Centrifugal Force Denial

Frederick David Tombe,
Belfast, Northern Ireland, United Kingdom,
sirius184@hotmail.com
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Abstract. **When a mooring line needs to be cast from ship to shore over a lengthy distance, this can be accomplished by utilizing the concept of centrifugal potential energy. Swinging the weight in circular motion in a vertical plane, and building it up to a high angular speed is a means of storing up pressure. The weight can then be released underarm, resulting in a projectile with kinetic energy corresponding to the stored centrifugal potential energy. We can of course choose to deny the existence of this centrifugal pressure and explain the phenomenon on the grounds that we are merely witnessing the tendency of an object to move in a straight line in the absence of an applied force. But we can only indulge in this denial in the absence of a radial or a solenoidal field, and such fields exist everywhere. It will now be shown how centrifugal force corresponds to positive electric charge, kinetic energy, and inertia, and how a magnetic field is a particular manifestation of inertia.**

Inertia and Mass

I. Inertia is an archaic term that is used to describe the tendency of a body to remain inert unless acted upon by a force. It is often considered to be the resistance which a body offers to a change in its state of rest or uniform motion. As such, it could theoretically correspond to inertial mass. Inertial mass is in turn related to the amount of matter in a body, and the amount of matter in a body will depend upon both the volume and the density of the body. The density will in turn depend upon the number of molecules per unit volume as well as upon the pressure or tension of the aether in the interstitial regions between the molecules. Hence it is possible to change the density of a given volume of matter without changing the number of molecules. Inertial mass is a resistance to acceleration under the action of a given force, for three different reasons. If we increase the inertial mass of a body by increasing the amount of a given density of the material by virtue of having a greater volume of it, then we will increase the capacity to absorb energy from the input force. This will lead to a lesser acceleration, since the input energy will be distributed over a larger number of molecules. If we increase the inertial mass by virtue of increasing the density, this might be because we have increased the number of molecules in a given volume, or it might be because we have increased the aether pressure in the interstitial regions between the molecules. In the case in which we increase the number of molecules in a given volume, just as in the case of increasing the volume of a given density, we will increase the capacity to absorb energy. However, in the latter case where we increase the density by virtue of

increasing the aether pressure in the interstitial regions between the molecules, then we will increase the inertial mass by virtue of reducing the ability to absorb any further energy. Increasing the inertial mass in this manner ultimately leads to a state of saturation in which a body will reach a terminal velocity under the action of a given external force.

Gravitational Mass and Weak Negative Charge

II. Gravitational mass, being simply weak negative electric charge, will increase proportionately when the inertial mass increases by virtue of an increase in the volume of a given density, or by virtue of an increase in the number of molecules in a given volume. However, when the inertial mass increases by virtue an increase in the aether pressure, this will serve to undermine the gravitational mass.

Inertia and Kinetic Energy

III. The term inertia is often used to describe a concept which would more accurately correspond to momentum or kinetic energy. Kinetic energy and momentum both involve the product of inertial mass and speed. Momentum and kinetic energy are not theoretically a measure of the resistance of a body to change in its state of motion, but nevertheless, the greater the kinetic energy or the greater the momentum of a body, the more difficult it is to bring that body to rest. And so the word inertia is used for kinetic energy and momentum as well as for inertial mass. When it comes to the effects of inertia in relation to the issue of centrifugal force, the speed factor is of crucial importance, and so when we are talking about inertia in relation to it being the cause of centrifugal force, then we are talking about inertia in the sense of it meaning kinetic energy or momentum. Mathematically, transverse kinetic energy corresponds exactly to centrifugal potential energy, and so we can accurately say that inertia in relation to centrifugal force is in fact kinetic energy.
It is often argued that centrifugal force doesn't exist and that it is only an effect of inertia. However, if it is an effect of inertia, and if inertia is real, and if the effects of inertia are real, then centrifugal force does exist. Just like gravity, centrifugal force can cause a physical reaction, and just like gravity, centrifugal force can be mathematically formulated as a radial force. Gravity and centrifugal force come face to face in the radial planetary orbital equation and so it is hard to see any basis for claiming

that centrifugal force doesn't exist. Some argue that it exists but that there is no need to ever consider it, since it is merely the effect of the tendency of a body to move in a straight line at constant speed in the absence of an applied force. Nevertheless, there are many applications in engineering that involve rotation and in which the entire focus is upon the radially outward pressure that arises because of the tendency of particles to move in a straight line. And so it is in fact very helpful to consider the concept of centrifugal force when we are focused exclusively on the physical reality of the outward expansion.

Repulsion and Rotational Inertia

IV. Theoretically, all outward radial forces are centrifugal forces. Electrostatic repulsion is a centrifugal force. But it is normal to only use the term centrifugal force when the outward repulsion is visibly caused by rotation. Any large scale object which spins has a tendency to expand outwards. This repulsive tendency is in turn due to the tendency of a particle to move in a straight line, but nevertheless the net result is a tendency for outward radial expansion which is clearly identified as centrifugal force. Straight line motion involves rotation relative to any origin that does not lie on the path of motion. We will now investigate whether straight line motion and electrostatic repulsion on the large scale involve rotation on a microscopic level.

Ultimately repulsion arises from aether pressure which emerges from a source particle such as a positron. Maxwell identified magnetic repulsion with the centrifugal force in the equatorial plane of his all pervasive molecular vortices [1]. If these vortices were to comprise of an electron in mutual circular orbit with a positron [2], then we would have a basis for the regulation of the positron pressure throughout space. It would seem that the positron pressure increases as the angular speed of the dipole orbit increases, and that this is the fundamental basis of the connection between positive charge and centrifugal force. Hence when we spin a body that is comprised of molecules, the electron-positron sea will blow right through the body between its molecules, like water flowing through a basket. This will give rise to a solenoidal electric wind which is like an electric current. This in turn will cause the molecules of the body to align their spin axes in sympathy with the large scale spin axis, in a similar manner to which Ampère's circuital law means that the rotating electron-positron dipoles mutually align in the space surrounding a current carrying wire. The molecular alignment within the spinning body will

result in a centrifugal pressure in the equatorial plane. This centrifugal pressure is in fact rooted in the positive charge within the molecules.

Inertia and the Magnetic Field

V. Electric current is the flow of aether, and the aether corresponds to the vitreous fluid of Franklin, Watson, and DuFay. When an electric current in a wire increases, it induces an angular acceleration in the rotating electron-positron dipoles/fly-wheels in the surrounding space. This induces an increased rotational kinetic energy/centrifugal aether pressure in the surrounding space, and we call this a magnetic field. When the current is switched off, this increased aether pressure releases back into the wire again so as to give a final surge of vitreous aether current. Likewise, when a body linearly accelerates through space, if the body is small enough, the electron-positron sea will blow through the interstitial regions between its molecules. As this electric wind increases, it will cause the molecules to angularly accelerate such as to increase the aether pressure within the body. This aether pressure within, is of course centrifugal pressure, inertia, positive charge, and kinetic energy. This means that when a body is in motion through the electron-positron sea, its density and mass will necessarily increase too. It will become inflated. The large scale kinetic energy will in fact be the difference between the rotational kinetic energy of the molecules in the moving state as compared with their rotational kinetic energy in the rest state. The difference will depend on the differential speed of the electric wind on either side of the rotating molecules, and hence the mass of a moving body will increase asymptotically with a formula that looks like the Doppler shift formula. This formula will involve the circumferential speed of the molecules. Classical kinetic energy is of course defined on the basis that mass remains constant during motion, and this works reasonably well for speeds that are considerably below the circumferential speed of the molecules.

The Newton's Cradle

VI. When a collision occurs between the balls in a Newton's Cradle, three kinds of disturbances are propagated through the balls. The slowest of these is the deformation wave which travels in the order of the speed of

sound for the material in question. Then there is a rotational wave which propagates through the molecules in a similar manner to that in which light propagates through the electron-positron sea. Since the collisions are nearly perfectly matched, the deformation waves will be negligible. At the moment of the collision, and at the point of impact, pressurized aether in the molecules of the incoming ball causes the molecules of the stationary ball to angularly accelerate. The angular acceleration will induce an increased centrifugal pressure and disturb the next molecules along the line, and the mechanism will be repeated. Meanwhile the molecules in the incoming ball, now at rest, will angularly decelerate and their excess aether pressure will sink into the negative particles of the molecules, in line with Lenz's law. These rotational waves constitute a net flow of pressurized aether through the row of stationary balls. They are waves of kinetic energy, or 'inertial waves'. Their speed will be greater than the speed of sound and it will be related to the circumferential speed of the molecules. When the inertia reaches the end of the row, the end ball will carry on in the same state as the incoming ball was in, just before it stopped. Finally there will be a path finding wave pulse through the pure aether which determines, at the moment of impact, whether or not matching is going to occur. This path finding pulse probably travels at many orders of magnitude greater than the speed of light, if not instantaneously.

Conclusion

VII. Rotation is the cornerstone of absolute motion. When atomic and molecular matter undergoes linear motion, the constituent atoms or molecules angularly accelerate above their absolute rest threshold. This means that inertia and the surrounding centrifugal field are identical in principle to electric current and the surrounding magnetic field. In particular, the kinetic energy wave which flows through the row of stationary balls in a Newton's Cradle is to all intents and purposes an electric current. When two bodies collide, we cannot tell the degree to which each of them initially possessed absolute motion relative to the electron-positron sea. Only the difference between the two absolute kinetic energies will manifest itself. If the collision is matched, the two bodies will swap their kinetic energies. Kinetic energy propagates through atomic and molecular matter as a rotational wave in the likeness of electromagnetic radiation and electric current.

References

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