation of 180 degrees taking place in time t_s . Before this rotation, the electron was moving a distance to arrive at the place of the rotation.

After the rotation, it was moving back in the direction from whence it came. The electron is traveling a repeating course or cycle, and a 180 degree rotation is at the end of each half-cycle. At the other end of the cycle, there is another rotation of 180 degrees (the other half of the energy in h/t is expended). One complete cycle of two 180 degree rotations creates the energy that is " h/t ".

Each rotation creates change or acceleration of nether. The movement of the electron between rotations is a velocity and since velocity is relative, no apparent change takes place except for the time taken to move from one 180 degree rotation to the next. This time is important because it creates the integer part of the frequency. A long time between rotations creates a lower frequency than a short time between rotations. The energy is from the rotations. A higher frequency means more rotations than a lower frequency, so higher frequencies have more energy than lower frequencies.

The half-wave is the correct place to begin, and the kinetic energy equation that is for the light half-wave is

$$h/(2t) = mad \text{ or } (1/2)mv^2$$

By moving the divisor of "2" on the left side of the equation to right side (muliptying both sides by 2), we have

$$h/t = mv^2 = 2mad.$$

The "m" in the above equation is the mass of the electron which is the flow measure of nether inward.

$$m = M/t$$

" m_s " is the amount of Mass of nether entering the electron center in time " t_s ".

$$m_s = m_e(t_s/t)$$

The "a" is the transverse acceleration " $2c/t_s$ " caused by the passage of a light half-wave and used in the production of a light half-wave. This is not a true acceleration of a Mass of nether but behaves mathematically as if it were. This is explained more fully in Book Four of *Behind Light's Illusion* on light. True inward acceleration cannot exceed " c/t ". However, the rotation of the electron causes the effect of an acceleration of $2c$. [When one turns a garden hose 180 degrees from one direction of flow to the opposite direction, the flow changes to double the flow velocity relative to the first direction of flow. But the rate of flow in the hose did not change.]

The "d" is the distance that the nether inflow of mass is moved in a tranverse manner by the acceleration " $2c/t_s$ ", measured at radius " r_s " which is the electron Schwartzschild radius. The "d" is actually not a straight-line linear distance. The "ring" of the outward moving transverse wave begins with "d" as many traversings of smaller circumferences, and becomes an arc measure within a single circumference as the light half-wave moves farther outward. As an arc measure it is both " $ct_s/2$ " and " $(2\pi)rn/2$ ". It is " $ct_s/2$ " because the average velocity during the acceleration is "c" and " t_s " is the tiny amount of time in which the electron changes direction at the end of each of its runs to produce the half-waves. The divisor of two is used because the average distance for all parts of the incoming Mass to move into the electron center in time " t_s " is the greatest distance divided by two. The expression " $(2\pi)rn/2$ " is the arc distance using the circumference of the "ring" which is " $(2\pi)r$ " and the number of times around it which is "n". So the equation for photon energy when used for the half-wave becomes the following.

$$h/(2t) = m_s(2c/t_s)[(2\pi)rn]/2]$$

$$h/(2t) = m_s(2c/t_s)[ct_s/2]$$

$$h/(2t) = m_s c^2$$

$$h/(2t) = m_e(t_s/t)c^2$$

$$\text{Equation 1: } h/(2t) = m_e(t_s/t)c^2$$

The equation can also be

$$h/2) = m_e t_s c^2$$

and solved for t_s

$$t_s = h/(2m_e c^2)$$

$$t_s = 4.12702 \times 10^{-22} \text{ second}$$

New Known

$$\text{Turn-around time for the electron} = t_s = 4.1270 \times 10^{-22} \text{ second}$$

Compton's momentum is a paradox that nether theory dispells. Ordinarily, the shortcut equation for kinetic energy is

$$E_k = (1/2)mv^2.$$

Momentum is "mv" (in this case, "v" is equal to "c"). To find momentum from energy, one must divide energy by "(1/2)v" (in this case, "(1/2)v" is "(1/2)c". Compton and Einstein divided energy by "c" which meant that the momentum found was that of the half-wave.

A photon energy for a lightwave is "hf ". It was divided by "c" for the momentum of a lightwave. This was found experimentally and is correct. However, what Compton found was the half-wave momentum that exists between electron reversals. The momentum is the tangential (transverse) velocity of the mass of the outward-moving "ripple" of that is half-wave. It reverses after each electron reversal. The only time it can be measured or experienced as either momentum or energy is when it is moving one way or the other - but not both simultaneously. The only kind of momentum that Compton or anyone else could find is the that of the half-wave.

Compton's half-wave momentum is

$$h/(2ct) = m_e(t_s/t)c$$

Equation 2: $h/(2ct) = m_e(t_s/t)c$

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FINDING n

Looking at the half-wave equation in another way, the term "d", used for a certain distance over which the "acceleration" " $2c/t_s$ " is applied, is actually the sum of many distances, each of which is a circumference of the circle formed by " r_s ", and also forming a dimension of the outward-moving acceleration of Mass that is the half-wave for light. The Mass is strangely shaped because the outward movement of the first part of the acceleration that is the half-wave begins when the electron is beginning to rotate, and the first part of the the half-wave is, therefore, starting its journey earlier than the other portions of the half-wave. So "d" is more like a means of summing up the number of vortex "revolutions" after an electron reversal. At the core of the electron it is equal to $[n(2\pi)r_s]/2$.

The actual length that is the extra dimension, "S", is $n(2\pi)r_s$. However, this length begins to move into the electron center immediately and the first part to move in does not move the distance "S". In fact, only the last part to move in actually moves the full distance. When the math is done, we find that the

correct distance, on average, that each part moves in time " t_s " is " $S/2$ ". So

$$d = n(2\pi)r_s/2 = ct_s/2.$$

$$\mathbf{d = 6.1862 \times 10^{-14} \text{ meters}}$$

$$d = n(2\pi)r_s/2 = n(\pi)r_s$$

$$n = d/[(\pi)r_s]$$

$$\mathbf{n = 1.4554 \times 10^{43} \text{ revolutions}}$$

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New Knowns

The electron radius at "c", which is its Schwarzschild radius = $\mathbf{r_s = 1.3530 \times 10^{-57} \text{ meter}}$

Turn-around time for the electron = $\mathbf{t_s = 4.1270 \times 10^{-22} \text{ second}}$

Length of element moving into electron center in time $t_s = \mathbf{d = 6.1862 \times 10^{-14} \text{ meters}}$

Number of vortex revolutions in time $t_s = \mathbf{n = 1.4554 \times 10^{43} \text{ revolutions}}$

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DISCUSSION AND CONCLUSIONS

The electron reversing direction is what causes the half-wave of acceleration. Before each reversal the electron is moving in its polar direction, and after each reversal the electron is moving in its polar direction. During the reversal, the electron vortex is taking in nether at a constant rate, producing a number of "revolutions" of nether entry equal to " n " which is the effect that creates the half-wave acceleration of light. The electron movement between half-wave accelerations is a velocity that causes the effect of frequency. The reversals are the accelerations that become the energy that we call Planck's constant.

The question arises as whether or not there is a way to crosscheck the value of " t_s ".

The half-wave energy passes into the receiving electron in about 2×10^{-22} second. This is a distance of about $(3 \times 10^8)(2 \times 10^{-22})$ which is approximately 1×10^{-14} meters or a ten-thousandth of an angstrom.

The highest known frequencies are about 1×10^{22} . These have half-wavelengths that are essentially the same (within the limits of our ability to measure them) as the distance for the electron to travel after its turn each time. Apparently, the electron requires a certain space or time to make its turn and that is the reason for the time used which is called " t_s " here.

" t_s " should be the time used to make one half-wave of the highest possible frequency. Therefore, the inverse of the highest known frequency multiplied by 2 should be equal to t_s . The inverse of the frequency for the highest known gamma radiation appears to be very close to the correct value.

It should be remembered that the half-wave of acceleration that is part of what we call a photon, moves outward at what is literally a crawl at the beginning and builds up speed as the distance from the electron center increases.

It seems that when producing a typical series of light waves (not the highest frequencies) the source electron sends a light half-wave as it changes direction, moves a distance and changes direction once more, sends another half-wave, and so on. The portion of the half-wave of acceleration that is received is the same for any frequency and is caused by " n " complete revolutions of nether entering the vortex. The distance the electron travels between sending the new acceleration through the nether is what governs the frequency or distance between half-wave receptions.

The Schwarzschild radius for the electron may not show the true radius where the incoming velocity of nether is equal to " c ". The electron is a vortex creating a tiny gravity funnel with a cross-section, at the magnitude of " r_s ", that is a hemisphere. The usual gravity funnel has a cross-section that is spherical. So the electron must have a vortex radius at incoming nether velocity " c " that mimics the effect of a spherical cross-section. In other words, the cross-section at incoming nether velocity " c " may be required to have the same area as would a spherical cross-section at incoming nether velocity " c ". This means that the actual " r_s " of the electron is probably close to the product of the square root of two and its supposed " r_s ". This radius can be called " r_e ".

Regardless, it is the " r_s " rather than the " r_e " or the actual hole radius that should be the basis of the flow into the hole for purposes of these calculations.

According to my experiments with vortices, the actual radius of the hole into the 4th dimension should

be double the value of " r_e " and can be called " r_h ". The hole encloses the vortex as it turns into the fourth dimension.

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More New Knowns

Probable electron vortex radius = $r_e = 1.9134 \times 10^{-57}$ meter

Probable electron hole radius = $r_h = 3.8267 \times 10^{-57}$ meter

SPIN

The definitions that follow in this section are from engineering physics, mechanics, etc. - things engineers have known and used for many years. If one still thinks that the electron is not a vortex, and that it is a gyroscope-like particle, the following may cause him to pause.

Electron spin is more formally called electron angular momentum. Angular momentum is a stepchild of linear momentum. Linear momentum is the product of mass and velocity, " mv ". Linear momentum is handy in tracking some kinds of motion without having to use the energy equations. However, momentum is based upon velocity and velocity is always a relative quantity. So momentum changes according to that to which velocity is relative. Energy is never really noticed until something accelerates something else and really has nothing to do with velocity except as a shortcut in math.

Angular momentum is based upon linear momentum with a radius of curvature added so that it becomes a means of measuring through the use of angular velocity. Its use is necessary when rotation is involved.

Electron spin is, in reality, the means by which the vortex can exist. To those who think of the electron as a particle, spin is angular momentum. By definition, the angular momentum, p , of a rotating body such as a gyroscope is

$$p = Iw = mr_g^2w$$

where I = moment of inertia, w = angular velocity, r_g = radius of gyration, and m = mass of the rotating body.

Center of Gyration

The center of gyration of a body is defined as a point that, if all the mass of the body were concentrated at that point, its moment of inertia would be the same as that of the body. In other words, this is the center about which the body can rotate without moving linearly or vibrating.

Torque (Moment)

When working with rotation, "torque" or "moment" is the product of force and the distance between the force and the center of rotation. The distance is called the "moment arm", and the force is simply the product of mass and acceleration [$F = ma$]. So the product of force and the radius or moment arm is the torque "T" or moment [$T = Fr = mar$].

Moment of Inertia

The moment of inertia " I " of a body is defined as the sum of all moments of inertia of its parts. The moment of inertia of a part is defined as the product of its mass and the square of its distance from the center of gyration. The distance from the center of gyration is " r_g " known as the radius of gyration. The equation is

$$I = mr_g^2$$

The need for a moment of inertia comes from angular velocity, and the energy and momentum of rotation or gyration. The sum of the moments of inertia of various parts of a body is difficult to calculate with linear motion. The distance that one part is from the center of gyration is not the same as the distances of the other parts. Therefore, when calculating kinetic energy in a linear fashion, the velocity squared part of

$$"(1/2)mv^2"$$

is not easy to average. Or when calculating the momentum in a linear fashion,

$$"mv"$$

the velocity part is not easy to average. However, if it were possible to have all of the parts move the same velocity, the calculation would be simple.

By going to a circular measure, the angle of rotation per length of time is the same for all of the parts. When translating to circular measure, in place of " v " we have $(2\pi)(n/t)$. The expression (2π) is one circumference measured in radians. A radian is the same length as a radius but is a circular linear measure. There are 2π radians in one circle. The " n/t " is the number of circumferences of rotation per

second. The expression " $(2\pi)\{n/t\}$ " is usually known as " w ", and is the circular velocity. It applies to all parts of the rotating body equally, making it very convenient for use.

Radius of Gyration

The radius of gyration of a body is defined as the square root of the quantity that is the moment divided by the mass of the body.

$$r_g = (I/m)^{1/2}$$

This is just another version of the equation above for the moment of inertia.

$$I = mr_g^2$$

Angular Velocity

Angular velocity of a body is its circular movement per unit of time. The circular movement is usually calculated in radians, with 2π radians for every 360 degrees. An angle in radians is the arc distance divided by the radius. Such an angle divided by time is angular velocity. The usual equation is

$$w = (2\pi)(n/t)$$

This comes from a linear velocity of $(2\pi)r(n/t)$ in which " $(2\pi)r$ " is one circumference of a circle, and " n/t " is the number circles traversed in one second. For angular measure, it is divided by " r " which converts it to radians per second rather than a straight linear distance per second.

Linear Momentum

Linear momentum equals the product of mass and velocity.

$$\text{Linear momentum} = mv$$

Linear momentum of a body rotating about an axis is " mv " in which " v " is $(2\pi)r_g(n/t)$.

$$\text{Linear momentum of a body rotating about an axis} = m[(2\pi)r_g(n/t)]$$

Angular Momentum

Angular momentum is the linear momentum about an axis multiplied by its moment arm.

The linear momentum about an axis is $m[(2\pi)r_g(n/t)]$.

The moment arm is r_g .

Angular velocity is: $w = (2\pi)(n/t)$

So the angular momentum " p " is

$$p = m[(2\pi)r_g(n/t)]r_g$$

$$p = mr_g^2[(2\pi)(n/t)]$$

$$p = mr_g^2w$$

Using mr_g^2 as the moment of inertia " I " makes calculating easier.

$$p = Iw = mr_g^2w$$

As was shown above.

Finding r_g

Let us assume that we have a cylinder like a length of pipe. The wall thickness of the pipe is infinitely small and it is rotating about an axis at its center where fluid would flow if the pipe were in use. This means that all the parts of the pipe's mass are the same distance, " r ", from the axis of rotation. Then the torque or rotational momentum can be computed in a linear fashion is " mrv " where " m " is the sum of all the masses in the pipe, " r " is the distance of all of the masses from the axis of rotation, and " v " is the linear velocity at the pipe wall.

" v " may be in radians per second or " $(2\pi)r(n/t)$ " where " n " is revolutions and " n/t " is revolutions per second. Then

$$mrv = mr[(2\pi)r(n/t)] = (2\pi)mr^2(n/t).$$

$$p = mr^2[(2\pi)(n/t)] = mr^2\omega.$$

The reasoning above is especially true in the case of electron momentum which has the same *Mass* moving inward at any radius and therefore has the same *mass* at any radius. So for the electron,

If we can solve the equation " $p = mr_g^2\omega$ " for " r_g ", we may have the radius of gyration.

However, the electron vortex extends to infinity and has a disc-like shape that is distorted by other forces at distances very far from its center. So it has a radius of gyration that ranges from about 10^{-57} meter (which is the Schwarzschild radius) to infinity. It has no particular radius of gyration because " m " (the total inward nether flow rate) is the same at all radii and the product of velocity and circumference is always the same at all radii.

To elaborate, the transverse velocity of the of the incoming nether is the same as the incoming velocity at all radii, and is proportional to $1/r$ (same as the radius to the minus one power) - while the circumference at all radii is proportional to the radius. This makes the product of the velocity and the circumference the same at all radii, meaning that the product of the mass, velocity, and circumference are the same at all radii.

The result of the above is that the angular acceleration for the electron, according to the definition in the book, can be found at any radius where the mass and velocity are known. And there is a gyroscopic action which depends upon gyration.

The electron produces an acceleration that we call planck's constant and moves outward in the form of a light wave. It takes about 10^{-22} second for the electron to rotate to produce half of this wave. The relatively slow rotation indicates that the electron has a tendency to remain oriented in space until acted upon by a force (one of the properties of a gyroscope). This proves that the electron does have something like angular momentum. But this acceleration is merely a change in velocity caused by the 180 degree rotation of the electron during the production of a half-wave of light.

Rigid Body vs a Vortex

The foregoing has been used to prove that the electron has angular momentum when treating it as a rigid body. But the vortex is fluid and very "flexible" as compared to a rigid body. This is not so true of the vortex center where the forces keep the nether in a strong grip. The incoming nether takes a shape similar to a modified cylinder or a hemisphere. Although the electron Mass increases in density as it approaches the electron center, the fact that the electron acts like a small gravity funnel except for a difference in shape causes its mass to remain the same at any distance from its center.

[The electron's incoming nether (that produces micro-gravity) takes almost a disc-like shape as

compared to the spherical shape of gravity funnel for a planet.]

What is usually considered the vortex in nether theory and has been treated as a rigid body, is actually the part close to the electron center. This is the part of the electron where the radius is such that the exiting accelerating half-waves have not achieved lightspeed yet due to a very fast nether inflow. Outside of this distance from the electron center, there is more flexibility and the speed of the incoming nether is quickly overcome by the light half-wave. This outside part is a reality, but difficult to use in working with angular acceleration because the electron nether flow becomes masked or distorted by other nether flows. This is not a problem because we can use the part that we know best to establish angular momentum (since any radius will do for this purpose).

Electron Angular Momentum

The electron has an innate tendency to maintain something which seems to be angular momentum even though a specific radius of gyration does not exist. At any radius from the electron center, a theoretical mass moves perpendicular to the theoretical radius at a theoretical angular velocity. The electron radius of gyration is any radius we can use from about 10^{-57} (the Schwarzschild radius) to infinity. But the easiest radius to use is the Schwarzschild radius itself because here we know that the velocity of both the incoming nether and the tangential nether is the speed of light "c".

Actually, the hole that is the electron center creates a vortex that is the electron. The vortex extends to infinity even though the electron center is constantly re-orienting itself. Because it is a lightweight entity re-orienting itself frequently, most of the vortex becomes eclipsed by other forces as the radius increases. So it does not act like a body extending to infinity. Also, the geometrical law for nether inflow into the electron means that the higher speeds of inflowing Mass at shorter distances from the electron center dominate the vortex that extends outward. This domination is so great that the electron mimics a solid body - even though the electron vortex is actually a flexible disc or hemisphere. Yet it is true that the use of the equation for a solid body - in the strictest sense - is improper for electron angular momentum.

Quantum Spin

Angular momentum is said to be already known as " $-h/2$ ", and the equation which describes it is of theoretical value for use in discovering the nature of a photon. But this is not angular momentum.

In quantum theory, spin is considered a quality that can be accepted but is not really angular momentum as we understand it. The Bohm interpretation of quantum theory is not far from nether theory in many ways, but is largely designed to express "large-scale" results without knowing the details of how these are achieved. In quantum theory, the Planck unit of action, " h " equals " $h/(2\pi)$ ", and is the unit used for spin.

The value $h/(2\pi)$ is used for the Planck unit of action. It comes from " hf " as the energy of a photon - " hf " is the same as the energy in one lightwave multiplied by the number of waves in a photon. And " f " is merely the number of waves per second. If one assumes that a wave is a cyclic thing produced with a circumference, then " 2π " is the circumference of that wave in radian form. So $h/(2\pi)$ is a logical means of having a unit of action for the electron.

" S " is spin and " $S = M_s h$ ".

" M_s " is the quantum number which can be " $-1/2$ " for electron spin "up" or " $1/2$ " for spin "down". Most of the time " M_s " and " h " are combined so that " h " is a spin of one and " $h/2$ " is a spin of " $1/2$ ". This value of electron spin has been determined by math and experiment when dealing with photons.

So for the electron, the unit of quantum spin is considered " $h/2$ " or " $h/(4\pi)$ " - and h is called the "Planck unit of action".

Calculating Electron Angular Momentum

Angular momentum, " p ", is usually defined as the product of the moment of inertia, " I ", and the angular velocity, " w ". With " v " for velocity, " n " for number of revolutions, " t " for time, and the subscript " g " for "gyration", the correct equations follow.

$$p = Iw = m_g r_g^2 w \quad n_g = n/t = v_g / [(2\pi)r_g]$$

$$w = (2\pi)(n/t)$$

$$w = (2\pi)n_g$$

$$w = (2\pi)\{v_g / [(2\pi)r_g]\}$$

$$w = v_g / r_g$$

$$p = m_g r_g^2 w$$

$$p = m_g r_g^2 (v_g / r_g)$$

$$p = m_g r_g v_g$$

The value of " $r(mv)$ " for the electron does not change as one moves from its center outward. So we may use the mass for the electron " m_e ", the Schwarzschild radius " r_s " and the velocity at the Schwarzschild radius " c " (the speed of light) in the equation.

$$p = m_e r_s c$$

$$p = (9.10956 \times 10^{-31} \text{ kilogram})(1.3530 \times 10^{-57} \text{ meter})(2.9979 \times 10^8 \text{ meters/second})$$

$$p = 3.6949819 \times 10^{-79} \text{ kilogram meter}^2/\text{second}$$

The above value is incredibly small, but that appears to be the answer.

New Known

Electron Angular Momentum = $p = 3.6949819 \times 10^{-79}$ kilogram meter²/second

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OUR VIEWING ORIENTATION

A transparent vortex and its salient features are very difficult to portray on a two-dimensional piece of paper or on a computer screen. The only way to see it is the mind's eye. To accomplish this, a viewing orientation is necessary. So, let us assume that the electron is moving upward with its mouth on top.

If one were to view the electron from the "front" (the top) as it moves, the revolutions would appear to be clockwise, according to convention. When the electron rotates to move in the opposite direction, one would be viewing it from the "rear". From the rear, the revolutions appear to be counter-clockwise. Viewed from the side, as most of the incoming nether would "see" it, the incoming nether would be first moving to the left. When the electron rotates, the new direction would be to the right.

The electron rotation at this turn-around point causes the incoming nether to reverse the direction of its revolution. So the nether would be moving first along a tangential vector to the left at the speed of light. During the rotation, this vector reverses itself so that the nether is moving along the same tangential vector which now is pointed to the right.

Specifics of Rotation

The rotation occurs, in all cases, within a span of time that we have labeled " t_s " - which is approximately 4.1270×10^{-22} second. This is a fraction of a second that looks about like this:

4/10,000,000,000,000,000,000,000 second

which is a very short time for us, but a very long time for an electron.

The "zero point" where the vector points upward is what I call the "centerline" at which the observer or receiver of a light wave is "located" relative to the transverse wave.

The shifting also causes an acceleration wave (that is the light half-wave) to move outward from the electron. This wave moves outward in an expanding circle about the electron. It travels outward at the speed of light and moves the nether from clockwise revolutions (as viewed from the electron front) to counterclockwise revolutions.

An acceleration of " $2c/t_s$ " seems to be an impossibility. If it were a true acceleration it would be impossible. However, it is not a sudden change in velocity. Instead, the velocity remains constant at the radius and is re-directed a little bit at a time as the electron rotates. It is not the same nether that is being accelerated, but a new length of nether with each small re-direction, that has a slightly different vector (direction) than the one before it and the one after it. If you were to take a garden hose and aim its stream of water in one direction and then turn it slowly so that the stream went in the opposite direction, you would not be causing any water to be accelerated from the first direction to the second. It would be different water moving in each direction. In the case of the electron, it is taking in water like the garden hose working in reverse, but the principle of different water still applies.

Perhaps it still appears that this sideward "acceleration" is too great. If so, a further examination is advisable. The circumference at the Schwarzschild radius is " $(2\pi)r_s$ " which is about 8.5×10^{-57} meter.

Half of this circumference is the distance that is rotated in time " t_s ". This is a distance of 4.25×10^{-57} meter. The number of nether revolutions entering radius " r_s " in this time is about 1.4×10^{43} . The distance that one element of nether would be shifted along the half-circumference in the time for one revolution is $4.25 \times 10^{-57} / 1.4 \times 10^{43}$ meter. This is about 3×10^{-100} meter in time " t_s/n ". The distance of 4.25×10^{-57} meter divided by " t_s " which is 4.127×10^{-22} is the velocity of shift, about 1.03×10^{-35} meter/second. This is rather slow when compared to the speed of light around the circumference.

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SPIN MAGNETIC MOMENT

Although in some texts (perhaps all new ones) this is called the spin magnetic dipole moment, the "dipole" portion is unnecessary since physicists finally seem to agree that a magnetic monopole cannot exist.

The magnetic moment is a way of representing the electron's resistance or preference, depending upon one's viewpoint, to change its direction in a magnetic field. The resistance is based upon the mass in the magnetic moment equation, and the preference is based upon the charge and the rest of the elements of the equation.

The equation is $u = -2m_s u_B$ where "u" is the magnetic moment, " m_s " is the spin magnetic quantum number, and " u_B " is the Bohr magneton.

$u_B = (h/2\pi)(e/2m)$ where "e" is the charge of an electron.

What we have is the two forces which prefer to change the electron orientation when it is in a magnetic field, given as "e", charge, and " $h/2\pi$ " or "h" (the Planck unit of action), showing electron spin, divided by the mass which is actually "M/t", the inward flow rate of nether, which provides the electron with inertia.

[Vectors were once considered to have direction and magnitude with their direction indicating their direction of action. Then physicists developed a way of thinking that would make it easy for them to show electron spin. This was fine for electrons but created confusion when applied to other fields. So a vector may or may not be a true vector and a moment may or may not be a true moment in the old sense, as they are now represented. Bear this in mind when you work with contemporary texts. If you studied physics after the changes occurred, this explanation may clear up some residual confusion that the new convention has caused.]

In the battle between force and inertia, force ultimately wins, but time is used in the winning, so we have such things as the magnetic moment which helps us with things like "magnetic resonance" which has become a boon to science and technology.

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ELECTRON PERSONALITY

The electron is a very unique vortex with a "mind" of its own. It has a preferential orientation/configuration for its internal structure which "overflows" into its environment. Although its internal configuration may change very slightly and only momentarily when external factors force it to do so, the

electron would prefer to keep a particular one.

The one it chooses to keep is based upon the minimum energy required for it to maintain its vortex. A certain balance must be achieved between the polar and equatorial flow patterns which are actually one pattern of the two blended into one another.

One of the things the electron prefers in its environment is constant nether velocity relative to itself. Any change in its environmental nether velocity/acceleration causes the electron to readjust its orientation and/or its own velocity/acceleration. Since the electron's environment is anything but static, and the electron is a very lightweight vorticle, the electron is constantly reacting to maintain its preferred internal configuration. This means that every electron is always in motion.

When an alternating electromotive force causes electrons to move in a wire such as a sending AM antenna, after a very quick initial acceleration, the electrons are all moving at the same speed because electrical current impeded by the wire's resistance causes this to happen. The electrons "stack-up" at one end of the antenna and the electromotive force, pushing on the opposite direction along with pressure from the "stacked" electrons, causes electron movement in the opposite direction. Each time electron movement in the antenna begins, the current builds with time, meaning new electrons are added to the total and the "flux field" around the wire is increased in its intensity.

The accelerating electrons adjust their environment so that it becomes a new nether flow pattern. This adjustment in their environment is also an adjustment in the environment of any nearby electrons such as those in an adjacent receiving antenna. So those in the adjacent wire readjust to accommodate themselves to the new environment. This readjustment takes the form of a polar orientation opposite to that of the electrons in the sending wire. The new orientation is accompanied by a desire to move in their polar direction which is more energy-efficient (less nether acceleration necessary). Each new set of electrons that are accelerated in the sending wire makes for other electrons oppositely accelerated in the receiving wire.

When a single electron vibrates to send out a photon, it is alternately accelerating and decelerating to alternately increase and decrease the intensity of the "flux field" it creates. This is a different way to alter the intensity than that of the antenna.

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SUMMARY OF MATHEMATICAL VALUES

What follows is a list of the relevant values found rounded to four digits after the decimal point (because

further digits are probably not very correct).

Known in Contemporary Physics

Speed of light = $c = 2.9979 \times 10^8$ meters/second

Electron Mass = $m_e = 9.1096 \times 10^{-31}$ kilogram

where the *kilogram is a unit of mass

Planck's constant = $h = 6.6252 \times 10^{-34}$ Joule second = 6.7577×10^{-35} meter kilogram second

where the *kilogram is unit of force

Planck unit of action = $h = 1.0755 \times 10^{-35}$ meter kilogram second

where the *kilogram is a unit of force

Gravitational constant = $G = 6.6742 \times 10^{-11}$ meter³/kilogram second²

where the *kilogram is unit of mass

Those found with Nether Theory (math shown)

Computed electron Schartzschild radius = $r_s = 1.3530 \times 10^{-57}$ meter

Probable electron vortex radius at "c" = $r_e = 1.9134 \times 10^{-57}$ meter

Probable electron hole radius = $r_h = 3.8267 \times 10^{-57}$ meter

Time for incoming nether Mass to create the light half-wave = $t_s = 4.1270 \times 10^{-22}$ second

(The time for one turn-around of the electron when creating light.)

Length of element moving into electron center in time $t_s = d = 6.1862 \times 10^{-14}$ meter

Number of vortex revolutions at radius r_s in time $t_s = n = 1.4554 \times 10^{43}$ revolutions

Number of vortex revolutions at radius r_e in time $t_s = n_e = 1.0290 \times 10^{43}$ revolutions/second

Electron Angular Momentum = $p = 3.6950 \times 10^{-79}$ kilogram meter²/second

Electron radius of gyration = $r_g = \text{anything between } r_s \text{ and infinity}$

Products That Remain Constant at All Radii Above r_s

$vr = 4.0562 \times 10^{-49}$ meter²/second

$mvr = 3.6950^{-79}$ kilogram meter²/second This is angular momentum.

$nr = 1.9661 \times 10^{-14}$ meter revolutions

Those found with Math not shown here

Incoming Mass seconds in time $t_s = M_s = 3.7595 \times 10^{-52}$ kilogram second

where the *kilogram is a unit of mass.

Incoming Mass seconds in one electron vortex revolution at $r_s = M_{as} = 2.5832 \times 10^{-95}$ kilogram second

where the *kilogram is a unit of mass.

Incoming Mass seconds in one electron vortex revolution at $r_e = M_{ae} = 3.6531 \times 10^{-95}$ kilogram second

where the *kilogram is a unit of mass.

[* The metric system has the same name for force as for mass, unlike the English system which uses pounds for force and slugs for mass. The metric system was devised to create a standard that was "natural". Actually, the metric system is erroneous as to the "natural" part and fails to properly address the difference between force and mass. Perhaps it could be improved by calling the force unit a "Kram" and keeping the mass unit as the "gram".

When working on these things, I was constantly spending more time converting units, checking and re-checking the conversions, than I was spending with the theory itself. Our systems of measurement came about from different branches of science in different countries at different times and they do not easily work with one another. In fact, measuring systems are much like people in committees. The more there are, the more is the obstruction of progress and the obfuscation of thought. It may be said that what we

have created is an abomination that is a non-system. Perhaps we can eventually find a way to have a reasonable standard system of measurement that works with all disciplines of science and engineering.]

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WHY A NEW UNDERSTANDING?

Some detractors of nether theory have asked why we need it. What good is it? Does it help us with practical matters? Aren't the old theories sufficient? Why waste time with a new one?

The implications of nether theory, when combined with available knowledge, is startling - and in the long run, perhaps a hundred years from now, it may have done as much to alter our perceptions as the discovery of the principle behind the wheel.

When the Wright brothers first flew, there were many who considered the airplane to be a toy without any future. The first flight demonstrated that something heavier than air could fly. The principle of a wing with a curved top to create lift led to propellers being built with a cross-sectional curve. Improvements in engines and new materials joined in, and aircraft evolved into supersonic jets and space flight.

It was curiosity and a desire for greater freedom that led to automobiles, aircraft, computers, and much more. Why is an orbiting telescope that can find galaxies millions of light years away worth anything? Why should we know anything about other galaxies? Why should we know about microbial life? Are we supposed to continue to learn about the universe? Our ancient ancestors, who lived many thousands of years before the dark age, believed that to know the works of the Creator was to know more about the Creator. Science and religion were one, curiosity and reason were encouraged.

Quantum theory and Einstein's relativity do not agree. String theory appears to be an incomprehensible joke. Particle theory is an embarrassment, and high-energy colliders are a waste of resources. Perhaps there is more to learn once we have taken the first step toward understanding a true unified theory.

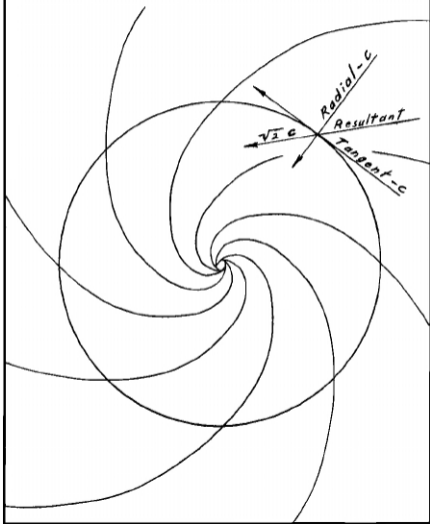
Our universe appears to be composed of a perfect fluid which is filled with energy in the form of motion. Concentrations of this energy form vortices which, in turn, are centers of energy. Radiated energy creates vortices which radiate energy. Along the way these vortices concentrate to form suns. Suns form other arrangements of vortices, explode, and the debris forms planets and other suns. But the basic principle remains: energy creates what we call matter, and matter creates more energy. Nothing appears to be lost and nothing appears to be gained. Energy equals mass multiplied by the speed of light squared. And creation continues, fueled by destruction. Sometimes this cycle leads to pleasant experiences, and sometimes it leads to agony. Perhaps greater knowledge and greater wisdom will eventually lead to less conflict and a properly guided cycle.

***God has made all things out of nothing
because...
even though the world has been made of some material,
that material has been made out of nothing.***

Augustine

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ELECTRON HOLE AND VORTEX
(Expanded Top View)



the general science
Journal