RESEARCH ARTICLE

CIRCULAR MOTION, INERTIA AND MECHANICAL MOTION

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ARTICLE INFO	ABSTRACT
  *Corresponding author: *Nripesh Trivedi*	This paper presents a general perspective on circular motion, inertia and mechanical motion.

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INTRODUCTION

This paper presents a perspective on circular motion, inertia and mechanical motion.
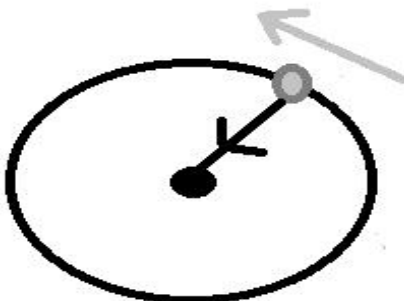
Circular Motion

Fig 1. Circular motion shown with inner arrow showing direction of force and tangential arrow showing direction of motion

The centripetal force is shown with an inner arrow denoting the direction of the force from the object revolving around the object at the center. This change of direction of force with change in position of object revolving around the center could be termed as consciousness. The object revolving around the center experiences a force from the center.

This force results in inertia which keeps the object revolving. The object at the center experiences a force from the object revolving. This force results in inertia keeping it fixed at center. This circular motion could be explained with the equation –

$$|F|=m|a| \qquad (1)$$

The direction of force from the object at the center and from the object revolving around the center are equal and opposite in direction. More the force on a given mass, higher the inertia. Therefore, higher the acceleration, greater the inertia while lower the acceleration, lower the inertia. This can be concluded from equation (1) above. For a given m,

$$F \propto a \qquad (2)$$

Inertia: Inertia depends upon position and direction. It implies that inertia is relative. Relative means it can be related to any scalar. The incident of Apple falling on newton could be illustrated using this definition. Its direction was towards newton's head and when it touched his head, he felt the inertia due to apple's shape and size relative to him.

Mechanical Motion: Mechanical motion consists of two parts –

Periodicity

Inertia

Both these parts could be depicted by the curve below

Plot of 1/x
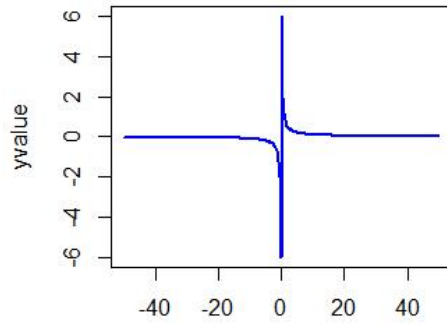
Function – 1/x

CONCLUSION

This paper presents a general perspective on circular motion, inertia and mechanical motion

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