

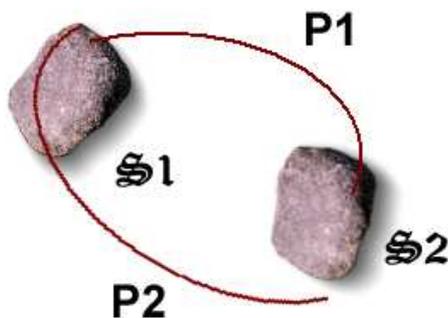
## Nsr postulates on perpetual motion machines

While I am working on some ideas for creating theoretical foundations for making a perpetual motion machine (which is presently unrealizable and unrealistic), I want to share some postulates with you for you to offer criticism, there by refine the postulates.

### 1. Unstable systems

When a unstable system tries to change from one state to another, energy is either consumed or released.

Energy is a state property relative to other systems.



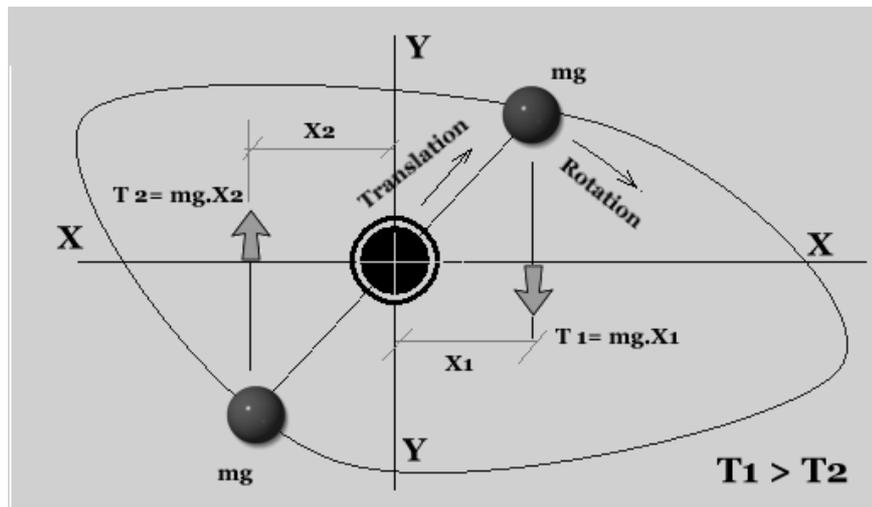
Each system status is associated with certain energy. Unstable system S1 when goes through a process of P1 to into another unstable state S2, energy is released. Continuous instability leads to continuous energy generation.<sup>1</sup>

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<sup>1</sup> PMM Part 1 (from NSR Moorthy)

The Key to making a perpetual motion machine is have

- a. An Unstable system<sup>2</sup>
- b. Keep the instability to continue uninterrupted.



Consider a spoke rotating around a curved vertical path as shown in the figure. The two ways this can happen are

- a. The path is a vertical circle.
- b. The spoke is flexible.

At any instance of time  $t$ , the mass at the end of the spokes is subjected to

- Vertical gravitational force
- Radial centrifugal force.

Since radial force is along the spoke, it can not create any torque at the center. Only gravitational component can cause torque at the center.

If the motion is symmetric across  $Y$  axis, there could be any net torque generated. Hence the curve must be such that

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<sup>2</sup> PMM Part 1 (from NSR Moorthy)

$T_1 > T_2$  for the motion to perpetuate

Hence a rotational perpetual motion machine must be

- a. A motion involving along a curve asymmetric about Y-axis ( Vertical axis)
- b. To perpetuate motion along non-circular curve, we require a flexible spoke which can translate radially and rotate on a perpendicular axis to the plane containing the curve.
- c. The curve should be such that the torque due to masses in 1 and 4 Quadrants is always greater than the torque due to masses in 2 and 4 quadrants

### **c. Non Conservation of energy in constrained open systems**

The principle of conservation of energy may be true only in closed systems. Is system involving GRAVITY a closed system or open system ? Further a system controlled with constraints or with feed back may not follow conservation rules.

A small controlled force with some small control energy may change system status drastically.

An object placed on the edge of a table can be pushed with small control force to make the system unstable and release large amount of energy disproportionate to the force and input energy. Similarly when the motion is constrained to take place in a particular path, the energy required to keep the object in that path, may be small compared to the energy released.

The Key to making a perpetual motion machine is to

- c. Apply small controlled forces to make systems unstable
- d. Keep the instability to continue uninterrupted by applying such forces as needed.

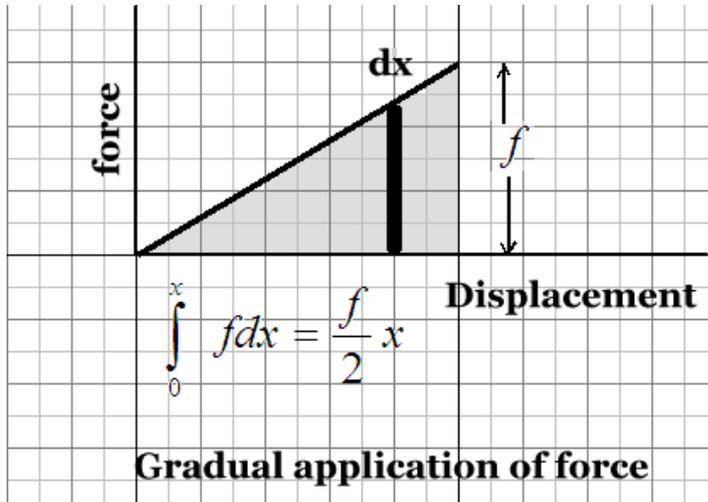
### **d. Instantaneous force vs. gradual force<sup>3</sup>**

instantaneous forces do more work than gradual forces.

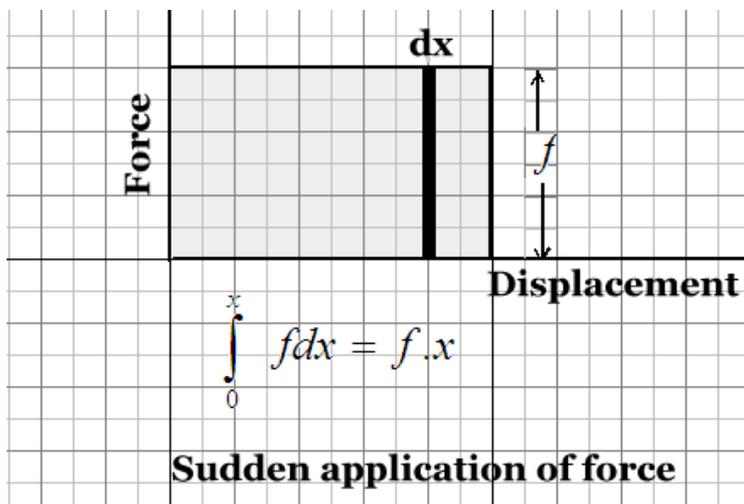
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<sup>3</sup> PMM Part 1 (from NSR Moorthy)

As you recall from the normal principles of work, when a gradual force  $f$  is applied on a body to move through a displacement of  $s$ , the work done is  $(1/2)f*s$ .(integral of  $f$  and  $s$ )<sup>4</sup>



But when an instantaneous force  $f$  is applied for a very short time to move the body through the same displacement the work done is  $f*s$




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<sup>4</sup> PMM Part 1 (from NSR Moorthy)

This is very important postulate for building the perpetual motion machine. You apply instantaneous force to a system to move from one state to another and let the system restore to its position gradually. The energy difference is a critical to drive the PMM.