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On law of existence and its application for gravity and relativity

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ABSTRACT

The statement for the law of existence is as follows: Space completes the mass and mass completes the space. Mass and space complete each other through equal and opposite interaction, and form a system — a system which is commonly understood as a physical existence or reality. Gravity, time dilation, and everything that we hear, taste, touch, smell and see are consequences of this law.

Keywords: Mass, Space, Existence, Gravity, Relativity

INTRODUCTION

Human mind defines a physical or material existence as anything that we can see, touch, taste, smell or hear. All things that *happen, occur or exist* are in the framework of mass-time and space-time. Mass and space, both are primary constituent of our universe. The universe cannot be created without either of it. However, for human mind, material (mass) always takes front seat, and empty space seats in the back. Right from the beginning of human understanding, it is assumed that the 'space' around us, or in which every mass moves, is infinite, and is there forever. We think that the 'space' around us, around every object, is inert and it has no special role to play. It is a human nature — more common, more ordinary is a thing — less we think about it. The 'space' around us, around every mass is extremely ordinary thing, and therefore we do not think about it at all. We take this 'space' granted. And as a result, we failed to understand the fundamental model of existence.

If we think our universe as a beautiful painting; the 'space' is a paper or a canvas on which the creator created his painting. Without paper/canvas or any two dimensional surface, one cannot create a painting. Similarly, without the concept of three dimensional 'space', the universe cannot be created. The 'space' itself is one of the most essential constituent of our universe. It is the 'space', which provides the ultimate structure to our universe. The 'space' is there so that 'mass' can move inside it. The 'space' is there so that mass can stay in state of 'mass' inside it. We failed to consider the 'space' as a physical entity. Probably it is our ignorance towards the 'space' because of which we do not comprehend the most fundamental force of nature — Gravity.

2. Law of Existence — Space completes the mass, and mass completes the space

Space and mass share equal and opposite interaction with each other and form a system which is generally acknowledged as *existence or physical reality*.

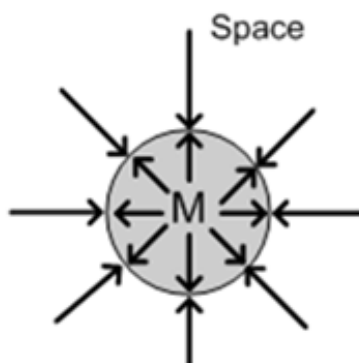


Figure 2.1: Existence formed by equal and opposite interaction between mass-time and space-time

Every existing mass has natural ability to expand itself (like in big bang). This ability of mass can be defined as *mass root force*. The unit of mass root force is $(\sqrt{m}\sqrt{kg/s})$ or square root of newton. However, the space around every mass has natural ability to suppress the mass root force with equal and opposite strength. This ability of the space can be defined as *space root force* with the same unit as stated above. More is the magnitude of mass; more is the mass root force. And so is the space root force in opposite direction.

2.1 The Birth of Gravity as a Consequence of Existence

Space root force forms a sloped (curved) space around every mass. Magnitude of this slope (curvature) is directly proportional to the mass root force. It means more is the mass; more will the slope of the space around that mass.

This slope is nothing but gravity. The unit for the slope of a space is $\sqrt{m/s}$.

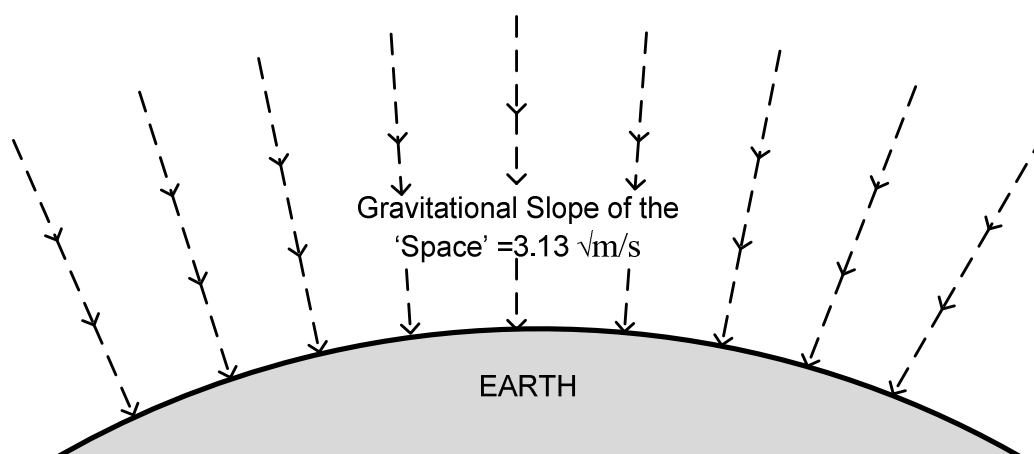


Figure 2.2: Gravitational Slope of the Space on the Surface of Planet Earth

Gravitational slope on the surface of planet earth is directly proportional to the root mass of the earth and inversely proportional the distance i.e. radius of the earth. The magnitude of this slope can be calculated as $3.13\sqrt{m/s}$. When other small mass body comes in the sloped space around the earth, it follows the direction of the slope, irrespective to the mass magnitude of that body. In year 1589, the Italian scientist Galileo Galilei had dropped two balls of different masses from the Leaning Tower of Pisa to demonstrate that their time of descent was independent of their mass magnitude. It happens because both balls are in same sloped space.

2.2 Relativity and Time dilation

One of the important properties of the *space* is — it has its own braking mechanism (a speed limit) for any mass travelling (through it) at relatively high speed. Time slows down for the mass which is travelling at relatively high

speed. It happens because space exerts more space root force on the mass at higher speed. In a reaction, root force exerted by mass i.e. mass root force is also increases with equal amount of magnitude, only in opposite direction. This is nothing but relative increase in mass at higher speed (Figure 2.3).

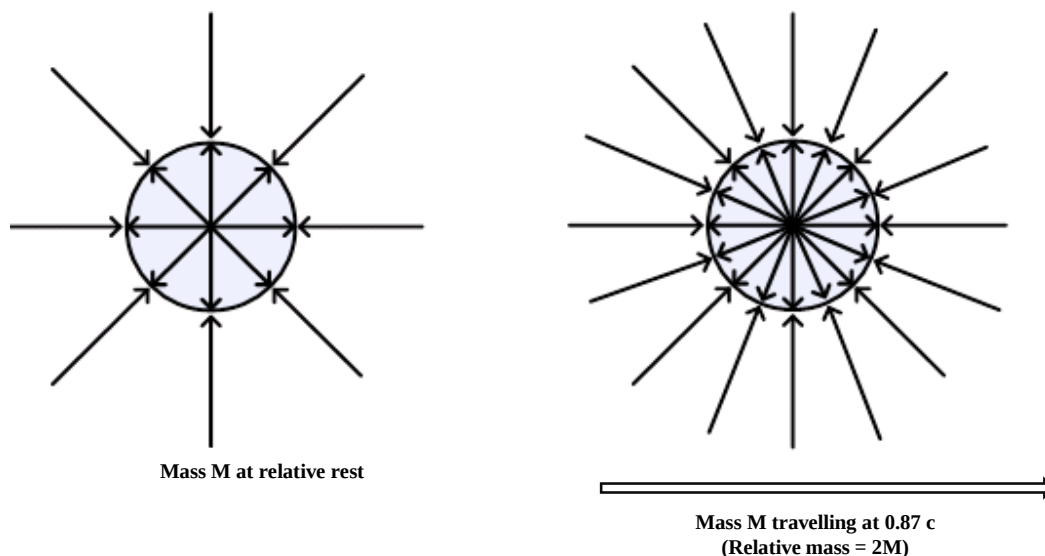


Figure 2.3: Relative increase in space root force due to high relative speed and equal and opposite reaction of mass root force

Relative speed of the time is inversely proportional to the root force exerted by the mass and space on each other. It means at more root force, time will run more slowly. At relatively higher speed, the space exerts more root force on the mass. The result is — reactionary mass root force increases with equal magnitude and relative time slows down. Time is equally associated with mass and space both. Therefore it would be wrong just to use the word *space-time*. Either we should say *mass-time* and *space-time* both, or we use words *mass* and *space* as it is, and assume that *time* is equally and fundamentally associated with both.

2.2.1 Time Dilation Due to Gravity

Time will run a lot slower on the surface of neutron star than to the surface of earth. The reason is the same as explained above. At more root force exerted, time will run more slowly. The only difference is — at high relative speed, time runs slow because high space root force exerted by the space on moving mass, whereas at high relative gravity, time runs slow because high mass root force exerted by heavy mass on the space. Respective equal and opposite reaction follow.

CONCLUSION

The *existence* or *physical reality* as we know it, is nothing but equal and opposite interaction between space and mass. Space completes the mass and mass completes the space, giving birth to gravity, relativity and everything else in this universe. Also, relative speed of time is inversely proportional to root force exerted by the mass and space on each other. It means at more root force exerted by any of the entity (mass or space), time will run more slowly.

REFERENCES

There are no references for this article.