

The Aether and the Electric Sea (The Link between Gravity and Electromagnetism)

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***Abstract.* The aether alone cannot explain electromagnetism. In order to explain electromagnetism, we need to have a sea of tiny aether vortices. In order to have a sea of tiny aether vortices, we need to have sources and sinks in the aether. These sources and sinks are what we call electric particles and it is the ‘Electric Sea’ of electric particles that renders the aether into tiny vortices and causes the fundamental hydrodynamical aethereal forces to manifest themselves in the particular guise of electromagnetism. This paper aims to clarify the relationship between the aether and the electric sea. The solenoidal alignment of the electric sea can reverse a mutually attractive gravitational/electrostatic force into a mutually repulsive electrostatic force. The attractive gravitational and electrostatic forces arise primarily out of pure aether hydrodynamics.**

Bernoulli’s Sea of Aether Whirlpools

I. ET Whittaker [1] writes “*All space, according to the young [John] Bernoulli, is permeated by a fluid Aether, containing an immense number of excessively small whirlpools. The elasticity which the Aether appears to possess, and in virtue of which it is able to transmit vibrations, is really due to the presence of these whirlpools; for, owing to centrifugal force, each whirlpool is continually striving to dilate, and so presses against the neighbouring whirlpools.*”

Bernoulli's aether theory would appear to be the starting point in Maxwell's 1861 paper ‘On Physical Lines of Force’ [2]. The important thing to note is that the aether alone is not sufficient to explain electromagnetism. We need a sea of aether whirlpools. Maxwell expanded upon Bernoulli's sea of whirlpools and he pointed out in part II of this paper, that no such arrangement could be possible unless there were idle wheels between the vortices. Maxwell linked these idle wheels with the particles of electric

current. Hence Maxwell's sea of whirlpools became a sea of electric particles. Lord Kelvin says *"My suggestion is that the Aepinus' fluid consists of exceedingly minute equal and similar atoms, which I call electrions, much smaller than the atoms of ponderable matter; and that they permeate freely through the spaces occupied by these greater atoms and also freely through space not occupied by them."*[3]

It was suggested in 'The Double Helix Theory of the Magnetic Field'[4] that Maxwell's idle wheels are electrons and positrons, and that his molecular vortices should more accurately be replaced by rotating electron-positron dipoles in which each electron is undergoing a mutual central force orbit with a positron. The axis of rotation of each electron-positron dipole will be perpendicular to the line joining the electron to the positron. Aether emerging from the positron will cross over and sink into the electron, and so the aether in the universe will be continually renewing itself. The rotation of the dipole will hence lead to an aethereal vortex being contained within it. These dipoles will align solenoidally in a twisted rope ladder fashion, with the electrons angularly phased above the positrons in the axial plane, rendering magnetic **H** lines of force into helical springs. See fig.1 below,

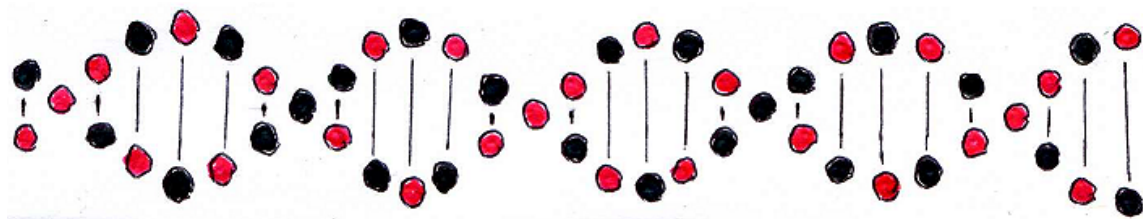


Fig. 1 A close-up view of a single magnetic line of force. The electrons are shown in red and the positrons are shown in black. The double helix is rotating about its axis with a prodigious angular speed and the rotation axis represents the magnetic field vector **H**. The diagram is not to scale as the relative dimensions remain unknown.

The Electric Sea and Mutual Repulsion

II. It is a common mistake to try and explain both gravity and electromagnetism using a single medium. Any attempts to do so have foundered on the grounds of inability to account for why gravity is mutually attractive and why electromagnetism is mutually repulsive. We must clearly distinguish between the 'Aether' and the 'Electric Sea' albeit that the

'Electric Sea' is ultimately a sea of aether vortices. The aether is the link between gravity and electromagnetism. The aether is space itself and it is of unknown substance. It is dynamical, stretchable, and compressible, and it accounts for the fundamental forces.

The electric sea is the aether when it is rendered into a rigid solid of solenoidally aligned vortices. The solenoidal alignment in the electric sea can reverse the aethereal force of mutual attraction by centrifugal pressure in the equatorial plane of the vortices. In situations where mutual repulsion occurs, either in magnetism or in electrostatics, the lines of force emanating from the two bodies will spread outwards and away from each other. The centrifugal force acting in the equatorial plane of these vortices will then cause a mutual repulsion to act laterally between the lines of force.

In the case of two mutually orbiting planetary bodies, the gravitational field lines emanating from the two bodies will spread outwards and away from each other, as in the case of mutually repelling magnetic poles and electrically charged bodies. The question of friction in space has often been used to undermine the idea of a particulate luminiferous medium. We can now see how the gravitational field lines that spread away from each other in the region between planetary bodies will align and linearly polarize the electron-positron dipoles of the electric sea, hence leading to centrifugal aether pressure which will oil the shear regions with a hovercraft effect. The centrifugal force acting laterally between the radial gravitational field lines of neighbouring planetary bodies will create a mutual repulsion, hence eliminating friction.

Electrostatics

III. Electrostatics clearly sits on the fence between gravity and electromagnetism. Electrostatics can be a pure aether hydrodynamical phenomenon in which like negative charges mutually attract and in which like positive charges mutually repel. Gravitation is a particular manifestation of mutually attracting electrostatics.

Electrostatics can also be an elastic phenomena associated with polarization of the electric sea. In this case like charges become mutually repulsive due to

fine-grained centrifugal pressure in the polarized field lines. The reversal threshold is discussed in ‘Electrostatic Repulsion and Aether Pressure’ [5]. We will have two forces both acting in opposite directions. The mutually repulsive centrifugal force will drop off more steeply than the mutually attractive gravitational force because the centrifugal force is an inverse cube law force whereas gravity is an inverse square law force. If the repulsive force dominates at close range, then a graph showing the two superimposed forces will take on a shape identical to that of the graph that demonstrates the bonding forces that act between atoms and molecules. See fig. 2 below,

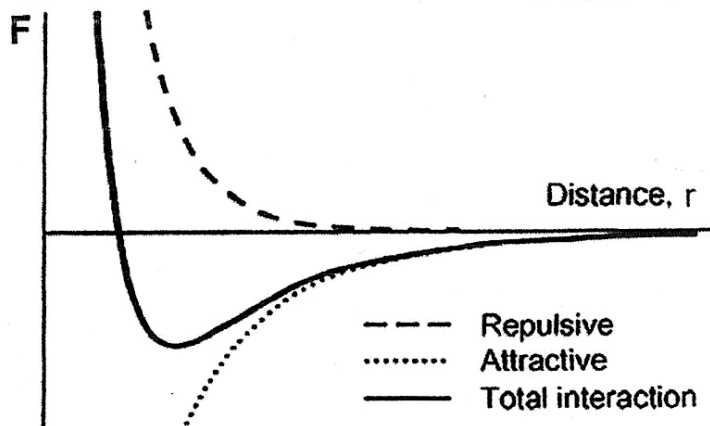


Fig. 2 This serves as both the inter-atomic force graph and the radial force graph for planetary motion. It corresponds to Boscovich’s force law.

Inertia, Kinetic Energy, and Centrifugal Force

IV. Inertia is an archaic term which can have a number of meanings. It is generally understood to be that tendency of a body to continue in its state of uniform motion unless acted upon by an external force. In this respect, it is closely related to Newton’s first law of motion. However, inertia is sometimes associated with that property of a body which causes it to resist changes to its motion. In that respect, it becomes closely related to the quantity which is called inertial mass. Inertial mass is the impedance to an applied force as is described by Newton’s second law of motion. Inertia has also come to be associated with that property which a body possesses by

virtue of its state of motion. In that respect, inertia becomes closely related to the linear momentum and the kinetic energy of the body.

We will begin by considering the two body problem. Each of the two bodies will be surrounded by aether pressure on all but one side. There will be a centrifugal pressure due to the mutual transverse motion of the two bodies. This will exist in the radial line which connects the two bodies, and it will have a tendency to push the two bodies apart. This centrifugal pressure will be induced because the mutual transverse motion will cause the electron-positron dipoles in the electric sea to angularly accelerate. Angular acceleration of the electron-positron dipoles rotationally stresses the aether and hence widens the positron sources and tightens the electron sinks giving rise to an induced excess aether pressure that is known as centrifugal force. In the large scale two body problem, the absolute motion through the electron-positron sea should also induce centrifugal aether pressure on the two sides that are in the axial direction relative to their mutual orbital motion.

A centrifugal barrier will also form on the windward side of the motion of each of the two bodies. Kepler's second law tells us that this centrifugal barrier causes a Coriolis force which is mathematically balanced by another force that is induced on the leeward side of the motion. The force that is induced on the leeward side of the motion will be a kind of positive electric charge that is induced due to the rarefaction of the electron-positron sea on the leeward side of the motion. This rarefaction will stretch the aether and hence widen the positron sources and tighten the electron sinks. In a large scale elliptical orbit, this induced positive charge will cause an angular acceleration that will be physically observable yet mathematically cancelled by a Coriolis force which will also be physically observable. The Coriolis force will be observed by virtue of the fact that the radial motion will be continually deflected into the transverse direction.

The conclusion is that when absolute motion occurs relative to the electric sea, a body will have an associated aether pressure in its immediate vicinity. In the two body problem, this aether pressure will exist on all sides apart from the outward radial side. The two bodies will be squeezed apart unless the large scale gravitational aether tension can overcome the centrifugal aether pressure. The large scale gravitational aether inflow constitutes a monopole field which therefore obeys an inverse square law relationship.

The aether pressure that arises due to the fine-grained vorticity in the electric sea is an electric dipole field and hence it will obey an inverse cube law relationship. These two different power laws allow for the stability nodes which occur in the familiar Keplerian orbits. See fig. 2 in section **III** above.

In the sense of Newton's first law of motion, inertia might refer to the induced positive charge on the leeward side of an object that is in a state of absolute motion through the electric sea. That induced positive charge cancels any impeding effect that arises from the centrifugal barrier (Coriolis force) on the windward side of the motion. Inertial mass is however a slightly different concept. Inertial mass is the capacity to absorb and to share a force over all the particles in a body, so it is therefore a measure of the amount of particulate matter in a body. In the sense of being that property which is associated with absolute motion, inertia might be the aether pressure which surrounds a body and which is induced due to its absolute motion through the electric sea. That aether pressure is in some respects the very physical basis of kinetic energy, and it is closely related to fine-grained centrifugal force in the rotating electron-positron dipoles. In fact, a transverse component of kinetic energy can serve as the potential energy function for radial centrifugal force. The aether pressure that is associated with kinetic energy can be transferred from one body to another on collision. This is seen in the case of the Newton's cradle.

References

[1] ET Whittaker, A History of the Theories of Aether and Electricity; The Classical Theories (London; New York, American Institute of Physics, 1987) p.6

[2] Clerk-Maxwell, J., "On Physical Lines of Force", Philosophical Magazine, Volume 21, (1861)
http://vacuum-physics.com/Maxwell/maxwell_oplf.pdf

[3] Aepinus Atomized, Lord Kelvin, Philosophical Magazine Vol 3, No. 15 (Sixth Series) p.257ff (1902)
<http://chemteam.info/Chem-History/Aepinus-Atomized.html>

[4] Tombe, F.D., “The Double Helix Theory of the Magnetic Field” (2006)
<http://www.wbabin.net/science/tombe.pdf>

[5] Tombe, F.D., “Electrostatic Repulsion and Aether Pressure” (2008)
<http://www.wbabin.net/science/tombe44.pdf>

[6] Dr. Menahem Simhony in Jerusalem has put forward a very compelling argument to suggest that space is pervaded by a dense medium of electrons and positrons.

<http://web.archive.org/web/20040606235138/www.word1.co.il/physics/mass.htm>

[7] Ian Montgomery and Peter Whan in Australia have proposed that a sea of electron-positron couplets explains electromagnetic theory. Full details have not yet been published.

[8] Arden Barker (Monitek@aol.com) has advocated a sea of electron-positron dipoles for the purposes of the propagation of electromagnetic radiation.

[9] Dr. Allen Rothwarf wrote ‘An Aether Model of the Universe’ in 1998 in which he envisaged the aether to comprise of electrons and positrons.

<http://arxiv.org/abs/astro-ph/0703280>

[10] John Polasek has a ‘Dual Space’ theory that is similar in some respects to the electron-positron lattice theory of Dr. Simhony, mentioned at reference [6].

<http://www.dualspace.net/>