GFT

CHAPTER TEN

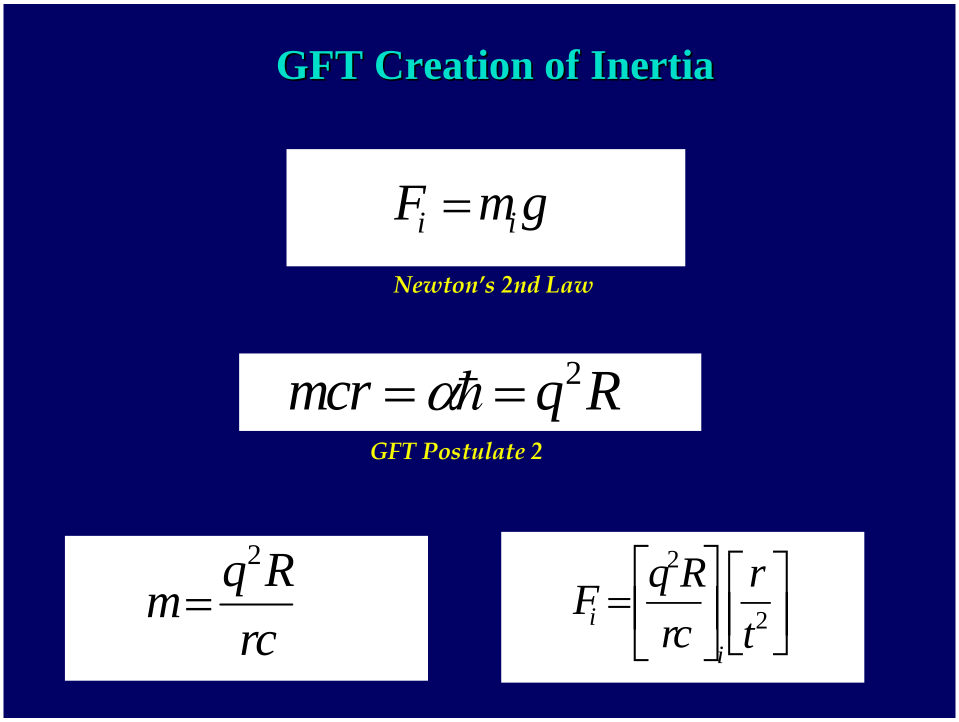
The Gyroscopic Foundations of Inertia: Clenthia's Law

Imagine placing an elephant and a peanut atop a skyscraper and then allowing one, and then the other, to be dropped over the side landing atop an innocent observer waiting below on the ground. Which would do the most damage to the observer? Well, of course it would be the elephant. Why? Because since the elephant has a much greater mass than that of the peanut the earth pulls the elephant towards the head of the observer with a much, much greater force. This is a very rudimentary example of the affects of gravitational mass. Mathematically, Newton's gravitational force law explains this difference in force. We will allow m to represent the falling object. The greater the mass of the falling object the greater the force it is pulled towards M, the earth.

Now imagine the elephant and the peanut, both being dropped over the side of the skyscraper simultaneously. Which one hits the ground first? Intuitively one would think that the heavier elephant should land first but both elephant and peanut strike the ground simultaneously. They both accelerate toward the earth at the same rate despite the disparity in their gravitational masses. This occurs because in addition to both objects having gravitational mass they also possess inertial mass. What is inertial mass? It is a quality possessed by all objects to resist falling, i.e., to resist the effects of gravity. The greater the gravitational mass of the falling body the greater the force of attraction between it and the earth, i.e. the earth tugs on it more. However, the greater the inertial mass of an object, which is always equal to the gravitational mass, the more it resists falling, i.e. the more massive the falling object the more it resists the efforts of the grasping earth. We may think of inertial mass as a type of intrinsic breaking system that doesn't allow the elephant to exceed the velocity of its less massive traveling partner, the peanut. The inertial mass quality of mass is defined mathematically via Newton's Second Law. Even though gravitational mass and inertial mass may appear to be paradoxical, they are both equal in magnitude and must act simultaneously and synchronisticly. Heretofore, we have been presented with these two forms of mass existing as intrinsic traits of an object absent any theory as to how or why such forms of mass should exist. The GFT will now provide such an explanation.

The GFT Postulate 2 provides for the equating of mass to charge. Mathematically it is a simple matter to substitute mass, in terms of charge, into Newton's Second Law. In so doing us obtain the following equation:

$$F_i = \left[\frac{q^2 R}{rc}\right]\left[\frac{r}{t^2}\right]$$



This equation can be further simplified to read

$$F_i = \frac{Vi}{c}.$$

This equation is named Clenthia's Law. Let's explore the implication of this law further. Given the equation

$$F_i = \left[\frac{q^2 R}{rc}\right]\left[\frac{r}{t^2}\right]$$

where

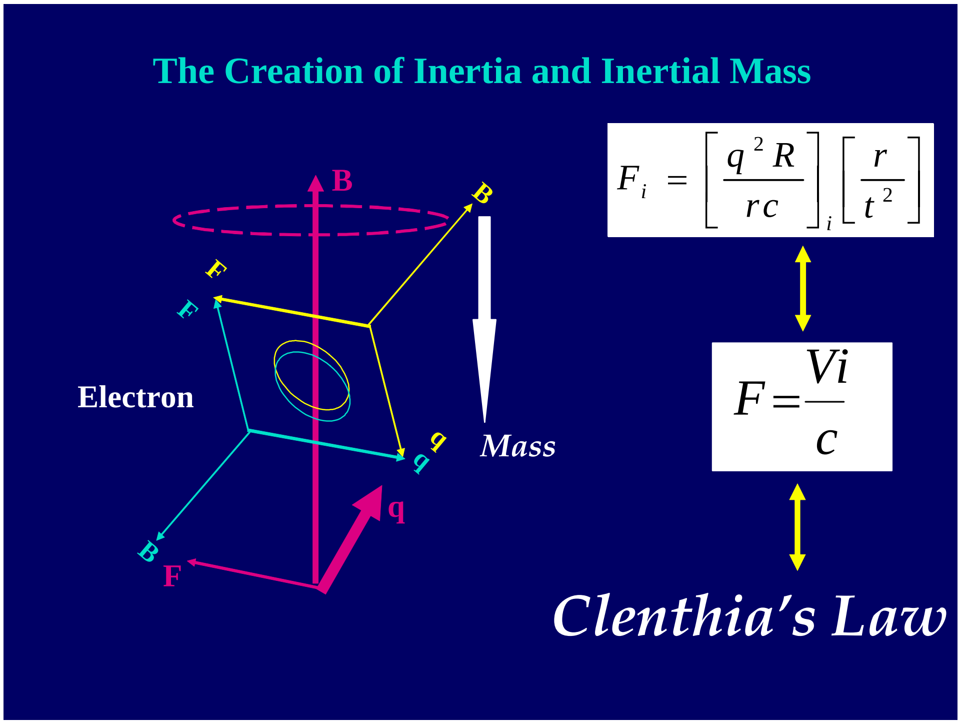
$$m_i = \left[\frac{q^2 R}{rc}\right]$$

if we wish to increase mass we can do so by simply decreasing r. However, note the acceleration term $\left[\frac{r}{t^2}\right]$**, i.e. as mass increases the acceleration must decrease. This is simple relationship is the basis of inertial mass.**

We may ask how can $F_i = \frac{Vi}{c}$**, an equation of electromagnetism pertain to mass? It is obvious from Clenthia's law that for a constant force, *V* and *i* are indirectly proportional, i.e. an increase in *V* causes a decrease in *i*. The gravitational**

potential, in this case is a measure of how strongly the earth attracts the body that is to fall. The larger the potential the further the object is located from the center of the earth and the less the attraction of the earth on the object. For now we will allow V to be equivalent to the gravitational potential.

Having accounted for *V* what then is *i* the current? How can we equate current to mass? To explore this concept we need once again refer to the GFT model of an electron. We allow q to accelerate thus creating a new current i. This enhanced current i will cause an enhanced B field. Again, as previously stated,



the normal force of gravity is the consequence of the forced precession, via the B field, of the up quark component of the electron. The acceleration of q and the creation of *i* is a function of the gravitational mass and the attraction of the earth on the now more massive accelerating body. If Clenthia's law is true it therefore dictates that an increase in *i* will cause a diminution in the force with which the up quark component is pushed/pulled toward the earth. We know, however, that this cannot be the case. An increase in mass is synonymous with an increase in the gravitational mass, which is manifest as an increase in the B field, which issues forth from an increase in i. Therefore, the potential V in Clenthia's law cannot be the gravitational potential. It is obvious that it can only be the inertial potential. As the gravitational mass increases, which is a function of an accelerating q, this results in an increased i, thus causing a decrease in the inertial potential. *This decreased inertial potential is manifest as a decreased tendency of the up quark to precess or to be pushed downward toward the earth. It is manifest as a resistance to the pull of gravity or the push of precession. Note that the gravitational potential and the inertial potential are both equal in magnitude and even equivalent but they are not* identical.

Even though Clenthia's law provides us with a more complete view of the origins and dynamics of inertia it still fails to demonstrate from whence this tendency of mass to resist increased gravitational attraction originates. This will be examined in Chapter Eleven.