

Spirallogic: Sparking The Cycle Of Life Toward A New Age Of Energy Enlightenment.

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This technical white paper provides a mathematical overview of an invention that has the potential to generate copious currents of clean moral electricity for the greater global good.

The equations presented will quantify the first manifestation of the electrical generating invention codenamed "Ring of Power." Basically, the device works as a force multiplier. That is, it transfers the leveraged momentum of speeding bicyclists into rotational motion. This harnessed force then acts to torque a speed of sufficient angular velocity to drive a cluster or bank of alternators.

The following four force-related formulas offer a quantitative appreciation of the power conversion capabilities of a leveraged momentum machine like the Ring of Power.

- 1.) Kinetic Energy
- 2.) Angular Momentum
- 3.) Torque and Leverage
- 4.) Bike Gears and Pulley Transfer Ratios

However, we'll conclude by briefly touching on the socioeconomic ramifications of this invention.

- 1.) Kinetic Energy

Kinetic energy or the lack thereof is the reason why using a stationary bike to generate electric power is so woefully inefficient. Conversely, riding a bicycle out on the open road can seem so magically fantastic simply because it moves you through time and space. Today's bikes are basically highly efficient machines for transporting the human body over great distances at speeds generally faster than either walking or running.

The force or energy that is generated by the action of consistently rapid spatial displacements can be mathematically expressed as kinetic energy. That is, the equation is as follows:

$$KE = 1/2 I \omega^2$$

Where (I) represents the moment of Inertia for the object in motion.

(ω) is for angular velocity that the object is travelling.

So to delve further into why using a stationary bike is so inefficient for electrical production, let us compare the kinetic energy between spinning a bicycle wheel and a cyclist riding their bike on a level surface.

To measure how much kinetic energy can be produced when a bike wheel is forced to rotate on its axle by pedalling, we'll begin with the dimensions of a standard 26-inch bicycle wheel rim that has a diameter of 559 mm (22.0") and an outside tire diameter of about 26.2" (665 mm). This correlates to an approximate wheel radius (r) that equals:

$$r = ((665 \text{ mm}) + (559 \text{ mm}) / 2) / 2 = 306 \text{ mm or } 0.306 \text{ m}$$

Next, we'll complete the formula for measuring kinetic energy.

$$\text{Wheel Weight} = 2.3 \text{ kg}$$

$$\text{Inertial Constant (k)} = 1$$

Moment of Inertia of Wheel:

$$I = (1) (2.3 \text{ kg}) (0.306\text{m})^2 = 0.22 \text{ kg m}^2$$

The speed of the bicycle is 25 km/h (6.94 m/s; 15.5 mph).

The wheel's circular velocity is 3.32 revolutions/s

$$\text{The angular velocity (} \omega \text{)} = 20.9 \text{ rad/s}$$

The kinetic energy (E) of the spinning bicycle wheel is expressed in joules.

$$E = 0.5 (0.22 \text{ kg m-squared}) (20.9 \times 20.9 \text{ rad/s})$$

Therefore the kinetic energy of a spinning bike wheel equals approximately 47.9 J.

That is 47.9 joules.*

Now let's quickly calculate the kinetic energy of a bicyclist travelling at 6.94 m/s (15.5 mph). The total mass of the lightweight cyclist and bike is 74 kg. (74 kg = 163 lbs)

Therefore, the kinetic energy of a travelling cyclist equates to $0.5 \times 74 \text{ kg} \times 48 \text{ m/s} = 1782 \text{ J}$.

That is 1782 Joules**

So the difference in kinetic energy between a cyclist riding their bike on a level roadway or the same person using a stationary bike is $1782 \text{ J} - 47.9 \text{ J} = 1,734 \text{ Joules}$.

This is an additional equivalent force of 36 spinning bike wheels. In other words, this represents an additional 36 alternators to potentially produce that much more electrical power by the same cyclist.

Ideally, that individual cyclist would only exert identical amounts of physical intensity for each trial run. Also, the effects of thermal build-up from the increased caloric burn or the wind resistance experienced while travelling 15 miles per hour would be omitted from the overall energy matrix and as such, the preceding calculations clearly demonstrate why using a stationary bike to generate electricity is an extremely inefficient energy stratagem.

Again, the basic function of a bicycle is not the ability to rotate a bicycle wheel exceedingly fast. It is rather the practical utility of causing a human body to quickly traverse distances or in other words, rapid spatial displacement. That is the true power provided by this time-tested travel machine. And that is the source of power (kinetic energy) which must be harnessed to generate endless electrical energy.

2.) Angular Momentum

Before we calculate the angular momentum of the aforementioned cyclist as it pertains to the invention let's consider that the kinetic energy calculated for the travelling cyclist was measured as spatial displacement parallel to a straight line.

So using the previous quantities we can calculate the momentum as; $p = \text{mass} \times \text{velocity}$.

$$74 \text{ kg. (74 kg = 163 lbs)} \times 6.94 \text{ m/s (15.5 mph)} = 513.56 \text{ kg m/s}^{***}$$

And as previously indicated the rapid spatial displacement required to operate the "Ring of Power," is exclusively rotational. With a defined axis now available, the forces of torque and angular momentum can then be determined with precise accuracy.

Now, the angular momentum of a rigid object is defined as the product of its "moment of inertia" and its angular velocity. And as importantly, subject to the universal laws of physics and more specifically the conservation of angular momentum. ***

$$\text{Angular momentum } L = I (\text{Moment of Inertia}) \times (\text{Angular velocity})^{***}$$

$$I = MR^2 = 74 \text{ kg} \times (7.76 \times 7.76) \text{ m} = 4456 \text{ kg m}^2$$

$$L = 4456 \text{ kg m}^2 \times 0.894 \text{ rad/s} = 3984 \text{ kg m}^2/\text{s}$$

$$L = pD$$

$$L = 513.56 \text{ kg m/s} \times 7.76 \text{ m} = 3985 \text{ kg m}^2/\text{s}$$

The dominant design characteristic of the "Ring of Power" is its circular configuration and consequently axis or pivot point to effect 360 degree rotational movement. This also means that located on its perimeter circumference there exists two points or contacts that are exactly 180 degrees apart. This will effectively function as provisional levers and will operate most efficiently when a pair of cyclists are positioned exactly at those two equally separated circumference contact points and effectively facing in opposite directions (left facing/right facing) and rather importantly, while travelling at or near identical speeds.

The duelling cyclists will then be positioned to equally contribute to the the total force that will drive the alternators with nearly 8,000 kilograms of angular momentum.

But as will be shown in the next section, this force is used to torque double that amount or nearly 16,000 kilograms of real driving force!

3.) Torque and Leverage

So now that we've demonstrated how the formidable kinetic energy of a speeding cyclist can result in a powerful primary mover for the Ring of Power. What we further hope to prove is that the true effectiveness of the invention is found in its ability to leverage the angular momentum of the dual cyclists into an amplified or multiplied torque.

First let's look at the equation for torque:

(Torque) = I (Moment of Inertia) multiplied by (Angular Acceleration)

$a = v^2 / r$:

6.94 m/s (15.5 mph) and 7.76 m

$(6.94 \text{ m/s})^2 / 7.76 \text{ m} = 6.2 \text{ m/s}^2$

= Angular Acceleration = a / r :

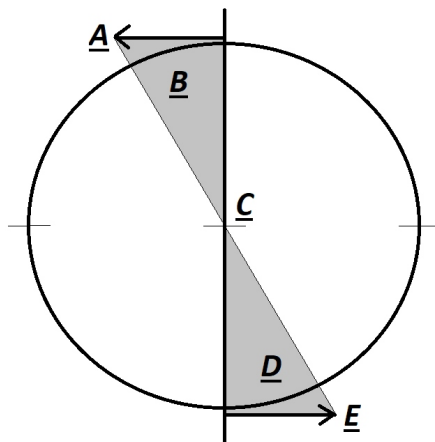
$= 6.2 \text{ m/s}^2 / 7.76 \text{ m} = 0.7998 \text{ rad/s}^2$

Torque = $4456 \text{ kg m}^2 * 0.7998 = 3564 \text{ N m}$

As is indicated by the following diagram, with the duel cyclists positioned exactly 180 degrees apart, they will establish an imaginary pivot at point "C."

However, the torque that would have been experienced at point "C" is not imaginary but quite real and more importantly this force is conserved.

Therefore this torque must be realised as an inverse-transfer to the opposing cyclist. Each cyclist produces a torque that the other cyclist experiences as a reduction in the resistance of the eight (min. configuration) alternators.



- A.) Cyclist A travelling @ 15.5 mph (24.94 kph)
- B.) Triangular Area of Inverse Torque (Cyclist B)
- C.) Imaginary Pivot Point

D.) Triangular Area of Inverse Torque (Cyclist A)

E.) Cyclist B travelling @ 15.5 mph (24.94 kph)

4.) Pulley Transfer Ratios

As previously mentioned, with dual cyclists pedalling their bicycles at an average speed of 15 mph, they should be able to generate enough power to drive a minimum of eight alternators with the invention's "Galaxy Cluster" formation.

Now, without having conducted any prior proto-type trial runs to verify certain assumptions we will currently rely on the following dimensions as structurally ideal until proven otherwise.

ROP Circumference = 160 feet (48.768 m)

ROP Radius = 25.46 feet (7.760208 m)

Transfer Pulley Circumference = 75 inches (1.905 m)

Transfer Pulley Radius = 12 inches (0.3048 m or 30.48 cm)

Alternator Pulley Circumference = 6.28 inches (0.159512 m or 15.9512 cm)

Alternator Pulley Radius = 1 inch (2.54 cm)

15 mph = 79,200 ft/hour = 1,320 ft/minute = 15,840 inch/minute

ROP = 8.25 rpm

Transfer Pulley = 211 rpm

Alternator pulley = 2,519.9 rpm (Note: 15,840 divided by 6.28 equals 2,522.2929)

New World Power and the Promise of Good Energy

Throughout the ages, the greater mass of humanity has always lacked the strategic energies to truly effect far-reaching societal change, in spite of its greater aggregate population size.

Obviously the perturbed masses can be used to effect short term change by combining their overwhelming physical presence as in a mass demonstration or protest gathering.

That's because the total cumulative crowd is the real power which also immediately dissipates upon dispersal of the gathered individuals. Of course, the residual or echo responses created by the gathering can develop into their own movements. However these ancillary actions could also form counter to the original impetus.

It's reasonably understood that social media platforms offers fast and efficient connectivity between enormous numbers of "active users." But though these internet platforms are ultra-fast, it is also just part of a globally fermented stream of social media noise and useless distractions that easily inundate any single movement or cause in a cesspool of digital malaise. Basically, the social media platforms must

be the instrument of the movement and not the movement, in and of itself.

And of course, there could always be an armed or quasi-military uprising and potentially an insurgent coup. Even possibly civil wars, but as has been shown by history, this course of action plays entirely into the authorities hands because that's their calculated expectation!

Therefore, those in charge, unless totally incompetent, fully corrupt and or both are always expertly equipped and prepared to suppress any immediate threat of armed violence.

Let's be honest with ourselves, as long as the masses are hopelessly reliant on the wealth and power of a small minority they will always be like puppets on a string. In other words though you may feel like you're moving with deliberate initiative, in fact your actions are being guided by the stealthy strings of the ubiquitous puppet master.

And until the masses are able to cut the power cords of the global profit mongers by using their own wealth and power, the status quo of the money matrix will remain unquestioned.

However, New World Power respectfully begs to differ with this greed centric global-logic with a moral centric "spiral-logic." And it begins with the understanding that the masses should never expect the "1%" to act in any fiduciary capacity toward the benefit of mass humanity. For they will surely be greatly disappointed.

Big money will always act in whatever manner optimizes their return on investment or profit. They will always act for the further benefit of maintaining, if not enriching their wealth, fortune and status quo.

Plain and simple, their profit is their prophet.

NWP believes that it's solely incumbent upon the indentured masses to create their own power and profit and without strings attached. But more importantly, it would behoove the masses to act on a strategic and coordinated causeway without resorting to violence.

For in the end, should a military insurgency succeed in removing the greedy few, they will be constrained by their own violent actions to choose previously like-minded personnel to replace those they forcibly removed. Consequently the "Energy Enlightenment" necessary to effect a true social transformation to a higher moralistic state of consciousness will prove unattainable.

Growing up in post-ww2 America, we were thoroughly indoctrinated to believe that we lived in the most perfect society ever imagine by man. And it would not be long before that modernity would deliver us to that promised land of the future. A time and space where we would be able to fly our cars anywhere we wished and all tedious work would be delegated to totally obedient robots.

While in our digitized virtual worlds we may have fooled ourselves into believing we have reached our promised land. Even so, in our unalterable determination to live this life of fantasy that's so unrealistically far beyond our means, we may have, quite unfortunately, established an enduring false sense of entitled prosperity. And in our blind faith to maintain this mass state of mind-numbing delusion we have reduced ourselves to stealing the resources of future generations with a despicably callous abandon.

Arguably, we have stolen from the generations destined to come, these absolutely helpless generations of tomorrow, their planet Earth. Once, a truly living paradise; alone in a vast lifeless universe. Unbelievably abundant of amazing wildlife and life sustaining vegetation that only cherished praise on their glorious life-giving creator. Now we will leave them unsustainable skyscrapers, a continent worth of asphalt parking lots linked together by endless miles of cement highways. Not to mention the billions of four wheeled gas guzzlers racing over them every single day.

And so, we have with a greedy malice stolen from coming generations their rightful claim or fair share as future inhabitants of this planet, or more specifically, from Earth's profoundly unique legacy; her ancient oceans petroleum or hydro-carbons molecules.

The NWP is a promise to provide the moral and electrical power necessary to successfully reevaluate this greedy construct before it is far too gone.

Also the "Ring of Power" technology only exists to rescue mankind from the greedy tyranny of the petrodollars power matrix; thereby giving man a new means of righteous energy endeavour.

But unfortunately, there really isn't much time, since within short order, robots not only be designed and built to replace most employees at their current jobs will flood the marketplace. But more ominously, robots also hold the technological prowess to become the most awesome and effective fighting machine in the history of human warfare. Sooner or later, warbots will be coming to a battle front near you.

Will you be ready? Just kidding of course, because once that day arrives it will already be too late.

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* Calculations provided by engineeringtoolbox.com (11/6/2018)

** Calculations provided by answers.yahoo.com (11/14/2018)

***<http://hyperphysics.phy-astr.gsu.edu/>