Raymond Head’s Over Unity Proof for Veljko Milkovic’s Two Stage Mechanical Oscillator

This document will analyze and present conclusions made by Mr. Raymond Head, a construction businessman from Texas, USA, who has been working on the pendulum-lever system research and making Veljko Milkovic’s two-stage mechanical oscillator replica (www.veljkomilkovic.com).

Mr. Head has built a big oscillator 8 feet long, 2 ½ feet wide and 9 feet high (2.4m x 0.75m x 2.7m) and the frame (without the pendulum and power bar), weigh around 960 pounds (430kg), see below for pictures of its operation.

Picture 1

Picture 2

Picture 3

Picture 4

He used a scale to measure maximum pressure that he could apply with his hand. It was 21 pounds (9.5kg), see *Video 6* (http://www.youtube.com/watch?v=gC6Qlj1Mbo8) on Youtube.com for this.

He was driving the pendulum with his right hand, more accurately, with his bent fingers (see pictures 1 through 3), but not with maximum force, because he was able to drive the pendulum for very long time. This means that force of his hand was less than 20 pounds (9kg). He has seen his son (he was 7 years old at the time) lifting 100 pounds 2+ inches, 45 times a minute for over 5 minutes with one hand. At that point his Mother came up and to show off, he said "look mom, two fingers" and continued for another two minutes with only two fingers.

For his last experiment, shown on *Video 7* (http://www.youtube.com/watch?v=yCkVmv4zizM), on YouTube.com he used a lever ratio of 3.5 : 1. The 145 pound (66 Kg) pendulum was hung on the short side of the lever and on the longer side, a weight of 80 pounds (36kg) was fixed with a 3/8 inch all thread rod.

The weight would be raised 2+ inches (5 – 6 cm) when the pendulum was moving towards the left side and 2- inches when it was moving back. So the weight of 80 pounds was raised a total of 4 inches (10cm) for each hand input. The path of the hand was also around 10cm (before losing contact with pendulum).

So, because paths passed by the weight and path passed by the fingers were almost the same and because the weight was 80 pounds and force of the fingers was less than 20 pounds, it should be obvious that output energy was 4 times bigger than input energy.

It is necessary to note that above statement is valid only after the initial raising of the pendulum. Energy spent for the initial raising of the pendulum can be disregarded for longer periods of work by the oscillator.

Note that no one has counted the fact that weight on the left side of the lever was going up and down and that it could do work both ways. Only raising up and increasing potential energy of the weight was counted in this case.

Some people believe that the energy in a two stage oscillator keeps oscillating like see-saw and this gives a false impression of an energy surplus. Because a pendulum with fixed pivot point can oscillate for couple of hours and a pendulum in a two stage oscillator would lose half of its energy for a half minute it is obvious that movement of the pivot point would consume energy from the pendulum. Here we have a second proof that there is no oscillation of energy in the two stage oscillator. Because the weight is fixed with a steel rod that is allowed to flex and it can be seen, in picture 4, that the rod was loose after the weight struck the ground. This means that weight passed all its energy to the ground and wasn't able to return it to the lever.

Mr. Head also came to conclusion that even with increasing the weight of the pendulum he would hardly notice a proportional increase required from his hand. Small input energy should be necessary to add for air and friction losses for heavier pendulum. Because a heavier pendulum can raise more output weight it is obvious that efficiency ratio would grow for more heavy pendulums.

He also noted that the efficiency ratio would grow larger with an increase in length of the pendulum support rod. This increase would slow lever frequency, but a gain would still exist. For example if a pendulum with length of 1 meter was able to raise 100 pounds in one second, then pendulum with length of 3 meters would be able to raise 342.25 pounds in three seconds and if it was extended to 5 meters it would rise 1171.35 pounds every 5 seconds. By dividing 1171.35 pounds with 5 seconds the power would be 234.27 pounds per second. So, although frequency kept decreasing, the power kept increasing.

The above conclusion wasn't examined nor measured by the team of Mr. Veljko Milkovic, but their opinion is that is has some logic because of the inertia of the output mass. It would need some time to overcome inertia and start moving heavy weight. The slower oscillator would spend less energy to raise heavy weight.

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