

The Inertial Helicopter

*Frederick David Tombe,
Northern Ireland, United Kingdom,
sirius184@hotmail.com
27th March 2017*

Abstract. A sea level object that is moving horizontally at a speed greater than 8km/sec is already in orbit and it will rise upwards due to centrifugal force. Two such objects tethered together while moving in opposite directions should therefore spiral upwards like a helicopter.

It will be proposed that the atom is a dipole, and that it is the fundamental helicopter.

The Aerodynamic Gyroscope

I. Consider a wheel with radial spokes, to which are attached evenly along each spoke, freely rotating gimbals each holding a freely rotating turbine. When the wheel spins, the wind will cause the turbines to rotate and the gimbals to align such that the rotation axes of the turbines trace out concentric circles around the centre of the wheel. If we then subject the wheel to a forced precession, this will momentarily change the angle of attack of the turbines relative to the wind and induce the aerodynamical P-factor, resulting in a torque being induced at right angles to the forced precession. This aerodynamic effect imitates the gyroscopic effect hence providing a clue as to the underlying physical cause behind the gyroscopic forces. It indicates that in a gyroscope, a microscopic P-factor must be involved in connection with the molecules of the gyroscope, and in conjunction with a finer background medium which is not recognized to exist in mainstream physics [1].

The Electric Sea

II. It is proposed that in every cubic picometre of space throughout the universe, there exists a two pin electric power socket that rotates like a propeller with a steady state circumferential speed which determines the local speed of light. One terminal of the power socket is a positron. The positron is a source of pressurized electric fluid known as *electricity* or *aether*. The other terminal is an

electron exhaust or sink. Space is therefore filled with a dense sea of rotating electron-positron dipoles, and this sea will be called "*The Electric Sea*". These dipoles align along their mutual rotation axes tracing out double helix magnetic lines of force [2], [3], [4], [5].

The Atom

III. The atom will be considered to be a rotating dipole on a larger scale than the electron-positron dipoles that fill all of space. In general, on any scale, positive charge is the pressure in the aether in the vicinity of a source, while negative charge is the tension in the aether in the vicinity of a sink. It is proposed that negative charge dominates in the universe in the absence of rotation, but that when a dipole is angularly accelerated, the aether pressure which emerges from the positive particle increases while the aether inflow into the negative particle is constricted. Therefore when a dipole is caused to be angularly accelerated, the generated centrifugal pressure will be increased. An atom is therefore a tiny helicopter. It can rise against gravity when it is angularly accelerated.

An atom can be angularly accelerated convectively or inductively [6]. Convective angular acceleration occurs when an atom is linearly accelerated through the background electron-positron sea. Inductive angular acceleration occurs when an atom is in a force field, or when it receives energy from an angular acceleration wave [7]. In a force field, the induced angular acceleration is caused by the dipolarity of the atom, and the ensuing centrifugal pressure leads to a resistance against the causative force (Lenz's law), by analogy with the manner in which a winged sycamore seed falls to the ground like a helicopter.

When heat is radiated into a molecule, this induces angular acceleration. In the case of liquids and gases, this causes the molecule to rise against gravity relative to the surrounding molecules as can be observed in the case of convection currents.

The Rotatory Theory of Inertia

IV. When an atom linearly accelerates through the electric sea, a shear interaction will occur causing both itself and all the affected electron-positron dipoles to angularly accelerate. This will lead to an increase in the centrifugal

aether pressure that is generated. This centrifugal pressure is the basis of kinetic energy, the inertial forces, and magnetic repulsion.

When the winged maple seed free falls through the air, it rotates like a helicopter (Greek;- helico “*spiral*”, pter “*wing*”) and its axis of rotation aligns with the direction of motion. It is proposed that this is a large scale manifestation of the principle behind kinetic energy. The maple seed exhibits a marked similarity to the atom. It has a nucleus where its centre of mass is concentrated and it has a wing corresponding to the atom’s electron orbitals. It’s on the wing and the orbitals where the centrifugal force is experienced. See “*Bernoulli’s Principle and the Theory of Flight*” [8]. In the case of the atom, angular momentum already exists as a matter of course, but when the background electric sea flows by at an arbitrary angle of attack, the aerodynamic P-factor results in a pressure asymmetry which results in a torque, which in turn causes the atoms to precess with their precession axes aligned in the direction of the electric sea current. The fact that the precession axis would naturally align with the direction of motion is indicated by the fact that a pivoted gyroscope precesses about an axis that is aligned with the gravitational field.

We can’t see atoms or molecules clearly, but if we suppose that they act like turbines in an electric sea current, then kinetic energy and centrifugal force on the large scale can be understood in terms of an alignment of fine-grained angular momentum at molecular level. The large scale gyroscopic force is therefore explained in terms of the P-factor acting on the tiny gyroscopes within the large gyroscope.

Conclusion

V. A Keplerian orbit is totally stable due to the fact that the inward gravitational force follows an inverse square law in distance while the outward centrifugal force follows an inverse cube law. Any additional external forces applied to a Keplerian orbit will therefore superimpose upon the already existing motion. It follows therefore that if a horizontal centripetal force is applied to a circular orbit at sea level, the ensuing horizontal circular motion will hover at the Earth’s surface. By extrapolation, we conclude that any object spinning about a vertical axis will rise against gravity if the average circumferential speed is greater than 8km/sec [9].

While this exceptionally high hovering speed makes it impractical to test this syndrome on the large scale, it is almost certainly observed at molecular level within liquids and gases, in conjunction with Archimedes’ principle, hence explaining why convection currents rise, on the assumption that the input heat waves are angular acceleration waves by nature [7].

This helicopter effect is not to be confused with the situation in which a pivoted precessing gyroscope defies gravity. In the latter case we are dealing with a Coriolis force pair with respect to the radius of the gyroscope, as opposed to the radius of the Earth as in the case of the helicopter effect. This Coriolis force pair could only ever cause a torque, and this could never levitate the gyroscope above the pivot. It has no effect on the weight of the gyroscope although it does enable it to be lifted at the stem with less torque, since the weight is effectively transferred from the centre of mass to the pivot.

References

- [1] Tombe, F.D., **“Magnetic Repulsion and the Gyroscopic Force”**, (2014)
<http://gsjournal.net/Science-Journals/Essays-Mechanics%20/%20Electrodynamics/Download/5887>
- [2] Tombe, F.D., **“The Double Helix Theory of the Magnetic Field”**, (2006)
 Galilean Electrodynamics, Volume 24, Number 2, p.34, (March/April 2013)
<http://www.gsjournal.net/Science-Journals/Research%20Papers-Mathematical%20Physics/Download/6371>
- [3] Clerk-Maxwell, J., **“On Physical Lines of Force”**, Philosophical Magazine, Volume XXI, Fourth Series, London, (1861)
http://vacuum-physics.com/Maxwell/maxwell_oplf.pdf
- [4] Whittaker, E.T., **“A History of the Theories of Aether and Electricity”**, Chapter 4, pages 100-102, (1910)
“All space, according to the younger 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.”
- [5] O’Neill, John J., **“PRODIGAL GENIUS, Biography of Nikola Tesla”**, Long Island, New York, 15th July 1944, quoting Tesla,
“Long ago he (mankind) recognized that all perceptible matter comes from a primary substance, of a tenuity beyond conception and filling all space - the Akasha or luminiferous ether - which is acted upon by the life-giving Prana or creative force, calling into existence, in never ending cycles, all things and phenomena. The primary substance, thrown into infinitesimal whirls of prodigious velocity, becomes gross matter; the force subsiding, the motion ceases and matter disappears, reverting to the primary substance”.
<http://www.rastko.rs/istorija/tesla/oniell-tesla.html>
- [6] Tombe, F.D., **“Atomic Clocks and Gravitational Field Strength”**, (2017)
<http://gsjournal.net/Science-Journals/Research%20Papers-Astrophysics/Download/6780>
- [7] Lodge, Sir Oliver J., **“Ether (in Physics)”**, Encyclopaedia Britannica, Fourteenth Edition, Volume XIII, Pages 751-755, (1937) - regarding the speed of light,
“The most probable surmise or guess at present is that the ether is a perfectly incompressible continuous fluid, in a state of fine-grained vortex motion, circulating with that same enormous speed. For it has been partly, though as yet incompletely, shown that such a vortex fluid would transmit waves of the same general nature as light waves— i.e., periodic disturbances across the line of propagation—and would transmit them at a rate of the same order of magnitude as the vortex or circulation speed” (Sir Oliver Lodge, 1937)
- [8] Tombe, F.D., **“Bernoulli’s Principle and the Theory of Flight”**, (2007)
<http://gsjournal.net/Science-Journals/Research%20Papers-Mechanics%20/%20Electrodynamics/Download/244>
- [9] Tombe, F.D., **“Centrifugal Force Between Two Orbital Systems”**, (2017)
<http://gsjournal.net/Science-Journals/Research%20Papers-Mechanics%20/%20Electrodynamics/Download/247>