# Understanding the Dropping of the Spinning Ball Experiment

by

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The beginning of this author's work with rotating objects began with moment of inertia measurements of constrained gyroscopes undergoing forced precession. The increased moments of inertia discovered for precessional motion were translated into a series of measurements on pendulums with rotating bobs. Although the discovery of the inertial effects associated with precession and pendulum oscillations were highly suggestive, this author greatly resisted attempts to force him to drop a rotating object for two reasons.

Firstly, he had no reason to be able to predict the motion of a freely falling object on the basis of the inertial alterations he had measured which had concerned themselves with constrained situations of rotating objects. Second, there was no reason to expect inertial alteration to affect the rate of fall of a released object, and there was no available theory which could in any way be applied to the situation of a falling object in a gravitational field. This is a situation known in religious terms as a "leap into the dark".

Since the author and his assistants are experts ion the application of stroboscopic lighting techniques to the study of high speed motions, the first experimental cut at the situation was to photograph the trajectories of a steel ball bearing rotating at high speed together with an identical control object moving at similar initial velocity. The result of the experiment was so startling and anomalous as to have taken me 5 years to understand.

The original results of our experiments were circulated as a report in 1974 (Ref. 1). Two years later, the experiment was published in an appendix to a book of Christian exegesis (Ref. 2). In 1977, one of my former students performed a high precision verification of the dropping of a rotating object: "The Gyro Drop Experiment" (Ref. 3). Actually, the experiment has two parts, the spinning ball going up, and the spinning ball falling. Since I would rather be thought a fool than misrepresent results of experiments, I only attempted to analyze the portion of the experiment I thought I understood. Basically, the spinning object going higher than the identical non-rotating control with the same initial velocity, and then falling faster than the identical non-rotating control, presents a dilemma which can only be resolved or understood on the basis of radically new concepts in physics -- concepts so radical that only the heretofore un-

understood results of other experiments (the elastic collision of a rotating and an identical non-rotating object, et al.) and new conceptions of physics growing out of the many discussions and correspondence pertaining to rotation, inertia, gravity, and motion in general. We should remember the pioneers in this field: Wolfe, Cox, Dean, Laithwaite, Rendle, Searl, Kummel, DePalma and Delvers, to name but a few.

In the beginning, I developed the concept of variable inertia to explain the behavior of rotating material objects, but variable inertia in itself contravenes the laws of physics in the sense of contravention of the laws of conservation of mass and energy. Of course, the destruction of one thing is interesting, but of course this is in itself not a creative act and does not take us any closer to the truth.

Because man is so interested in the universe, and the motions of the universe depend so much on gravity, the study of gravity takes us to the deepest foundations of human thought. I think it is a mind-bending experience to see every stone fall at the exact same rate as any other stone. And when you spin an object, why does it fall faster? And most mind-boggling of all, why does it go higher than the identical non-rotating control released to go upward at the same initial velocity? Of course, the experiment could be wrong, but also perhaps we could develop a hypothesis which would fit all experiments.

We know that when we can alter the properties of mechanical objects, i.e., change their inertia, we have contravened the conservation of energy because we have associated the properties of an object with the space which contains the object. The space which contains the object also contains energy and we can go at the project in two ways: we can attempt to extract the energy without worrying where it came from, or we can attempt to understand physics, ourselves, and the universe by a new formulation of reality.

Par of the difficulty of accepting free energy is the feeling that we're getting something for free, and that automatically makes it suspect. On the other hand, however, we can accept what we know as "energy" as something which is a natural part of our environment and can be reached if we have the key.

Most of the difficulties in the location of this energy lie in the comprehension of where it's coming from. If this can be comprehended, then the understanding of the free energy experiment can be believed.

When reality came into existence, the time energy of the Universe was concentrated into a single form, the exactitude with which a single atom gave off a beat of frequency when excited as a spectral line. We have come to regard this as the only way of measuring time. The true way of measuring time is in the inertia of objects. Thus, a tuning fork watch or oscillator is a more natural way of measuring which can only exist and not be measured. In the case of Time, we can know the existence of it, but for whatever measurement we take to be indicating it, we make our own determinations as to whether this measurement is more suitable or "accurate" for our purposes (we might prefer a crystal clock to a tuning fork, but for what purposes or measuring is this "time" being used?). If, for instance, we were interested in inertial processes, i.e., the motion and the orbits of the planets, and we knew these were sensitive to inertial influences, we might consider a "time" which was also sensitive to these inertial influences to be more "accurate" than a time derived from another experiment which might have no relationship to the phenomena of importance.

Time is a manifestation of a much deeper and basic force that we have a concern for here. The point of connection I want to make is: the inertia of objects relates to the time energy flowing through them.

The rotational quanta drawn to a rotating body induce in that body a feeling of inertial anisotropy as well as increased inertial mass. Could this "mass" be thus somehow translated into energy for mass consumption? The first indications of that came when we dropped our spinning ball experiment, but we were unwilling to interpret the increase in energy of a spinning to a non-spinning object dropped to fall over a controlled distance to some kind of energy principle we did not understand.

We also had a second series of experiments, elastic collisions of rotating and non-rotating identical controls which we could not interpret. It took a paper, "The Cause of Gravitation", by Bernard Rendle (Ref. 4) to jar my mind into comprehension of the facts as I saw them. We can only conceive of the inertia of objects, or inertial mass to be exact, to be representative of the time energy created when the Universe was created. Naturally the question of how old is the Universe becomes invalid then because a possible interpretation is that the Universe existed forever because inertial mass exists at all. Measurements of the age of the Universe are also invalid. All the time in the world is summed up in the inertial mass of an object.

How this relates to the spinning ball experiment is that the spinning of an object draws to it the quanta of inertial motion of rotation which are accumulated in the body of the flywheel and account for the altered inertial properties of the rotating object. These inertial quanta, Ro, draw the time energy to themselves in proportion to the number of them present in the flywheel at a given time. If a rotating object is collided with an identical non-rotating one, the non-rotating object is rebounded a greater distance than it would have traveled if it had been struck with the same identical object non-rotating. A rotating object struck by an identical non-rotating object rebounds less than it would had it not been rotating (Ref. 5).

This explains why the spinning ball went higher than the identical non-rotating control (moving at the same initial velocity), and also explains why the spinning object falls faster than the non-rotating control. The momentous fact is that there is no special interaction between rotation and gravity. The behavior of rotating objects is explained simply by the addition of free energy to whatever motion the rotating object is making. The spinning object goes higher and falls faster than the identical non-rotating control.

I like the understanding of inertia growing out of the statement of Rendle: "The immaterial medium of space itself is in motion" If we dispose of any special connection between rotation and gravity, the constancy of "G" then becomes the inertia of objects. The fact that all objects fall at the same rate (earth normal acceleration) means that the substrate space is moving all objects along at the same rate. This we can define as Earth normal standard inertia, a unity factor to which all other conditions are compared. Thus rotating an object does not change its inertia (under the new standard) since the mechanical alterations in behavior of rotating object do not affect their inertia but are the result of the additional (free) time energy flowing through the rotating object by virtue of its accumulation of rotational quanta, Ro.

The question to be answered: is there any gravitational effect from rotation, or is gravitation a special interaction of mass with its environment? I would tend to believe gravitation is a special interaction of real mass with its environment. This is not to say that artificial gravitation fields cannot be created, but they would always be distinguishable from the real thing through some physical test. An artificial gravitational field would be non-isotropic and anisotropic.

In terms of the dropping of the spinning ball, the understanding of the experiment involves the results of many other experiments as well as the resolution of a mind picture of the Universe which is our best approximation to understanding at the present time. What makes it difficult for other experimenters to understand the experiment is that it is not simply the results which are important. Without a theoretical foundation of understanding to make the experiment comprehensible -- to fit the results into a context of rational understanding and harmony with the facts of other experiments -- the data become trivial and worthless and, worst of all, subject to misinterpretation.

The availability of free energy from as simple an experiment as colliding in a rotating object with a no-rotating one opens up the development of other machines for energy extraction and propulsion which may be more convenient to handle than the extraction of energy from the collision of a rotating object with a non-rotating one.

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