Journal of Multidisciplinary Engineering Science and Technology (JMEST)
ISSN: 2458-9403
Vol. 8 Issue 1, January - 2021

Theory of Natural Relativity: A New Beginning

(Unique Nonlinear Transform for Universal Traffic Policing)

Relative motion cannot alter objects-Absolute motion contracts volume

Bandula W. Dahanayake
Farmfield Crescent, Kanata, ON, Canada
Bandula_Dahanayake@yahoo.com

***Abstract*—**Relativity. If you can stop it, it is relative, otherwise not. Light is NOT relative. Relative motion cannot alter objects and time. That is the reality of relativity, naturally. Theory of Natural Relativity reveals the nature's ultimate traffic policing mechanism for all objects of mass in the universe. Natural Relativity does not force any hypothetical unnatural behavior on light or on moving objects and time. Natural Relativity is based on a nonlinear frame-to-frame transform that is unique. There is no time contraction or dilation, no dimension contraction, no mass dilation in Natural Relativity. Natural Relativity is the objective traffic cop of ultimate fairness in nature that guarantees the relative motion of objects does not exceed the speed of light while maintaining the integrity of objects and time. Light remains as massless and momentum-less waves in Natural Relativity, naturally. Everybody ages at the same rate in Natural Relativity irrespective of the speed they are travelling at. Unlike color-biased policing in North America that has no respect for the integrity of objects, the natural universal policing absolutely preserves the integrity of objects and time unaltered independent of the color of objects.

Natural Relativity guarantees that no relative speed of an object exceeds the speed of light without using hypothetical linear Lorentz transform, without forcing Maxwell's equations to be hypothetically relative, and without forcing the light to be hypothetical momentum carrying bogus photons or massless light particles. Light is a coherent wave that comes in wave bursts, not spatially random particles, or photons.

Light cannot carry a momentum or be relative since it is the medium, an outside agent, that determines the speed of light. Motion or cyclic field variation in propagation is always orthogonal to the direction of propagation. Only the objects of mass have the motion or momentum in the direction of motion. Propagation of light has no motion in the direction of propagation and hence light cannot carry a momentum. The energy of a light wave is solely due to the motion orthogonal to the direction of propagation, which is the frequency.

If any entity has a momentum, that entity must be able to be brought to a complete stop by applying equal and opposite momentum. And that entity must also be able to either gain or lose momentum in a collision. Light cannot be brought to a complete stop since light has no existence without propagation. Light can neither gain nor lose momentum since speed of light is a constant determined by the medium, an external agent. Propagating light cannot carry a momentum. Any entity that cannot carry a momentum cannot be a particle and hence light is not a particle.

Modern Physics solely rest on the false conjecture that light carries a momentum and hence relative. For light to be relative, although it is necessary for Maxwell's equations to be transformable onto inertial frames, it is not sufficient. Maxwell's equations must also be transformable to accelerating frames at any instant of time, and the transformation must be unique. Maxwell's equations cannot be transformed onto accelerating frames, and transformation onto inertial frames is not unique. Any entity that is not uniquely transformable to an accelerating frame at any instant of time is not relative. A beam of light propagates neither relative to objects of mass nor relative to any other wave. Propagation of light is absolute.

Absolute motion of an object of mass is the motion of an object of mass relative to the propagation of light. There is no reversible symmetry in absolute motion. There is no relative motion without absolute motion. Motion of an object of mass relative to another object of mass is the relative motion. There is no relative motion without two or more objects of mass. Waves are not relative since the motion is orthogonal to the direction of propagation.

Natural Relativity guarantees that the relative speed of an object of mass does not exceed the speed of light without altering the object and time. Universal Relativity guarantees that the absolute speed of an object of mass does not exceed the speed of light by volume contraction without altering mass and time. When the absolute speed of an object reaches the speed of light, the mass density reaches infinity turning itself into a black hole while time and mass remain unaltered. No motion, neither absolute motion nor relative motion, and no frame, neither inertial frame nor accelerating frame, can alter the mass and time. Time and mass are absolute. Time and mass remain unaltered even in a black hole.

It is we who defined the time based on the relative motion of objects of mass. Since relative motion dynamics are frame independent, time must be frame independent. What made time to be artificially relative is the forcing of linear Lorentz transform on light to make light appears relative when it is in fact not. Frame to frame transform is nonlinear. Relative

motion cannot alter objects and time. Mass and time do not depend on speed.

If anybody is foolish enough to take a clock on an airplane to prove time is relative, instead of taking a single clock, if you take two clocks, one water clock together with any other clock, around the world, you will realize that it is the mechanism of the clock that is relative, not the time itself. Similarly, instead of one clock, if you take two clocks of different mechanisms onto a mountain top and back, you will realize that it is the mechanism of a clock that is affected by the gravity not the time itself. Time is independent of gravity and speed of an object. Time is absolute.

Light cannot exert a force on objects of mass since light has no momentum. Light has no mechanical energy. Momentum that we can harness in outer space using large wings and near the earth surface using windmills does not come from light. It is the material medium in space that generates a momentum in the presence of light. Light changes the density of a medium locally, which in turn generates a momentum in the medium due to the pressure differences. The presence of a momentum in space is an indication that there is a medium in space. If we can harness a momentum in empty space, it is an indication that the space is not empty. Even when light is present, there will be no momentum in space without a material medium. No wind without air. Light cannot exert a mechanical force since the speed of light cannot be slowed down or stopped by force. If light carries a momentum, we should be able to change the speed of light by using an external force or a momentum. Speed of light cannot be changed by an external force or momentum. Only a medium can change the speed of light.

Light has no effect on gravity. Gravity has no effect on light. However, both gravity and light can change the medium density. Any change in medium density in turn affects the net force on an object as well as the direction of the propagation of light. It is the medium that mediates an artificial appearance of an interaction between light and gravity. No such appearance of an interaction between light and gravity is possible without a medium. Gravity and light are mutually independent, that is the reality.

Relative distance is independent of time and depends only on the speed of the object and the speed of the frame for objects on linear motion on any inertial frame. Hypothetical relative time in Special Relativity is independent of the distance and depends only on the speed of the object and speed of the frame for objects under linear motion on any inertial frame. Space and time are mutually independent for objects and frames under linear motion. There is no spacetime. Time is not relative. Relative time is a result of forcing hypothetical linear Lorentz transform where it does not belong. Hypothetical spacetime, relative time, and relative mass in Special Relativity are not unique. Nature abhors non-uniqueness. Special Relativity is a mechanism of human mind, not a mechanism of nature.

Einstein's proclamation in Physics that light carries a momentum is simply preposterous. Lights has no momentum. Since the Special Relativity, Quantum Mechanics, and the Modern Physics in general. rest on the false premise that light is relative, the collapse of Modern Physics is imminent, an absolute must for any progress in natural sciences. Modern Physics is a religion, a human Crafted Prophesy (CRAP). Demise of religions that perpetuate ancient texts of ignorance is imminent, not far away. Imaginary photon is a highly contagious virus that must be eradicated by mass vaccination with a dose of reality for the reemergence of the natural dawn, the reality.

Keywords—*Special; General; Relativity; Maxwell; Time; Mass; Dilation; Big Bang; Red Shift; Gravity; Spacetime; Absolute; Light; Particle; Photon; Wave*

I. INTRODUCTION

The Theory of Special Relativity is an artificial imaginary structure built solely on hypothetical and invalid foundation of time dilation, length contraction, and mass dilation reinforced with an equally hypothetical and invalid claim that light carries a momentum. If an entity carries a momentum, that entity must be able to be brought to a complete stop by applying equal and opposite momentum. No matter what you do, you cannot bring light to a complete stop. Any entity that cannot be brought to a complete stop cannot consists of a momentum. Any entity that carries a momentum must either gain or lose momentum in a collision with objects of mass. Light can neither gain nor lose momentum in a collision since speed of light is a constant.

If an entity consists of a momentum, that momentum should be able to be nullified by applying equal and opposite momentum. Waves have no existence without propagation. Any entity that has no existence without propagation cannot be brought to a complete stop. Any entity that propagates cannot carry a momentum. Light, which cannot be brought to a complete stop, cannot carry a momentum. Any entity that cannot be slowed down by applying a force cannot carry a momentum. Any entity that cannot be accelerated by applying a force cannot carry a momentum. Light can neither be accelerated no decelerated by an external force and hence light cannot carry a momentum. Light cannot be slowed down or accelerated since the speed of light is a constant. Light cannot have a momentum. The false claim that light carries a momentum and hence relative is simply against the very nature of the momentum. The very foundation of the Special Relativity is false, wicked, unnatural, preposterous religious non-sense. That is the unseen reality.

If an entity has a momentum, we can increase or decrease the momentum of that entity by an external force. We can increase or decrease the speed of an entity with a momentum by an external force.

However, we can neither increase no decrease the speed of light by an external force since the speed of light is a constant determined by the medium. It is only a medium that can increase or decrease the speed of light, not an external force or momentum. If light has a momentum, light cannot propagate at a constant speed in the presence of external forces. Since the speed of light is a constant that is determined by the medium, light does not have a momentum.

Corollary:

If light carries a momentum, the speed of light will not be a constant determined by the medium in the presence of gravity or any other external force. Speed of light will not be a constant even in a vacuum if light carries a momentum and the Maxwell's equations for propagation of light will no longer hold.

Law of Momentum:

If it has a momentum, you can stop it. If an entity carries a momentum that entity must be able to be brought to a complete stop by applying equal and opposite momentum.

"*If you can stop it, it is relative, otherwise not.*"

Contrary Law of Momentum:

If you cannot stop it, it has no momentum. Any moving entity that cannot be brought to a complete stop cannot carry a momentum. Any entity that has no standstill existence cannot carry a momentum.

Corollary: Light has NO Momentum

You cannot stop light. So, light cannot carry a momentum. Light cannot be brought to a complete stop using equal and opposite momentum. You cannot stop light since light has no existence without propagation, and hence light cannot carry a momentum.

If time dilates and length contracts as it is claimed in Special Relativity, the relative motion mechanics will not be frame independent. Relative motion mechanics must be frame independent. For relative motion mechanics to be frame independent, both time and length either must contract by the same factor, both time and length must dilate by the same factor, or both time and length must remain unchanged. In Special Relativity, what is there is a time contraction and length contraction, both of which are unnatural since relative motion cannot change an object and time.

What happens in nature is obvious since relative speed cannot change the physical characteristics of an object and time. Observer dependent relative motion cannot change the length and mass of an object and time. No motion, neither absolute motion and relative motion nor inertial motion and accelerating motion, can alter the time and mass. That is the unseen reality.

The fallacy of Special Relativity is in its inherent invalid and hypothetical time dilation, length contraction, mass dilation, and the forcing of an equally invalid and hypothetical momentum on light, all of which are crafted prophesies, not the reality. Special Relativity is a religion, a human Crafter Prophesy (CRAP), a disgrace to science, an insult to the human ingenuity. Special Relativity is not an actual mechanism of nature.

The aim of this paper is to introduce the true mechanism of nature that polices the traffic in the universe. The Natural Relativity is the traffic cop of ultimate fairness that has no bias against the color of an object. With firsthand experience, I can confidently say that such fair traffic policing that is independent of color of objects is nonexistent in North America, especially in Canada, and the United States. You do not have to speed to get a traffic ticket in Canada, having wrong color is sufficient. This deeply structured systemic color bias in North America appears to continue without deterrent since the society as a whole and its legal system are for some reason intentionally or unintentionally blind to it.

Obvious Irony of Special Relativity:

If relative motion dilates time and contracts the length as it is claimed in Special Relativity, the relative motion dynamics will not be frame independent. Relative motion dynamics must be frame independent. Newtonian relative motion dynamics are frame independent. For relative motion to be frame independent, either both time and length must dilate by the same factor, both time and length must contract by the same factor, or both time and length must remain unaltered. Since relative motion cannot change the physical characteristic of an object and time, dimensions of an object and time must remain unchanged by the relative motion. Observer dependent, reversible symmetric, relative motion cannot alter objects and time.

You Cannot Ride a Light Wave:

Lemma:

Light is NOT relative. Any entity with velocity determined by the medium cannot be relative.

Property:

Velocity of light is determined by the medium or the lack of it, an external agent. As a result, velocity of light is unaffected by the frame of reference.

Einstein dreamed about riding a light wave and ended up steering physics into a dark abyss. Physics has stuck in that abyss for more than a century now with no hope of getting out of it and see the real light, a wave, again. One way we can free ourselves from that deep dark abyss, black hole, is to ask few questions. Can you really ride a light wave? If you are travelling at certain speed along a beam of light, do you think if you speed up to the speed of light you can ride it? If you think you can, you must really be

dreaming. It is time to get the fundamentals right.

There is a big difference between motion and propagation. The motion of a mass is always in the direction of the motion. The motion in the direction of the motion of a mass determines the speed of the mass. The motion or variation in propagation is always orthogonal to the direction of propagation. Motion or variation in propagation does not determine the speed of propagation. Motion or variation in propagation determines the frequency of light and the electromagnetic energy of the light. There is no motion in propagation in the direction of propagation. There is no propagation if there is a motion or momentum in the direction of propagation. Light has no momentum since there is no motion in the direction of propagation. The speed of light is determined by the medium, an external agent, and the speed of light is independent of observers. Electromagnetic energy is determined by the motion or variation orthogonal to the direction of propagation, the frequency. If you divide the electromagnetic energy by the speed of light what you get is nonsense, not the momentum.

Lemma: Energy and Frequency

Wave propagation has no motion, momentum, in the direction of propagation. Electromagnetic energy of light is determined by the motion or variation orthogonal to the direction of propagation, the frequency.

When you are travelling faster and faster thinking to ride the light wave, it does not matter what speed you are travelling, the motion or variation of the propagation of light is always orthogonal to you, and hence the speed of propagation of light is independent of the speed you are travelling. In other words, light is not relative. Irrespective of the speed you are travelling at, the speed of the light is the same if the medium is the same since speed of light is determined by the medium and the motion in propagation is always perpendicular to the direction of propagation.

Momentum is determined by the motion in the direction of motion. There is no motion or momentum in propagation in the direction of propagation. Without a motion in the direction of propagation, light cannot carry a momentum. Having no momentum, light cannot do mechanical work. Light has no kinetic energy. Light has no mechanical energy. Light cannot push or pull objects of mass. Light cannot gain or lose speed in a collision since speed of light is a constant determined by the medium, and it is a good indication that light cannot have a momentum.

Speed of any entity that has a momentum cannot be determined by the medium, an external entity independent the moving entity. Any entity that has no momentum cannot be a particle. There are no light particles or photons. Particles can carry a momentum. Any entity with momentum cannot propagate. Particles cannot propagate. Energy of any entity with momentum cannot be proportional to frequency. Energy of any entity with momentum is a function of momentum. Particles have standstill existence. Waves do not have a standstill existence. Standstill particles cannot reach a constant speed instantly. Light has no existence without propagating at constant speed determined by the medium. Any entity that has a momentum must be able to be brought to standstill by applying an equal and opposite momentum. Light cannot be brought to standstill since light has no existence without propagation. Light cannot carry a momentum. Light is not a particle.

A. The Theory of Natural Relativity in a Nutshell

This section provides the essence of the Theory of Natural Relativity in a nutshell. Regular introduction starts in section B.

Definition: Relative Entity

An entity is relative If and only if an entity of finite speed can be brought to a complete stop by applying equal and opposite speed. A moving object of mass is such an entity. Motion of an object of mass is relative.

Definition: Non-Relative Entity

If an entity of finite speed cannot be brought to a complete stop by applying equal and opposite speed, that entity is not relative. A wave is such an entity. Waves are not relative.

Definition: Standstill Existence

If an entity of finite speed can be brought to a complete stop by applying an equal and opposite speed, then, that entity has a standstill existence. Any object of mass has a standstill existence. Waves do not have a standstill existence.

Axiom: Relative Entities

Two moving entities are relative if and only if each moving entity can be brought to a stop by applying an equal and opposite momentum:

- Two moving objects of mass are relative.
- An object of mass and a light beam are not relative.
- Two light beams are not relative.

Property: No Light Particles or Photons

Any entity that has no standstill existence cannot carry a momentum. Light has no standstill existence since light has no existence without propagation. Light has no momentum. Any entity that has no momentum cannot be a particle. There are no photons or light particles. Photon or a wave particle is an oxymoron.

Lemma:

Any entity that has no standstill existence is not relative. Waves have no standstill existence. Waves are not relative. Light is not relative.

Lemma:

Any entity that cannot be transformed onto

accelerating frames at any instant of time is not relative.

Property:

Maxwell's equations are not relative since Maxwell's equations are not transformable onto an accelerating frame at any instant of time.

Corollary:

Motion of objects of mass is relative; propagation of waves is not.

Zeroth Law of Relativity:

Propagation of light is absolute, not relative. Light does not propagate relative to any object of mass, inertial or accelerating.

First Law of Relativity:

For an entity to be relative, although it is necessary for that entity to be relative on inertial frames, it is not sufficient. That entity must also be relative on accelerating frames at any instant of time.

Second Law of Relativity:

Maxwell' equations are not relative. Transformation of Maxwell's equations for propagation of light onto inertial frames is not unique. Maxwell's equations cannot be transformed onto accelerating frames at any instant of time.

If Maxwell's equations are relative, they must also be relative not just on inertial frames, but on accelerating frames too at any instant of time. Any entity that is relative on accelerating frames at any instant of time is also relative on inertial frames; however, the reverse is not true. For Maxwell's equations to be relative, Maxwell's equations must also hold their structure not just on inertial frames but also on accelerating frames at any instant of time. Maxwell's equations are not transferable onto accelerating frames. Any entity that cannot be transformed onto accelerating frames at any instant of time is not relative. For a transformation to hold true, it must be unique. Transformation of Maxwell's equations onto inertial frames using linear Lorentz transform is not unique. Lorentz and Einstein's claim [1] that light is relative is false [2,3,4].

Linear Lorentz transform is not unique. Lorentz Transform is unrealistic and unnatural since it requires time to be relative. Relative time is false and preposterous. To transform Maxwell's equation onto an inertial frame, transformation must be linear. Linear transformation requires time to be relative. Lorentz had to let the time to be relative in forcing Maxwell's equations for propagation of light onto to an inertial frame using a linear transform to make the light to appear relative, an illegal act of first degree. Lorentz Transform is not a transform of nature. Any transform that requires time to be relative is not a true transform of nature, not realistic. Time cannot be relative. If time is relative time will be directional since motion is directional, and not unique [2]. Time must be unique. Time cannot be directional.

What were they thinking? Relative time is simply meaningless. Do not try to justify time dilation and Special Relativity using Global Positioning System (GPS). If you are using GPS to justify time dilation, it is a good indication you certainly have no clue what GPS is. Do not give GPS a bad name by dragging it to falsely justify some non-senses like time dilation and Special Relativity. GPS has nothing to do with Special Relativity or time dilation. If Special Relativity holds true, GPS is not possible [9,12]. Maxwell's equations cannot be transformed onto GPS satellites since GPS satellites are not moving at constant speed. Maxwell's equations are not relative. GPS estimates the request time of a mobile receiver for making the system client independent. Time estimation in GPS is not done to compensate for hypothetical time dilation in Special Relativity; it is done with the understanding that any mass communication system must be client independent in mind. Nobody should try to contaminate GPS using hypothetical non-sense like Special Relativity. The fact that no relative motion can alter physical characteristics of an object of mass and time itself is sufficient to discard hypothetical Crafted Prophesies (CRAP) such as Special Relativity and time dilation. Time is not relative.

Third Law of Relativity:

No motion, neither absolute motion nor relative motion, can alter the mass of an object and time. The time, the mass of an object, and the speed of propagation of light are the same for every moving frame irrespective of whether the frame is an inertial frame or an accelerating frame.

Time, and time lapse it takes to travel between two points in space, are not the same. We can only define and measure the time lapse, not the time. Time is the same everywhere in the universe. Time lapse is independent of positions in space and depends only on the distance travelled and the speed chosen to travel the distance.

Time is unique. However, time lapse for a given distance is not unique since the speed chosen to travel the distance can be of any value, and infinitely many positions in space have the same distance between two positions. The linear distance between two positions in space is independent of the positions themselves. There is no time lapse attached to a position in space. Time lapse to a position in space is a definition. Position in space and time lapse to that position have no association.

Spacetime interval or proper time is the same as the relative time and hence it also depends only on the ratio distance/time, which is a constant for an object under linear motion, and independent of the distance and time themselves. As a result, spacetime interval or proper time is independent of the space for

an object under linear motion. In addition, spacetime function in Special Relativity is not unique [2]; there are infinitely many spacetime functions that are equally valid. If there is a spacetime function, it must be unique. Space time function is not unique [2]. There is no spacetime.

Theorem: Natural Relativity: Ultimate Traffic Cop (Unique Equation of Relativity)

If the inertial frame F′(x′,y′,z′) is moving at speed v relative to the inertial frame F(x,y,z) in the direction of **x**, the Natural Relativity coordinates transformation function or the Ultimate Traffic Cop, which guarantees that relative speed of any object in the universe does not exceed the speed of light while maintaining the time, mass, and the dimensions of the object, as well as the speed of light are independent of the relative speed of the object, is given by,

$$x'=x\psi(x/t,v) \quad (1.1)$$

where, the transformation function ψ(x/t,v) is given by,

$$\psi(x/t,v)=[1-v/(x/t)]/[1-(x/t)v/c^2]. \quad (1.2)$$

Relative to the frame F(x,y,z), the moving object of constant speed u is at position **x** at time t. Relative to the frame F′(x′,y′,z′), the same moving object is at position **x**′ at the same time t, and it is moving at constant speed u′. In the case of an object on linear motion x/t=u and x′/t=u′, where u and u′ are constant speeds in respective frames.

If an object P at distance x at time t is moving in the direction **x** on frame F(x,y,z), then, we can get the relative distance x′ of the object P on frame F′(x′,y′,z′) at the same time t by transforming the distance x on frame F(x,y,z) onto the frame F′(x′,y′,z′) by using the transform function ψ(x/t,v).

Lemma: Reversible Symmetry

If frame F′(x′,y′,z′) is moving in the direction **x** with speed v relative to the frame F(x,y,z), then, the frame F(x,y,z) is moving relative to the inertial frame F′(x′,y′,z′) at speed -v, and hence we have coordinates transformation,

$$x=x'\psi(x'/t,-v) \quad (1.3)$$

where, the transformation function ψ(x′/t,-v) is given by,

$$\psi(x'/t,-v)=[1+v/(x'/t)]/[1+(x'/t)v/c^2]. \quad (1.4)$$

The ratio x/t is a constant for any moving object of constant speed u. The ratio x/t is independent of distance x and time t themselves. Similarly, the ratio x′/t is a constant for any moving object of constant speed u′, and the ratio x′/t is independent of distance x′ and time t themselves. Time t is the same on both frames F(x,y,z) and F′(x′,y′,z′). Time t is independent of the frame of reference as it should naturally be.

Lemma: Universality

The time and mass of an object are independent of any motion, both absolute motion and relative motion of an object.

Theorem: Relative Speed on Different Frames

If an object P′ is moving relative to the frame F′(x′,y′,z′) at speed u′ in the direction **x**′, and the frame F′(x′,y′,z′) is moving at speed v relative to the frame F(x,y,z) in the direction **x**, then, the speed u of the object P′ relative to the frame F(x,y,z) is given by,

$$u=u'\psi(u',-v) \quad (1.5)$$

where,

$$\psi(u',-v)=[1+v/u']/(1+u'v/c^2) \quad (1.6)$$

Relative motion cannot alter the time, mass, and the dimension of an object.

Lemma: Reversible Symmetry

Reversible symmetric relative motion cannot alter an object and time. Time, mass, and dimensions of an object as well as the speed of light are the same for all the frames under relative motion.

B. **Natural Historical Motivation**

With the introduction of the Maxwell's theory of electromagnetic propagation in the second half of 1800 AD, it became clear that the speed of light is a constant that is determined by the electromagnetic properties of the medium or the lack of it. Following the Maxwell's theory, in the late 1800 AD, Michelson and Morley experiment demonstrated that the speed of light is independent of the frame of reference. Almost at the same period, Lorentz tried to transform the Maxwell's equations on to an inertial frame to demonstrate that the structure of the Maxwell's equations remains after the transformation.

In the early 1900 AD, using the outcome of Maxwell's theory of electromagnetic propagation and the fact that the speed of light is a constant independent of any reference frame, and grounded on the Lorentz's linear transform and partially completed work, Einstein correctly realized that relative speed of any object of mass should not exceed the speed of light. Einstein tried to theorize how could the nature makes the relative speed of light the same as the speed of the propagation of light for all the inertial frames under the false impression that light is relative. Special Relativity is an outcome of this false belief that light is relative.

It is only an object of mass that can be relative to another mass. For an entity to be relative, that entity must have a stationary existence. Light has no existence without propagation. Light has no stationary existence. Light is not relative. You can stop moving mass by applying equal and opposite speed; that is why relativity applies for a mass. You cannot stop light by applying an equal and opposite speed; that is why light is not relative.

Definition: Stationary Existence

An entity is stationary or standstill when that entity has an existence when speed of that entity is zero.

Property:

Relativity only applies for entities that have stationary existence. Waves do not have existence without propagations. Waves do not have a stationary existence. Waves cannot be relative.

Any object of mass is relative. Very easy, but unnatural and bogus way to make light relative is to bestow upon a fake mass on light. Einstein took that very easy and unnatural bogus path by forcing the light to carry a hypothetical momentum. When light is forced to carry a momentum, then, in effect, you are making the light to behave as imaginary particles. Thanks to that bogus forcing of light to carry an artificial momentum, ridiculous concept of light particles was born. Light is supposed to behave as particles now by proclamation. If there are hypothetical light particles carrying momentum, then these hypothetical particles can be stopped by applying equal and opposite momentum, and as a result they can be relative. These, human created, bogus, imaginary light particles later came to be called photons. For some reason, photons have become so main-stream even people who has no idea what Maxwell's equations for propagation of light were, started talking about them. Interesting thing is that no one can explain what photons are, not even Einstein, just like an imaginary creator in religions. Many people blindly believe in them, yet no one has a clue to what they are.

Coherent light cannot consist of particles since so-called bogus photons have no mechanism to carry coherent information. If you quantize some entity, there must be a protocol to reassemble them; nature has no such protocol. Spatially random light particles or photons cannot be coherent or directional. There are no massless particles. For an entity to be a particle, that entity must have a standstill or stationary existence. Waves do not have a stationary existence.

Property:

An entity to be a particle, that entity must have a standstill existence, and must be able to carry a momentum. Light has no standstill existence and cannot carry a momentum. Light is not a particle.

Corollary:

There are no light particles or photons. Light particle is an oxymoron.

There is no momentum without a mass. Momentum has no existence without a mass. Momentum by its very meaning indicates a motion of a mass in the direction of motion. In contrast, propagation of a wave is complete opposite. In propagation, the motion or change of a field is orthogonal to the direction of propagation. There is no motion or a change in the direction of propagation in propagation. Electromagnetic energy has no association with a momentum. You cannot force a momentum on massless. You cannot force a momentum on waves. You cannot force a momentum on light.

Property:

Any entity that has no standstill existence cannot possess a momentum. Waves have no standstill existence and hence no momentum. There is no massless momentum.

Corollary:

Only the kinetic energy of a mass is associated with a momentum. Electromagnetic energy is not kinetic energy. Electromagnetic energy has no associated momentum. Electromagnetic energy has an associated frequency, not momentum.

As we are going to see later, Special Relativity of Einstein is a total failure for his forcing of light to be artificially relative and for the use of Lorentz's linear frame-to-frame transform that is not unique. Einstein's attempt on General Relativity is also an unrealistic effort since the time lapse between two positions in space depends only on the distance between the positions and the speed chosen to travel that distance; the time lapse is independent of the positions themselves.

Since the speed chosen to travel a distance can be of any value, time lapse to travel to any position in space from the origin or to travel the distance between any two positions in space is not unique. Further, the linear distance between two positions in space is independent of the positions themselves. There is no time lapse associated with a position and no position associated with a time lapse, and as a result there is no spacetime as such.

Axiom:

Neither the absolute speed nor the relative speed of an object of mass can exceed the speed of light.

The claim that nothing can travel faster than light is an exaggeration, a conjecture; there is no truth to it. It is only an object of mass that cannot exceed the speed of light. Relativity does not apply to massless since massless is momentum-less. You cannot artificially force a momentum on massless. Massless cannot be relative. Massless do not move, they propagate. There is no motion in propagation in the direction of propagation. It is only the masses that have a motion in the direction of motion. Relativity does not apply to massless. Relativity only applies to masses.

Electromagnetic wave propagation is not relative since material medium or mass is not required for the existence of electromagnetic wave propagation. It is only the motion of a mass that can be described based on the propagation of electromagnetic waves or light, not the other way around. Light does not propagate relative to objects of mass. Propagation

light is absolute, not relative. It is only the motion of masses that is relative.

Relativity does not apply to electromagnetic wave propagation. Relativity does not apply to the propagation of massless. Motion requires a momentum. Momentum requires a mass. Massless waves do not move, they propagate. Masses cannot propagate. Momentum cannot propagate. Masses move. Massless propagate. Movement carries a momentum. Propagation does not carry a momentum.

There is no theory of motion without mass and momentum. On the other hand, there is no theory of propagation with masses and momentum. Mechanical energy is not the same as the Electromagnetic energy. Electromagnetic energy is determined by the frequency of a wave. Mechanical energy is determined by the mass and the speed or the momentum of the moving object of mass. Light has electromagnetic energy. Light has no mechanical energy. Light cannot push or pull an object of mass. Light cannot do mechanical work. A mass has mechanical energy. A mass does not have electromagnetic energy. A mass can do mechanical work. A mass cannot do electromagnetic work. It is only an electrically charge object of mass that can link mechanical energy and electromagnetic energy.

Following Einstein's work on relativity, there had been many ill-conceived efforts to convince themselves that massless can carry a momentum. Massless cannot carry a momentum. Massless does not have a momentum. Electromagnetic wave propagation is not a result of a momentum. If light carry a momentum, speed of light cannot be a constant under the presence of gravity or any other force. Massless light cannot possess a momentum. There is no momentum without a mass. There is no motion in the direction of motion without a mass. Massless waves propagate. Propagation is momentum-less since there is no motion in propagation in the direction of propagation.

The massless momentum conjecture of Einstein falls apart since light is not relative [2]. When the propagation of light is not relative, light cannot carry a momentum. As a result, Special Relativity does not hold true. Special Relativity is not a mechanism of nature since the linear transform that the Special Relativity based on is not unique.

Any mechanism of nature must be unique. If any entity is relative, that entity must be relative on any frame irrespective of whether the frame is an inertial frame or an accelerating frame. Maxwell's equations for propagation of light cannot be transformed onto accelerating frames and hence light is not relative. The claim that the light is relative is false, simply preposterous.

C. Natural Historical Dilemma

There is a natural scenario that any observer on a moving frame must deal with. Consider the object R′ is moving at speed u′ in the direction **x**′ on an inertial frame F′(x′, y′, z′). The inertial frame F′(x′, y′, z′) itself is moving at speed v relative to another frame F(x, y, z) along the **x** axis. Both frames F′(x′, y′, z′) and F(x, y, z) are in coincidence at time t=0 and the corresponding axes in each frame are parallel to each other.

Now, the question is, if the speed of light is the same in every frame, how does the nature guarantee that the relative speed u of the object R′ relative to the frame F(x, y, z) does not exceed the speed of light? What the coordinate transform from one frame to another frame should be, to guarantee that the relative speed of any object does not exceed the speed of light?

This was the natural historical problem that Einstein posed and came with an unrealistic, incorrect, and bogus hypothetical solutions, the Special Relativity and the General Relativity that defy the nature, that defy the reality, that defy the common sense. Any relativity theory, such as Special Relativity and General Relativity, that forces the change of physical characteristics of an object and the time with the relative speed is invalid since no relative motion can alter the physical characteristics of an object and time. It is only the absolute motion of an object that can change the volume. Absolute motion of an object was dealt with in Universal Relativity [3,4]. Neither absolute motion nor relative motion can alter the time and the mass of an object.

D. Limitations of Newtonian Dynamics

In Newtonian dynamics, motion of an object is always relative. There is no absolute motion in Newtonian dynamics. In Newtonian dynamics, observers cannot determine if the frame the observers are on is moving or stationary. Newtonian dynamics came before the Maxwell's equations for the propagation of light was introduced, and hence there was no awareness of the fact that the speed of light is a constant determined by the medium or the lack of it at that time when Newtonian dynamics were introduced.

Newtonian dynamics assume that all that is there is a relative motion and the relative motion dynamics should be independent of the inertial frame of reference. In fact, absolute motion of an object of mass must exists since there will be no relative motion without absolute motion. Relative motion exists because of the velocity differences of the absolute motion of objects.

Lemma:

There is no relative motion without absolute motion. Without velocity difference of absolute motion of objects of mass, there will be no relative motion.

As Einstein has demonstrated, the Newtonian relative motion dynamics are frame independent while guaranteeing that no relative speed of an object exceed the speed of light only for speeds much smaller than the speed of light. Newtonian motion

dynamics do not guarantee that an object on relative motion does not exceed the speed of the propagation of light when the relative speed of the object is comparable to the speed of the propagation of light.

As we are going to see, although the absolute speed of an object is not observable using the mechanics of an object of mass as Newton correctly suggested, the absolute speed of an object is experimentally obtainable using a burst of light. It is only the absolute motion that is observer independent at any speed within the bound of the speed of light. Relative motion is reversible symmetric and observer dependent, and hence it is not real. No physical change of an object or time is possible with the relative motion. Observer perception cannot make physical changes.

Lemma:

Relative motion cannot generate physical changes to an object and time.

E. **Failure of Special Relativity**

Lemma:

Any entity that has no standstill existence cannot be relative. A wave has no standstill existence. Waves have no existence without propagation. Waves cannot be relative.

Corollary:

No massless entity has a standstill existence. There is no relativity without a mass. Light waves do not propagate relative to objects of mass. It is only an object of mass that can be relative with respect to another object of mass.

After realizing that the speed of light is a constant, which must be the same for all the inertial frames, as an outcome of the Maxwell's equations for the propagation of light, Lorentz tried to transform Maxwell's equations for propagation of light onto an inertial frame to see if the basic structure of the Maxwell's equations still holds on an inertial frame using a linear transform that is known today as Lorentz transform. To force a linear transform, Lorentz had to make one sacrifice; he had to artificially force the time to be relative. The requirement of time to be relative, which is quite bogus and unnatural, to transform Maxwell's equations onto an inertial frame is also an indication that the Maxwell's equations are not relative. The concept of relative time is simply meaningless. However, there is no possible way to transform Maxwell's equations onto an inertial frame without forcing time to be relative.

Maxwell's equations cannot be transformed onto an inertial frame without a linear transform. It is the price you must pay to use a linear transform. So, Lorentz pressed ahead and let time to be relative and forced a linear transform on Maxwell's equations to transform Maxwell's equations onto an inertial frame. In the end, Lorentz was pleased to find out that the basic structure of the Maxwell's equations remain after the Maxwell's equations were transformed onto an inertial frame and made the claim that the Maxwell's equations are relative and hence the propagation of light is relative, which is indeed false [2].

After seen the Lorentz's work, Einstein realized that for light to be relative, light must have a momentum since any entity that has no momentum cannot be relative. The truth is that any entity without a mass cannot be relative. Light has no mass. So, to make light relative only option available was to force a weird massless bogus momentum on light. On the other hand, any entity that has a momentum must also be a particle. Now there is a conundrum since it was well founded at the time that Light is a wave, not a particle. So, there is an incompatibility here. Einstein argued that for light to have a momentum, light must behave as particles even though light has no mass. With this bogus conjecture of Einstein's what is born was massless particles that carry a hypothetical momentum, which is known today as a meaningless, unexplainable, hypothetical buzzword, photon. That point onward, everybody started talking about photons just like an empty meaningless verse from an ancient religious text from flat-earth or earth centric era.

After forcing a hypothetical momentum and particle behavior on light, Einstein had no alternative but to stick with the linear frame-to-frame transformation of Lorentz since that is what proved the propagation of light to be relative. Einstein used the linear frame-to-frame transformation that holds onto the structure of the Maxwell's equations on an inertial frame to incorporate the constant speed of light into the motion dynamics of moving bodies and with that the Special Relativity was born.

The fact is that the Newtonian dynamics or the dynamics of particles of mass does not apply to massless waves, light, or electromagnetic waves. When all you have is a hammer, you tend to visualize everything you come across as nails. That is exactly the scenario both Lorentz and Einstein had played. They had Newtonian mechanics, the hammer, for objects of mass, and they started hammering waves with it even though that hammer is incompatible and simply useless for waves.

Special Relativity incorporates the frame independent constant speed of light into the motion dynamics of objects of mass by forcing an artificial momentum on light by proclamation. As far as light is concerned, now with this artificial enforcing of a momentum on light, light is assumed to behave as golf balls even though light is massless. With this fatal assumption, not just physics, but the whole discipline of science has entered the trouble waters. It has given us more than a century of voodoo-physics.

Special Relativity was willing to pay any price to force the relative speed of any object to not to exceed the speed of light while maintaining the speed of light to be frame independent, and to hold on to a linear

frame-to-frame transform of Lorentz's. Because, without linear transformation, there is no way to drag the Maxwell's equations for propagation of light into motion dynamics of objects. The price that had to be paid to achieve this is quite unnatural, indeed; it was wild, wild west, anything and everything is free to change in any manner with the relative motion, weird voodoo-science was born; the reality, what reality? Science turned into science fiction. Science turned into a religion. You must be a believer, to practice it, no argument about it.

Special Relativity achieved its desired goal at the cost of allowing time, length, and mass of an object to be speed dependent in addition to forcing of light to be massless particles or photons that carry an artificial momentum, which is simply incomprehensible if not preposterous. There was no limit to the unnatural characteristics that it was willing to force on nature to achieve a desired goal, just like a mad dictator or a country run by a religious doctrine that will do anything to hold on to power at any cost. Every commonsense was ready to be put on the chopping block and thrown out. If anyone airs a criticism, criticizers would be on the chopping block.

The problem is that the relativity is reversible symmetric and any changes to an object due to relative speed is observer dependent, not real. You cannot change time, mass, and the size of a mountain by running away from it. Further, in Special Relativity, two people running away from a mountain at different speeds change the time, mass, and size of a mountain by different amounts.

More importantly, reversible symmetric observer dependent processes cannot generate real physical changes to an object. No observer dependent phenomenon can change an object and the time. Just because couch-potato is moving relative to a jogger, couch-potato is not going to lose weight. The claims in Special relativity that the time, mass, and the size are observer dependent is simply unnatural and artificial since observer perceptions and reality are not the same.

Corollary:

The truth is that the Relative speed cannot bring physical changes to an object and time. Any relativity mechanism such as Special Relativity that cannot function without changing the object and time must be false, not a process of nature.

Interestingly, they even went on to define the simultaneity. Simultaneity is not a definition. Simultaneity has nothing to do with observers. If two events in two different positions happens at the same instant, I will sense first, the one I am closer to than the other even when I am at standstill; it has nothing to do with observer motion. My sensing has nothing to do with simultaneity. Simultaneity is not determined by observers. The recorded time at each location for the two events tell us if they are simultaneous or not. Just because we see the lightning before we hear thunder does not mean they are not simultaneous.

Time is absolute. Time lapse is a definition. There is no spacetime. How can the time create a fabric to hold an object? It is the space that hold an object. Time itself is a definition, human definition. Clock is a human engineered device. Clocks tick in the way they are designed to, if the clocks are in an environment that is specified in the manual and the batteries are within the specified voltage.

Although conceptually incorrect and hypothetical, Lorentz transform is mathematically correct. However, for a transform to hold true in nature, the transform must be unique. In other words, that transform must be the only transform in town available for the job. If a transform is not unique, you have no idea which transform did the job. That is exactly where Lorentz transform fails. Lorentz transform is not unique [2]. There are infinitely many linear, frame-to-frame transforms that retain the structure of the Maxwell's equations for the propagation lo light after the transformation. If there exists a linear frame-to-frame transform in nature that retains the structure of the Maxwell's equation for the propagation of light, that transform must be unique. Lorentz transform is not unique.

More importantly, for light to be relative, it is necessary that the Maxwell's equations must be relative, but it is not sufficient. For any entity to be relative, that entity must be relative on inertial frames as well as on accelerating frames at any instant of time. Maxwell's equations cannot be transformed onto accelerating frames, and as a result, Maxwell's equations cannot be relative.

In addition, if the light is relative, relative time will be dependent on the frame of reference and relative time is not unique. Every observer has his/her own relative time even when they all are at the same speed since the relative time is not unique. If the light is relative, so-called spacetime is dependent on the frame of reference and the spacetime is not unique since the transform is not unique. Every observer has his/her own spacetime even when they all are at same speed since spacetime is not unique. When spacetime is observer dependent and not unique, how can the space time define the gravity, impossible; gravity cannot be observer dependent. If spacetime defines the gravity, gravity will not be unique. Every observer has his or her own description of gravity. Gravity cannot be observer dependent. Time and space are mutually independent for any object on linear motion. Spacetime cannot define gravity. Gravity is the property of an object of mass. Gravity is not a property of space. There is no spacetime.

So-called spacetime interval or proper time is not unique. Time lapse depends on the distance and the speed used to travel the distance. Linear distance between two positions is independent of the positions. Speeds available to travel a distance is infinitely many. So-called spacetime interval or proper time is

also the same as the relative time. We know that the relative time is independent of the position, and depends only on the ratio distance/time, which is a constant for an object of mass under linear motion. As a result, spacetime or proper time is independent of the space itself. Similarly, space is also independent of time itself. Space and time are mutually independent.

Linear Lorentz transform is not unique and dependent on the observer. Maxwell's equations are not transformable uniquely onto an accelerating frame at any instant of time. As a result, light cannot be relative. Light cannot propagate relative to objects of mass. Propagation of light is absolute. When the propagation of light is not relative, light will have neither a particle behavior nor a momentum, and with that the fragile hypothetical structure of Special Relativity and General Relativity will collapse.

Special relativity failed to separate the absolute motion from the relative motion. Absolute motion is real and observer independent. There will be no relative motion without absolute motion. Any physical change to an object can only take place under absolute motion of an object. Neither the absolute motion nor the relative motion can alter the mass of an object and time. The mass of an object and time are independent of the speed of an object. No physical change of an object can take place under a reversible symmetric relative motion. Special Relativity fails in every aspect in describing the nature. Special Relativity, General Relativity, and Quantum Mechanics are religious proclamations, human Crafted Prophesies (CRAP). It is HIGH TIME for losing my religion and face the reality. All the religions are born out of human ignorance in the stone age and flat-earth or earth-centric era. Religions are simply meaningless and serve no purpose except to perpetuate the ancient religious texts of human ignorance.

II. **NO SPACETIME IN SPECIAL RELATIVITY**

In both Lorentz transform and the Lorentz transform based Special Relativity, it has been claimed repeatedly that the time is a function of position or space, and the position or space is a function of time. Although this claim may appear to be correct on the surface, close examination will reveal that it is not the case for objects on linear motion. The use of Lorentz's transform in Special Relativity to claim that the time depends on the space or the position, and the position or space depends on the time is a result of an oversight; it is an invalid hasty conclusion even though it has been there for more than a century. For an object on linear motion, position does not depend on time, and time does not depend on position.

Consider we have an inertial frame F′(x′,y′,z′) moving at constant speed v relative to the frame F(x,y,z) in the direction of **x**. Then, the Lorentz transform pair is given by [1],

$$x'=\beta(x-vt) \quad (2.1)$$

$$t'=\beta(t-xv/c^2) \quad (2.2)$$

where $\beta=1/(1-v^2/c^2)^{1/2}$.

Lorentz Transform only applies for motion of objects of mass since it requires the movement or momentum to be in the direction of motion. In the case of propagating waves, there is no movement or momentum in the direction of propagation. In propagation of waves, the movement carries no momentum, and motion or change is always orthogonal to the direction of propagation. There is no motion in the direction of propagation in propagation of waves.

You cannot force a momentum on a massless propagating entity that has no motion in the direction of propagation. Lorentz transform does not apply to propagating waves. It is only a motion of mass that can be transformed using Lorentz transform. Lorentz Transform can only be applied to particles, not for waves. Lorentz transform is hypothetical, not real. Any transform that requires time to be relative is not real. Lorentz transform is not unique. Lorentz transform is a human crafted mechanism to artificially force Maxwell's equations and propagation of light to be relative, a failed attempt. If you want to apply Lorentz transform for light, you have no option but to force light to be artificial particles carrying a momentum travelling at the speed of light, the genesis of unreality in Modern Physics, the voodoo-physics.

Einstein had nothing to lose and everything to gain, so took the gamble and forced light to be particles just for the sake of applying Lorentz Transform on waves an force the Maxwell's equations and propagation of light to be relative. DeBroglie came along and took it one notch too far forcing particles of mass to be waves, generating a spooky world that happens to be a gold mine for fiction books writers [7,8]. Even with this forced application of Lorentz Transform on Maxwell's equations for propagation of light, the transformation is not unique [2] and hence does not apply to physical processes. A transform must be unique for it to be a transform of nature. Lorentz transform is not unique [2].

Lemma:

Nature abhors non-unique transforms.

By looking at these Lorentz transforms given in eqns. (2.1) and (2.2), one may tend to make a superficial judgement that the time is a function of position, and the position is a function of time, but they are not. Note that the distance x here is the distance to position **x** of a moving object at time t. For any object on linear motion at position **x** at time t, the ratio x/t is a constant, which is the speed of the object. The ratio x/t is a constant for an object of mass under linear motion. And hence, the ratio x/t is independent of distance x and time t themselves. When the object approaches the speed of light, x/t→c, the relative speed of the object also approaches the speed of

light, $x'/t' \rightarrow c$. The ratio x/t is independent of the distance x and the time t. The ratio x'/t' is independent of the distance x' and the time t'. Lorentz transform does not apply to light; it only applies to motion of objects.

For any object travelling at constant speed u, we have u=x/t, and the ratio x/t is independent of distance x and time t themselves. If we have an object moving on frame F(x,y,z) at constant speed u, we have,

$$u=x/t. \quad (2.3)$$

That means, at x=0 and t=0, for any moving object at constant speed, x/t is always finite. As a result, the Lorentz transforms pair can be written as,

$$x'=\beta[1-v/(x/t)]x \quad (2.4)$$

$$t'=\beta[1-(x/t)v/c^2]t \quad (2.5)$$

We can write these as,

$$x'=\beta_x x \quad (2.6)$$

$$t'=\beta_t t \quad (2.7)$$

where,

$$\beta_x=\beta[1-v/(x/t)] \quad (2.8)$$

$$\beta_t=\beta[1-(x/t)v/c^2] \quad (2.9)$$

For an object moving at constant speed u, the ratio x/t is independent of x and t. And hence, it is clear that the relative position x' is a linear function of the position x with the gradient β_x that depends only on the speed of the object u=x/t and the speed v of the frame $F'(x',y',z')$. As a result, the relative position x' is independent of the time t.

Similarly, the relative time t' is also linear function of time t with the gradient β_t that depends only on the speed of the object u=x/t and the speed v of the frame $F'(x',y',z')$. Both gradients β_x and β_t are independent on position x and time t themselves individually, and only depend on the ratio u=x/t. The ratio x/t is the constant speed of an object on inertial frame F(x,y,z).

If the speed of an object at position x at time t is u, then u=x/t and hence we have,

$$\beta_x=\beta[1-v/u] \quad (2.10)$$

$$\beta_t=\beta[1-uv/c^2] \quad (2.11)$$

In Special Relativity $\beta=1/(1-v^2/c^2)^{1/2}$, and hence, we have,

$$\beta_x=[1-v/u]/[(1-v^2/c^2)^{1/2}] \quad (2.12)$$

$$\beta_t=[1-uv/c^2]/[(1-v^2/c^2)^{1/2}] \quad (2.13)$$

The Lorentz transform pair does not directly depend on position x itself or time t itself. The Lorentz transform pair only depends on the ratio x/t and given by,

$$x'=\beta_x x \quad (2.14)$$

$$t'=\beta_t t \quad (2.15)$$

where,

$$\beta_x=[1-v/(x/t)]/[(1-v^2/c^2)^{1/2}] \quad (2.16)$$

$$\beta_t=[1-(x/t)v/c^2]/[(1-v^2/c^2)^{1/2}] \quad (2.17)$$

A. **Relative Speed**

Relative speed u' for an object moving at constant speed is given by,

$$u'=x'/t' \quad (2.18)$$

Dividing eqn. (2.14) by eqn. (2.15), we have,

$$x'/t'=\beta_u(x/t) \quad (2.19)$$

where,

$$\beta_u=\beta_x/\beta_t \quad (2.20)$$

$$\beta_u=[1-v/(x/t)]/[1-(x/t)v/c^2] \quad (2.21)$$

For an object moving at constant speed u, we have,

$$u=x/t \quad (2.22)$$

Substituting in eqn. (2.19), we have,

$$u'=\beta_u u \quad (2.23)$$

where,

$$\beta_u=(1-v/u]/(1-uv/c^2) \quad (2.24)$$

For any object moving at constant speed u, the relative speed u' is directly proportional to the speed u and the gradient or the proportionality factor β_u is a constant since u and v are constants. As a result, in Special Relativity, the relative speed u' is independent of the position **x** and time t of an object on linear motion.

Lemma: Constant Relative Speed u'

Relative speed u' is independent of distance x and time t for an object of mass moving at constant speed u=x/t. Relative speed u' varies linearly with speed u with gradient β_u, which is a constant,

$u'=\beta_u u$

where, $\beta_u=[1-v/u]/[1-uv/c^2]$.

The gradient β_u is a constant since it is a function of the constant speed u of the object and the constant relative speed v of the relatively moving frame.

B. **Relative Distance**

The relative distance x' is given by,

$$x'=\beta_x x \quad (2.25)$$

where,

$$\beta_x=[1-v/u]/[(1-v^2/c^2)^{1/2}] \quad (2.26)$$

The relative distance x' is linearly related to the distance x of the moving object by the proportionality factor or the gradient β_x. The gradient β_x is a function of the ratio x/t, which is the constant speed u=x/t of the moving object that is independent of the distance x and time t. The gradient β_x is a constant that is independent of x and t themselves. Relative distance x' is independent of the time t for an object of mass moving at constant speed u.

Lemma: Time Independent Distance x

Relative position x' is independent of time t for an object of mass moving at constant speed u. Relative position x' varies linearly with position x with gradient β_x, which is a constant,

$x'=x\beta_x$

where, $\beta_x=[1-v/u]/[(1-v^2/c^2)^{1/2}]$.

The gradient β_x is a constant since it is a function of the constant speed u of the object and the constant relative speed v of the relatively moving frame.

C. **Relative Time**

The relative time t' in Special Relativity is given by,

$$t'=\beta_t t \quad (2.27)$$

where,

$$\beta_t=[1-uv/c^2]/[(1-v^2/c^2)^{1/2}] \quad (2.28)$$

The relative time t′ is linearly related to time t of the moving object by the proportionality factor or the gradient β_t, which is a function of the ratio x/t. The constant speed u=x/t of the moving object is a constant that is independent of the distance x and the time t. The gradient β_t is independent of x and t themselves. Relative time is independent of the position **x** for an object of mass moving at constant speed u.

Lemma: Position Independent time t

Relative time t′ in Lorentz Transform and Special Relativity is independent of the distance x for an object of mass in linear motion. Relative time t′ varies linearly with time t with a gradient β_t, which is a constant,

$t'=t\beta_t$

where, $\beta_t=[1-uv/c^2]/[(1-v^2/c^2)^{1/2}]$.

The gradient β_t is a constant since it is a function of the constant speed u of the object and the constant relative speed v of the relatively moving frame.

Few Properties of Special Relativity:

Case 1:

In general,

$$x'/t'=\beta_u(x/t) \text{ or } u'=\beta_u u \quad (2.29)$$

where, $\beta_u=\beta_x/\beta_t$, and

$$\beta_u=(1-v/u]/(1-uv/c^2) \quad (2.30)$$

Case 2:

When u→c or x/t→c,

$$\beta_x=\beta_t \text{ and } \beta_u=1 \quad (2.31)$$

$$x'/t'\rightarrow c \text{ or } u'\rightarrow c \quad (2.32)$$

Case-3:

When v→c,

$$\beta_u\rightarrow -c/u \quad (2.33)$$

$$x'/t'\rightarrow -c \text{ or } u'\rightarrow -c \quad (2.34)$$

D. **There is No Spacetime in Special Relativity**

The factor β_x affecting relative position, and the factor β_t affecting the relative time are independent of position x and time t themselves, and depend only on the ratio x/t, which is the constant speed u of the object. Relative time t′ is not a function of position x, it is a function of the ratio x/t, which is the constant speed u of the object. Relative position x′ is not a function of time t, it is a function of the ratio x/t, which is the constant speed u of the object.

Both x′ and t′ are functions of the ratio x/t, which is the constant speed u of the object. As a result, there is no intermingling or interdependence of space x and time t in both Lorentz transformation and Special Relativity. When there is no intermingling or interdependence of the space and time, there is no spacetime.

Space is independent of time and time is independent space for any moving object at constant speed. There is no spacetime. The term spacetime is simply meaningless.

Even though Special Relativity and General Relativity treat time as a dimension, there is no ground for it. How can the time be a dimension when all that exist is the present? The reality is that past does not have an existence. Past exists only in our memory. Future does not exist. Future exists only in our definition. Time can be defined only in the presence of change, a motion. Nature has plenty of change. Universe is three dimensional. There is no fourth dimension. Time is not an axis, it is a point, the present. Time is not a dimension. That is why we cannot travel in time. Time does not exist. Time is a definition. Space exists. We can travel on space.

Property:

Time is a moment, not a dimension. The past does not exist. The future does not exist. What is there is this moment.

Lemma: No Spacetime

Space does not depend on time. Time does not depend on space. Space cannot change time. Time cannot change space. Space and time are mutually independent. There is no spacetime.

Lemma: Linear Relativity

In Lorentz Transform and Special Relativity, the relative time t′ is directly proportional to time t, relative distance x′ is directly proportional to the distance x, and relative speed u′ is directly proportional to the speed u for an object moving at constant speed u=x/t. Proportionality parameters or gradients β_t, β_x, β_u are constants independent of the position **x** and time t.

Special Relativity require time to be relative, mass to be relative, length to be relative, and propagation of light to be relative. Special Relativity is unnatural and not a mechanism of nature since time is not relative, propagation of light is not relative, and mass and length of an object are not relative in nature. Physical properties of an object and time cannot be observer dependent. Lorentz Transform, Special Relativity and General Relativity are not real mechanisms of nature since relative motion cannot alter objects and time. We want to find out how nature guarantees that no relative speed of an object of mass exceeds the speed of light without the object and light being subjected to any unnatural assumptions.

It is only the entities that have an existence at standstill that can be relative. For an entity to be relative, you should be able to bring it to a standstill. Light has no existence without propagation. Light has no standstill existence, and hence light cannot be relative. Propagation of light is naturally independent of the inertial frames or moving objects. Light does not propagate relative to objects. In addition, relative speed cannot change physical characteristics of an object and time, and no object of mass can exceed the speed of light. The Theory of Natural Relativity is

the natural solution that guarantee all those natural requirements without unnatural assumptions.

In Natural Relativity, we are going to let the time to be the same for all the frames just as the speed of the propagation of light is the same for all the frames. We need Natural Relativity to guarantee that the speed of an object does not exceed the propagation speed of light while maintaining the object and time unchanged. Natural Relativity is based on the natural fact that it is not possible to move a mountain by running away from it. You cannot lose weight because someone is running away from you.

III. MOTION OF AN OBJECT

Both Newtonian mechanics and Einstein's theories are based on the conjecture that every motion is a relative motion. This made believe assumption holds intact under the assumption that the propagation of light is relative. Propagation of light is not relative and hence there is more to a motion of an object than the relative motion. The reality is that there cannot exist a relative motion without an absolute motion.

Lemma: Essential Motion

There is no relative motion between objects without absolute motion of individual objects.

As Einstein stated, it is only for the speeds of objects that are negligible compared to the speed of light that the relative motion dynamics of Newton hold. However, Einstein failed to realize that relative motion cannot change the physical properties of an object and time. He also failed to provide an acceptable natural solution without making unnatural assumptions to overcome the limitation of the Newtonian Motion Dynamics and extend the Newtonian physics faithfully to inertial frames of any speed.

Einstein's theory of relativity achieved the frame independence relative motion dynamics for all speeds at the cost of allowing both time and length to contract by the same contraction factor while allowing the mass to dilate by the reciprocal of the same contraction factor, which are unnatural and hypothetical. Without time and length being contracted by the same contraction factor, the relative motion dynamics of Einstein would not be frame independent. Mass dilation in Einstein's solution is an unwanted side effect of allowing time and length to contract.

As we are going to discover later, the nature can easily guarantee that no relative speed of an object of mass exceeds the speed of propagation of light while maintaining the frame independence of relative motion dynamics without changing the mass and dimensions of an object as well as time. There is more to a motion of an object than relative motion both Newton and Einstein adhered to.

There cannot be a relative motion without an absolute motion of an object. Now the question is with reference to what does the absolute motion exist? One thing is totally clear, it cannot be with reference to another mass. With reference to what should the absolute motion be measured? It cannot be measured with respect to an entity with momentum. Since propagation of light is not relative, we know with relative to what an absolute speed of an object must be measured against.

A. Absolute Motion

Absolute motion cannot be measured relative to any other object of mass. For motion to be absolute it must not be dependent on the observer or the frame of reference. Absolute motion of a frame must be independent of speed of any the other frame. Absolute motion of a frame can solely be measured by an observer withing the frame or object. Absolute motion of an object or frame cannot be measured by an observer in another object or frame. However, once you know the absolute speed of your frame, you can use that information together with the relative speed of other frames to obtain the absolute speed of other frames.

True speeds of other objects are only known directly to an object that has no absolute motion or an object that is stationary. On the other hand, stationary object has no independent existence since it is the motion that allows an independent existence of an object in a gravitational field. Any stationary object will be gobbled up by other gravitational object of a bigger mass. In the case of an object in the universe, the motion of the object provides its independent existence. Speed is the currency for an object for its independent existence like the cash in the bank gives us the independent existence.

Definition: Absolute Motion

Absolute motion of an object of mass is the motion of an object relative to the speed of the light. There is no reversible symmetry in absolute motion since reversible symmetry requires the motion of two masses.

Alternative Definition: Absolute Motion

Absolute motion is a motion that is not reversible symmetric.

Corollary:

If two entities are not reversible symmetric, both entities cannot be in motion. One entity must be in motion while the other entity must be in propagation. The entity in motion must be an object of mass while the other entity in propagation must be a massless and momentum-less propagating wave.

Special Relativity Conundrum:

In Special Relativity, the propagation of light is assumed to be relative and hence the absolute speed of an object must be zero. No object can possess an absolute speed in Special Relativity. On the other hand, there cannot be relative speed without an absolute speed. Special Relativity is in contradiction

with its own assumptions or by its forced hypothetical characteristics on nature.

Theorem: Non-existence of Special Relativity

There is no Special Relativity without relative motion. There cannot be a relative motion without absolute motion. Absolute motion cannot exist in Special Relativity. Therefore, Special Relativity cannot exist.

Both Newtonian physics and Einstein's theories are under the assumption that it is not possible for an observer on an inertial frame to determine if the frame is moving or stationary. Both Newton and Einstein are right when they claim that it is not possible to determine the speed of an inertial frame by using the motion mechanics of objects of mass. You cannot measure the speed of an inertial frame by throwing golf balls. Einstein had no option but to agree with Newton's claim since, by assumption, he had enforced an artificial mass on light for the light to behave as particles with momentum. In Einstein theories, light must hypothetically behave as golf balls by his dictatorial orders. In Special Relativity, absolute speed of any frame is zero by the false assumption that the light is relative. The fact is that the light is not relative [2]. On the other hand, relative speed has no existence without absolute speed. If objects are not moving individually, there is no relative motion. Two parked cars do not have a relative motion. Light cannot be relative since Maxwell's equations cannot be transformed onto accelerating frames.

Theorem: Non-Existence of Special Relativity

There is no Special Relativity without light being forced to be relative hypothetically. Light is not relative since Maxwell's equations for propagation of light cannot be transformed onto an accelerating frame. Transformation of Maxwell's equations onto an inertial frame is not unique. Hence, Special Relativity is not real, non-existent.

Although the claim that the speed of an inertial frame cannot be experimentally obtained using motion mechanics of objects of mass is true, the general claim that the speed of an inertial frame cannot be measured by an observer on an inertial frame from within the frame is false since throwing golf balls is not the only way to determine the speed of an inertial frame. It is true you cannot measure the speed of an inertial frame by throwing golf balls. However, as we are going to see later, any observer on any inertial frame can determine if the frame the observer is on, is moving or stationary. In addition, any observer can also determine the speed of the frame the observer is on from within the frame.

Axiom:

Absolute motion of an object of mass cannot exceed the speed of the propagation of light.

B. **Relative Motion**

This is the familiar motion for everybody. This is the only motion that existed for both Newton and Einstein as well as everybody else. This is the motion everybody in any inertial frame can determine, no restriction. This is the only motion that exists in physics.

We all know that relative motion cannot exist unless individual objects themselves are moving. The only problem was how to measure the motion of an individual object? It is only in Special Relativity and associated Modern Physics that it is not possible to measure the absolute motion or the motion of an individual object because special Relativity forced light to carry a hypothetical momentum even though light cannot carry a momentum. When the light is freed from this enforced assumption, measuring of the speed of an individual object is possible. When the Special Relativity and Modern Physics are kicked aside, everything becomes naturally normal again. Special Relativity is a curse to our understanding of nature. Special Relativity is a human built barrier to our exploration of nature. Special Relativity and Modern Physics in general are supported by either misinterpreted or bogus experiments [6,5]. When the light is freed from the unwarranted burden of hypothetical human imposed momentum for good, everything will be naturally normal in natural science.

Definition: Relative Motion

Motion of an object of mass relative to another object mass is the relative motion. Relative motion is reversible symmetric.

Alternate Definition: Relative Motion

Relative motion is the motion that is reversible symmetric.

Corollary:

If two entities are reversible symmetric, at least one of the entities must be in absolute motion. No entity can be in propagation. Both entities must be objects of mass in motion.

Property:

Wave propagation is not relative. Propagating light is not relative. Propagation of light is absolute.

Both Newtonian mechanics and Einstein's theories only deal with relative motion since they did not believe that there existed any other motion. For them, the relative motion was the only motion. Newton and Einstein failed to realize that there cannot be a relative motion without absolute motion. Einstein fail to realize the major drawbacks of the relative motion. The main drawback of the relative motion is that the relative motion cannot alter objects since the relative motion is observer dependent. Observer dependent relative motion cannot alter physical characteristic of objects

and time.

Relative motion cannot change the time, mass, and the physical dimensions or the size of an object, impossible. Einstein's theories fail in this aspect since they resort to time, mass, and dimension changes of an object when the object is in relative motion. Without time contraction and mass contraction in Special Relativity, motion dynamics in Einstein theories will not be frame independent.

Relative motion cannot change anything in an object. Relative motion cannot bring physical changes to an object or time. You cannot change a mountain by running away from it. You cannot become younger than your twin brother or sister on earth by simply being on a fast-moving spaceship.

Axiom:

The relative motion of an object of mass cannot exceed the speed of the propagation of light.

It is not just the relative speed of an object of mass that should be bound by the speed of propagation of light. The absolute speed of an object must also be bound by the speed of propagation of light. How does the nature guarantee that the absolute speed of an object does not exceed the speed of propagation of light? That is where Universal Relativity comes in. The Universal Relativity is given elsewhere [3]. Here, in the next section, we are going to present the summary of it for the completeness.

IV. **UNIVERSAL RELATIVITY FOR ABSOLUTE MOTION** [3,4]

Universal Relativity deals with the absolute motion of an object. It is given in references [3] and [4]. Here, we reproduce the kernel of the Universal Relativity just for the completeness. In universal relativity, the mass of an object and time remain unchanged whether the object is moving or not. What is changed with the absolute motion of an object is its dimensions or volume. Universal relativity guarantees that the speed of light remains a constant in the presence of the absolute motion of an object. This is achieved by volume contraction that depends on the absolute speed.

Theorem: Length Contraction [3]

If an object is in absolute motion, the length of the object along the direction of motion ℓ changes with the speed of the object,

$$\ell'=(1-v^2/c^2)\ell$$

where, ℓ' is the length along the direction of the absolute motion of the object, ℓ is the length of the object when the object is at standstill relative to the propagation of light, v is the absolute speed of the object along the length ℓ, c is the speed of light.

Theorem: Lateral Dimension Contraction [3]

The dimension contraction orthogonal to the direction of the absolute motion is given by,

$$h'=(1-v^2/c^2)^{1/2}h$$

where, h′ is the height or width orthogonal to the direction of the absolute motion of the object, h is the height or width when the object is at standstill relative to the propagation of light, v is the absolute speed of the object along the length ℓ, c is the speed of light.

Corollary: Volume Contraction [3]

When an object is in absolute motion, its volume contracts. Volume contraction is a function of the square speed of the absolute motion.

Lemma: Mass Density [3]

When an object is in absolute motion, mass density (not the mass) of the object increases due to the contraction of volume. Mass of the object remains unaltered with the motion of the object.

Lemma: Absolute Time and Mass

Mass of an object and time are independent of any motion of the object irrespective of whether the motion is absolute motion or relative motion, and inertial motion or accelerating motion. Time and mass are absolute.

Correction to References [3,4]:

A correction is required for references [3] and [4] on Universal Relativity. In Universal Relativity, although the speed of an object is defined relative to propagation light, the term absolute speed was not used. Please note that the Universal Relativity given in [3,4] applies only to absolute motion, not to the relative motion. Relative motion is not dealt with in papers [3] and [4], the phrase "relative motion" must be replaced by the phrase "absolute motion" in the references [3] and [4] since the motion of an object is given relative to the propagation of light.

Relative motion only applies for the motion of one object of mass relative to the motion of another object of mass. Motion of an object of mass relative to the propagation of light is the absolute motion of an object. There is no reversible symmetry between a mass and a wave. The reversible symmetry is only between motion of two masses. Relativity is always between two masses.

The Natural Relativity presented in this paper applies only to relative motion. I did not realize the importance of separating relative speed from the absolute speed at the time I was working on Universal Relativity [3,4]. Relative speed is not possible without absolute speed. Both relative speed and absolute speed must be bound by the speed of light individually. Contemporary physics or Modern Physics failed to address this issue regarding the speed limit of the absolute speed. In addition, the Special Relativity used to address the speed limit of relative speed is unnatural and hypothetical since relative speed cannot alter an object and time. Special Relativity is a religion, not a science. Followers of Special Relativity believes it religiously just like some

people still believe flat-earth or earth-centric era non-sensical religious texts, not as a matter of scientific fact.

Black Holes:

When an object is under absolute motion, its volume contracts while the time and mass remain unaltered. When the absolute speed of an object reaches the speed of light, its volume approaches zero and hence the mass density becomes infinite turning itself into a black hole. Time and mass of a black hole remain unaltered [3,4].

Black holes do not have infinite mass. Mass of a black hole is finite. It is the mass density that becomes infinite in a black hole. Black hole is an object that has reached very high density due to the volume contraction as absolute speed approaches the speed of light. The claim in Special Relativity that the time itself seizes to exist in a black hole is incorrect. Time remains unaltered with the speed and hence there is not change in time in a black hole. Time lapse is the same in every frame including blackholes. Time is absolute.

Lemma: Mass of a Black Hole is Finite

Time and mass remain unaltered in a black hole. It is the mass density that is infinite in a black hole due to volume contraction.

V. THE THEORY OF NATURAL RELATIVITY

Finally, we are here at the kernel of this paper, the Theory of Natural Relativity. Everything we talked about so far is just the background preparation for this section. In this section, we are going to see how the nature is policing the traffic. Let us see how nature's traffic cop guarantee that the relative speed of no object of mass can exceed the propagation speed of light c.

Axiom:

There will be no relative speed without absolute speed.

Absolute speed is real, relative speed is not. Relative speed is an observer perception. Even an observer with no absolute motion at standstill may be perceived as if he/she is moving by any observer on a moving frame in non-zero absolute motion. Relative to an observer on a moving frame, a frame that is at standstill or, in other words, a frame that is not in absolute motion is moving. Irrespective of whether an inertial frame is moving or not, any observer on any inertial frame perceives as if he/she is stationary. When two objects are having absolute velocities that are different, then, one object is also moving relative to other.

Still, the nature must have some mechanism to ensure that the relative speed does not exceed the speed of light. We want to find out what mechanism the nature deploys to ensure that no relative speed exceed the speed of light. In other word, we want to incorporate the fact that the relative speed of any object of mass cannot exceed the speed of light into the motion dynamics.

When it comes to relativity, there is no special reference frame. For any observer, observer's own frame is the special frame or the reference frame. In the eyes of any observer, his/her frame is the reference frame. Any observer on an inertial frame considers his/her frame as stationary, just like we consider our reference frame, the earth as stationary.

For any observer, it appears as if his/her inertial frame is stationary. If an observer measures if he/she is moving relative to the propagation of light, then only an observer will realize that his/her frame is on absolute motion. How to measure the absolute motion of a frame by an observer within the frame will be considered later.

We have already seen how the constancy of the speed of light is handled by the Universal Relativity in absolute motion. Universal Relativity ensure that the absolute speed of any object does not exceed the speed of light. Now, the question is, how does the nature ensure that the relative speed of any object does not exceed the speed of light. This is where the Natural Relativity comes in. We are going to see how Natural Relativity ensures that the relative speed of any object does not exceed the speed of light. Just as Universal Relativity is the natures solution for Absolute Motion, the Natural Relativity is the natures solution to the Relative Motion. Let us see the Natural Relativity at work.

A. Foundation of Natural Relativity

Let us consider two inertial frames F(x,y,z) and F′(x′,y′,z′). If the origins of both frames are in coincidence, their frames will overlap. Frame F′(x′,y′,z′) is moving relative to frame F(x,y,z) in the direction of **x** at speed v. At time t=0, the origins of both frames are in coincidence. An object P is moving at constant speed u on frame F(x,y,z). At time t=0, an object P is at the origin of frame F(x,y,z) moving in the direction of **x** axis at a constant speed u. Assume that the object P travels x distance on frame F(x,y,z) at time t. At the same time interval t, the frame F′(x′,y′,z′) travels distance vt in the direction of **x** relative to the frame F(x,y,z). Note that, relative to the propagation of light, frame F(x,y,z) can be stationary or moving. In other words, the absolute speed of the frame F(x,y,z) may or may not be zero.

If the frame F(x,y,z) is stationary relative to the propagation of light, the frame F′(x′, y′, z′) is moving at speed v in the direction of **x** relative to the propagation of light. In other words, absolute speed of frame F(x,y,z) is zero since the frame F(x,y,z) is stationary, while the absolute speed of the frame F′(x′,y′,z′) is v. The relative speed v of the frame F′(x′,y′,z′) relative to the frame F(x,y,z) is also the absolute speed of frame F′(x′,y′,z′) when frame F(x,y,z) is stationary.

There must be an absolute speed to have a

relative speed. Without absolute speed, there will be no relative speed. This is exactly what Lorentz did in Lorentz transform [1], although he did not realize he was using absolute speed to obtain the relative speed. In hindsight, Lorentz defined a stationary frame relative to the propagation of light in the Lorentz transform. Lorentz's main goal was to prove somehow that the propagation of light is relative and hence he was blind to the facts that the propagation of light is not relative. Lorentz transform is not unique and hence light is not relative [2].

Axiom:

It is the motion of an object that can be described relative to the propagation of light, not the other way around. Propagation of light cannot be described relative to objects or frames. Propagation of light is absolute.

Light: SCREAMING ……

We are not related to anybody! We are sovereign. Well, not exactly. Our speed is determined by the medium we are in. Anyway, do not call us your relatives. We do not move like you guys do. We propagate without a motion in the direction of propagation. Isn't that interesting? We have no existence without propagation. You guys have existence without motion. You guys waste life just sitting there watching professional sports and drinking beer. We are continuously propagating. What is interesting is that we propagate without doing any mechanical work. If you had known that you should not have tried to force a hypothetical momentum on us. Enforcing a hypothetical momentum is the biggest mistake you guys have made. We have no mechanical energy. We have no momentum. We have no mass. So, we cannot do any mechanical work for you directly. However, we can generate a density change in a medium that can perform mechanical work. Do not try to interpret it as light doing the work or light affecting gravity. I repeat, we, the light, cannot exert a mechanical force. You guys cannot stop us by applying equal and opposite momentum. Only the entities that can be stopped are relative. Since you guys cannot stop us, we cannot be relative. If we stop, we will not be alive. We do not propagate relative to other objects. We do not have a mass. We do not have a momentum. Propagating entities do not have a motion or momentum in the direction of propagation. We propagate because our motion is orthogonal to the direction of propagation. We are not particles like you guys. We come to existence due to the motion of charges. Charges exist thanks to you guys, objects of mass. Although we allow you to enjoy objects in different colors for the variety, we do not expect you to treat the object of different colors differently. You should not issue traffic tickets based on color as it is done in Canada. You should issue traffic tickets to speeders irrespective of the color. We do not follow you guys. Moving charges give us the birth. Charges have no existence without you guys. So, it is quite fair if you happen to utter that we exist because of you guys. Once we are born, we have no attachment to you guys. We are free to travel wherever the medium guide us; medium is our guide. You guys can use us to find the speed you are moving. Without our help, you have no way of finding your bearings, your speed or even whether you are moving or not. Even though you may think it is you who gives us the birth, it is not really you who gives us the birth. It is the charges that give us the birth with your help in providing a home for charges and bringing the charges into motion. You are our parents' chauffeurs. You help us in our birth, and we help you find your bearing. Do not tell us we are relative, because we are not. We are just helping each other. We cannot be relative because we have no mass. There is no momentum without a mass. What we have is electromagnetic energy. If you divide electromagnetic energy by our speed, what you get is nonsense, not momentum. You get momentum only if you divide mechanical energy by one half the speed of an object. We are not Objects. We are not particles. Any entity without a momentum cannot be a particle. Any entity without a mass cannot carry a momentum. Any propagating wave cannot have a momentum. We do not decide our speed. It is the medium that decide our speed for us. We are light waves. You are objects of mass. We have nothing in common.

We can describe the motion of objects universally by using the propagation of light. Although the architects of Special Relativity started with the same description of the model using a beam of light, they failed to realize they were defining absolute speed in order to obtain relative motion. They fell on the wrong path trying to describe the propagation of light relative to moving frame or object, which lead them into making a series of unnatural hypothetical assumption one after another. The architect of Special Relativity had the predetermined mindset that light is relative without any evidence to substantiate that claim; that is what is wrong in Special Relativity.

Propagation of light is not relative [2]. Light does not propagate relative to moving frames, stationary frames, inertial frames, accelerating frames, or any frame. Propagation of light is absolute. It is the absolute motion of an object that is described relative to the propagation of light. If the frame F(x,y,z) is not moving relative to the propagation of light, then, frame F(x,y,z) is stationary. Stationarity of a frame is real, not relative. The frame F′(x′,y′,z′) is in absolute motion relative to the propagation of light if the frame F(x,y,z) is stationary relative to the propagation of light.

Both frames F(x,y,z) and F′(x′,y′,z′) can be in absolute motion. As a result, each frame has a relative speed, one relative to the other. Each frame can be stopped by applying equal and opposite speed and as a result they are relative. However, only one relative motion is real. It is the motion of the frame F′(x′,y′,z′) relative to frame F(x,y,z) that is real. If frame F(x,y,z)

stationary relative to the propagation of light, the motion of frame F(x,y,z) relative to the frame F′(x′,y′,z′) is not real, it is an observer perception. Reality is not reversible symmetric. It is only the observer perception that is reversible symmetric. When the object P travels x distance in time interval t, the frame F′(x′,y′,z′) moves vt distance during the same time interval.

It is always the motion of an object that can be described relative to propagation of light, not the other way around. Light does not propagate relative to objects. Propagation of light is absolute, not relative. When a burst of light is released by a device on any moving frame, although the source of light is a part of the moving frame, a burst of light is not a part of the frame; propagation of light is independent of the frame.

Property:

Once a burst of light is out of a source, the direction and the speed of light is solely determined by the medium and as a result light cannot be relative.

Motion of object of mass is always relative. The forcing of the light to travel relative to moving frames or bodies is one of the fundamental mistakes in the Special Relativity and the Lorentz transformation. Light is not relative since light has no existence at standstill. An entity cannot be relative unless that entity has an existence at stand still. The foundation of the Theory of Natural Relativity is that the propagation of light is absolute.

Lemma: Maxwell's equations

Maxwell's equations for propagation of light are absolute, not relative. Maxwell's equations are independent of the frame of reference [2].

Lemma: Light is Not Relative

Any entity having velocity determined by medium cannot be relative. Speed and the direction of light is determined by the medium where light is propagating and hence light is not relative.

Corollary: Relativity

Propagation of light is absolute. Light has no existence without propagation, and as a result light cannot be relative. Only an entity that has a standstill existence can be relative.

Corollary:

It is always the absolute motion of an object that can be described relative to the propagation of light, not the other way around. Propagation of light cannot be described relative to moving objects of mass.

B. **Unique Frame-to-Frame Transformation**

Axiom: Absolute Time

Time is absolute. Time lapse is the same in every reference frame just like the speed of light is the same in every reference frame irrespective of whether the frame is inertial or accelerating, and in absolute motion or in relative motion. For inertial frames, r/u=r′/u′=t.

If the distance one travels at any speed u on the frame F(x,y,z) at time lapse t is x, then the equivalent distance at time lapse t at speed u′ on the frame F′(x′,y′,z′) that is moving at speed v in the direction **x** relative to frame F(x,y,z) is x′. The distance x′ can be written as,

$$x'=\beta(x,t,v)(x-vt) \qquad (5.2.1)$$

where, β(x,t,v) is an unknown function of x, t, v,
v is the speed of the moving frame F′(x′, y′, z′) relative to the frame F(x, y, z).
We have no idea what the function β(x,t,v) is. We will find that later. Only thing we know about β(x,t,v) is that it approaches 1 when v→0,

$$\lim_{v\to 0} \beta(x,t,v)=1. \qquad (5.2.2)$$

The time taken to travel distance x at speed u on frame F(x,y,z) is the same as the time take to travel distance x′ at speed u′ on frame F′(x′, y′, z′) since the time is absolute. Time lapse t is independent of the frame of reference and hence, we have,

$$x/u=x'/u'=t. \qquad (5.2.3)$$

In general, eqn. (5.2.1) is for any object moving at any speed u, where, x=ut and x′=u′t, u′ is the speed u relative to the moving frame F′(x′,y′,z′). Note that the time lapse t is the same on both frames.

It is important to note that t is the time lapse incurred to travel certain distance x at a certain speed u; t is not the time; t is the time lapse. Time lapse and time are not the same. We can only measure a time lapse, not the time. The time is the same everywhere in the universe. We can only define a time lapse, not the time. However, when we talk about time, it is the time lapse we are talking about. What exists for us is the time lapse. What we measure experimentally using a clock is a time lapse.

Time is the same everywhere in the universe. Time lapse is the same on any frame irrespective it is moving or not, irrespective of whether the frame is in absolute motion or relative motion, irrespective of whether the frame is an inertial frame or an accelerating frame. Time lapse t is a definition. When we talk about time, we are in fact talking about time lapse. There is no time lapse t until someone come along and define it. The time lapse t depends on the distance travelled x and the speed u that is used to travel the distance x. For a given position **x**, there can be infinite time lapses since u can have infinite values. As a result, time lapse t taken to travel to a given position **x** is not unique. However, it does not matter how you define time lapse, time lapse in one frame is the same as any other frame, r/u=r′/u′=t. where r is the distance travelled at speed u on one frame and r′ is the distance travelled at speed u′ on another frame. Time lapse is frame independent. Speed u can vary depending on the means of trave, on foot, by car, by bullet train, etcetera. The speed u′ is the

corresponding speed on any other frame. So, time lapse to travel distance r depends on the means of travel. Since you can choose any means of travel, time lapse to a position is not unique.

Property:

The time lapse t to any position **r** depends on the distance r and the speed u chosen to travel the distance. Since the linear distance r is independent of the positions, and the speed u can be of any value, time lapse is not unique to a position.

Corollary:

There is no time lapse attached to a position in space and vice versa.

The time lapse t incurred on foot will be much more than the time lapse t incurred if an object has taken airplane or bullet train. So, time lapse t at any position depends only on the distance r to the position and the speed u that is chosen to travel the distance. Time lapse t has no association with a position itself.

It does not matter whether you travel from origin of a coordinate system O to position P, position A to position B, or from P to position Q in space, if the distances OP=AB=PQ and all the distances are travelled at the same speed u, the time lapse t will be the same and independent of the positions O, A, B, P, and Q.

In fact, time lapse t is independent of positions in space since the linear distance between any two positions is independent of the positions. This is an indication that there is no spacetime. Time lapse t is independent of position **x**. Time lapse t to travel distance r from position P to position Q in 3D space is independent of position P and position Q, and depends only on the distance r, r=PQ, and the speed u chosen to travel the distance r.

Dividing eqn. (5.2.1) by u′, we have,

$$x'/u'=\beta(x,t,v)[(x/u')-vt/u'] \quad (5.2.4)$$

For linear motion of objects x/u=t. Substituting for x and t, we have,

$$x'/u'=\beta(x,t,v)[(ut/u')-vx/u'u] \quad (5.2.5)$$

Since time is absolute, x′/u′=x/u=t. Now we have,

$$t=\beta(x,t,v)[(ut/u')-vx/u'u] \quad (5.2.6)$$

At t=0, x=0, the ratio x/t=u, which is finite and hence, we can write eqn. (5.2.6) as,

$$t=t\beta(x,t,v)[(u/u')-(x/t)v/u'u] \quad (5.2.7)$$

$$1=\beta(x,t,v)[(u/u')-(x/t)v/u'u] \quad (5.2.8)$$

Unlike Special Relativity, everything in Natural Relativity will be just natural. Natural Relativity does not force hypothetical behaviors on nature. There will be no unnatural hypothetical alterations of time or unnatural alteration of the physical characteristics of an object due to relative motions. No unnatural changes of time and mass due to any motion of an object. There will be no artificial hypothetical twin paradoxes. Relative motion will be as it supposed to be, not real. Relative motion is not allowed to meddle with the time, mass, and dimensions of an object in Natural Relativity.

Lemma:

In Natural Relativity, the mass and dimension of an object and time are observer independent.

Natural Relativity is grounded on the very fact that it is not possible to move a mountain by running away from it. You cannot make obese person lose weight by running away from that person. You cannot make charge particles radiate by running away from them. Only the absolute motion can do those, not the relative motion. You cannot move a mountain by running away from it. You cannot make pancakes by running away from a dough. You cannot stay young by riding a spaceship.

Corollary:

Relative motion exists irrespective of whether a living organism is there to observe or not. Existence of an entity is independent of an observer and observations.

C. Natural Transform: Equation of Nature

Axiom: Universality of Propagation of Light

Propagation of light is absolute. Light does not propagate relative to any frame or an object. Speed of the propagation of light is the same in every reference frame.

Light cannot be relative since light has no standstill existence. Wave propagation has no standstill existence. Only the entities with standstill existence can be relative. For an entity to be relative, that entity should be able to be stopped by applying equal and opposite speed. It is only a mass in motion that can be stopped by applying an equal and opposite speed.

Two masses in motion are relative. Waves cannot be relative. Mass and a wave cannot be relative. Relativity requires two objects of mass. Any entity with a momentum must be able to be stopped. You cannot force a momentum on light since light cannot have a standstill existence. Any entity that cannot be stopped or cannot have a standstill existence cannot contain a momentum.

Lemma:

Any entity with a momentum must have a standstill existence. Any entity with a momentum must be able to bring back to standstill by an equal and opposite momentum. Light has no standstill existence, and hence light cannot have a momentum.

Lemma:

Any entity without momentum cannot be a particle. Light is not a particle.

Corollary:

You cannot force a momentum on light by assumption since light has no standstill existence.

Axiom: Universality of Light Propagation
Propagation of light is observer independent.

Axiom: Universality of Time
Time is observer independent.

Axiom: Observer Independence of an Object
Mass and dimensions of an object are observer independent. Physical properties of an object in general are observer independent.

Corollary: Non-Linear Transform
It is not the time t on a moving frame F′(x′,y′,z′) that depends on the position **r** and the speed v of the frame, it is the transformation factor β(r,t,v) that depends on distance r, time t, and the speed v of the moving frame, where **r**=(x,y,z) and $r=(x^2+y^2+z^2)^{1/2}$.

The Lorentz Transform forces the transformation factor β to be a constant that depends only on the speed of the frame F′(x′,y′,z′), and independent of the speed of a moving object at the cost of letting time to be relative. The Theory of Special Relativity forces a linear transformation on itself by constraining the transformation factor β to be a constant that depends only on the speed v of the moving frame F′(x′,y′,z′), and independent of the speed u of a moving object at the cost leaving time, mass, and dimensions to vary with the speed of a frame. This is the fallacy of Lorentz Transform and Special Relativity. We are going to get rid of the linear transformation.

It is the confinement to a linear transform that made the relative time a requirement in Lorentz Transform and Special Relativity. Linear Lorentz transform is essential if you want to force propagation of light to be relative. Once we realize that the propagation of light cannot be relative, Lorentz Transform is useless. Lorentz transform has no place in motion dynamics since propagation of light is not relative. Even with the use of Lorentz Transform, it is not possible to show light is relative since Lorentz Transform is not unique [2]. Once we let go or simply get rid of the linear Lorentz Transform, light does not propagate relative to objects, there will be no relative time, there will be no change of objects under relative motion, we are not in the imaginary hypothetical world created by Special Relativity, and we are back to the reality.

Lemma:
It is transformation factor β that is both frame dependent (depends on v) and object dependent (depends on r/t), not the time, mass, and dimensions of an object.

We are going to strictly enforce the time lapse to be the same in every frame (r/u=r′/u′=t) and accept the fact that the transformation is nonlinear in nature and the transformation factor β(r,t,v) depends on distance r to the position **r** and the speed of the moving frame v and time t. Soon we will discover that the transformation factor β(r,t,v), in fact, does no depends on distance r and time t themselves, and depends only on the ratio r/t, which is the speed of an object u=r/t that is a constant independent of the r and t themselves for an object under linear motion.

Theorem: Natural Relativity (Equation of Nature)
For an inertial frame F′(x′,y′,z′) moving at speed v relative to the frame F(x,y,z) in the direction **x**,

$$x'=x\psi(x/t,v) \qquad (5.3.1)$$

where,

$$\psi(x/t,v)=[1-v/(x/t)]/[1-(x/t)v/c^2] \qquad (5.3.2)$$

the time lapse t is the time taken for an object of mass to travel distance x from the origin at any given speed u=x/t, the speed of the frame F′(x′,y′,z′) relative to the frame F(x,y,z) is v.

The function ψ(x/t,v) is the Natural Relativity transform function. Natural relativity transform function is a non-linear function of the ratio x/t. The function ψ(x/t,v) transforms coordinates x of any object under linear motion on Frame F(x,y,z) at time t onto the corresponding coordinates x′ on the moving frame F′(x′,y′,z′) at the same time t.

Lemma:
The Natural Relativity transform function ψ(x/t,v) that transforms x onto x′ depends on the ratio of x/t, not on the x and t themselves. The ratio x/t is the constant speed u of an object, u=x/t, which is independent of distance x and time t.

If an object P of mass is travelling at speed u on the frame F(x,y,z), then, we have x/t=u. The relative speed u′ of the same object P relative to the moving frame F′(x′,y′,z′) is given by x′/t=u′. We can obtain the relative speed u′ of the object P using the coordinates transform equation (5.3.1).

Theorem: Relative Speed
If object P is moving in **x** direction on the inertial frame F(x,y,z) at speed u, and the inertial frame F′(x′,y′,z′) moving at speed v relative the frame F(x,y,z) in the direction **x**, then, the speed u′ of the object P relative to the moving frame F′(x′,y′,z′) is given by,

$$u'=u\psi(u,v) \qquad (5.3.3)$$

where,

$$\psi(u,v)=[1-v/u]/(1-vu/c^2) \qquad (5.3.4)$$

The proof is straight forward since relative speed u′ can be obtained directly from the Natural relativity theorem simply dividing both sides by t and substituting u′=x′/t and u=x/t. All that is left to do now is the proof of the Natural Transform theorem or the Equation of Nature given by eqns. (5.3.1) and (5.3.2).

D. **Proof of the Natural Transform Theorem**
So far, we have two relationships given in eqns.

(5.2.1) and (5.2.8),

$$x'=\beta(x,t,v)(x-vt) \quad (5.4.1)$$

$$1=\beta(x,t,v)[(u/u')-(x/t)v/u'u] \quad (5.4.2)$$

where, β(x,t,v) is an unknown function of x, t, v,
v is the speed of the moving frame F′(x′,y′,z′) relative to the frame F(x, y, z).
We also know that any object P that is moving at constant speed on the frame F(x,y,z) is at distance x at time t. Since the object P is an object moving at constant speed, the speed of the object P is given by, u=x/t. The same object P relative to the frame F′(x′,y′,z′) is at distance x′ at time t. The speed of the object P relative to the moving frame F′(x′,y′,z′) is given by u′=x′/t.

Equations (5.4.1) and (5.4.2) describe the motion dynamics of particles. They apply only to particles in motion. They do not apply to waves since there is no motion in propagation in the direction of propagation. They do not apply to the propagation of light. For a particle, the position (x,y,z) at any time is unique. For a wave propagating in the direction **x**, (x,y,z) at any time t is not unique since y and z can have infinite values at any position x at any time t. Equations (5.4.1) and (5.4.2) only applies for particles, they do not apply for propagation of light. Lorentz transform does not apply for entities where the speed is determined by the medium. Speed of light is determined by the medium and hence Lorentz transform does not apply to light.

Lorentz Transform deals with the motion of objects. Light is not Objects in motion. Propagation does not have a motion in the direction of propagation. There is nothing moving in propagation in the direction of motion. Lorentz Transform cannot apply to Maxwell's equations for propagation of light. Lorentz transform only applies to particles even when the speed of a particle approaches the speed of light. Motion dynamics of objects of mass do not apply to waves. Wave propagation does not apply to particles of mass.

Equations (5.4.1) and (5.4.2) applies to any particle of mass at any speed. For any object of mass, equations (5.4.1) and (5.4.2) must also satisfy when the speed of an object u reaches the speed of light c. Since no object can exceed the speed of light, when u reaches the speed of light c, the relative speed u′ should not exceed the speed of light c. When an object reaches the speed of light, u→c, the relative speed u′→c and hence, substituting in eqn. (5.4.2), we have,

$$1=\beta(x,t,v)[1-(x/t)v/c^2] \quad (5.4.3)$$

From this, now we have,

$$\beta(x,t,v)=1/[1-(x/t)v/c^2] \quad (5.4.4)$$

Substituting for β(x,t,v) in eqn. (5.4.1), we have,

$$x'=(x-vt)/[1-(x/t)v/c^2] \quad (5.4.5)$$

For an object moving at linear speed, at x=0 and t=0, the ratio x/t=u, which is finite and hence, we have,

$$x'=x[1-v/(x/t)]/[1-(x/t)v/c^2] \quad (5.4.6)$$

$$x'=x\psi(x/t,v) \quad (5.4.7)$$

where,

$$\psi(x/t,v)=[1-v/(x/t)]/[1-(x/t)v/c^2] \quad (5.4.8)$$

We can easily obtain the Natural Relativity transformation for moving frame F′(x′,y′,z′) at any position **r** moving at speed v in the direction **r** relative to the frame F(x,y,z), where **r**=(x,y,z).

Theorem: Natural Relativity (Equation of Nature)
For an inertial frame F′(x′,y′,z′) moving at speed v relative to the frame F(x,y,z) in the direction **r**,

$$r'=r\psi(r/t,v) \quad (5.4.9)$$

where,

$$\psi(r/t,v)=[1-v/(r/t)]/[1-(r/t)v/c^2] \quad (5.4.10)$$

r=(x,y,z), $r=(x^2+y^2+z^2)^{1/2}$, and
r′=(x′,y′,z′), $r'=[(x')^2+(y')^2+(z')^2]^{1/2}$.

Time lapse t does not depend on a position **r.** Time lapse depends on the distance r, not on the position. The linear distance r is not unique to the position **r**. There are infinitely many positions that have the same linear distance r and hence the same time lapse t.

Time lapse t depends on the distance r, and the linear distance r between two positions is independent of the positions. The time lapse t also varies with the speed u chosen to travel the distance, t=r/u. There are infinitely many speeds one can choose from, and as a result, time lapse t at distance r is not unique. Time lapse t is not a property of the position **r** since speed u for travelling the distance r is determined by the object that is travelling there. For any object moving at constant speed, the ratio r/t=u is independent of r and t themselves. As a result, relative position r′ is dependent only on the ratio r/t=u, which is a constant, and it is independent of r and t. The time lapse t is independent of the position **r**.

In the case of light, time lapse to travel distance r is determined by the medium since the speed of light is determined by the medium. In addition, the path of the light is also determined by the medium. As a result, for light, time lapse is determined by the medium.

VI. RELATIVE SPEED OF AN OBJECT WHEN RELATIVE SPEED OF THE FRAME REACHES SPEED OF LIGHT

From the Natural Relativity transform given in eqn. (5.3.1), we have,

$$x'=x[1-v/(x/t)]/[1-(x/t)v/c^2] \quad (6.1)$$

Now we want to find out what happens when the speed v of the moving frame F′(x′,y′,z′) reaches the speed of light c. If we have an object moving on frame F(x,y,z) at any speed u, where u≤c, when v→c, what the relative speed of the object u′ approaches to, u′→?. When v approaches the speed of light, we want u′, where u′=x′/t, to not to exceed the speed of light c. Let us see if that is the case.

Lemma: Natural Speed Limit
When the speed v of the moving frame F′(x′,y′,z′) reaches the speed of light c relative to the frame F(x,y,z), the position x′ will be independent of the position x of the frame F(x,y,z). Any object,

irrespective of the speed of the object on frame F(x,y,z), travels at the speed -c relative to the moving frame F′(x′,y′,z′) when v approaches c, v→c,

$$\lim_{v\to c} x'/t=-c \quad (6.2)$$

Since, u′=x′/t,

$$\lim_{v\to c} u'=-c \quad (6.3)$$

Proof:

From the Natural Relativity transform, we have,

$$x'=x[1-v/(x/t)]/[1-(x/t)v/c^2] \quad (6.4)$$

When v→c, we have,

$$x'=(x-ct)/[1-(x/t)c/c^2] \quad (6.5)$$
$$x'=(x-ct)/[1-x/ct] \quad (6.6)$$
$$x'=ct(x-ct)/(ct-x) \quad (6.7)$$
$$x'= - ct \quad (6.8)$$
$$x'/t= - c \quad (6.9)$$
$$\lim_{v\to c} x'/t= - c \quad (6.10)$$

Since, u′=x′/t,

$$\lim_{v\to c} u'= - c \quad (6.11)$$

When the speed of the frame F′(x′,y′,z′) approaches the speed of light c, relative distance x′ becomes independent of x or independent of the frame F(x,y,z) and depends only on the time t. When v→c, any object on the frame F(x,y,z), irrespective of the speed u=x/t of the object, moves at speed -c relative to frame F′(x′,y′,z′).

No relative speed of an object can exceed the speed of light in the Natural Relativity as we expected. Natural Relativity guarantee that no relatively moving object exceed the speed of light while maintaining time, mass, and the geometry of the moving object unaltered.

VII. **REVERSIBLE SYMMETRY**

Axiom:

There is no relativity without reversible symmetry. There is no reversible symmetry without the motion of two masses.

Corollary:

No two waves can be relative or reversible symmetric. A moving mass and a propagating wave cannot be relative or reversible symmetric.

In absolute motion, if I am at standstill and you are moving, that is the end of the story. You are moving and I am standstill. There is nothing more to it. In absolute motion, motion is relative to the propagation of light and it is not reversible symmetric. Motion in absolute motion is real, not an observer perception. Absolute motion has nothing to do with observers. Absolute motion is observer independent. The absolute motion can only be determined within the frame or object. No outside observer can do it unless the observer is on an outside frame or object that is at standstill relative to the propagation of light. In other words, unless the observer is on a stationary frame or an object, no observer can determine the absolute speed of another frame.

Note the difference between relativity of the masses and absolute motion. In relativity, if you are travelling at the same velocity as I am, both you and I appear to be relatively stationary. We are both relatively at stand still because we are both either travelling at the same velocity or we are both at stand still. However, when you are stationary relative to the propagation of light, you are at stand still, and the light is propagating at speed c since light has no existence without propagating at speed c. If you are stationary relative to the propagation of light, your absolute speed is zero; you are absolutely at stand still relative to the light propagating at speed c.

However, your volume starts to shrink with the absolute speed [3,4]. And as a result, if you measure the speed of light, you will still get a constant speed of light c irrespective of the absolute speed you are travelling at.

Absolute motion of an object is the motion of an object relative to a massless and momentum-less entity, the propagation of light. Since only a single mass is involved here, absolute motion is not relative, and not reversible symmetric. Reversible symmetric relativity requires the motion of two separate masses.

Change of the volume of an object due to the absolute motion is real [4]; it is not an observer perception since no observer is involved in absolute motion. No motion of an object can change the time and mass of the object, neither absolute motion nor a relative motion. Relativity, by its very meaning is not real. For the existence of relativity and relative symmetry, it requires two masses. There will be no relativity without the motion of at least two masses.

What is referred to as a frame is an object of mass. What is referred to as an inertial frame is an object moving at constant absolute speed. There is no relative speed in the absence of absolute speed. For an observer on any frame, his/her frame is the reference frame or the standstill frame even when that frame has an absolute speed.

Corollary:

An observer on an inertial frame that is in absolute motion does not know it is in motion unless he/she carries out an experiment using a burst of light to find out if the frame is moving. Any observer can determine if the frame or object he/she is on is moving or not.

Lemma: Absolute Time and Mass

No motion of an object can change the time and mass of the object, neither absolute motion nor a relative motion. Relativity, by its very meaning is not real.

So, the relative speed of any other frame is its effective speed when the observer assumed his/her frame to be at standstill. For an observer to assume an entity to be at stand still, that entity must have a stand still existence. A wave has no stand still existence and hence a wave cannot be relative. A

mass has a standstill existence and hence a mass can be relative.

Relative speed is not real. No physical change could take place by relative speed. You cannot move a mountain by running away from it. Mountain is still at standstill, and you are the one moving, and that is the reality; the reverse is a perception, not the reality. You cannot change the time on a mountain by running away from it. You cannot change the shape of a mountain by running away from it. You cannot change the mass of the mountain by running away from it. That is the reality.

In actuality, the relativity for some observers is the reality, but they are not aware of it. No observer knows the reality in relativity until they perform an experiment using a burst of light. As a result, observer perception in relativity is not the reality. So, observer perception in relative motion cannot change a physical object itself and time. Reversible symmetric relative speed cannot change the physical characteristics of an object and time. Observer perception in relativity cannot change mass, length of an object and time. Gravity is real. Gravity is observer independent. Relativity is not real. Relativity is observer dependent. As a result, gravity cannot have any connection to relativity. Gravity and relative motion are mutually independent. However, gravity depends on the absolute motion since absolute motion contracts the volume of an object. When the volume of an object contracts, the surface gravity of the object increases.

Lemma: Gravity Increases with Absolute Speed

When the absolute speed of an object of mass increases, the volume of the object decreases, and as a result, the surface gravity of the object increases with the increase of the absolute speed.

Relativity is the reality when it comes to Newtonian motion dynamics of an object. Newtonian motion dynamics are independent of the frame of reference for the very reason relativity does not alter the object and time.

Even though, the motion of the frame F(x,y,z) at speed -v relative to the frame F′(x′,y′,z′) is not the reality, and the motion of the frame F′(x′,y′,z′) at speed v relative to the frame F(x,y,z) is the reality, neither one is aware of the reality. Observers on each frame consider his/her perception as the reality. For any observer, his/her frame is stationary, and the other frames are moving. This is the reason why waves cannot be relative; waves can never be stationary or at standstill. If we want to assume an entity to be stationary, that entity must have the ability to be stationary, waves cannot be stationary.

Relative motion dynamics of an object of mass is universal since they are frame independent. Relative motion allows us to study the motion of objects. We need to find out how the nature guarantee that the relative speed of an object does not exceed the speed of propagation of light. That allows us to obtain the trajectories of objects at all speeds even when the speed of an object reaches the speed of the propagation of light.

If frame F′(x′,y′,z′) is moving relative to frame F(x,y,z) at speed v, then, relative to frame F′(x′,y′,z′), the frame F(x,y,z) must be moving at speed -v. It should be the case for any Theory of Relativity. We want to make sure it is the case for the Natural Relativity.

Definition: Reversible Symmetry

Inertial frames F(x,y,z) and F′(x′,y′,z′) are reversible symmetric if the inertial frame F′(x′,y′,z′) is moving at speed v relative to the inertial frame F(x,y,z), then, the frame F(x,y,z) is also moving relative to the frame F′(x′,y′,z′) at speed -v.

Corollary: Relative Symmetry

Relative motion of two objects of mass is always reversible symmetric. If the motion of two inertial frames is not reversible symmetric, they do not have a relative motion, and one of them must be massless, a wave.

Theorem: Reversible Symmetry

If inertial frames F(x,y,z) and F′(x′,y′,z′) are reversible symmetric, then,

$$x'=x\psi(x/t,v) \tag{7.1}$$

where,

$$\psi(x/t,v)=[1-v/(x/t)]/[1-(x/t)v/c^2] \tag{7.2}$$

and,

$$x=x'\psi(x'/t,-v) \tag{7.3}$$

where,

$$\psi(x'/t,-v)=[1+v/(x'/t)]/[1+(x'/t)v/c^2] \tag{7.4}$$

Proof:

We already have the transformation,

$$x'=x[1-v/(x/t)]/[1-(x/t)v/c^2] \tag{7.5}$$

This can be written as,

$$x'- x'vx/c^2t=x-vt \tag{7.6}$$
$$x'+vt=x+x'vx/c^2t \tag{7.7}$$
$$x'+vt=x(1+vx'/c^2t) \tag{7.8}$$
$$x=(x'+vt)/(1+vx'/c^2t) \tag{7.9}$$
$$x=x'[1+v/(x'/t)]/[1+(x'/t)v/c^2] \tag{7.10}$$
$$x=x'\psi(x'/t,-v) \tag{7.11}$$

where,

$$\psi(x'/t,-v)=[1+v/(x'/t)]/[1+(x'/t)v/c^2] \tag{7.12}$$

It is clear, the Natural Relativity maintains the reversible symmetry. Any observer on any frame sees his/her frame as the stationary frame. An observer on frame F(x,y,z) sees realistically that the frame F′(x′,y′,z′) is moving at speed v if and only if the observer knows that the frame F(x,y,z) is stationary. Any observer on frame F′(x′,y′,z′) also has the perception that the frame F(x,y,z) is moving (not realistically) relative to the frame F′(x′,y′,z′) at the speed -v. Moreover, as we are going to see later, any observer in any frame can determine whether the

frame observer is on, is moving or stationary.

As a result, even though any observer on frame F′(x′,y′,z′) has the perception that he/she is at standstill, and the frame F(x,y,z) is moving at -v speed, any observer on frame F′(x′,y′,z′) can experimentally determine that it is he/she that is physically moving at speed v in the direction **x′** from within the frame F′(x′,y′,z′) by using a burst of light. This determination is possible because the light is not relative. This determination is not possible using motion mechanics of objects of mass as indicated by Newton. You cannot make this determination by throwing golf balls. How is it possible for an observer to determine the speed of his/her frame from within his/her own frame is considered later.

VIII. **LAWS OF RELATIVITY**

Zeroth Law of Relativity:

Propagation of light is absolute, not relative. Light does not propagate relative to any object, inertial or accelerating.

Lemma: Waves are Not Relative

For an entity to be relative, that entity must have a standstill existence. If an entity cannot be brought back to standstill by applying equal and opposite speed or momentum, that entity cannot be relative. Light has no standstill existence. Waves are not relative. Waves cannot be relative. Light is not relative.

Corollary:

Moving objects of mass are relative since any moving object of mass can be brought back to standstill by applying an equal and opposite speed or momentum.

First Law of Relativity:

For an entity to be relative, although it is necessary for that entity to be relative on inertial frames, it is not sufficient. That entity must also be relative on accelerating frames at any instant of time.

Second Law of Relativity:

Maxwell's equations for propagation of light are not uniquely transferable onto inertial frames and accelerating frames, and hence Maxwell's equations are not relative.

Corollary:

Propagation of massless cannot be represented relative to moving objects of mass. It is the motion of an object of mass that can be represented relative to the propagation of massless.

"It is relative only if you can stop it, otherwise not."

For Maxwell's equations for propagation of light to be relative on inertial frames, the transformation of Maxwell's equations onto an inertial frame must be unique. Transformation of Maxwell's equations onto inertial frames is not unique [2].

Further, if Maxwell's equations for propagation of light are relative, Maxwell's equations must hold their structure not only on inertial frames but also on accelerating frames. Although Maxwell's equations can be transformed onto inertial frames, Maxwell's equations cannot be transformed onto accelerating frames. Even though Maxwell's equations hold their structure on inertial frames, transformation is not unique [2]. Maxwell's equations and propagation of light are not relative.

If you are still claiming light is relative, try to transform Maxwell's equations on to an accelerating frame at any instant of time. It is not possible. If light is relative, light must also be relative not just on an inertial frame but also on an accelerating frame. If light cannot be transformed on to accelerating frames, light is not relative. If light is transformable to inertial frames, that transformation must also be unique. The transformation of Maxwell's equations on to an inertial frame is not unique [2], and Maxwell's equations are not transformable on to an accelerating frame. Light is not relative.

Third Law of Relativity:

No motion, neither absolute motion nor relative motion, can alter the mass of an object and time. The time, the mass of an object, and the speed of propagation of light are the same for every moving frame irrespective of whether the frame is an inertial frame or an accelerating frame.

Time and time lapse it takes to travel between two points in space are not the same. We can only define and measure the time lapse, not the time. Time is the same everywhere in the universe. This instant is the same everywhere in the universe; it has nothing to do with observers. Time lapse is independent of positions in space and depends only on the distance travelled and the speed chosen to travel the distance.

Fourth Law:

The only real motion of an object of mass is the absolute motion, the motion of an object of mass relative to the propagation of light.

Absolute motion contracts the volume of the object [3,4]. As the speed of the absolute motion of an object of mass reaches the speed of propagation of light, the mass density of the object reaches infinity turning itself into a black hole while the mass remains unaltered. No motion can alter the time and the mass of an object.

Fifth Law:

There is no reversible symmetry in absolute motion.

Motion of an object of mass relative to the

propagation of massless light is not reversible symmetric. For an object of mass to be relative, there must at least be two objects of mass. An object of mass can only be relative with respect to another object of mass. Relativity does not apply to massless waves. Light is not relative. Massless entity cannot be relative. Massless entity cannot carry a momentum. Any entity that is not stoppable cannot carry a momentum. Light cannot carry a momentum.

Sixth Law:

Motion of an object of mass relative to another object of mass is the relative motion. Relative motion is not real, it is an observer perception.

The relative motion of an object is not real. Relative motion cannot change the physical characteristics of an object. Relative motion cannot change the time, the mass, and the dimensions of an object.

Seventh Law:

Relative motion is reversible symmetric. Reversible symmetry requires the motion of two masses. If two entities are not reversible symmetric, at least one of the two is massless.

Eighth Law:

Any observer can determine whether he/she is moving or stationary from within his/her own frame since the propagation of light is not relative.

Nineth Law:

Nature guarantees that the relative speed of any object of mass does not exceed the speed of light while maintaining the physical characteristics of an object such as the mass and the dimension as well as the time unaltered.

Tenth Law:

Time is independent of space. The space is independent of time.

There is no warping of space and time. There is no entity called spacetime. Ubiquitous spacetime is a buzzword without meaning. Time is an instant, not a dimension. You have no access to neither past nor future. If we are not there to define time, there is no time.

Eleventh Law:

Time is the same everywhere in the universe. Time is absolute. Time lapse is independent of the frame of reference, $r/u=r'/u'=t$, where r is the distance, and u is the speed of an object on linear motion.

What we measure between two positions in space is the time lapse, not the time. The linear distance between two positions in space is independent of the positions themselves, and hence time lapse between two positions in space is independent of the two positions and depends only on the distance between the two positions and the speed chosen to travel the distance. Both time and time lapse are frame independent.

Twelfth Law:

Time lapse at a given position is not unique since the linear distance is independent of positions, and the speed chosen to travel a distance can be of any of infinitely many values.

So-called spacetime interval or proper time in Special Relativity is not unique. There is no unique time lapse attached to a position in space and vice versa. Time lapse is decided by the distance travelled and the speed used to travel the distance, both of which are independent of the positions in space. If you travel on foot at constant speed certain distance, the time taken to travel the distance is independent of the frame of reference, $r/u=r'/u'=t$.

Thirteenth Law:

There is no relative motion without absolute motion.

Absolute motion is real. Absolute motion is observer independent. Relative motion is not real. Relative motion is observer dependent. An observer can determine the absolute speed of the frame he/she is on experimentally from within the frame using a burst of light since the propagation of light is not relative.

Fourteenth Law:

When a burst of light is released from a source on a moving frame, the burst of light is not a part of the moving frame even though the source is. Unlike an object of mass on a moving frame, a burst of light is not moving with the frame at the speed of the frame relative to any reference frame since the velocity of light is determined by the medium. Light cannot travel relative to an observer since light cannot be stopped by any mean. Since light cannot be stopped, light has no momentum. Any entity with a momentum can be stopped. Any entity that has no ability to gain or lose momentum cannot have a momentum. Any entity that has no existence without propagating at constant speed cannot gain or lose momentum. As a result, light cannot carry a momentum. Light is not relative.

IX. NATURAL SOLUTION TO THE RELATIVE SPEED DILEMMA

We have already seen what the historical relativity dilemma was. How can the nature guarantee that the relative speed of an object of mass does not exceed the speed of light? Since no relative motion can change the physical characteristics such as time, mass, and dimensions of an object, we can restate the historical dilemma more accurately:

Century Old Question:

How can the nature guarantee that the relative speed of any object does not exceed the speed of propagation of light without altering any physical characteristics such as the mass and the dimensions of an object as well as time?

We know that the Special Relativity cannot guarantee the relative speed of an object does not exceed the speed of propagation of light without altering the mass and the dimensions of an object and time. Since relative speed is not real, relative speed cannot change the physical characteristic of an object and time and hence Special Relativity is simply hypothetical and artificial, not a real solution of nature. Special Relativity is not a naturally realistic solution to the natural relativity dilemma. Lorentz Transform, Special Relativity, and General Relativity can exist only in human imagination, just like meaningless backward stone-age useless religious texts and doctrines.

As we have seen, the Natural Relativity provides the relative speed of an object without altering the physical characteristics of an object. Now, let us see how the Natural Relativity guarantee that the relative speed of any object does not exceed the speed of propagation of light without altering the physical characteristics such as the mass and the dimensions of an object and time.

Consider the case where we have an object P′ travelling relative to the frame F′(x′,y′,z′) at constant speed u′ in the direction of **x**′. Since the speed u′ is a constant, we have the ratio x′/t, which is a constant that is independent of x′ and t,

$$x'/t=u' \tag{9.1}$$

Now, we want to find the speed of the object P′ relative to the frame F(x,y,z) in the direction of x. Assume that the speed of the object P′ relative to the frame F(x,y,z) is u, then, we also have the ratio x/t, which is a constant that is independent of x and t,

$$x/t=u \tag{9.2}$$

From the reversible symmetry of relativity, we know that the frame F(x,y,z) is travelling at speed -v relative to the frame F′(x′,y′,z′). As a result, from the Natural Relativity we have the coordinate transform,

$$x=x'\psi(x'/t,-v) \tag{9.3}$$

where,

$$\psi(x'/t,-v)=[1+v/(x'/t)]/[1+(x'/t)v/c^2] \tag{9.4}$$

Since the object is moving at constant speed, x/t=u and x′/t=u′ at any time t. As a result, at t=0, x/t and x′/t are finite, and hence we can divide eqn. (9.3) by t to obtain,

$$x/t=(x'/t)\psi(x'/t,-v) \tag{9.5}$$

Substituting for x′/t and x/t from eqns. (9.1) and (9.2), we have,

$$u=u'\psi(u',-v) \tag{9.6}$$

where,

$$\psi(u',-v)=(1+v/u')/(1+vu'/c^2]) \tag{9.7}$$

We can write it as,

$$u=u'(1+v/u')/(1+vu'/c^2) \tag{9.8}$$

$$u=(u'+v)/(1+vu'/c^2) \tag{9.9}$$

As u′→c, we have,

$$u\rightarrow(c+v)/(1+v/c) \tag{9.10}$$

$$u\rightarrow c \tag{9.11}$$

It does not matter what the speed v of the frame F′(x′,y′,z′) is, when the speed of the object P′ approaches the speed of light, u′→c, then, it is guaranteed that the speed u of the object P′ relative to the frame F(x,y,z) does not exceed the speed of light, u→c.

We can also see that when both u′, and v approach the speed of light, the relative speed u of the object does not exceed the speed of light.

If u′→c and v→c, then, we have

$$u\rightarrow c \tag{9.12}$$

The relative speed u of the object P′ relative to the frame F(x,y,z) will also be bound by the speed of light c irrespective of what the speed u′ of the object P′ relative to the frame F′(x′,y′,z′), and what the speed v of the frame F′(x′,y′,z′) relative to frame F(x,y,z) are. This is expected since the relative speed u′ of the object P′ relative to the frame F(x,y,z) cannot exceed the speed of light c irrespective of the speed v of the frame F′(x′,y′,z′) relative to the frame F(x,y,z). Similarly, when the speed v of the frame F′(x′,y′,z′) approaches the speed of light, v→c, it does not matter what the speed u′ of the object P′ relative to the frame F′(x′,y′,z′) is, the speed u of object P′ relative to the frame F(x,y,z) will not exceed the speed of light c.

In Natural Relativity, relative speed of any object is bound by the speed of light. More importantly, natural relativity does not alter the physical characteristics of an object and time. Natural Relativity enforces the maximum relative speed limit of any object to the speed of light without resorting to the changes of any physical characteristics of an object and time. Natural Relativity does not change the physical characteristics such as the mass and dimensions of an object and time under relative motion.

Lemma: Ultimate Traffic Cop

Natural Relativity is the ultimate traffic police for every object of mass in the universe. Natural policing is based on prevention, not punishment. Since no object can exceed the speed limit of nature, there are no speed violations or traffic ticketing.

Theorem: Natural Guarantee

Natural relativity guarantees that the relative speed of any object does not exceed the speed of light while maintaining the physical characteristics of the object and the time unaltered.

Natural Property:

Waves are not relative. There is no relativity without an object of mass.

X**. POSITION** x **AND TIME** t **ARE INDEPENDENT**

Position x and time lapse t are relative to a chosen

origin of any inertial frame F(x,y,z). In 3D space, position **r** is given by **r**=(x,y,z). Now, the time t at position **r** is the time lapse t that is taken to travel distance r in the direction **r** at any chosen speed u on the inertial frame F(x,y,z), where $r=(x^2+y^2+z^2)^{1/2}$.

The choice of a coordinate system is observer dependent. As a result, the time at any point **r** or the time lapse taken to travel distance r at some speed u is observer dependent. The time lapse t at any position **r** varies with the speed u chosen to travel the distance r from the origin. The time lapse t taken to travel the distance r in 3D space on foot will be different from the time lapse t taken to travel the same distance r on a bullet train. Since the speed u can be of any value, where u<c, time lapse t taken to travel distance r is not unique. In addition, the linear distance r between two positions in space is independent of the positions.

Lemma: Space and Time are Independent

A position has no attachment to time lapse and time lapse has no attachment to a position. Position and time lapse are mutually independent.

If you have chosen some mean to travel distance r from the origin at a constant speed u, then, the time lapse t taken is given by,

$$t=r/u \quad (10.1)$$

The time lapse t to travel distance r is the same whether the distance r is travelled at speed u in +**r** direction or -**r** direction and hence we have,

$$t^2=r^2/u^2 \quad (10.2)$$

Similarly, if the time lapse taken for the light to propagate the same distance r is t_c, we have,

$$t_c=r/c \quad (10.3)$$

Here again, since the time lapse t_c taken for light to propagate the distance r is independent of the direction of propagation, and hence we have,

$$t_c^2=r^2/c^2 \quad (10.4)$$

Since no moving object of mass can exceed the speed of light c on any mean of travel, we have u<c and hence,

$$t^2>t_c^2 \quad (10.5)$$

If the square time t^2 taken by an object of mass to travel a distance r at any given speed u by any mean OVER the square time t_c^2 taken for light to propagate the same distance, or the square time difference, is τ^2, then, we have,

$$\tau^2=t^2-t_c^2>0 \quad (10.6)$$

Substituting for t_c from eqn. (10.4), we have,

$$\tau^2=t^2-r^2/c^2>0 \quad (10.7)$$

This is the same τ that is referred to in Special Relativity as spacetime or proper time. As we can see, it has nothing to do with a spacetime or proper time unless proper time is defined as τ. Whatever it is called, τ is simply the time lapse difference for a particle to travel distance r at a given speed u OVER the time lapse it takes for light to propagate the same distance r.

Time lapse t is not a property of the position **r**. Time lapse t would be the same whether the distance r is travelled from the origin to position **r** or the distance r is travelled from position $\mathbf{r}_1$ to $\mathbf{r}_2$, where $\mathbf{r}_1=(x_1,y_1,z_1)$, $\mathbf{r}_2=(x_2,y_2,z_2)$, and $r=((x_2-x_1)^2+(y_2-y_1)^2+(z_2-z_1)^2)^{1/2}$.

The linear distance r between two positions in space is not a property of the positions; linear distance is position independent. Hence, time lapse t taken to travel a distance r is not a property of a position **r** in space. Time lapse t is not unique since the speed u chosen to travel the distance r can be of any value. As a result, the so-called spacetime interval τ in Special Relativity and General Relativity is not a spacetime and it is not unique.

It is important to note that the quantity τ is not a spacetime interval. In Special Relativity, the quantity τ on frame F(x,y,z) is simply the relative time axis t′ of a relatively moving frame F′(x′,y′,z′). In general, τ^2 is simply the square time difference taken to travel the r distance at any speed u OVER the square time taken for light to propagate the same distance r, where u can be of any value, u<c. Since time lapse t does not depend on the position **r**, and only depends on the distance r and the speed u used to travel the distance, τ is not a spacetime interval. There is no spacetime.

Lemma: Relative Time t′ in Special Relativity

The square relative time t′ of frame F′(x′,y′,z′) in Special Relativity is the square time difference the frame F′(x′,y′,z′) takes to travel a distance r on frame F(x,y,z) at a certain speed v over the square time the light takes to propagate the same distance r, which is same as square spacetime interval or proper time τ^2,

$$(t')^2=\tau^2>0 \quad (10.8)$$

$$\tau^2=t^2-r^2/c^2>0 \quad (10.9)$$

where, t=r/v.

Proof:

From the time contraction in Special Relativity, we have [1],

$$t'=(1-v^2/c^2)^{1/2}t \quad (10.10)$$

Squaring eqn. (10.10), we have,

$$(t')^2=(1-v^2/c^2)t^2 \quad (10.11)$$

Since r=vt, we have,

$$(t')^2=t^2-r^2/c^2>0 \quad (10.12)$$

$$(t')^2=\tau^2>0 \quad (10.13)$$

Lemma:

So-called spacetime interval or proper time τ is independent of the space, and directly proportional to the time lapse t since distance/time is a constant for linear motion.

Proof:

As we have shown earlier in section II, the relative time t′ is independent of distance r, and directly proportional to time t. Proportionality factor or the gradient is independent of the position r and the time t, and only depends on the ratio distance/time or the ratio r/t, which is a constant for an object moving at

constant speed v.

From eqn. (10.13), we have, t′=τ. Since t′ is independent of r, and directly proportional to time t, and the proportionality factor depends only on the ratio r/t, which is a constant for an object moving at constant speed v, the so-called spacetime or proper time τ is independent of position **r**.

Relative time t′ in Special Relativity is an unwarranted outcome of forcing a linear frame-to-frame transformation or Lorentz Transformation in place of the actual nonlinear frame-to-frame transformation. Time would not be relative if actual nonlinear frame-to-frame transformation had been used in Relativity. However, in the presence of a nonlinear transform, Maxwell's equations are not relative. Even with the use of the linear Lorentz Transform, Maxwell's equations are not relative since Lorentz Transform is not unique. It is the forcing of light to be relative in Lorentz transform that made Special Relativity unnatural and strange. Relative time t′ in Special Relativity is hypothetical, fundamentally unnatural, and totally unnecessary and unacceptable human crafted prophesy.

Relative time simply does not exist. Time is not relative. Time is a definition; a definition cannot be relative. Time cannot be stopped since time has no stationary existence. Any entity that cannot be stopped cannot be relative. It is only an object of mass that can be relative with reference to another object of mass. Massless waves cannot be relative. Wave propagation cannot be relative. Only the motion can be relative. Only the objects of mass can be in motion. Waves are not in motion. Waves are in propagation. Wave propagation has no motion in the direction of propagation. Waves have no standstill existence. Waves have no existence without propagation. Any entity that has no standstill existence cannot carry a momentum and cannot be relative. Any entity that carries a momentum must be able to be brought into a complete halt or to a stop. It is only an entity that can be brought to a complete halt that can carry a momentum. Light cannot carry a momentum. Light is not relative.

Relativity Check: Necessary and Sufficient Condition

For an entity to be relative, it is necessary and sufficient that the entity must be able to be brought to a complete stop by applying an equal and opposite speed or momentum.

Corollary:

Any entity with momentum must be able to be brought back to a halt. Only an entity carrying mechanical energy can be brought back to a complete stop. Light carries electromagnetic energy, not mechanical energy. Light cannot be brought back to a halt. Light cannot carry a momentum.

A. **In Natural Relativity τ^2 is Meaningless.**

Spacetime interval τ is simply meaningless with the Natural Relativity. There is no spacetime and hence spacetime interval is meaningless even with Special Relativity and General Relativity. As we have seen quantity τ is not a spacetime interval; it is just a time lapse difference of an object of mass to travel a certain distance at a chosen speed over the time lapse incurred by light to propagate the same distance.

In Natural Relativity, for an inertial frame F′(x′,y′,z′) moving at speed v relative to the inertial frame F(x,y,z), τ′ for frame F′(x′,y′,z′) and τ for frame F(x,y,z) are given by,

$$(\tau')^2=t^2-(r')^2/c^2>0 \quad (10.1.1)$$

$$\tau^2=t^2-r^2/c^2>0 \quad (10.1.2)$$

Note that the time is the same in both frames in Natural Relativity. We know that the relative distance r′ along the direction of motion **r** is related to r by the unique nonlinear equation,

$$r'=r[1-v/(r/t)]/[1-(r/t)v/c^2] \quad (10.1.3)$$

If the speed of an object at distance r and time lapse t is u, we have u=r/t for object under linear motion.

As a result, at any time t, we have,

$$r\neq r' \quad (10.1.4)$$

Since r≠r′, in the case of Natural Relativity, we have,

$$(\tau')^2\neq\tau^2 \quad (10.1.5)$$

So, the quantity τ is meaningless in Natural Relativity. The quantity τ is also meaningless in Special Relativity as we are going to see.

B. **In Special Relativity τ is Not Unique.**

Special Relativity has gone extra length to portray τ as a spacetime interval although it has nothing to do with a spacetime interval. However, in Special Relativity time is unnaturally assumed to be relative, and as a result, $(\tau')^2=\tau^2$. Let us consider τ^2,

$$\tau^2=t^2-r^2/c^2>0 \quad (10.2.1)$$

Here, t is the time lapse to travel distance r from the origin at a chosen speed u, where,

$$t=r/u \quad (10.2.2)$$

You can choose to travel r distance on foot or on an airplane. The speed u varies with the mean you have chosen to travel the distance r. Time lapse t that takes to travel the distance r depends on the speed u associated with the means of travel. If you walk the distance r, the time lapse t will be much greater than the time lapse it takes to travel distance r if you have taken bullet train. It is the speed u of a chosen means of travel that determines the time lapse t at **r**. The only limitation for u is that it must be less than the speed of light, u<c.

There is no specific time lapse attach to a point in space. There is no specific point in space attached to time either. On the other hand, there is no specific points in space attached to a distance either. The linear distance r between two positions in space is independent of the positions themselves. Time lapse t it takes to travel linear distance r is independent of the starting position and the end position in space.

So, τ has nothing to do with a so-called spacetime.

The quantity τ is simply the excess time t it takes for an object of mass to travel distance r at any given speed u over the time it takes for the light to propagate the same distance r. Since the speed u can have infinitely many possible values, τ can also have infinitely many values at any position **r**. In other words, τ is not unique for any position **r** in space. Although τ^2 is invariant for given speed u of an object, since speed u can have infinitely many values, no two observers are going to agree on τ^2 because no two observers can have an agreement of u. I can define time lapse t by walking distance r while another person may define time lapse by taking a bullet train to travel distance r. Although different observers may define time lapse differently based on the means of travel, any observer's time lapse t is independent of the frame of reference.

The quantity τ is different for different observers on the same frame since each observer may choose different speed u to travel the distance r. If an observer A decides to walk the distance r, and observer B uses airplane to travel the distance r, then the time lapse for observer A, t_A will be much higher than the time lapse for observer B, t_B. As a result, τ for observer A will be different from the τ for the observer B on the same frame. The so-called spacetime interval or proper time τ is not unique on any inertial frame.

Lemma: Invariant, but Not Unique

Although τ is invariant in Special Relativity, τ is not unique.

The quantity τ is different for different observers on the same frame since any observer can choose his/her own speed u to travel the distance r resulting different time lapse t for each observer. When time lapse t differs for each observer, the quantity τ differs for the different observers on the same frame. Since the speed u can have infinitely many values, observers on the same frame disagrees with τ.

C. **Another Reason Why τ is Not Unique.**

Special Relativity is based on a linear transformation function and the transformation parameter β is a constant that depends only on the square speed v of the moving frame F′(x′,y′,z′) relative to the frame F(x,y,z),

$$x'=\beta(x-vt) \quad (10.3.1)$$

$$t'=\beta(t-xv/c^2) \quad (10.3.2)$$

where $\beta=1/(1-v^2/c^2)^{1/2}$.

This transformation parameter β is not unique. For any value n, β^n is also a valid transformation parameter in Special Relativity, where n can be any value [2],

$$x'=\beta^n(x-vt) \quad (10.3.3)$$

$$t'=\beta^n(t-xv/c^2) \quad (10.3.4)$$

where $\beta^n=1/(1-v^2/c^2)^{1/2}$.

As a result, in Special Relativity, frame-to-frame transformation is not unique.

In Special Relativity, the quantity τ^2 is invariant for the transformation parameter β^n only when n=1. So-called spacetime distance or proper time τ is not invariant when n≠1. As a result, quantity τ^2 is not invariant between observers on different frames since observers on different frames cannot agree on the value of n.

It is important to realize that τ^2 has nothing to do with spacetime; it is not a spacetime interval. Quantity τ^2 is simply the square time difference an object takes to travel distance r at a chosen speed u depending on a chosen means of travel OVER the square time it takes for light to propagate the same distance r,

$$\tau^2=t^2-t_c^2>0 \quad (10.3.5)$$

where t=r/u, and t_c=r/c, u can be any value and u<c.

Position **r** in space has nothing to do with time lapse t. Time lapse t has nothing to do with a position **r** in space. It is we who define the time lapse t. Time lapse t does not depend on the position **r**. Time lapse depends on the distance r. Linear distance r between two positions in space does not depend on positions. Time lapse t it takes to travel from one position in space to another varies with the distance r, and the speed u that is chosen to travel the distance r. Time lapse depends on the distance r travelled, not on the positions. Linear distance between two positions is independent of the positions, and hence time lapse t is independent of the positions.

Time and time lapse are not the same. Time is the same everywhere in the universe. We can only measure time lapse. Time lapse t that takes to travel between two positions in space varies with the distance r and the speed u of the chosen method of travel. Time lapse t for travelling distance r on foot is much higher than the time lapse t it takes to travel the same distance r on train.

The time lapse difference τ for travelling r distance at speed v over the time lapse for light to propagate the same distance is given by,

$$\tau^2=t^2-r^2/c^2>0 \quad (10.3.6)$$

Since the distance r is travelled at speed v in time t, we have, r=vt and hence,

$$\tau^2=(1-v^2/c^2)t^2>0 \quad (10.3.7)$$

In Special Relativity, relative time t′ on a moving frame F′(x′,y′,z′) at speed v relative to frame F(x,y,z) is related to time t on frame F(x,y,z), by the time contraction relationship,

$$t'=(1-v^2/c^2)^{1/2}t>0 \quad (10.3.8)$$

As a result, in Special Relativity, we have,

$$\tau=\pm t' \quad (10.3.9)$$

As we have seen before in section II, the relative time t′ is independent of position **r** itself, and directly proportional to time t. Proportionality factor or the gradient depends only on the ratio r/t, which is a constant for a moving object at constant speed. Since τ=t′, the so-called spacetime or proper time τ is independent of the position **r** and linearly related to time t. The gradient of that relationship is independent of the position **r** and time t themselves, and only depends on the ratio distance/time, which is a

constant speed v of the object. In other words, τ is independent of space. There is no spacetime.

Corollary:

There is no spacetime. So-called spacetime τ is independent of space or position **r**. Spacetime or proper time τ is linearly related to time t and the gradient of that relationship is independent of the position **r** and time t, and depends only on the ratio distance/time, which is a constant for an object moving at constant speed.

In Special Relativity, τ on frame F(x,y,z) is defined as the relative time t′ on frame F′(x′,y′,z′). In other words, τ is invariant in Special Relativity in the way it is defined. If I define my τ as your t′ relative to me, and you define your τ′ as my t relative to you, then, there is going to be an agreement if the transformation factor β is unique. However, β is not unique in Special Relativity since β^n for any n is also a valid transformation factor. As a result, τ is not invariant and no two observers on different frames can be in an agreement.

Any theory that is not unique cannot be a theory of nature. Special Relativity is not unique. Frame-to-frame transform in Special Relativity is not unique. So-called square spacetime interval τ^2 is not unique, and τ^2 is invariant only for a very specific value of transformation factor β^n, for n=1. Square spacetime interval τ^2 is not invariant for transformation factor β^n when n≠1. Since n can be of any value, observers on different frames are not in agreement on τ.

Since the speed u chosen to travel the distance r can be of any value, the time lapse t at position **r** can be of any value depending on u. In other words, time lapse t at position **r** is not unique. As a result, τ is not unique for a given frame. There are infinitely many positions with the same distance r. As a result, infinitely many positions can have the same τ since τ depends on the distance, not on a particular position in space.

In Special Relativity, the transformation factor β^n is not unique since n can be of any value [2], and hence Special Relativity is not unique. Any theory that is not unique cannot be a theory of nature. Any theory that requires the relative motion to alter the mass and the dimensions of an object and time cannot be a theory of nature since no relative motion can alter properties of nature. Reversible symmetric relative motion cannot alter objects and time. Special Relativity and General Relativity cannot be theories of nature.

On the other hand, the Natural Relativity based on non-linear transform is unique. As a result, the Natural Relativity is a unique mechanism of nature that resolves the relative speed dilemma and guarantee that no object of mass exceeds the speed of light while maintaining the object and time unaltered.

The ubiquitous claim in Special Relativity that nothing can travel faster than light is an exaggeration without theoretical or experimental evidence. It is only an object of mass that cannot exceed the speed of light. Any object of mass cannot travel faster than light. An object has a mass. It is a mass that cannot travel faster than light. However, one thing is clear, there cannot be any other wave of constant speed that propagates in a vacuum.

XI. DETERMINING THE SPEED OF AN INERTIAL FRAME FROM WITHIN

Galileo, Newton, Einstein, and the rest of the physics community were under the constant belief that the speed of an inertial frame cannot be determined by an observer on or in a frame. That is understandable since it cannot be done by throwing an object of mass such as golf balls. When Newton claimed that the speed of an inertial frame cannot be determined by motion mechanics, it appeared as if it were universally true under the state of understanding at that time.

Although Newton's claim was correct in Newton's era, it is no longer the case. Although it is not possible to determine if an inertial frame is moving or not from within the frame by throwing golf balls or objects of mass, it is experimentally possible for any observer on an inertial frame to determine if the inertial frame the observer is on, is moving or not.

Propagation of light is not relative [2]. Light is massless and momentum-less. Massless and momentum-less propagation of light is there for the rescue. Propagation of light does not follow the motion mechanics of Newton since light has no mass. You cannot force a momentum on massless by proclamation as Einstein did; it is not going to stick. Irrespective of Einstein's proclamations, massless has no momentum. Massless is not relative. Einstein tried to force a mass on propagation of light by proclamation, it did not stick. That single proclamation of Einstein has transformed physics into voodoo-physics. You cannot force a momentum on massless by proclamation.

Relativity does not apply to massless. Massless are not relative. There is no momentum without a mass. Even though a source of light on an inertial frame is relative, the propagation of bursts of light released from that source is not relative. Propagation of light is not relative. Although Newton's claim that it is not possible to find the speed of an inertial frame from within the frame by motion mechanics of objects of mass is always correct, the general concept evolved from that claim that the speed of a moving frame is not experimentally obtainable within an inertial frame is false.

It is indeed possible not just the determination of if the inertial frame is moving or stationary from within a frame, but also possible to obtain the speed of an inertial frame from within a frame experimentally, specifically, using a burst of light.

A. Historical Mistake

When Maxwell formulated the theory of

electromagnetic wave propagation and found out that the speed of light is a constant determined by the medium or the lack of it, we have already taken the Newton's claim to heart that the speed of an inertial frame could not be determined from within a frame by motion mechanics as a fact, falsely. We were not ready to question that false claim. So, Lorentz, Einstein, and the rest shaped or warped the new knowledge obtained by the Maxwell's equation for propagation of light to fit the Newton's claim, and that is the genesis of all that is wrong in Modern Physics.

Why it is not possible to determine the speed of an inertial frame from within? Because every object of mass is having the same speed as the inertial frame. To fit the behavior of light into Newton's motion mechanical framework, all that had to be done was to force light to behave as an object of mass. That was easy. All that had to be done was issue a proclamation. Einstein did exactly that in Special Relativity and the rest obediently followed without question with few exceptions considered to be outcast.

Einstein proclaim that even though light has no mass, light has a momentum. On the other hand, anything that has a momentum must be a particle. If light has a momentum, light must be behaving as particles. So, light particles or subsequent nomenclature, photons were born. Now, light is bestowed upon a momentum by proclamation by his majesty, the king of physics. As a result, from there onward, light is expected to behave as particles that fit with Newton's motion mechanics and associated proclamation that the speed of an inertial frame cannot be determined from within the frame by motion mechanics.

To justify the claim, what is left to do was to show that the light is relative. Lorentz used a linear transformation and transformed the Maxwell's equations on to an inertial frame and found that the structure of the Maxwell's equations was retained on the inertial frame after the transformation. Lorentz had no option but to use a linear transform at any cost since Maxwell's equations do not fit on a nonlinear transform. So, they took it as a proof that the light is relative and must behave as particles with a momentum even though light has no mass. But there is one problem that was unknown to them, linear Lorentz transform is not unique. If they had realized that Lorentz transform is not unique, they should have avoided wasting more than a century.

Now, we have massless particles carrying a momentum by proclamation. This is how Special Relativity and its associated (in)famous equation $e=mc^2$ came to light. This equation is meaningless. They incorrectly argued, if there is a particle travelling at speed c with energy e, then it must have an effective mass given by, $m=e/c^2$, and as a result, what came out was $e=mc^2$. On the flip sides, this equation relates energy to a mass travelling at speed of light if the energy is mechanical energy. But mass cannot reach speed of light. Yet, according to this relationship, mass has energy even though mass cannot reach speed of light. So, they called it rest energy. One big problem though. The energy e is not kinetic energy, it is electromagnetic energy. Electromagnetic energy has no association with a mass or momentum. Any entity with a momentum must be able to bring to a complete stop. Light has no existence without propagation. Light cannot be brought to a complete stop because light has no momentum. Any entity without momentum is not relative.

Lemma:

Any entity that carries a momentum must be able to bring to a complete stop. Light cannot be brought to a complete stop. Light does not carry a momentum.

The motion in a wave is orthogonal to the direction of propagation. Propagating waves do not have a motion or momentum along the direction of propagation. Everybody was blind to that fact since they were religious followers. You are not allowed to question a religious text, or else … Religions are driven by generating fear among population. So, everybody started find a way to justify whatever the claim in the religious text without questioning. So, they went on preaching that the light consists of particles or photons; why? Because Einstein said so; it is in the sacred papers or text.

The problem is that the light is coherent. If light consists of particles or photons, light particles or photons have no mechanism to carry coherent information. If any entity is quantized, it must have a mechanism to reassemble; nature has no such mechanism for the quanta to carry the belonging information. Propagation of light is directional. Directional entities cannot come in spatially random quanta. Photons, by definition, are spatially random; if you are not so sure about that, you should read Einstein's derivation of photons, the one that was given the prize. Spatially random photons cannot be associated with coherent light. Light cannot consist of particles or photons. Only the scalar quantities such as electromagnetic energy can come in quanta. Even mechanical energy cannot come in quanta. Mechanical energy is associated with velocity which is directional.

Lemma:

Mechanical energy is directional, and hence cannot come in quanta.

Propagation of light is directional. So-called light particles or photons do not have a mechanism to carry directional information. In addition, by definition, Einstein's light particles or photons are spatially random. Coherent light cannot consist of spatially random particles. Any directional entity cannot come in quanta. You cannot quantize a vector. Vectors

cannot come in quanta. You cannot quantize angular momentum. Angular momentum cannot come in quanta. Bohr Atom is invalid in this very reason. If you quantize a vector, what you get is non-sense [8,9].

Interestingly, Lorentz's linear transformation of electromagnetic waves on to a moving inertial frame is mathematically correct even though it is ideologically false since time cannot be relative. There is one big hole in it though. To make it invalid, all one has to do is to show that there is at least one more transform that does the same job. For a transform to be a transform of nature, transform must be unique. Otherwise, nature has no way of choosing one transform over the other. As it turns out, there are infinitely many linear transforms that transform Maxwell's equations for propagation of light on to an inertial frame and still retains the structure of the Maxwell's equations for propagation of light. In other words, Lorentz transform is not unique and hence cannot be a transform of nature.

The untold truth is that the light does not propagate relative to inertial frames. If light does not propagate relative to inertial frames, light does not carry a momentum. If light does not carry a momentum, light does not behave as particles. If light does not behave as particles Einstein's (in)famous equation is false, $e \neq mc^2$. If light does not have a momentum, Special Relativity is invalid, false.

The biggest mistake in Modern Physics is holding on to an ancient Newtonian claim that the speed of an inertial frame cannot be obtained from within the inertial frame using motion mechanics. Newton clearly stated that it is not possible with motion mechanics of objects, and he is right. The problem was that others either dropped or did not pay much attention to the phrase "using motion mechanics" in the newton's claim. Newton did not rule out by any other mean that does not involve the motion mechanics of an object of mass. Motion mechanics only involve the motion of masses. Propagation of waves does not come under motion mechanics.

Motion of a mass and the propagation of light are two different phenomena; there is nothing common in them. Motion of a mass has a momentum in the direction of motion. There is no motion, or momentum in the direction of propagation in propagation of waves. Motion in propagation is orthogonal to the direction of propagation. If light had had a momentum, we could have brought light to a complete stop by applying equal and opposite momentum. Light has no existence without propagation. Newton's claim does not include massless. Newtonian physics do not apply to massless. Newtonian physics is not applicable to massless. Newton's claim excludes propagation of light since light is massless and momentum-less. Wave propagation does not come under motion mechanics since propagation is associated with massless and momentum-less, and there is no motion in the direction of propagation in propagation of waves.

Giving an artificial momentum to a wave that has no mass is simply preposterous; what were they thinking? Momentum has no existence without a mass. Electromagnetic energy has no association with a mass. Wave propagation does not involve a momentum. If electromagnetic energy carries a momentum and is subjected to Newton's motion mechanics, speed of light cannot be a constant under gravitational force.

Lemma:

Newton's mechanics only applied to the motion of masses, not to the propagation of massless and momentum-less waves or light.

Corollary:

There is no motion, or momentum in the direction of propagation in propagation of waves. Newton's mechanics do not apply to massless.

Lorentz Transformation is incomplete. Lorentz transform is not unique. Any transform that is not unique is not a phenomenon of nature. Propagation of light is not relative. Light has no mass and carries no momentum. Light contains electromagnetic energy. Motion of mass contains mechanical energy. Electromagnetic energy and mechanical energy are not the same. Mechanical energy has no existence without a mass, and light has no mass. Mechanical energy has no existence in light. It is the motion of a charge that can generate electromagnetic energy, not a mass. Light only has origin in the motion of charges, not the masses. Since charges have no existence without a mass, it is only the charges that is relative, not the electromagnetic waves generated by charges. Light does not propagate relative to inertial frames or relative to any object although the source of light is relative.

Propagation of massless is absolute, not relative. Propagation of light is absolute, not relative. Motion of charges is relative since charges have no existence without a mass. Once the light is emitted from a light source, the path light takes is determined by the density gradient of the medium or the lack of a medium.

Property:

Electrical charges are relative since charges have no existence without a mass. However, the electromagnetic waves generated by moving charges do not carry the speed of the charges, and hence not relative.

Einstein forced light to behave as golf balls in order to be consistent with the Newton's claim that it is not possible to determine whether an inertial frame is moving or stationary from within by motion dynamics. Newton was talking about objects with mass. Light does not belong to that category. Light is an exception. Light is not an object. Object is an entity

with a mass that follows Newtonian mechanics. Light has no mass or momentum; massless cannot carry a momentum.

Contrary to many claims in physics textbooks, massless cannot carry a momentum except in the mind of the proclaimers who act just like religious priests, whose only job is to repeat whatever ancient ritual in a written text without questioning and barring any questioning. Propagation of light is a wave that has no momentum. There cannot be a momentum without a motion in the direction of propagation; all the motion in a wave is orthogonal to the direction of propagation. Propagation of light is independent of any inertial or accelerating frame/object. If light carry a momentum, we should be able to stop light by applying equal and opposite momentum. Try and see if you bring the light to a full stop.

When Lorentz transform is not unique, the so-called spacetime associated with it is not unique. There are infinitely many spacetimes for a given inertial frame. As a result, spacetime cannot exist in nature. Time is independent of the space and the space is independent of time. Space exists. Time lapse is a definition. In Special Relativity the phrase we often come across, “Spacetime fabric” is simply a meaningless jargon, non-sense.

As we have already seen, position has no associated time lapse. Time lapse is associated with the distance and the speed used to travel the distance. Linear distance is independent of the positions in space. It is not the time that is associated with spacetime, it is time lapse. Time is universal. Time lapse depends on the speed of the transport and the speed of the transport depends on the means of transport, on foot, by car, by train, etcetera. Special Relativity is a deception in its inception, a religious thesis.

As we have already seen relative distance does not depend on time. It depends on the ratio distance/time, which is a constant at any time for any moving object at constant speed. In Special Relativity, relative time does not depend on the distance. It depends on the ratio distance/time, which is a constant at any position for any moving object at constant speed.

Linear distance between two positions in space is independent of the positions, and hence time lapse does not depend on positions. Time lapse depends on the ratio distance/speed of travel. Space and time are mutually independent. There is no spacetime. Claim that it is not possible to obtain the speed of an inertial frame from within an inertial frame experimentally is false. Let us see how we can determine not just if an inertial frame is stationary or moving, but also the speed of an inertial frame from within the frame experimentally.

B. **Experimental Determination of the Speed of an Inertial Frame from Within**

Newton’s claim that the experimental determination of whether the inertial frame you are on, is moving or not is impossible became invalid with the Maxwell’s formulation of the propagation of light or electromagnetic waves since light is not relative [2,3]. When light is not relative, experimental determination of the speed of an inertial frame from within an inertial frame is possible and simple.

Assume we are in an enclosed cabin of a train that is either moving at a constant speed or stationery. We do not know what state the train is in. For any observer inside an enclosed cabin, train is always stationary even when the train is moving. We know, we cannot determine the state of the train by throwing an object of mass as Newton correctly stated and Einstein and the rest strictly adhered to. However, although train appears as stationary for anybody inside an enclosed cabin, he/she can determine if the train is moving or not since the propagation of light is not relative. Let us see how.

Consider two separate positions A and B inside the cabin parallel to the track. Assume we are inside the cabin. We fire a burst of light from A in the direction of AB and find that the light takes time t_{AB} to travel from A to B. We also fire a burst of light from B in the direction of BA and find that it takes time t_{BA} to reach from B to A. We know, although the source of light is moving with the train, once the burst of light is released from the source, its path is determined by the medium or lack of it; the path of light has nothing to do with the moving mass of the train or the momentum of the train. The path of light is not decided by the momentum of the light source or the momentum of the train. As a result, we have, several situations for our time measurements that describes the state of the train,

$t_{AB}=t_{BA}$ (train is stationary)
$t_{AB}>t_{BA}$ (train is travelling in the direction of AB)
$t_{AB}<t_{BA}$ (train is travelling in the direction of BA)

Using the forward and backward time measurement between two positions, a person inside a moving cabin can determine the state of the cabin.

C. **Determining the Speed of an Inertial Frame**

Assume we are inside the cabin and we used the forward time measurement t_{AB} and the backward time measurements t_{BA} between two points A and B to find that $t_{AB}>t_{BA}$. As a result, we now know the cabin is moving in the direction of AB. Now, we want to determine the speed v of the train.

We can determine the speed of the train by firing a burst of light vertically perpendicular to AB. The path a vertical light burst take will be an angular path relative to the moving cabin or relative to a passenger in the cabin since the light is not relative.

This is a complete opposite of the Special Relativity since Special Relativity forces a false hypothetical momentum on light and expect light to behave as an object of mass even though light is massless. In Special Relativity, vertical burst of light from the bottom of a moving train is expected to travel

vertically, just like a golf ball, due to the artificial hypothetical momentum falsely bestowed on the light by Einstein. This is one of the biggest mistakes in the foundation of Special Relativity as well as on the foundation of the Modern Physics.

If the path of vertically oriented burst of light is at an angle θ to the vertical direction, then we have,

$$\sin \theta = v/c \qquad (11.3.1)$$

where v is the speed of the train and c is the speed of light.

Since v<<c, we have,

$$\theta \approx v/c \qquad (11.3.2)$$

$$v \approx c\theta \qquad (11.3.3)$$

If the slope of the light path is towards the AB, then the train is travelling in the direction of BA. If the slope of the light path is towards BA, then the train is travelling in the direction of AB.

It is important to note that the speed v here is the speed of the train only if the earth is stationary. When the motion of earth is considered, the v is the effective speed of the train including the motion of the earth. When the train is stationary, then the speed v is the speed of the earth. By obtaining the speed v for moving train as well as for stationary train, it is theoretically possible to obtain the speed of the train.

What we demonstrated here is a theoretical possibility. In practice, it is much more complicated than that since maintaining constant speed is quite difficult due to the other forces involved. In addition, the slope of the light path, angle θ is negligibly small and hence the angular path will appear as indistinguishable from the vertical for short distances. However, what we are interested here is not the actual values, but the theoretical possibility since the light is not relative. We are not interested in the engineering details of the speed measurement here.

A passenger inside an enclosed cabin can determine whether the train is stationary or moving using a burst of light. In addition, a passenger can determine the speed of the train too. Although a moving train at constant speed appears as stationary for any passenger, any passenger can determine the speed of the train experimentally from within the train.

As Newton correctly stated and others followed, a passenger inside a train cannot determine the state of the train by throwing an object of mass or a golf ball. In Special Relativity, a passenger in a train cannot determine the state of the train since Special Relativity forces light to be relative by forcing an artificial false momentum on light. However, light is not relative. Light cannot be relative. Light cannot carry a momentum since light has no standstill existence. A passenger can determine the state of a train the passenger is on by using a burst of light because the light is not relative.

Propagation of light is independent of any frame/object of reference whether the frame/object is an inertial frame or an accelerating frame. In the case of an accelerating frame, vertically fired burst of light will take a curved path [3], whereas in the case of a frame travelling at constant speed, the path of a light burst is a linear angular path relative to an observer on the frame. For an observer outside the train, vertical light burst fired from the bottom of the train takes a vertical path, which is its natural path.

Lemma: Experimental Observability

Although a moving inertial frame appears as stationary for any observer on a frame, any observer on a frame can determine the velocity of the frame experimentally from within the frame since light is not relative.

XII. NATURAL ASSOCIATIONS WITH THE THEORY OF NATURAL RELATIVITY

1. Propagation of light is independent of any reference frame irrespective of whether they are inertial frames or accelerating frames and in absolute motion or in relative motion. Propagation of light is absolute.
2. Time is the same for all frames irrespective of whether they are inertial frames or accelerating frames, and in absolute motion or relative motion. Motion of an object creates neither a time dilation nor time contraction. Time is absolute.
3. Mass of an object is the same for all frames irrespective of whether they are inertial frames or accelerating frames, and in absolute motion or in relative motion. Motion of an object cannot generate a mass. There is no mass dilation due to relative motion. Motion of an object cannot change a mass.
4. Motion of an object does not generate mass.
5. Collision of particles does not generate mass.
6. Collision of charge particles generate electromagnetic wave burst.
7. Collision of charge particles does not generate mass.
8. Motion is in-phase with the direction of motion of an object of mass and hence there is a momentum. Motion of a mass is driven by a momentum. There is a relativity between moving objects of mass.
9. Motion is orthogonal to the direction of propagation of a propagating wave. There is no motion in propagation in the direction of propagation. Propagation of a wave is not driven by a momentum.
10. Any entity with a momentum must be able to bring to a complete stop by applying an equal and opposite momentum.
11. Any entity that cannot be brought to a complete stop cannot consists of a momentum.
12. Light cannot be brought to a complete stop since light has no existence without propagation.
13. Light does not have a momentum.
14. Light changes the density of the medium. A change in the density in medium in effect generates a momentum. It is the medium that generates a momentum in the presence of light.

Light does not have a momentum. Light changes the density of the medium, which in turn generates a momentum that can do work. The momentum generated by the medium in the presence of light can act on an object such as a spacecraft with large wingspan to generate a motion in space.

15. Light cannot generate a motion of an object without a medium.
16. If you can use light to generate a momentum or a force on a spacecraft to drive it in space, it is a clear indication that there is a medium in space.
17. Light cannot generate a momentum in the absence of a medium.
18. When a beam of light passes through a homogenous medium, the medium is no longer homogenous.
19. A beam of light alters the medium density locally, and the change of the medium density in effect alters the path of the light beam. As a result, the change of the path of a light beam can be used to detect if a material medium is present or not in space.
20. Any entity with a momentum is relative.
21. Massless and Momentum-less waves cannot be relative.
22. Light is not relative.
23. Any entity that does not have a momentum cannot be a particle.
24. Light has no momentum and hence light cannot be a particle.
25. There are no photons or light particles.
26. Wave particle is an oxymoron.
27. Photon or wave-particle is a contagious disease in physics.
28. Absolute motion is the motion of an object relative to the propagation of light. Absolute motion is not reversible symmetric.
29. Relative motion is the motion of an object of mass relative to another object of mass. There is no relative motion without a mass. Massless cannot be relative. Propagating waves are not relative. Light does not propagate relative to objects.
30. Any entity that cannot be stopped cannot carry a momentum. Any entity that cannot carry a momentum cannot be relative.
31. Any entity that has no standstill existence cannot be stopped. Light has no standstill existence and hence light cannot be relative.
32. Relative motion of an object cannot generate physical changes to an object. Relative motion cannot change mass and dimensions of an object and time, impossible.
33. Relative motion is reversible symmetric. Reversible symmetric motion is observer dependent and it is not real. Reversible symmetric motion cannot bring physical changes to an object and time.
34. Only the absolute motion is real. Relative motion is not real. Absolute motion can move a mountain.
35. Relative motion cannot move a mountain. You cannot move a mountain by running away from it.
36. It is only the absolute motion of an object that can generate dimension contraction or volume contraction. Absolute motion cannot make any other physical changes to an object except dimension contraction.
37. Absolute motion generates a mass density dilation due to the volume contraction. Mass of an object is independent of its speed.
38. As the speed of absolute motion of an object reaches the speed of light, the mass density reaches infinity while mass remains the same, and the object turns itself into a black hole. Black holes are real. Mass of a black hole is not infinite. Mass of a black hole is always finite. It is only the mass density of a black hole that is infinite.
39. What prevents light coming out of a black hole is not the gravity. It is the high density of a black hole that prevents light coming out of a black hole due to total reflection.
40. Gravity and light are mutually independent. It is a medium that negotiate an interaction between the gravity and light.
41. In the absence of a medium, gravity has no effect on light and light has no effect on gravity.
42. No object of mass can exceed the speed of light.
43. Natural Relativity guarantee that relative motion of an object does not exceed the speed of light while maintaining the integrity of object and time.
44. Universal Relativity guarantees that the absolute motion of an object does not exceed the speed of light [2] while maintaining the time and mass unaltered.
45. If an object of mass has no motion relative to the speed of light, or in other words, if the absolute motion of an object is nil, then the object is stationary.
46. An inertial frame is always at stationary state for a passenger in/on an inertial frame even when the frame is moving at constant speed. However, passenger can experimentally determine if the inertial frame he/she is in/on is moving or not by using a burst of light since the propagation of light is not relative.
47. Newton's, Einstein's, and many others claim that no experiment can determine if an inertial frame is moving or stationary from within the frame is incorrect and it is a result of pre-Maxwell thinking stuck in time.
48. Newton's claim that it is not possible to determine if an inertial frame is moving or not from within the frame by motion mechanics of objects of mass or by throwing golf balls is correct. If one claims that it is experimentally not possible to determine if an inertial frame moving or not from within the frame by any mean, that is incorrect.
49. It is experimentally possible to determine if an inertial frame is moving or not from within the frame by using a burst of light since light is not

relative.

50. Light is not relative [3,4] and hence light has no momentum. Without a momentum, light cannot behave as particles. Propagation of light is directional and coherent. Any entity that is directional or coherent cannot come in quanta since there is no mechanism in nature to carry the direction information in a quantum. Hence, light cannot consist of particles or photons. There are no light particles or photons.
51. When the propagation of light is not relative, $e \neq mc^2$. Special Relativity is not a mechanism of nature since the relative speed cannot alter an object and time. When Special Relativity does not hold true, Einstein's (in)famous relationship is meaningless and invalid, $e \neq mc^2$.
52. Mass and electromagnetic energy are not equivalent. Energy comes in different flavors. It is only the kinetic energy and the potential energy that are associated with a mass. Kinetic energy and potential energy have no existence without an associated mass. However, electromagnetic energy has no association with a mass. Existence of electromagnetic energy does not require a mass. Mass and electromagnetic energy are not one and the same.
53. Since light has no momentum, $\lambda \neq h/p$, where λ is the wavelength, and p is the momentum of a particle. Momentum of a particle does not generate waves [8,9,12]. There are no particle waves or deBroglie waves. It is the absolute motion of CHARGE particles that generates electromagnetic waves. There is no relative motion without an absolute motion.
54. Since charge has no existence without a mass, the generation of electromagnetic waves by the motion of a charge has been falsely interpreted as a generation of waves by a moving particle, momentum. A moving mass, momentum, does not generate waves. It is the moving charge, chomentum, that generates electromagnetic waves [6].
55. Momentum is just a chauffeur that provides a motion to a charge particle. It is the motion of charge particles that does the job of generating waves.
56. Motion of electrically neutral particles does not generate waves.
57. There are no particle waves. There are no wave particles. Light is not relative and has no momentum. There is no wave-particle duality [7,8].
58. Relative distance does not depend on the time itself. Relative distance depends on the ratio distance/time, which is a constant for an object moving at constant speed, and it is independent of time itself.
59. Linear distance between two positions in space is independent of the positions.
60. In Special Relativity, time does not depend on the position itself. In Special Relativity, time depends on the ratio distance/time, which is a constant for an object moving at constant speed, and it is independent of position.
61. There is no spacetime.
62. Space and time are mutually independent. Time has no association with the space. Space has no association with time. There is no interdependence of space and time for objects moving at constant speed.
63. Time lapse is a definition. What we measure is time lapse t to travel from one position in space to another position in space at a chosen speed u. As a result, the time lapse only depends on the distance r travelled and the speed u of the chosen means of travel. If one travel from the origin to a certain position in space, the time lapse t incurred does not depend on the position itself. Linear distance between two positions in space is independent of the positions themselves. Time lapse t is independent of the initial position in space and the final position in space.
64. Time lapse t=r/u incurred in travelling distance r from the origin to the position **r** at a chosen speed u has no association with the specific position **r**=(x,y,z) itself in space, where $r=(x^2+y^2=z^2)^{1/2}$. Whether distance r is travelled at speed u from the origin to position **r** or distance r is travelled from the position $\mathbf{r}_1$ to position $\mathbf{r}_2$ at speed u, the time lapse will be the same. Time lapse has no association with a position in space.
65. Since the speed u chosen to travel distance r can be of any value, the time lapse t incurred for travelling r distance to position **r** is traveler dependent. Time lapse at position **r** is not unique.
66. Light is not relative and hence light has no momentum. Massless has no momentum. Gravity cannot have any effect on massless. Gravity cannot bend light. Bending of light near a gravitational object is a secondary effect of gravity. Gravity creates a density gradient in the medium surrounding the gravitational object. It is this density gradient of the medium surrounding a gravitational object that bends light. The use of bending of light near the sun to confirm General Relativity is simply an experimental mis-interpretation fallacy.
67. Light has no direct effect on the gravitational force. However, in the presence of a medium, the presence of light changes the density of the medium, which in turn affect the gravitational force between objects.
68. The interaction of light and gravity is always through a medium. There is no interaction between the light and gravity in the absence of a medium.
69. Gravity and light are mutually independent.
70. An experiment is as good as its interpretation. There are many experiments in physics that have been misinterpreted to support bogus claims,

especially in Quantum Mechanics, Special Relativity, and General Relativity. Without misinterpretation of experiments, there is no justification for Quantum Mechanics and Special/General Relativity.

71. There is no Quantum Tunneling [5].
72. Special Relativity and General Relativity are not mechanisms of nature since they expect relative motion to change an object and time, which is not possible. Relative motion cannot change an object and time. When Special Relativity and General Relativity are not mechanisms of nature, the Big-Bang and the expansion of universe have no existence.
73. Contrary to the claims made in Special Relativity, the mass and the dimensions of an object and time are frame independent. Relative motion cannot change the mass and dimensions of an object and time. All the claims and assumptions in Special Relativity are hypothetical and unnatural.
74. The Natural Relativity guarantee that relative speed of an object of mass does not exceed the speed of propagation of light using a single unique nonlinear equation without altering the physical characteristics of the object and time.
75. The Universal Relativity guarantee that the absolute speed of an object of mass does not exceed the speed of the propagation of light by contracting the volume of the object without altering the mass of an object and time [3,4].
76. Natural Relativity and the Universal Relativity provide the solution to the century old dilemma without any unnatural and unwarranted side effects that were inherent in the Special Relativity and the General Relativity.
77. Quantum Mechanics seizes to exist in the presence of Theory of Natural Relativity since light is not relative and has no momentum. Both LIGO (Laser Interferometric Gravitational-wave Observatory) and LHC (Large Hadron Collider) become meaningless in the presence of Natural Relativity.
78. Modern physics is founded upon the false premise that the light is relative and carries a momentum. Light is not relative. Light does not carry a momentum.
79. There is no choice but to discard the Modern Physics when we come to the realization that the light is not relative. You cannot fake it forever.
80. The naturally invalid bogus hypothetical claim that light is relative must be the biggest scientific blunder of the twentieth century. Sooner we come to grip with the reality is the better. That is the reality.
81. How long a theory has weathered the criticism or enjoyed the popularity, and the acceptance of the theory by a larger community are not indications that the theory is correct.

XIII. **RELIGIONS OF MODERN PROPHETS**

Special Relativity, General Relativity, and Quantum Mechanics are Crafted Prophesies (CRAP) by individuals and caried through by apostles, preachers, and dedicated believers under the disguise of science. There is no science behind them. If you want look and sound intelligent, or brainy, you must join the cult, start believing it, do not question it, and start preaching it. You do not have to prove anything, just say Einstein said this, Einstein said that … that is all to it. Interestingly, you get paid for doing it just like any other stone-age religious Crafted Prophesies (CRAP). Religions are still in mainstream since it is considered a heresy or blasphemous to question it. In religions, a total unconditional surrender of logical thinking is expected or else …; it is the law. We can witness it in places governed by meaningless archaic flat-earth and earth-centric era religious texts.

Special Relativity, General Relativity and Quantum Mechanics are still in the mainstream physics for the sole reason no body is dared to point out the fact that the emperor has no clothes; they fear losing their livelihood, earning a living, promotions, and membership of brainy bunch. You do not get paid for questioning, you get rewards for compliance, not for non-compliance. If you crunch numbers and find a way to support the ideology, you get promotions, and prizes. So, followers check in the commonsense at the door, surrender to the doctrine, close their mind and brains, build walls around their thinking, try to block any publication that goes contrary to the doctrine, go with the flow, feed the media in fancy news conferences to rally the unsuspecting public and politicians, find some way to justify what is in the religious text, publish some papers on journal dedicated to spreading the myth, and make supervisors happy. And in the end, you secure a job, a hefty research grant to continue spreading the myth even further, you may even get a medal, and the prize. So, everybody is in a race to find a way to fit observation to substantiate the widely accepted claims and justify the Crafted Prophesies (CRAP). This is no different from village idiot coming face to face with V. Mary who had a message for him/her while he/she was strolling in the wood. So, what will they do? They go and build a religious shrine there and money pours in year after year in pilgrimage; their coffer is full year after year.

This is twenty first century; it is time to leave the empty pride behind and wake up to the reality. Era of voodoo-science is over. There is no reality in voodoo-physics. Time to stop claiming a particle can be in multiple places at the same time; it is utter nonsense; you do not need a justification for that. It is hard to believe when they claimed that particle can be multiple places at the same time, why they did not become a laughingstock of the town. Time to stop claiming particles are waves and waves are particles. Particle is an entity with a mass. Waves are mass-less, that is the reality. Time to realize that a particle cannot be a wave. Time to stop claiming light carries a

momentum. Time to stop claiming light is relative. Time to stop claiming you can create mass by colliding particles. Time to stop claiming momentum generates waves (try and see yourself if you can generate waves by moving electrically neutral particles of mass, you cannot). Time to realize that electromagnetic energy is not the same as the kinetic energy and $e \neq mc^2$. Time to realize mass and electromagnetic energy are not the same. Time to stop claiming time is relative. Time is a moment, not a dimension. Time to stop claiming the length is relative. Time to realize that if time dilates and length contracts, Newton is not going to be comfortable with it because motion dynamics will not be frame independent. Time to stop claiming mass dilates with the speed. Time to realize that you cannot generate more mass by moving a mass. Time to realize that you cannot generate mass by colliding particles. Time to stop claiming gravity bends light. Time to stop claiming light affect gravity. Time to stop claiming time affects space and space affect time. Time to realize space and time are mutually independent. Time to realize that the phrase “spacetime fabric” is meaningless and bogus. Time to stop claiming universe is expanding. Time to stop calculating the age of the universe as the inverse of Hubble constant. Time to realize that the age of the universe is not a constant. Time to stop claiming that the out of band noise on a TV is remnant from big bang (Big Nonsense). Time to realize that black holes do not have infinite mass. Time to realize black holes are of infinite mass density with finite mass. Time to realize even a grain of rice can become a black hole if it reaches the speed of light. Time to stop claiming Global Positioning System (GPS) is not possible without Special Relativity; Special Relativity has nothing to do with GPS. If Special Relativity hold true, GPS is not possible [9,12]. Time to realize that the Large Hadron Collider (LHC) is a billion-dollar blunder hidden in the swiss alps. Time to realize gravity cannot be waves since the effect of gravity must be free of any time delay. Time to realize what we observe in the Laser Interferometric Gravitational-wave Observatory (LIGO) are fantasy waves, not gravitational waves. Time to stop saying anything that is not happening here is happening in a parallel universe. Time to discard mythical big-bang, inflation, bubble universes, twin paradoxes, multiple worlds, and parallel universes. Time to wake up and realize that a cat cannot be both dead and alive; alive and dead are monopoles; atomic spin is bipolar. Time to realize Stern-Gerlach device is neither a spin setting device nor a spin measuring device [6]. Time to realize the split of a beam of atoms by Stern-Gerlach device has nothing to with probability. Time to realize there is no quantum tunneling [5]. It is high time to realize that there is no option but to discard Modern Physics and start on a clean slate.

It is also time to realize that if the universe is a creation of a creator, that creator has done a bad job since he/she/it has wasted so much resource in creating too many useless planets. If the universe is a creation, the fact that the creator had not paid any attention to the living is very clear from the fact that it is only a small fraction of a very small planet that is suitable for living out of all the planets and galaxies there are. In addition, how can a creator be so cruel to create species in a wave one has to eat the other for existence? Such a creator deserves condemnation, not the appreciation or praise. Why does a creator require our prayers anyway? Prayer in one language is useless gibberish to somebody who does not understand that language. Without understanding of the language, you do not know if they are praising you or condemning you in the prayer. What makes you think a creator would understand your language even when most of the people on earth even cannot understand it? Language is a mechanism to communicate within a community. If you try to communicate in a language of some other community, or in a foreign language, it is always prone to misunderstanding. If there is a creator, I am certain he/she/it does not have to learn your language because it is a one-way communication, you will never hear from the guy/gal except in a dream or in hallucination under starvation, in this case in your own dialect.

Time to stop claiming you can generate mass by colliding particles because you cannot generate mass by colliding particles [9]. Time to stop claiming universe is expanding and gravity bending light, and so on …, because these claims are simply ridiculous; that is a perfect proof for ridiculous claims; no more proof is required. You do not need a proof to realize what is in a stone-age, flat-earth or earth-centric era religious-texts are utter non-sense; the same go with the Special Relativity and Quantum Mechanics. The non-sensical claims that the time is relative, mass is relative, particles can be infinitely many places simultaneously are sufficient to discard those religious Crafted Prophesies (CRAP).

For more than a century, observations have been mis-misinterpreted or warped to suit the claims in Special Relativity, General Relativity, and Quantum Mechanics. You can always use the observations to justify whatever you want by shutting down or not revealing other reasons for observed phenomenon. Diffraction of light has been used to justify Special Relativity and General Relativity. Since Special Relativity is based on the claim that light has a momentum, the diffraction of light near the sun is a perfect observation to support the claim that light has a momentum. But there is one problem. The problem is that the diffraction of light near a gravitational object has nothing to do with light having a momentum; light does not have a momentum. If you ask a Relativity priests why light has a momentum, their answer would be, because our prophet Einstein said so. They are right, there is no possible other reason. No waves can have a momentum because waves have no standstill

existence. Momentum without a mass is not possible. Massless entities cannot have a momentum. Gravity has no effect on massless. They forgo the real reason for the diffraction of light near a gravitational object, which is the effect of gravity on the medium surrounding a gravitational object just like atmosphere around earth. There will be no diffraction of light without a medium near a gravitational object. Similarly, light will have no effect on a gravitational force between objects in the absence of a medium. It is medium that mediates an interaction between light and gravity. Gravity and light have no mutual interaction in the absence of a medium. Gravity and light are mutually independent.

You cannot reveal the fundamental particles of nature by colliding charge particles since it is not possible to remove the extraneous electromagnetic burst generated due to the stopping of the fast-moving charges in the collision [9]. You cannot generate mass by colliding particles. When you collide charge particles, they generate electromagnetic wave burst in the collision. It is the misinterpretation of these extraneous electromagnetic waves as mass that has given the false impression of generating a mass [8,9]. Try colliding neutral and stable particles, you will not see any mass increase. What you get by colliding neutral particles is the sole outcome of splitting the particles and there will be no mass increase since there are no extraneous electromagnetic bursts to misinterpret as mass. Any electromagnetic wave bursts generated from the collision of neutral particles are the result of splitting the particles. Only problem is you cannot accelerate neutral particles using a particle accelerator. Particle accelerators are useless for colliding neutral particles. So, the hidden truth cannot be revealed if they keep colliding charge particles. Particle accelerators are useless for exposing the fundamental particles of nature. Only way to collide neutral particles is to throw them as hard as you can on each other.

Large Hadron Collider (LHC) is simply a billion-dollar blunder hidden in Swiss Alps. All particle colliders are money wasting blunders since it is not possible to reveal the fundamental particles of nature by colliding charge particles. You can reveal fundamental particles of nature by colliding neutral and stable particles, but particle colliders are useless for neutral particles. Followers adhere to false claims in Special Relativity, General Relativity, and Quantum Mechanics just like followers adhere to whatever that is there in religious texts. Isn't it obvious that it is not possible to find the truth in flat-earth and earth-centric era religious texts? Isn't it obvious we cannot understand the working of nature if we repeat the verses from the holy scripture, the religious text, Special Relativity and Quantum Mechanics? Let us see how all this started.

XIV. SPECIAL RELATIVITY IN A GRAIN OF SALT

For Galileo and Newton, every motion is a relative motion. If you are on an inertial frame, in your perspective, the frame is always stationary even when in fact it is moving. For us, from our perspective, earth is stationary. Based on the information available in the 16^{th} and 17^{th} centuries, Newton claimed that it is not possible for somebody on an inertial frame to determine if the frame is moving or stationary using motion mechanics. Newton's claim is indeed right at the time since for Newton the motion mechanics is the mechanics that govern the motion of objects of mass. It is not possible to determine if an inertial frame is moving or stationary by throwing objects of mass or golf balls, but it is not the only option for determining if an inertial frame is moving or not from within a frame.

Newton believed that it is not possible for a passenger in an enclosed cabin on a train moving at a constant speed to determine if he/she is moving or stationary by using an object of mass since every object on the train including train itself is in the same state. This newton's claim has been ingrained in physics as a fact even though the claim was grounded in mechanics of objects of mass. Even with the availability of new understanding, nobody was dared to question the Newton's claims. Everybody went to a greater length to mold any new understanding that appears with time to fit the Newton's claims. Nobody question if Newton's claim holds true for propagation? The fact is that the Newton's claim only holds true for the motion of object of mass and there are other movements that does not consists of a mass. For the propagation of a massless entity, the momentum will be zero. Newton's dynamics do not apply to propagation of waves. Propagation of light does not come under Newton's mechanics of motion unless we hypothetically force light to carry an artificial momentum even though there cannot be a momentum without a mass. The forcing of light to carry a momentum also undermine the fact that the propagation is a result of a movement orthogonal to the direction of propagation. Unlike a mass in motion, waves propagate due to a movement orthogonal to the direction of propagation. Mechanics of motion does not apply to electromagnetic wave propagation.

When Maxwell formulated propagation of light or electromagnetic waves, it became clear that the propagation of light is a constant that depends only on the medium or the lack of the medium. So, light must travel at constant speed in every frame irrespective of the speed of the frame. If observers on different frames measures the speed of light, they all must get the same result if the medium is the same in every frame.

If the propagation of light depends only on the medium, propagation of light must be independent of motion of any frame or object irrespective of whether it is an inertial frame or an accelerating frame. Propagation of light must be independent of any motion of an object or a frame. Although that was the new insight came from the Maxwell's equations, no body dared to question the long-held Newton's claim

that experimental determination of whether an inertial frame is moving or not from within the frame is not possible. So, instead of using the new knowledge came with the Maxwell's finding as it is to carve a new path, everybody tried to shape or warp the Maxell's finding to fit the several centuries old Newton's claims; that is exactly what Einstein did.

For Newton, every motion is relative. For the motion of any entity to be relative, all it must have is a momentum. In addition, for Newton, no experiment can determine the state of an inertial frame from within an inertial frame, and hence if every moving entity has a momentum, that is satisfied too. So, fitting the propagation of light into Newton's claims is easy since all you had to do was to force a hypothetical momentum on light.

They let forgo of the fact that there cannot be a momentum without a mass, and as a result hypothetical concept of massless momentum was born, which is indeed unreal. Einstein did exactly that, he forced an artificial and hypothetical momentum on light. In addition, for an entity to have a momentum, it must be a particle. So, Einstein indirectly made light to be particles simply by forcing a momentum on light by proclamation. Any entity that has a momentum by default is a particle. And with that the light particles or so-called photons were born. To hold onto Newton's claims, they had to force nature to behave in a way that Newton's claims hold true; the consequences of those forcing were in fact quite unnatural.

With the forcing of a momentum on light, massless light becomes relative, and massless light is expected to propagate relative to any frame at constant speed, and with that Special Relativity was born. Forcing of an artificial momentum on light is the genesis of massless momentum carrying particles or photons, an artificial anomaly of nature, a contradiction at highest level since massless particles or massless momenta are impossible.

If light is relative, Maxwell's equations must have the same structure in every frame and hence a frame-to-frame transformation must be linear. So, nobody ever thought of even a possibility of having a non-linear frame-to-frame transformation, because nonlinear transformation is not going to agree with the Maxwell's equations for propagation of light. However, linear transformation comes at a heavy unnatural price. Linear transformation requires time to be relative. There is no way around that. With that relative time was born. Lorentz used linear transformation to transform Maxwell's equations onto a moving frame with partial success using a constant transformation factor. Einstein made it a successful transformation that retain the structure of the Maxwell's equations using a transformation factor that is dependent on the square of the relative speed of the moving frame.

In Special Relativity every motion is relative just as Newton envisioned. In Special Relativity, no experiment can determine if an inertial frame is moving or not from within the frame, just as Newton envisioned. Special Relativity is designed to adhere to old claims by shaping the new knowledge instead of discarding the old and adapting the new as they are. Special Relativity was born at a cost. The forcing of light to carry a momentum just to make the propagation of light to be relative in Special Relativity led to many unexpected and unnatural consequences.

To fit the Maxwell's equations with any moving frame, Special Relativity had to limit to linear frame-to-frame transforms. It required to let the time vary with the frame of reference, which is incomprehensible. In Special Relativity time depends on the relative speed and hence time is now observer dependent. In Special Relativity, observers in different frames sees time differently. Irrespective of what is claimed in Special Relativity, time cannot be relative. Time is a definition. Time is a moment, not a dimension.

The fact is that the time is same everywhere in the universe. What we call time is in fact time lapse. It is the time lapse we measure on a clock, not the time. There is no time lapse until somebody come along and define it. What is there is motion in space. We use the relative motion to define the time. Relative motion dynamics are observer independent. As a result, time lapse measured by relative motion must also be observer independent. Time lapse cannot be relative.

In Special Relativity, time is interdependent with the position leading to so-called spacetime. The problem is that we do not measure time. We measure a time lapse t for a chosen speed u. In a coordinate system, time it takes to travel r distance at a certain speed u from the origin to a position $\mathbf{r}$ in space is a time lapse t. Time lapse t does not depend on the position $\mathbf{r}$. Time lapse t only depends on the distance r and the speed u chosen to travel the distance r. Whether you travel r distance at speed u from point $\mathbf{r}_1$ to the point $\mathbf{r}_2$ or travel the same r distance at the same speed u from the origin to point $\mathbf{r}$, the time lapse t is the same and t does not depend on the positions $\mathbf{r}_1$, $\mathbf{r}_2$, $\mathbf{r}$ or the origin of the coordinate system, where $\mathbf{r}=(x,y,z)$, $\mathbf{r}_i=(x_i,y_i,z_i)$, i=1,2.

The linear distance r between two positions in space is independent of the positions. Time lapse t depends on the ratio r/u, and both r and u are independent of positions in space. As a result, time lapse t has no attachment to any position in space. Any position in space has no attachment to the time lapse t taken to travel r distance at a chosen speed u. Space has no connection to time lapse t. Space and time are independent. There is space. An observer determines a coordinate system. We determine time lapse t based on the distance r travelled in a coordinate system and the speed u used to travel the distance.

If we travel the distance on foot, time it takes to travel the distance r will be more than the time it takes to travel the same distance by an airplane. Since the speed u can be any value, the time lapse t to travel

the distance r to a position **r** from the origin can have infinitely many values. Time lapse t to travel to a point **r** from the origin at speed u is not unique since u can have infinitely many values. In addition, there can be infinitely many positions **r** with the same distance r and as a result, time lapse t is not unique. There is more than one reasons for time lapse t at position **r** to be non-unique.

The so-called square of the spacetime interval or square of the proper time, τ^2 is simply the square time lapse t taken to travel distance r to a point **r** from the origin at a chosen speed u, where t=r/u, OVER the square time lapse r/c it takes for light to propagate the same distance r at the speed of light c, which is given by $\tau^2=t^2-r^2/c^2 >0$. Since the time lapse t depends on the speed u chosen to travel the distance r, and u can be of any value, u<c, the spacetime interval or proper time τ is not unique. As a result, observers in different frames have no agreement on spacetime interval τ, and hence spacetime interval τ is not invariant.

To have an agreement over the spacetime interval τ, observers in different frames must have an agreement over the speed u taken to travel the distance r, which is not possible. Further there are infinitely many positions **r** with the same distance r from the origin. As a result, there are infinitely many positions **r** with the same time lapse t for a speed u chosen to travel the distance r. Time lapse t is not unique to a position **r**. Position **r** is not unique to a time lapse t. It does not matter how hard you try to stick a time lapse t onto a position **r** in space, it is not going to stick. No two observers on the same frame can agree on τ. A person going the distance r on a horse-back is not going to agree with a person taking a bullet train to travel the same distance r. So, τ is invariant only if there is an agreement by different observers on the same frame on the speed of transportation to travel the distance r.

In addition, the frame-to-frame transformation factor β used in the linear transformation is not unique. You can use transformation factor β^n with any value n in the linear frame-to-frame transformation and still retain the structure of the Maxwell's equations for propagation of light. As a result, the linear transformation is not unique. Observers on different frames are not in agreement over the transform since n can have infinite number of values. In addition, the square spacetime interval τ^2 is only invariant when n=1 in the transform factor β^n. As a result, observers on different frames have no agreement over the spacetime interval τ since they have no agreement on n in the transform factor β^n.

Newtonian dynamics of motion is independent of the frame of reference; $mdx^2/dt^2=-dV(x)/dx$, where V(x) is potential, is the same for all the inertial frames. In Special relativity time must be allowed to vary with the frame of reference since it is a requirement for a linear transform required by Maxwell's equations if light to be forced to be relative. However, for motion dynamics to be independent of the frame of reference, dx^2/dt^2 must also be the same for all reference frames. For that to happen, d^2x/dt^2 on frame F(x,y,z) must be equal to d^2x'/dt'^2 on frame F′(x′,y′,z′) and hence if time t is contracted by a factor α, t'=αt on the moving frame F′(x′,y′,z′), then the distance x must also be contracted by the same factor α, x′=αx on the moving frame F′(x′,y′,z′). If time is dilated by factor α, then the length must also be dilated by the same factor α. Since what is there in Special Relativity is a length contraction, the time must also contract. What should be there in Special Relativity is a time contraction, not a dilation. If there is a time dilation in Special Relativity, the length must also dilate for motion dynamics to be frame independent. You cannot have time dilation and length contraction or time contraction and length dilation since that makes the motion dynamics dependent of the frame of reference.

When both time t and distance x contracts by the same factor α, the contraction factor cancels out and $d^2x/dt^2=d^2x'/dt'^2$. As a result, Special Relativity maintains the frame independence of motion dynamics by the contraction of both time and the distance by the same factor α on the moving frame F′(x′,y′,z′), where $\alpha=(1-v^2/c^2)^{1/2}$, v is the speed of the frame F′(x′,y′,z′) relative to the frame F(x,y,z). Newton may at least smile even though he would be quite uneasy about varying time and length. Newton may think we are nuts to allow time and mass to vary with relative speed, not to mention how objectionable Newton would be about mass dilation. Special Relativity has now imposed a momentum on light and forced both time and length to contract by the same factor on an inertial frame that is in relative motion just to comply with the Newtonian dynamics.

Imposing of a momentum on light in Special Relativity forced the propagation of light to be relative and hence made the speed of light relative to any inertial frame to be the same. The allowing of both time and length to contract by the same factor made the relative motion dynamics of Special Relativity to be independent of the frame of reference in compliance with the Newtonian physics.

In Special Relativity, to guarantee that the relative speed of an object does not exceed the speed of light, and to guarantee that the motion dynamics of any object is frame independent, it also had to let the mass to dilate with the relative motion of the frame in addition to the contraction of both time and length. In Special Relativity, if time and length contract by a factor α, then the mass of the object go onto dilation by the reciprocal of the same factor 1/α, m′=m/α. That is unnatural. Mass cannot increase with relative speed that is reversible symmetric. Relative motion cannot generate mass. Relative motion is observer dependent. Mass of an object cannot change from observer to observer. Mass is not an observer perception. Not even the absolute speed of an object can change mass. Mass and speed are mutually independent. There is a big problem associated with the dilation of mass and the contraction of time and

length in Special Relativity because relativity is observer dependent. Observer perception cannot generate physical changes.

Relative speed is not real. Relative speed is reversible symmetric. If frame F′(x′,y′,z′) is moving at speed v relative to frame F(x,y,z), then, frame F(x,y,z) is also moving at speed -v relative to the frame F′(x′,y′,z′). If time and length contract and mass dilates on frame F′(x′,y′,z′) due to its motion at speed v relative to the frame F(x,y,z), then the time and length must contracts and mass should dilates on frame F(x,y,z) due to the relative motion at speed -v relative to the frame F′(x′,y′,z′). This cannot happen in nature except in human psychic.

The change of time, length, and mass of an object due to the relative motion in Special Relativity is not real. Relative speed cannot make physical changes to an object and time. Relative speed cannot generate real physical changes to an object. Relative speed cannot change mass and length of an object and time. Time cannot change with the motion of an object. It is we who define the time using the relative motion of objects. Since the relative motion dynamics are frame independent, time must be frame independent.

Speed that is reversible symmetric cannot bring physical changes to an object and time. No motion can change the mass and time of an object. It is only the absolute motion of an object that can change the dimensions of an object. Absolute motion generates a mass density dilation with the speed while the mass of an object and time remain unchanged.

If frame F(x,y,z) is stationary and the frame F′(x′,y′,z′) is moving at speed v, the reality is frame F′(x′,y′,z′) is moving at speed v relative to F(x,y,z). Perception of motion of Frame F(x,y,z) relative to frame F′(x′,y′,z′) at speed -v by an observer on frame F′(x′,y′,z′) is not the reality. The motion that is unreal cannot make physical changes to an object. Relative motion cannot change the physical characteristics of an object, only an absolute motion of an object can. Even absolute motion cannot change the time and mass. Absolute motion can only contract the dimension of an object for real. Absolute motion does not exist in Newtonian dynamics or in Special Relativity. So, if the motion is relative, it is reversible symmetric. There cannot be any physical change of an object under relative motion, which is reversible symmetric.

Most talk about concept in Special Relativity is the so-called twin-paradox. The concept of twin-paradox is so silly, even just talking about it not only makes one appears silly but also it is simply a waste of time. How has physics gotten to a such a demeaning low level? It suffices to say again that relative motion cannot change the physical characteristic of objects and time. One of the twins on earth ages at the same rate as the other twin on a spaceship. Time is defined based on motion dynamics that are independent of the frame of reference. Time is reference frame independent. Time is independent of speed of an object. Time on an object is independent of any motion of an object irrespective of whether the motion is inertial, accelerating, absolute, or relative [3,4].

A clock is an engineered device. The reading on a clock depends on the environment the clock is in since the mechanism of the clock is affected by the environment the clock is in. It is not the time itself that is affected by the speed of an inertial frame the clock is on, it is the mechanism of the clock that is affected by the speed of the frame the clock is on. Do not use clocks to claim time is affected by the motion, it is meaningless and simply preposterous. It exposes the blindness and the foolishness of the experimenter, nothing more. It is as silly as the use of Double-Slit Experiment with a beam of charge particles to justify so-called non-existent mater waves, a Double-Slit Blunder [7]. There are no matter waves as such. Do not even think of dragging the Global Positioning System (GPS) into Special Relativity. GPS has nothing to do with time dilation or contraction, whatever you call it, in Special Relativity. If you are claiming GPS is there because of Special Relativity, you have no slightest idea of what GPS is; you are just chanting a verse from a religious text of Special Relativity as told by high priests of Special Relativity.

Time is not relative. It is the mechanism of a clock that is relative, not the time itself. Some clock mechanisms are less sensitive to the environment than the others. If you take two clocks of different mechanisms on an airplane around the world, you will see a different amount of time change in each clock. If the people who took a clock on an airplane had taken two clocks of different mechanisms, they might have realized the foolishness of their claim. Take a water clock and an electronics clock on an airplane and see if you get the same time difference on both clocks. Clock is an engineered device. Any engineered device comes with a manual that indicates the environmental conditions it supposed to function at an acceptable level of accuracy. Read the manual. Time is not relative. Do not waste time and money taking a clock around the world to prove time is relative because it is simply foolish. Do not believe blindly what you have been taught in universities or what is there in textbooks; they are just for getting a useless degree.

Since many of us learn things from textbooks, we consider what is in textbooks to be correct and rarely question them, but that attitude must change. Do not repeat something in textbooks like a chanting of a meaningless religious text by priests or blind followers in a trance. Not everything in textbooks is going to be correct. Unlike religious texts stuck in dark ages, flat-earth era or earth centric era, textbooks must evolve, discard ill-logical and adapt logical, of course that is only after you got the degree. Relative time, relative mass, and relative dimensions of an object are ill-logical since reversible symmetric relative motion cannot change objects and time.

There cannot be relative motions without absolute motions of frames or objects. Absolute motion is real.

Absolute motion is not an observer perception. Absolute motion is the motion of an object relative to the propagation of light. Any observer on a frame or object can determine if the frame or the object, that the observer is on, is moving or not using the forward and backward time differences for light to travel between two positions on the frame or object as we have seen in a previous section.

Nature must have a mechanism to make sure no object can exceed the speed of light irrespective of whether the object is on absolute motion or on relative motion. It is only the absolute motion that can change the dimension of an object, Even the absolute motion cannot change the time and mass of an object. Relative motion cannot make any change in time or make any physical changes to an object that is under relative motion. Special Relativity is unnatural since it allows time, mass, and the length along the direction of motion to change under relative motion leaving any observer claim in limbo since neither observer's claim is real. Special Relativity is not science, it is nonsense.

Both Newtonian motion dynamics and Special relativity only deal with the relative motion. Special Relativity has no mechanism to prevent the absolute speed of a single object or frame from exceeding the speed of light. Absolute speed of any single object must also be limited by the speed of light.

Absolute motion changes the dimension of an object under absolute motion. Absolute motion contracts the volume of an object. As a result, the mass density of an object increases with the absolute motion. When the speed of the absolute motion reaches the speed of light, the volume of the object approaches zero, and hence the mass density reaches infinity, but the mass of the object remains the same. In other words, when the speed of the absolute motion of an object reaches the speed of light, the object turns into a black hole. Black holes do not have infinite mass, they have infinite mass density. Mass of a black hole is finite.

Motion dynamics under absolute motion is no longer frame independent at speeds not negligible compared to the speed of light. Motion dynamics are frame independent under absolute motion only for the speeds that are negligibly small compared to the speed of light. As the absolute speed of a frame or object becomes comparable to the speed of light, motion dynamics becomes frame dependent. This is expected since the motion dynamics of a black hole is not expected to be the same as the motion dynamics of a frame that is in absolute motion at negligibly smaller speeds compared to the speed of light. When the absolute speed of an object of mass reaches the speed of the propagation of light, the mass density of the object reaches the infinity due to volume contraction turning itself into a blackhole; motion dynamics is no longer applicable when the object turns itself into a singularity such as a black hole.

Black holes are the objects with infinite mass density with finite mass. Claim in Special Relativity that the mass of an object reaches infinity when the object reaches the propagation speed of light is what is fundamentally wrong with Special Relativity. You cannot generate an infinite mass. That is common sense. The reason no light can come out of a black hole has nothing to do with gravity, it has all to do with mass density. When the medium density is high as it is the case with a black hole, the light undergoes total reflection, and that is the reason why no light can come out from a black hole. Gravity has no direct effect on light. Light has no direct effect on gravity. Gravity and light are mutually independent.

Neither absolute motion nor relative motion can increase a mass of an object. Motion cannot generate mass; it is as simple as that. Claim that black holes contain an infinite mass is false. In fact, the claim that a black hole contains an infinite mass is self-contradictory in Special Relativity, since in Special Relativity the mass and energy are assumed to be the same, and hence if the mass of a black hole is infinite, the energy associated with it becomes infinite, which is not possible since energy must be finite. If a mass of a black hole is infinite, what about when there are several black holes? A mass of an object cannot be infinite; that is common sense.

No motion can change the mass of an object. It is only the absolute motion of an object that can change the mass density, not the mass. Newtonian motion dynamics as well as the Special Relativity and the General Relativity failed to address the aspect of absolute speed of an object. Both Special Relativity and General Relativity are theoretical blunders of highest disaster level that have wasted so much time and resources of so many with incomprehensible adverse effect that is continuing due to religious following just like many other meaningless ancient religions stuck in meaningless ancient texts based on Crafted Prophesies (CRAP) of few individuals. Students should be given their tuition fees back with interest in addition to the compensation for the youth wasted on these Crafted Prophesies (CRAP).

Lemma: Motion Dynamics

Motion dynamics are independent of the relative motion of an inertial frame. Relative motion cannot alter an object and time. Absolute motion contracts the volume of an object. Neither relative motion nor absolute motion can alter the time and the mass of an object.

Lemma: Absolute Time

Time is a definition based on the relative motion of objects. Since relative motion dynamics are frame independent, the time must be frame independent.

Time Challenge:

Anybody who is foolish enough to take a clock on an airplane around the world to demonstrate time is relative and confirm Special Relativity, here is a

challenge:

Instead of one clock, take two clocks, one water clock and any other clock. Take them on an airplane around the globe and see if you get the same time difference. If it is the time that is affected by the frame of reference, the mechanism of the clocks should not matter, you would expect them to have the same reading. You will not be surprised to see that the readings on both clocks are not the same. From what you observe from this time challenge, you will realize in firsthand how foolish the Special Relativity is.

Lemma:

It is not the time that is relative, it is the mechanism of a clock that is relative. To claim time is relative is simply preposterous.

XV. SOME OBVIOUS EXPERIMENTAL BLUNDERS IN PHYSICS

There are many experimental blunders. Many of us learn from textbooks in schools to pass exams and get Degrees that decorate walls, mines are not on walls. If you want to pass an exam, the requirement is simple, you must agree with the professor; that is the implicit law in schools and universities. If you question, you are considered to be a troublemaker, you may even be given a failing grade. All you need to be kicked out from graduate studies is a single bad grade for a course. If you are a graduate student, you are at the mercy of your supervisors. There are plenty of horror stories in graduate schools. Being a teaching assistant is the worst job one can ever have. So, you suppress your inquisitive mind and go with the flow. Ye sir, yes sir. You are right sir.

It is natural for us to consider what we learn in school and textbooks as facts or the truth. As a result, we may be reluctant to even think of some of what we paid to learn in schools and find in textbooks as blunders even when they, in fact, are. Especially, if you are teaching them to earn a living; you have no option but to teach what you are hired for or else you will be fired. However, it is not that big a surprise if we find some of the theories and experimental justifications we learn in schools and found in textbooks are blunders of epic proportion since uncovering the natural processes is an adaptive process.

Unlike an ancient, meaningless religious texts considered to be carved on stone, which is not open to either questioning or for change and stuck in stone age thinking and designed to perpetuate ancient ignorance rather than a discovery, science text is a work in progress with the motto “discard what is not fitting and adapt the correct alternative at any level”; of course, this is in an ideal world and we are not in an ideal world. Beware, you can only adapt this motto when you are not a student and not working for others. Not many have the freedom to express what is proven to be right when it goes against the religious doctrine of the herd. So, we should not be hesitant to reveal blunders when we find them and when we are free to do so without being penalized. If you are at the exit door, you have nothing to worry about, you do not have to warry about acceptance, feedback, promotions, job security, prizes, or anything else. If you can prove something is right, you can say it, as long as you skip those useless mainstream dinosaur journals run by priests under the disguise of science that are there perpetuate ignorance just like religious journals that perpetuate stone age prophetic ignorance.

So-called academic journals that take more than a year to review a paper cannot be run by people with any conscience or understanding of science, or even by humans, they must be run by aliens. It is simply preposterous authors must wait for more than a year to hear from about his/her paper. By the time authors hear from reviewers and editors, authors are no longer working on that subject and they are even out of touch with the work to make any changes. These reviewers and editors must be aliens, otherwise they should have had mental capacity to grasp the reality. In one case, one reviewer took more than a year to inform that reference list is not broad enough, and that was the only comment. Editor’s response was to resubmit with full rebuttal; this editor must be senile. It shows that the editors do not even read the review. That is the sorry state of so-called academic journals. Any journal that charges exorbitant amount of money just to stick a file in a server hidden in some bunker cannot be there for dissemination of knowledge.

Any journal that takes more than few weeks for review is a barrier to progress. Those mainstream religious journals are barriers to progress; they are there to keep the blunders hidden, unexposed so they can continue perpetuating the myth. Without those mainstream religious journals, Special Relativity and Quantum Mechanics would have been history at the very start. Special Relativity and Quantum Mechanics are theoretical blunders. There are many experimental interpretation blunders that have been used to justify theoretical blunders. Some of them are billion-dollar blunders. Here some of them.

1. Double-Slit Experiment

The use of Double-Slit Experiment with a beam of charge particles to justify hypothetical particle waves simply incomprehensible. If you use a beam of neutral and stable particles, you will not get any outcome in this experiment. It is only the charge particles that produce an outcome [7,8]. It is the stopping of charge particles at the double-slit barrier that generates electromagnetic waves that pass through the slits to generate interference pattern. Since phosphor screen behind the double-slit barrier in the experiment is sensitive to the strength of the electromagnetic field, interference pattern appears as a pattern of spots corresponding to the peaks of the wave. Those spots are not particles colliding the screen. There are no particles behind the double-slit barrier. This is an

experiment that is used very often to justify hypothetical quantum mechanics. It is an experimental blunder.

Particles are not Waves. Particles move, they cannot propagate. Since particles cannot propagate, there is nothing waving in particles irrespective of their size. Waves are not Particles. Waves do not move, they propagate. Waves cannot be particles since they have no existence without propagation. Particles have standstill existence. Waves do not have standstill existence. A particle, an entity that has a standstill existence, contains a mass. A wave has neither a mass nor a momentum. Any entity that has no standstill existence cannot have a momentum. If it has a momentum, you can stop it. You cannot stop light. You cannot force a momentum on light waves since light has no standstill existence. Wave-particle duality is a theoretical blunder supported by Double-Slit blunder [7].

2. Stern-Gerlach Experiment

In this experiment a beam of atoms is passed through a nonlinear magnetic field and the split of the beam into two beams of opposite magnetic orientation is considered as probabilistic and used to claim that the spin is quantized. This experiment has nothing to do with probability or any spin quantization. Spin is a vector; vectors cannot come in quanta. Split of a beam of atoms in this experiment is due to magnetic coupling of the atoms since an atom contains a spin magnetic field [6]. Since any two neighboring atoms are of opposite magnetic orientation, beam is split into two beams of opposite orientations by a nonlinear magnetic field. The split of a beam of atoms has nothing to do with probability or spin quantization. The use of Stern-Gerlach experiment to claim that the spin is quantized, and that the split of the beam is probabilistic is an experimental blunder [6]. Spin is not quantized. Probability is a human information extraction process, not a process of nature. Vectors cannot be quantized.

The claim that an external magnetic field cannot exert a torque on a neutral atom is false. Although atom is neutral, the spin of the atom generates a spin magnetic moment since the constituent particles of the atom are charged. Spin Magnetic Moment of an atom is a result of the spin of the nucleus of an atom. A torque is exerted by an external magnetic field on a neutral atom due to this spin magnetic moment. It is this experimental blunder that is used to justify theoretical blunder of quantum 1/2, turning physics into voodoo physics [6].

3. Arthur Ellington's Interpretation of the Deflection Measurement of Light Near the Sun

Deflection of light near the sun has been used to claim that the gravity bends light and in turn to justify the General Relativity. The deflection of light near the sun is not a direct effect of gravity affecting light. Gravitational object generates a density gradient of the medium surrounding a gravitational object, and it is this density gradient of the medium that bends light. Gravity has no direct effect on light. In the absence of a medium, there will be no diffraction of light near a gravitational object.

The use of the diffraction of light to justify the General Relativity is an experimental blunder. Gravity cannot bend light. Gravity has no effect on massless. Massless has no influence on gravitational force. Light has no effect on gravitational force in the absence of a medium. It is the medium that negotiate an interaction between the gravity and light.

Light has no effect on gravitational force and gravitational force has no effect on the propagation of light in the absence of a medium. Gravity and light are mutually independent. If light carries a momentum, speed of light cannot be a constant. Any entity that has no standstill existence cannot carry a momentum. Light has no momentum. Arthur Ellington's misinterpretation of the diffraction of light near the sun to blindly justify General Relativity is an experimental blunder [9]. Space and time are mutually independent. There is no dark-matter or dark-energy [12].

4. Hubble's Galactic Redshift Measurement

When Hubble found redshift in the light from distance galaxies, it has been used to claim that the universe is expanding, which ties with the General Relativity. Galactic redshift is due to the electromagnetic energy loss of light. When light propagates long distances, light is subjected to electromagnetic energy loss that result in a frequency shift. Frequency shift of light from distance galaxies is not an indication of a radial motion of galaxies. The CHANGE of RED SHIFT is an indication of a shift of galaxies radially. Radial shift of an orbiting object in any orbiting system is a result of increasing mass of the orbiting object, and it is not a result of universe expansion. If the age of the universe is obtained as the reciprocal of the Hubble constant, the age of the universe would be a constant. How can the age be a constant? The use of Galactic redshift to support the false theoretical claim of a universe expansion and a hypothetical big bang is an interpretational blunder [3,9].

5. Use of GPS to Justify Time Dilation

The Global Positioning System has been used to support a false hypothetical claim of a time dilation. What is there in Special Relativity is time contraction, not a dilation. If time dilates and length contracts in Special Relativity, motion dynamics will not be frame independent in Special Relativity. Either both length and time must contract, or both time and length must dilate for the orbit dynamics to be frame independent. Or both time and length must remain unchanged as they really should be, which is not possible in Special Relativity.

The reason for the estimation of time by the GPS has nothing to do with Special Relativity. GPS

estimates time for the purpose of making the system client independent. Design of any multi-client electronic system for public use should be client independent. If time is relative as it is falsely claimed in Special Relativity, GPS is not possible. The client independence of GPS allows to provide a uniform service and system upgrades easy.

How can any entity that has no mass be relative? Time is a definition. How can time be relative? It is only the motion of matter that is relative, nothing else. Waves cannot be relative. Only the entities that have a standstill existence can be relative. Einstein's claim that time is relative must be the most bizarre claim, and biggest non-sense in physics.

If time is relative GPS is not possible. The use of GPS to support the false hypothetical claim of relative time is an interpretation blunder; GPS has no connection to hypothetical time dilation or Special Relativity [8,9].

6. Charge Particle Accelerators (LHC)

Charge particle colliders such as Large Hadron Collider (LHC) has been used to justify many false claims. LHC has been used to support a hypothetical claim of mass generation by the collision of particles. Collision of particles do not generate mass. LHC only work with CHARGE particles. When fast moving charge-particles are brought to a stop by a collision, it generates electromagnetic bursts. It is the false interpretation of these electromagnetic burst as mass that gave the impression of mass generation.

These extraneous radiation bursts due to the collision of charge particles are not an outcome of the disintegration of the particles due to collision. Fundamental particles of nature cannot be obtained by colliding charge particles since extraneous electromagnetic bursts cannot be isolated from the inherent electromagnetic burst resulted from the splitting of the particles into its constituent parts in the crash site. Although fundamental particles of nature can be obtained by colliding neutral particles since there is no such extraneous electromagnetic burst generation if neutral particles are collided, particle accelerators are useless for colliding neutral particles. You just have to throw neutral particles as hard as you can onto each other.

LHC is a billion-dollar blunder hidden is Swiss alps. You can prove anything and everything with that. All you need to do is keep colliding until you hit the jackpot, until you get a data set that matches whatever you want to prove. Since the extraneous electromagnetic wave bursts are different in each collision, you may get lucky occasionally. LHC is just like fortuneteller's 8^{th} ball, an oracle [9].

7. Taking a Clock Around the World to Justify Time Dilation in Special Relativity

There is nothing funnier than a taking a clock on an airplane and using the time difference to make a bogus claim that time is relative to justify Special Relativity. Important thing to note here is that a clock is an engineered device. Any engineered device performs correctly when the device is in an environment it designed to. It is the mechanism of the clock that varies with the environment the clock is in, not the time itself. The taking of a clock around the world on an airplane is a desperate attempt to justify hypothetical time dilation in Special Relativity, and it is an experimental blunder of highest rank [8,9], nothing short of an experimental farce.

Instead of taking a single clock on an airplane, if one takes two clocks, one water clock, and any other clock on an airplane around the world, one may realize the mockery of the claim that the time is relative. The reading on the water clock will not be the same as the other clock. If it is the time itself that is relative the reading on the water clock must be the same as the reading on the other clock. Taking a clock on an airplane to confirm Special Relativity is simply silly. If they had read the manual first, they should have avoided unnecessary waste of time and resources. It is the mechanism of the clock that is relative, not the time itself.

8. Taking a Clock onto a Mountain to Claim Time is Affected by Gravity in Special Relativity

Taking a clock onto a mountain and bringing it back and using the time difference to justify one of the bogus claims in Special Relativity that the time is affected by gravity is simply an experimental blindness. It is the mechanism of the clock that is affected by gravity, not the time itself. Time has no association with gravity. Gravity cannot change time. It is only an object of mass that is affected by gravity. It is the mechanism of a clock that is affected by gravity.

Instead of one single clock, if they have taken two clocks, a water clock, and another clock on to a mountain top and back, they should have realized it is not the time itself that is affected by the gravity, it is the mechanism of the clock that is affected by the gravity. It is we who write down numbers on the dial of a clock and call it time. What is displayed on the dial is just an outcome of what is happening in the mechanism of a clock. If you cannot grasp that and go on claiming it is the time that is relative, it will be a good service to the field of science if you retire your white coat for good. Gravity pulls matter, nothing else. Interpretation of the effect of gravity on a mechanism of a clock as an effect of gravity on time is simply non-sense, an experimental blunder [9].

9. LIGO (Laser Interferometric Gravitational-wave Observatory) for Measuring Gravitational Waves (Fantasy Waves)

LIGO is a device for measuring so-called hypothetical gravitational waves or more accurately fantasy waves [9,12]. Gravity cannot be a wave. Gravitational effect must be present without a time delay. Mass and its associated infinite span gravitational field must be a single entity. If you can

call the waves you observe in LIGO as gravitational waves that resulted from a black hole collision, then you can also model the stock market crash as a collision of black holes and claim that the stock market crash is a result of a collision of black holes. Black hole collision gravitational wave model is not unique to what is measured by LIGO. Model does not have to be unique for prediction and gathering information from data. However, model must be unique to claim the data you received is from a specific event. What is measured by LIGO is not unique to a specific event, it can be from any one of many earthly events. LIGO is simply one big costly experimental farce [9]. There is no face-saving way to get out of LIGO money-pit without swallowing the pride just as there is no face-saving way to come out of the LHC billion-dollar money-tunnel.

9. Use of Microwave Background to Justify Big-Bang

The claim that the off-band noise in a microwave antenna is a result of big-bang must be the biggest scientific farce ever. What a non-sense! It is surprising how they still manage to keep engineering license. Can it go any lower than this? Our generation is going to be a laughingstock of the future in big time. Our blind faith in non-sensical meaningless ancient religious texts itself will make us a good candidate for that too. Universe is not expanding. Big bang is not possible. Microwave background has nothing to do with a big bang [3,4,9,12].

10. Simultaneity Thought Experiments

You do not need to be a genius to know that if you are closer to a source of light or sound, you will see it or hear it earlier than somebody distant away see or hear. You do not have to be genius to know that if two lightning flashes occur at the same time, for a person in the middle of the line joining the two lightning sources or at equal distances from the two sources, they are simultaneous while for anybody else they are not. Just because, depending on the location somebody is on, somebody considers two light flashes not to be simultaneous has nothing to do with the simultaneous occurrence of the light flashes. Observer sense of simultaneity has nothing to do with the simultaneity of occurrence of two events. Time delay and time are two different things. Time is absolute. Time delay varies with the distance and the speed used to travel the distance. Linear distance between two positions is independent of the positions. There is no time delay attached to a position. Observer perception does not determine the simultaneity. My perception of two simultaneous events as non-simultaneous does not deny the simultaneity of the events.

Lemma:

Simultaneity is not a definition; it is a word in English language. If we do not know the meaning, we just check the dictionary.

Corollary:

Simultaneity of events is observer independent. Simultaneous events are happening in Mars and other uninhabited planets too. Simultaneity of events are not determined by human observers. We just record them.

A person, who is near an event, sees or hears it first, there is nothing special about it. Events do not happen just because we are there to witness it. Our observations have nothing to do with the events themselves. Simultaneity of events is independent of observers. Time is the same everywhere in the universe. It is the time lapse or time delay that vary with the distance of an observer. Time lapse is also frame independent. Time lapse is the same in every frame, $r/u=r'/u'=t$. If you are at a distance r from a sound source, the time lapse for you to hear the sound is $t=r/u$, where u is the speed of the sound. So, time laps depend on the distance r and the speed u. Time lapse does not depends on the position in space since both speed u and the linear distance r, are independent of the positions. There is nothing strange about time lapse varying with the speed you travel. If you travel distance r by car, the time lapse incurred will be obviously less than if you walk the same distance.

Time is independent of space or observers. Time is the same everywhere in the universe irrespective of speed of an inertial frame. Time lapse does not depend on the frame of reference. Time lapse is independent of space; time lapse depends on the distance and the speed used to travel the distance. There is no time lapse attached to a position. There is no spacetime.

Lightning strike thought experiment used in Special Relativity is so trivial. You do not have to be moving to see two lightning strikes in different times. If you are not at equal distances from the lightning strikes, of course you will see them in different times. Irrespective of what an observer sees, if a clock at location where lightning strike-1 occurs registers time t_1 for the occurrence of strike1, and a clock at the location where the lightning strike-2 occur registers time t_2 for the occurrence of strike-2, and $t_1=t_2$, then, they are simultaneous.

Time is not relative. Time is independent of speed of an observer. Simultaneity of events is independent of observers. This so-called thought experiment repeated everywhere like a religious mantra is so trivial that it is not even worthy to refer to as a blunder. Simultaneity is not determined by observers. Simultaneity is not subjective. Simultaneity is not something open for a new definition, we all know what it is. Simultaneous events on mars are not determined by observers, yet events happen simultaneously on mars.

Corollary:

Hearing of thunder later than seeing the lightning does not deny the fact they both are simultaneous occurrences. Simultaneity is independent of observers.

There are other experimental blunders. There is no point of going on listing them. The message is clear,

"experiment is as good as its interpretation".

There is nothing more ridiculous than a professor from a so-called ivy-league university going on TV telling public that a particle can be in multiple places at the same time and using Double-Slit experiment with a beam of particles to justify it, in addition to the preposterous claim that what is not happening here is happening in a parallel universe. Is this science? Snap out of it, this even beyond voodoo practice. It is not the particles that are going through the slits at the same time in the Double-Slit experiment, it is the electromagnetic waves, generated by the stopping of charge particles at the barrier, that are going through the slits at the same time. If you cannot comprehend that, you should be teaching in Harry-Potter Academy, not in a university.

A university is not a place for voodoo practices or religious studies. Religions try to lock your brain up in a meaningless ancient text written by somebody and make you to memorize every word of it while barring any criticism. Voodoo practice searches for answers on 8^{th} ball. Physicists also have created their own 8^{th} ball, Large hadron Collider (LHC), which can be used to prove anything and everything. They just keep colliding until they get lucky. On the other hand, purpose of universities must be to encourage people to write their own objective texts, not to follow some ridiculous voodoo-physics texts, not to adhere to some ancient non-sensical flat-earth or earth-centric era religious texts. They are contradictory and should not be under the same umbrella or roof.

XVI. WHY, HOW, WHAT OF NATURAL RELATIVITY

There is no spacetime in Special Relativity. The claim that the time depends on position and the position depends on time is false. The purpose of Lorentz transform is to transform an object on linear motion onto a moving frame, or to transform a constant ratio distance/time onto a moving frame, not the transformation of distance and time themselves. In both Lorentz transform and Special Relativity, relative position does not depend on time itself, and relative time does not depend on position itself. Both the relative time and the relative distance of a relatively moving object in Special Relativity always depend on the ratio distance/time. For any linear motion, the ratio distance/time is a constant that is independent of distance and time, and hence there is no mutual dependence of position and time in relative motion. There is no spacetime.

The motion in a propagating wave is always orthogonal to the direction of propagation. There is no motion in the direction of propagation in propagation of a wave. There is no momentum in propagation of a wave. A wave has no existence without propagation and bears no momentum. Momentum has no existence without a mass in motion. Relativity has no existence without a mass. Massless cannot be relative. Light is not relative. It is only between two masses that one mass can be in motion relative to another mass; relativity cannot exist without two masses.

If there is any entity that carries a momentum, we should be able to bring that entity to a complete stop by applying an equal and opposite momentum. There is no way to bring a propagating wave to a complete stop since waves have no existence without propagation. If light has a momentum, it should be possible to bring light to a complete stop by applying in opposite direction whatever the momentum it is said to carry. Yet, this is not possible since light has no existence without propagation. Light cannot possess a momentum. You cannot force light to carry a momentum by assumption. Light has no momentum.

Lemma: Light cannot carry a momentum

If light has a momentum, we should be able to stop light by applying equal and opposite momentum. Since light cannot be stopped, claim that light carries a momentum must be false.

Propagation of massless momentum-less light is absolute, not relative. Motion of an object of mass relative to the propagation of light is the absolute motion of an object. There will be no relative motion of objects without absolute motion. Momentum has no existence without a mass. Relative motion has no existence without two objects of mass. Unlike an object of mass on an inertial frame, propagating massless on an inertial frame is not a part of the inertial frame. Propagation of light is does not belong to an inertial frame. Propagation of light is independent of any reference frame. Light is not relative.

Although a source of light on an inertial frame is a part of the inertial frame that is moving with the frame or at standstill relative to the frame, a light burst emitted from that source is not a part of the frame, and that light burst is not moving with the frame in the direction of the frame. Even if that light burst is vertical to the direction of motion of the frame at the emission of the light burst from the source, that light burst is not at stand still relative to the frame in the direction of the motion of the frame. As a result, the path of a vertically directed light burst from a moving frame will be angular relative to the moving frame, not vertical as it is assumed in Special Relativity. Propagation of light is independent of any moving object or a moving frame. Propagation of light is not relative. Massless waves are not relative. Direction of propagation of light is determined by the medium, not by an object or

a frame. If it has a mass, it is relative. If it does not have a mass, it is not relative.

Lemma: Light is Not Relative

Any entity with the speed determined solely by the medium cannot be relative. Propagation of light cannot be relative since the speed of the propagation of light is solely determined by the medium, not by the source of light or a moving frame.

It is only the absolute motion that can generate physical changes in an object in motion. There is no reversible symmetry in absolute motion. The speed of an object in absolute motion can be determined experimentally from within the frame using a burst of light since the propagation of light is not relative.

Motion of an object of mass relative to another object of mass is the relative motion. Relative motion is reversible symmetric. A motion that is reversible symmetric is not real and cannot generate actual physical changes to a moving object or the time.

Special Relativity is a failed attempt to guarantee that the relative speed of an object of mass does not exceed the speed of propagation of light. Special Relativity tried to achieve this by forcing a hypothetical momentum on light, making light to behave as particles, and using a linear frame-to-frame transform that lead to hypothetical changes to the mass and the length of a moving object as well as the time itself. It is not possible to change the mass and the dimension of an object as well as the time itself by running away from it. Reversible symmetric relative motion cannot change an object and time.

Linear Lorentz transform is not unique. Lorentz transform is hypothetical, not real. Lorentz transform is the genesis of spookiness in physics. Relative time in the Lorentz transform is the main culprit in dragging physics in a destructive path into an abyss, where everything is dark, dark matter, dark energy and the spookiness is the norm. It is the Lorentz transform that forced a false momentum on light.

Special Relativity is false for forcing a non-existent hypothetical momentum on light, and for using a linear frame-to-frame Lorentz Transform that is not unique and not real due to the time being relative in the transform. Forcing an artificial momentum on light is the easiest way to make speed of light to be the same on every frame since it makes the propagation of light relative, but it is false and there is no justification for it. When the light is forced to be relative, light has to act as golf balls. There are infinitely many frame-to-frame linear transforms that are equally valid. There is no way of determining which linear transform does the job since there are infinite possible transform for the job. You cannot choose one linear frame to frame Lorentz transform arbitrarily and hide the rest in a closet secretly as Lorentz and Einstein did because one day somebody will peek into the closet and realize what is really happening there [2]. Most probably Lorentz, Einstein and the rest of the believers did not have clue to what was in the closet; they had no idea that there were other linear transforms that for the same job. They just saw one linear transform, picked it up and went to work.

Both Newtonian physics and Einstein theories fail to recognize that relative motion is not possible without absolute motion. Absolute motion of an object of mass must also bound by the propagation of the speed of light, and Special Relativity failed to address that. Natural Relativity separate the absolute motion from relative motion and only deals with the relative motion, which cannot generate any changes in a physical object or the time. Universal Relativity [3,4] guarantees that absolute speed of an object does not exceed the speed of light without altering the mass of the object and time.

In any realistic relativity theory, frame-to-frame transform must be unique, and light must be treated as it is, massless and momentum-less wave, where the speed is determined by the medium. The physical properties of a moving object and the time must remain unchanged by the relative motion. Since relative motion has no existence without absolute motion, there must also be a separate mechanism to guarantee that the speed of the absolute motion is bound by the speed of propagation of light. Lorentz Transform, Special Relativity, and General Relativity fail in all these aspects.

Theory of Natural Relativity incorporates the fact that both the speed of light as well as the mass of an object and time are the same for all frames using a unique non-linear transform, and treating light as it should be, massless and momentum-less wave, while guaranteeing the relative speed of any object does not exceed the speed of light. Absolute motion is handled separately by Universal Relativity [3,4].

Natural Relativity is reversible symmetric just as any theory of relativity should be by nature, and the dimensions and the mass of a moving object as well as the time remain unchanged as they should be in relative motions. In addition, light remains as massless and momentum-less waves as it naturally should be, not as hypothetical made-up particles.

All the objects are affected by absolute motion since absolute motion of an object generate a volume contraction. Mass density of an object under absolute motion becomes infinite as the speed of absolute motion reaches the speed of light. Mass density of an object is independent of absolute motion only for speeds much less than the speed of light.

Relative motion dynamics are always frame independent since relative motion cannot alter the time, the mass, and the dimensions of an object. Newtonian dynamics fail at high speeds for its inability to guarantee that both the relative speed and the absolute speed of any object does not exceed the speed of the propagation of light. Although Einstein's Special Relativity managed to guarantee that no relative speed of an object exceeds the speed of light; it fails as a real solution since it requires changes to

an object and time that no relative motion can provide, and for its inability to accommodate the absolute motion of an object. In addition, the forcing of a an artificial momentum on light in Special Relativity is hypothetical, not real since light cannot carry a momentum.

Special Relativity fails for the forcing of a hypothetical momentum on propagation of light to artificially make the light to be relative, and for the forcing of a non-unique linear frame-to-frame transform to make it looks fitting with Maxwell's equations for propagation of light when it is not in reality. Maxwell's equations for propagation of light are not relative. Maxwell's equations have nothing to do with relativity since relativity is solely associated with the motion of masses. Lorentz transform applies to motion of masses at constant speed. Lorentz Transform does not apply to propagation of waves. Maxwell's equations have nothing to do with the motion of masses. Motion of masses and propagation of waves are not the same; they are two completely different mechanisms. Special Relativity is not complete since it has no mechanism to prevent the absolute speed of an object exceeding the speed of propagation of light.

Both Newton and Einstein failed to realize that there cannot be a relative motion without an absolute motion. Absolute motion is real, relative motion is not. It is the absolute motion that can change an object. Relative motion cannot change physical properties of a moving object such as the mass and the dimensions of an object and time. Time and mass are the same for all inertial frames. Neither the absolute motion nor relative motion can alter the time and the mass.

It is the time lapse that varies with the distance travelled and the speed used for travelling the distance, not the time. Time lapse is independent of positions in space and depends only on the ratio of the distance and the speed chosen to travel the distance. Linear distance between two positions is independent of the positions themselves. The time lapse to a position in space is not unique since there are infinitely many speeds one can choose to get there. There is no time lapse attached to a position in space. Since time lapse is independent of the position and the position is independent of the time lapse, there is no interdependence of position in space and time lapse. There is no spacetime.

So-called spacetime interval or proper time in General Relativity is not unique. Time and positions are mutually independent. There is no spacetime. Time and time lapse are not the same. We can only define and measure a time lapse, not the time; time is the same everywhere. Time lapse varies with the distance and the speed used to travel the distance. The linear distance does not depend on positions, and hence time lapse is independent of the position. For objects under linear motion, time lapse is the same for every frame, r/u=r′/u′=t.

Universal Relativity [3,4] deals with the observer independent absolute motion of an object by contracting the volume of an object, while the Natural Relativity deals with the observer dependent relative motion of objects by using a non-linear frame-to-frame transform without altering the object and time. Both Universal Relativity and Natural Relativity together describe all aspects of motion of objects of mass while guaranteeing that neither the absolute speed nor the relative speed exceed the speed of light and maintaining that the time and the mass of an object are the same irrespective of the speed of motion. In Natural Relativity, everybody ages at the same rate irrespective of the speed they are travelling.

XVII. HARNESSING LIGHT PASSIVELY IN SPACE

Harnessing light using active devices by converting light to electrical energy is quite common. Now, the question is, can we use light directly to carryout mechanical work? The answer is no, absolutely, not.

The claim in Modern Physics that light contains a momentum, and we can harness that momentum in space using wings is false. Light has no momentum. Light has no mechanical energy. Light cannot be used directly to do mechanical work. However, light can help to carryout mechanical work indirectly in the presence of a medium. A medium in space can generate a momentum in the presence of light. The weather we experience on earth is an effect of light on the medium on earth. The momentum generated by the medium in the present of light runs windmills, fly kites, generates ocean currents, and do useful work. Similarly, the medium in outer space can also generate a momentum in the presence of light that we can harness using large wings to do useful mechanical work. However, the forces a medium generate in outer space in the presence of light is not as strong as the forces the atmosphere on earth generate in the presence of light since the medium density in outer space is not as strong as the medium density in the atmosphere on earth.

Lemma: Light has No Momentum

Light has no momentum. Light has no mechanical energy. Light cannot move objects of mass since light has no momentum. However, a medium can generate a momentum that can do mechanical work in the presence of light.

If you find that the presence of light exerts a force, it is an indication that there is a material medium. In the presence of a material medium, light reduces the medium density at the location where light is present. It is this change of the medium density in the presence of light that generates a momentum or a force. Light cannot generate momentum or a force in the absence of a medium. Severity of the momentum or the force a medium can generate in the presence of light is evident form the extreme weather patterns here on earth in the atmosphere, which would not have been the case if there had not been a material

medium, air. It is the medium that generate forces and the light is the catalyst in that process. Without a medium the presence of or absence of light make no difference.

If you are harnessing momentum in space using large wings, that momentum does not come from light itself, because light has no momentum, light has no mechanical energy. It is the medium that is generating a momentum in the presence of light. It does not matter how far away in space from earth you are harnessing momentum, if you can harness a momentum in space, then, it is a clear indication that there is a medium in space.

If you can harness a momentum in space using large wings, it is an indication that space is not empty. In the presence of light, gas or liquid medium can generate a momentum or a force. Windmill is a good example of medium generating momentum in the presence of light. Ocean currents are another example of medium generating momentum with the help of light. Even when there is no detectable medium present, if you can harness a momentum in space, that means there is a medium present even though we cannot detect the presence of the medium. If the path of light is altered when the light is propagated in space, then, space has a medium, a material medium.

We know that a gravitational object changes the density gradient of a medium, which in turn changes the path of light. It is not just a gravitational object that can change the density of a medium though. Light itself can change the density of a medium since light heats up the medium locally at locations where the light is present. When the density of the medium is changed in the presence of a light beam, the path of light changes. A light beam changes the density of the medium, which in effect changes the path of light. The change in density in the medium in the presence of light generates a local pressure difference in the medium resulting in a momentum or a force in the medium, which we can harness using large wings.

Indications for the presence of a medium in the space:

- If the space exerts a momentum on large wings, then there must be a material medium in space.
- If the path of light is not linear, then, there must be a material medium in space.

Lemma: Outer Space Medium Detector

Path of light is altered in the presence of a material medium. The change of the path of light can be used to detect the presence of a material medium.

Corollary:

If we have a homogenous material medium, when a beam of light passes through that material medium, it is no longer homogenous due to the change of medium density locally in the presence of light.

In the absence of a medium, light itself cannot exert a momentum since light has no momentum. In the absence of a medium, there is no momentum to harness in space using wings even though light is present. In the absence of a material medium, light cannot generate or exert a momentum, which we can use to fly a kite or run a windmill. In the absence of a medium, there is no momentum in space even in the presence of light. It is the medium that generates a momentum in space in the presence of light. Light has no momentum, assume otherwise is simply preposterous. The declaration in Special Relativity that light carries a momentum is one of the biggest blunders in physics.

Lemma: Medium Generates a Momentum

The momentum we can harness in space is not from light itself since light has no momentum. It is the medium that generates a momentum or a mechanical force in the presence of light. There is no momentum in space in the absence of a medium even when the light is present.

If there is no air surrounding the earth, there would be no wind. Without a medium, light itself cannot drive windmills.

Corollary:

Light cannot exert a momentum on an object since light has no momentum. Light cannot exert a mechanical force on an object since light has no mechanical energy.

Corollary:

It is only on electric charges that light can exert a direct force or a momentum. If light exerts a momentum on any object, that object must be electrically charged.

Property: Motion of an Object of Mass is Relative

If it carries a momentum, it has a mass. Motion of an object of mass is relative. An object of mass can carry a momentum and hence the motion of an object of mass is relative. Motion of one object of mass can be described relative to another object of mass. However, the mass of an object is frame independent.

Property: A Wave is not Relative

If it cannot carry a momentum, it is not relative. If it has no mass, it is not relative. Massless cannot carry a momentum and hence massless cannot be relative. Light cannot carry a momentum and hence light is not relative. You cannot assume light to be relative because it is not. Light does not propagate relative to masses.

Lemma: Propagation of Light is Absolute

A beam of light neither propagates relative to an object of mass nor propagates relative to another beam of light. Propagation of light cannot be described relative to a mass. Propagation of a beam

of light cannot be described relative to the propagation of another beam of light. Propagation of light is absolute.

Lemma: Absolute Time

Time is absolute. Time delay is frame independent, r/u=r′/u′=t, where r is distance, and u is the linear speed of an object of mass, prime denotes a different frame. Time remains unaltered even in black holes.

XVIII. LIGHT HAS NO EFFECT ON GRAVITY

Masses move, massless waves propagate. Momentum has no existence in the propagation of massless waves. There is no motion, a momentum, in the propagation of waves in the direction of propagation. There is no momentum without a mass in motion in the direction of motion. There will be no motion dynamics without momentum or a mass in motion.

Any entity with a momentum must be able to be stopped by an equal and opposite momentum. Light cannot be stopped since light has no existence without propagation. Light cannot carry a momentum. Light has no momentum. Assumption in Special Relativity that light carries a momentum is unnatural and false.

Masses move in the direction of motion, and hence there is a momentum in the direction of motion. Motion of massless waves is orthogonal to the direction of propagation. There is no motion, a momentum, in the direction of propagation in propagation, and hence there is no momentum in the propagation of waves. Waves propagate due to a change or motion orthogonal to the direction of propagation. Waves propagate without a motion in the direction of propagation.

Lemma: Light Has No Momentum

If light carries a momentum, speed of light will no longer be a constant in the presence of gravity or any other external force even in a vacuum and Maxwell's equations for propagation of light will no longer hold.

Corollary:

If any entity carries a momentum, that entity cannot be in propagation, cannot be a wave. Only an object of mass in motion carries a momentum. Propagation has no momentum since the motion in propagation is orthogonal to the direction of propagation.

There is no momentum without a mass in motion in the direction of motion. If light has a momentum, we would be able to bring light to a complete halt by applying equal and opposite momentum. The inability of bringing light to a complete stop is an indication that light carries no momentum. You cannot force a momentum on waves by proclamation. Claim that "Einstein told us that light carries a momentum" is not a reason to believe that the light carries a momentum. It is like saying that God exists because some guy from an era where people believed the sun goes around the earth or the earth was flat prophesied so thousands of years ago. That is not a reason to believe the existence of an entity called God. Einstein said that the light carries a momentum more than a century ago is not a reason to believe that the light carries a momentum. Gravity has no effect on massless, momentum-less waves. Massless, momentum-less waves have no effect on gravity.

There is no gravitational force on massless. Electromagnetic wave propagation is not a mass in motion and hence Newtonian motion mechanics does not apply to electromagnetic wave propagation. Electromagnetic energy is not kinetic energy. What you get by dividing electromagnetic energy by speed of light is simply nonsense, not a momentum. Newtonian Motion mechanics apply only to objects of mass in motion. Relativity applies only to objects of mass in motion. Relativity does not apply to electromagnetic wave propagation because electromagnetic waves have no standstill existence. Gravity has no effect on electromagnetic waves and electromagnetic waves have no effect on gravitational force between objects. Light has no effect on gravity. Gravity has no effect on light.

Momentum in the direction of propagation has no existence in the propagation of waves since there is no motion in propagation in the direction of propagation. There will be no motion dynamics without momentum or a mass in motion. Propagation of massless light has no part in motion dynamics. Our only task is to incorporate the fact that the speed of motion of an object of mass cannot exceed the speed of light into motion dynamics. We cannot force a hypothetical momentum on light as it was done in Special Relativity since propagation of light is not a part of an inertial frame although the source of light is a part of the inertial frame if the source is on the frame.

Although massless electromagnetic waves have no momentum, electromagnetic waves can generate a momentum on charge particles, and motion of charge particles can generate electromagnetic waves. This is where the interaction of electromagnetic waves and motion of charge particles come into play. Electromagnetic or light waves have no effect on NEUTRAL particles or masses, and NEUTRAL particles or masses have no effect on electromagnetic waves or light.

However, light can make charge particles move due to force generated by the action of the electric field in the light on charge particles. On the other hand, moving charge particles in the magnetic field of the light generates an electric field. So, light makes charges move, and moving charges generate electromagnetic waves in return. Accelerating or decelerating charge particles generate electromagnetic waves. When a charge particle moving at constant speed is stopped suddenly, as in the case of Double-Slit experiment with a beam of

charge particles, it generates electromagnetic radiation waves.

There is no mutual connection between forces associated with charges and the forces associated with objects of mass. However, the effective force between two charged masses will be the net force due to the gravitational force between the masses, and any other forces due to the charges. As a result, the net force between two charge masses is not the same as the gravitational force between the neutral masses. The net force between two charged masses is not the same as the gravitational force between the masses. Gravitational force between two masses is independent of charge, electrostatic field, or electromagnetic field.

Light has no effect on gravity since gravity is associated with masses, not with charges. However, electrically charged mass is affected by light solely due to the charge present. Whenever there is a charge present, a mass is there too since charge has no existence without a mass. Therefore, it is easy to misinterpret the effect of light on a charge as an effect of light on a mass. This is not a light affecting gravity, and it is simply the light affecting charges on a mass. Interpretation this as a light affecting gravity is incorrect. Since there is no charge without a mass, one may incorrectly claim light affects mass, even though it is the charge that is affected by light, not the mass.

The gravitational force between masses is affected by the medium since medium consists of a mass. In addition, in the presence of a fluid medium, the presence of light will create local density variations in the medium. Local density variations in the medium in turn generates extra forces that strengthen or counteract the gravitational force between two masses making the net force between the two masses different from the gravitational force between the two masses alone. In the present of light, the net force between two masses in a medium varies with how long the light is present since the density of the medium varies with how long the medium is exposed to the light. In the absence of a medium the net force between masses will be the same as the gravitational force between the masses irrespective of the presence or absence of the light, or how long the light is there.

Recently, there have been some interest in investigating the effect of light on gravity after the Rancourt experiment [10] to investigate the effect of light on gravity, its results, and conclusions. As we are going to see, they have come to the wrong conclusion that light affects the gravitational force for the simple reason that they failed to account for the forces due to the density variation of the medium in the presence of light. They completely disregarded the effect of light on the medium. If they have thought about the weather havocs light generates by minute density changes in our atmosphere, they would have not come to the same conclusion. Let us see their experiments and results [10,11] in detail.

A. **Rancourt Experiment** [10]:

This experiment does not demonstrate an effect of light on gravity. Light has no effect on gravity. This experiment demonstrates the effect of light on a medium that in effect alters the net force on an object.

In Rancourt experiment [10], a suspended torque pendulum is used with a laminated laser beam. Two equal masses are fixed on each end of a suspended wooden bar, which is hanging by three copper wires from the middle. The bar is free to move on a horizontal plane. Another mass is placed at a fixed position near a mobile mass at one end of the pendulum bar. Once the pendulum is stabilized near the fixed mass, laminated laser beam was passed through in between the fixed mass and the mobile mass on the pendulum closer to the fixed mass. The mass on the opposite end of the pendulum is just a balancing mass.

They observed from the experimental data that the presence of laser light between the masses decreases the distance between the masses and falsely concluded that the gravity must be affected by the light. They also found out even when the fixed mass is taken out, the overall effect remained. The mobile mass moved towards the laser beam even though there was no fixed mass present.

According to this experiment, almost like magic, light is somehow attracting a mass, which could not be realistically possible. Miraculously, a mass is moving towards the light, which is of course impossible since light has no mass. Mass only attracts another mass. A charge only attracts or repulse another charge. If the mass is electrically neutral, the attraction or the repulsion of charges do not come into play here. So, what made this impossible, possible? That is what we would like to find out.

Following the Rancourt [10] experiment and its conclusions, there have been some activities on this presumed hypothetical effect of light on gravity, which can only exist in human imagination just like many other experimental observational claims in physics, not in reality. Contrary to the observation made in the experiment, the reality is that the light cannot have any effect on gravity and gravity cannot have any effect on light. So, it is important to find out what is exactly causing the mass to move towards the light beam in the Rancourt experiment.

Irrespective of the conclusion of the experiment presented in the paper [10], the closed scrutiny of the data does not support the conclusions of this experiment for several reasons:

1. If gravity between two masses is affected when the laser is present in between the masses as it was claimed, then, when the laser is turned on, the distance between the masses must be reduced by a constant as long as the beam is ON. Whether the laser is present for few minutes or few hours, the drop

should be a constant. The amount of drop should not depend on the length of time laser is ON. And, when the beam is turned OFF, the distance should go back to the distance it was before the beam is turned ON or the pre-laser distance at least on average. On average distance after the beam is turned OFF must be the same as the on average distance before the laser is turned ON. On average distance in the absence of a laser must be the same before the laser is turned ON and after the laser is turned OFF. According to the data this did not happen. We have to consider on average distance since the pendulum oscillates at the mean value.

In fact, what has happened was complete opposite. The distance gradually increased slightly in the presence of the laser with time when the laser is ON. When the laser is turned OFF, there is a jump in the distance, and it remained at the jumped state while the laser is OFF. The distance when the beam turned OFF is different from the distance before the laser is turned ON. This cannot be the case if the change is a result of light affecting gravity. If it is a result of light affecting the gravity, the distance before the laser was turned ON should have been the same as the distance after the laser was turned OFF.

If the presence of the laser decreases the distance between the masses, the distance between the masses should have been decreased when the laser is turned ON, and distance should have come back to the distance before the laser was turned ON (pre-laser-turned-ON distance) when the laser is turned OFF. If laser affect the gravitational force, the beam turned OFF distance should be the same as the distance prior to the beam turned ON; they should not be different.

According to the data [10], what changes the distance is not the presence of laser between the masses. What changes the distance is the action of turning OFF the laser. The data does not show a reduction of distance in the presence of laser. The observed effect cannot be a result of the change of gravitational force due to the laser. It should be a result of completely different phenomenon that is governed by the change of the presence of laser from ON to OFF, and how long the laser is ON. If the result is an effect of laser on gravity, it should not depend on how long the laser is ON and should not depend on the switching of laser from ON to OFF.

2. If the decrease of the distance between the two masses is a result of light affecting the gravity, when the fixed mass is removed, the overall effect should have been disappeared, but it did not. The decrease of the distance remains even after the fixed mass is removed. This is an indication that the decrease of the distance is due to some other process, not the effect of light on gravity.

3. If the decrease of the distance between the two masses in the presence of a light beam in between masses is a result of light affecting gravity, the results for the masses of different material should have been the same, but they are completely different. The change of the material the masses were made of should not have change the results. It is the mass of an object that is associated with a gravitational field, and the gravity is independent of the material itself.

On average the result for the brass mass should have been the same as the on average results for the rock mass if the masses are the same, but the results are completely different. Here again, according to the data [10], the presence of laser did not reduce the distance on average. It is the turning OFF the laser created the jump. This shows that the observed effect is not associated with gravity. It must be a result of some other process.

4. When the laser is turned ON, but the beam was prevented from going through in between the masses by blocking the beam for some time, and then removing the blockage, situation had been completely reversed. According to the data [10], the moving mass has crossed over to the other side of the fixed mass. This cannot happen under a gravitational action. This result should not have been any different from the result obtained without any beam blocking at the turn ON of the laser. This is not a gravitational action. This cannot be attributed to change of gravitational force due to the presence of laser.

5. If the reduction of distance between the masses in the presence of laser beam is a result of light affecting gravity, on average, the result should be simply a constant dip in the distance for the duration the laser is ON. On average distance between the masses before the laser turned ON and the on average distance between the masses after laser turned OFF should not be different. This is not the case in the results [10] of the experiment.

6. According to the data [10], when the laser is present between the masses, it did not decrease the distance between the masses. In fact, there is slow, but steady gradual increase in the distance with time in the presence of laser. It is only when the laser is turned OFF, a jump of distance is present.

7. The observed result [10] in the experiment is due to a hidden phenomenon affected by the turning-OFF of the laser, not the presence of laser. Presence of laser did not reduce the distance between the masses. Presence of laser has no significant effect on the gravitational force between the masses according to the data.

8. When the laser beam was used with a single mass, the change of distance was not instantaneous. If the change is an effect of the laser on gravity, it should have been instantaneous. In the experiment data [10], the change of mean distance was a gradual change

with time, and the mean distance decreased with time gradually at a negative gradient. If the change in distance is an effect of laser on gravity, the decrease in the distance should have been a constant drop, it should not have gone decreasing with time. If light affects gravity, it is the presence of light that should have mattered, not how long the light is ON. This indicates that there is some other phenomenon behind this decrease of the distance between the laser and the mobile mass on the pendulum arm.

Important Points:

Gravitational forces between the masses used in the experiments are NOT in the Same League as the forces required to Rotate the Pendulum. Even the full gravitational force between the masses in the experiment is extremely weak to make even a slightest motion on the torsion pendulum.

In the Rancourt experiment [10], two masses on the opposite ends of the torsion pendulum are 500g each while the fixed mass is 909g. The gravitational force between a 500g mass and a 909g masse is rather minute and the any change will be even weaker, negligible. However, the force required to move the torsion pendulum even a slightest amount is quite significant. Even the whole gravitational force between those two masses is too insignificant compared to the force necessary to displace the pendulum even by a minute amount.

Force required to move the pendulum is not even in the range of the gravitational force between the two masses, and hence even if there is any change in the gravitational force, that force is not sufficient to generate any movement on the pendulum. As a result, the motion of the pendulum cannot be a result of the change gravitational force even if the gravity is affected by laser in the experiment. The data in the experiment [10] does not support the claim that the gravity is affected by light.

There are some other phenomena that may affect the pendulum, and the strength of those forces are in the range of the forces that is required to shift the pendulum. One such force is the electro-static force due to any charge present on the masses. The other is due to the change of the properties of the medium by the laser or the change of medium density in the presence of light. There are several things that can be done to examine the real reason for the result.

(a) Replace the all the wood with metal or at least paint an electrical-conductive coating over the wood. Keep the original brass masses used in the experiment. Make sure the three copper suspension wires are free of insulated coating. Twist the free ends of the copper wires sticking out of the fixture at the top together and connect it to the fixed brass mass and ground it properly.

(b) Make the glass case, the device is in, is airtight. Remove all the air from inside. It is very important to make sure the device is in a vacuum. Creating a vacuum chamber is not a difficult task.

When the experiment is redone with these adjustments, the result would be different. There will not be any change in distance when the laser is present. There will not be any changes when laser is turned OFF.

B. **Rancourt and Tattersall Experiment** [11]**:**

To further investigate the effect of light on weight of an object, Rancourt teamed up with Tattersall (a rare north pole and south pole collaboration) and carried out further experiments using a simple device that involves a light box and a balance [11]. According to their results, when the light box was turned ON, it did not display any change of weight for some time. After a considerable time-lapse, for the case where the light box was above the mass, weight started to decrease in the presence of light and it gradually kept decreasing with time, and more or less stabilized after some time with some variations. For the case where the light box is below the mass, process reversed, weight started to increase after some time gradually with time when the light box is ON.

This shows clearly that it is not the presence of light that affected the weight. If the presence of light affected the weight, the change due to the presence of light should have been a drop by a constant or an increase by a constant, not gradual variation with time. As soon as the light box is turned ON, the weight should have been dropped or increased, depending on whether the light box is above or below the mass, by a constant amount and should have returned to the regular weight when the light box was turned OFF. It should be a constant drop or constant increase while the light box is ON.

If the presence of light affected the gravity, the weight should not have been going on decreasing or increasing with time in the presence of light. It shows there is a hidden phenomenon that is slowly reacting, not to the presence of light, but to how long the light is present. Whatever that phenomenon is, it reaches a saturation point after some time and become insensitive to the presence of light. This is the same phenomenon that generates pressure differences in the air in the presence of light. It is the same mechanism that generates weather pattern on earth. If those experiment had been conducted in a vacuum, there would have not been a change of weight or change of distance in these experiments.

Although this variation of the properties of the medium in the presence of light is not noticeable from the temperature measurements or hanging silk threads, this phenomenon is still at work in the presence of light as long as there is a medium or air in the experiment. The movement of a mass towards light or the change of weight of an object in the present of light is not a result of light affecting gravity.

The real reason for changing weight in the presence of light is the local change in the density of the medium or the change of pressure in the medium in the presence of light; longer the light remains, higher the change.

These are the experiments that should have been done in a vacuum. These devices must be in airtight glass containers. All the air must be removed from the container. If the experiments are done in a vacuum, the conclusions would be different, and we would have observed,

1. There would be no weight change of an object in the presence of light box above or below the weight if the device is in a vacuum.
2. There would be no change in the distance between two masses in the presence of a light beam in between the masses if the device is in a vacuum.
3. There would be no movement of a mass on a torsion pendulum towards a light beam if the device is in a vacuum.

Unless special care is taken in experiments such as these for determining the effect of light on gravity, the results of these experiments are prone to misinterpretation and false conclusions.

From the data of the Rancourt and Tattersall experiment [11], it is very clear that the weight decrease in the presence of light above the mass is almost 10 times higher than the weight increase in the presence of light below the mass. If the change is a result of light affecting the gravity, there should not have been a difference.

The Real Reason:

The underline principle for the working of the Rancourt experiment is the same as the underline principle of the medium density variations or the air pressure variations in the presence of light. The displacement of the mobile mass on pendulum arm is not an interaction of light with gravity. Change of weight of an object in the presence of light is not an effect of light on the gravity. If the devices used in those two experiments had been in vacuum chambers, there would not have been a movement in the mobile mass or the change of weight of an object in the presence of light. Light has no effect on gravity. Gravity has no effect on light. Gravity and light are mutually independent. It is the medium that mediate an appearance of an interaction between the gravity and light, which is not real. This is not light affecting gravity; this is light affecting the net force on a mass in the presence of a medium.

Light Box Over the Mass:

When the light box is over the mass, the air density above the mass becomes lower gradually with time, and as a result, the mass has an additional upward force that increases gradually with time, in effect reducing the weight gradually with time.

Light Box Under the Mass:

When the light box is below the mass, the air density below the mass becomes lower gradually with time, and as a result, the mass has downward force that increases with time gradually, in effect increasing the weight gradually with time.

Change of Weight and Placement of Light Box:

When the light box is ON below the mass, the air density below the mass starts to decrease with time resulting in an increasing downward force on the mass with time. As a result, the net downward force on the mass increases with time when the light box is ON below the mass, in effect increasing the weight of the mass with time.

When the light box is ON above the mass, the air density above the mass decreases with time resulting in an increasing upward force on the mass with time. As a result, the net downward force decreases with time when the light box is ON above the mass, in effect decreasing the weight of the mass with time.

Reason for the Differences in the Amount of Weight Change Depending on the Placement of Light Box:

When the light box is under the mass the upward moving warmer air affect negatively on the downward force due to the pressure difference on the mass. When the light box is over the box upward moving warmer air does not come to contact with the mass. As a result, the weight increases when the light box is under the mass will be much smaller than the weight decreases when the light box is above the mass.

Important Note:

The look of the graphs in Rancourt [10] and Rancourt and Tattersall [11] experiments can be deceiving since they are not in the same scale.

A Side Note:

In the twenty first century, in an age where you can gather information in a key stroke, it incomprehensible that reviewers had taken a year to review the paper [10] and more than a year for paper [11]. Review of these two papers should not have taken more than few days. There are no equations to verify in these papers. All they had to do was to go through the experiment setup, few graphs, and conclusions. How can any reviewer take one year to review a paper unless the reviewer is brainless? Most certainly, these reviewers have not read these papers even once. It appears as if they kept the papers on their desks and return them after a year. Otherwise, reviewers should have found out the mismatch of data and conclusions. If reviewers had read the papers, they should have asked the authors to not to include the data that authors considered suspicious due to a loose connection. They should have asked the authors to explain the inconsistencies of the graphs for the rock.

Anyone who take one year to review a paper is either lazy or simply incompetent as a reviewer. Any

editor who allows reviewers to take one year to review a paper is simply incompetent to be an editor. This shows the sorry state of the mainstream journals. Mainstream journal editors are just the record keepers, clerks, nothing more. Real editors should take charge. Anyone who cannot review a paper within one or two weeks should not become a reviewer; should not be allowed to be a reviewer. If an editor returns a paper review after one year, the authors are no longer working on the subject; they are no longer in touch with the work they had done a year ago to incorporate any changes required; a year is a long time to waste waiting for a review. These mainstream status-quo dinosaur journal with lazy, arrogant, and incompetent reviewers and editors have no place today in a fast-moving environment; these editors and reviewers are walking fossils, not humans.

If your paper is not handled within few weeks, pull it out and submit to somewhere else. There are plenty of options today. Gem is a gem irrespective of where you found it. On top of it, some of these journals are double-dipping. They charge authors an exorbitant amount and grab the copyright too, and then go on charging readers for each download. That itself shows these mainstream journals are not there to disseminate knowledge. The quality of review is not determined by the length of time a paper lies on a reviewer's desk.

In any case, the results of Rancourt experiment [10] cannot be an effect of light on gravity since any change of gravitational force between two masses is too weak to generate any motion in the torsion pendulum. Those forces are not in the same league. Further, if light affects gravity, any effect of light on gravity should be instantaneous, not a gradual variation with time. The gradual variation of data with time in the presence of light shows that the hidden phenomenon at work is the effect of light on the medium.

Gravity has no effect on light. Light has no effect on gravity. Gravity has no effect on massless. Massless has no effect on gravity. Massless is not affected by gravity. There are no massless particles. Waves are not particles. Particles are not Waves. There are no massless particles except in the mind of religious believers of Special Relativity. There is no momentum without a motion of a mass except in the mind of religious believers of Special Relativity. There is no momentum in the propagation of waves. There is no motion in propagation of waves in the direction of propagation. There is no momentum without a motion in the direction of propagation. Light cannot carry a momentum. Light has no momentum. Any entity that has no momentum is not a particle. There are no photons or light particles. Mechanical energy has no existence without a mass in motion. Electromagnetic energy has no association with a mass or momentum. Electromagnetic energy does not require a mass or momentum for its existence. Masses do not propagate, they move. Massless, momentum-less waves do not move, they propagate. The mechanics of motion of masses do not apply to the propagation of waves.

Light Affects Charges, Not the Masses:

It is only an electrically charged mass that is affected by light or electromagnetic waves. Electromagnetic waves are generated by electrically charged mass or particles. The effect on a mass by light is only through the electrical charge of a mass. Since there is no existence of a charge without mass, one may be inclined to interpret the effect of light on a charge as an effect of light on a mass. However, this is incorrect since every mass does not carry a charge, and light has no influence on an electrically neutral mass.

The effect of light on a mass is always through the electrical charge of a mass; there is no other way. Irrespective of how big the mass is, an electrically neutral mass has no effect on light and light has no effect on an electrically neutral mass. It is not the gravity that prevents light coming out of a black hole, it is the internal reflection due to high density that prevents light coming out of a black hole. Mass of a black hole is finite. It is the mass density of a black hole that is infinite. The effect of gravity on light is always through a medium. Without a medium, gravity has no effect on light even when that gravity is from a black hole.

The diffraction of light near a gravitational object is due to the density gradient of the medium created by a gravitational object [4]. Irrespective of how massive an object is, there is no diffraction of light near a gravitational object in the absence of a medium surrounding the gravitational object:

1. Gravity does not bend light in the absence of a medium.
2. Light does not reduce the gravitational distance between masses in the absence of a medium.
3. Light does not reduce or increase the weight of an object in the absence of a medium.
4. The net force on a mass cannot be changed by using light in the absence of a medium.

Note Worthy:

- If light affects gravity, the decrease in weight when light is above the mass should not be more than the increase of the weight when the light is below the mass, they must have been the same.
- If light affect gravity, the change of the material of the mass should not have changed the results, they should have been the same.
- If light affect the gravitational distance between two objects, the effect of light should have been a constant dip for the duration of the presence of light.
- If light affect gravity, the effect should not have varied with time when the light is ON. The change

should depend on whether light is ON or OFF, not how long the light is ON.

- If light affect the gravity, the pendulum should not have crossed over to the other side of the fixed mass when the beam was blocked by a screen for a limited time.

What has been demonstrated by the Rancourt [10], and Rancourt and Tattersall [11] experiments is an effect of light on the medium. It is the effect of light on the medium, the air, that generated the observed effects in the experiments. We know very well from the weather that the effect of light on air can be so subtle, yet its consequences can be so significant.

Similar historic misinterpretation happened in Arthur Ellington's observations for determining if gravity affect the propagation of light. Arthur Ellington came to the wrong conclusion for not taking the medium surrounding the sun into account. Gravity does not bend light. It is a secondary effect of gravity that bends light. Gravity generates a density gradient in the medium that surrounds a gravitational object such as the sun. It is this density gradient of the medium that bends the path of light. If Arthur Ellington and colleagues including Einstein had taken the medium surrounding the sun into consideration, physics would have taken different path; we should not have wasted more than a century.

In the experiments investigating the effect of light on gravity, the shift of a neutral mass towards the light, and the reduction or increase of the weight of a neutral mass in the presence of light above or below a mass are solely a result of an effect of light on the medium, not a direct effect of light on gravity; if the experiments had been done in a vacuum, there would not have been any shift. In the absence of a medium, light has no effect on a neutral mass.

Most importantly, light has no effect on gravity. In the absence of medium, the net force on a mass will be the same as the gravitational force irrespective of whether light is present or not. And there would not be any diffraction of light near a gravitational object in the absence of a medium surrounding the gravitational object. Light and gravity are mutually independent. It is a medium that mediates a look-like appearance of an interaction between light and gravity. There is no mutual interaction between light and gravity.

Corollary:

It is the medium that mediates an appearance of a look-like interaction between the gravity and light. Gravity and light are mutually independent.

C. **Gravity is Not a Pushing Force**

Conclusion of Rancourt [10] and Rancourt and Tattersall [11] that gravity is most probably a pushing force is most certainly false. Gravity is not a pushing force. Gravity is always an attractive force. A pushing force is due to the density changes in the medium in the presence of light, and it has nothing to do with gravity. In the absence of a medium, there will not be any extra pushing force on an object of mass over the gravitational force in the presence of light. In the absence of a medium, the net force on an object of mass is the same as the gravitational force. It is medium that generated a pushing force in the presence of light over the gravitational force.

In the Rancourt [10] and Rancourt and Tattersall [11] experiments, when light box is turned ON, it reduces the density of the medium at the location of the light box generating a pushing force towards the location of the light box. Since the gravitational force between two masses of 500 grams and 909 grams is negligible compared to the force generated by the pressure differences in the medium in the presence of light, the motion of a mobile mass towards the location of the light source is visible; this is not light affecting gravity. It is light affecting a material medium. It is this additional pushing force in the medium in the presence of a light source that affects the net force on a mass or the weight of an object depending on the location of the light source.

Light Box Above the Mass: Weight Decrease

When the light box is ON above the mass, density at the location of light source decreases gradually with time, and hence the pushing force on the mass due to change of density increases with time. The pushing force is against the gravitational force on the mass, and hence the net force on the mass is affected negatively with time. The force due to the change of the density is such, it decreases the weight gradually with time. The net force on the object is less than the gravitational force. As a result, the weight of the object decreases gradually with time when the light box is ON above the object.

Light Box Below the Mass: Weight Increase

When the light box is below the mass, the pushing force on the object is in-phase with the weight of the object. The force due to the change of the density is such that it enhances the gravitational force. The net force is more than the gravitational force. As a result, the weight of the mass increases with time when the light box is turned ON below the object.

Absence of a Medium: No Weight Change

If the experiment is carried out in a vacuum chamber, there is no change in the density irrespective of whether the light box ON or OFF. As a result, the net force is the same as the gravitational force. There will be no change of weight of an object irrespective of the location of the light box in the absence of a medium.

It is medium that generates a pushing force towards the location of a light source. In the absence of a medium there will be no extra pushing force and the net force present on a mass is the same as the gravitational force.

Lemma: Light and Gravity are Mutually Independent

Light has no effect on gravity. Gravity has no effect on light. Gravity and light are mutually independent.

XIX. **CONSPECTUS**

Hypothetical Lorentz transform, Special Relativity, and General Relativity are not mechanisms of nature since physical characteristics of objects and time must be observer independent. Relative distance and relative time of an object depend only on the ratio distance/time, which is constant for objects on linear motion, and independent of the distance and time themselves. Space and time are mutually independent.

Propagation of light is not relative irrespective of whether a frame is an inertial frame or accelerating frame, and in absolute motion or in relative motion. Motion of an object of mass relative to the propagation of light is the absolute motion of an object. Absolute motion of an object is experimentally determinable from within the frame using a burst of light since the propagation of light is not relative. There is no reversible symmetry in absolute motion.

Nature guarantee that the absolute speed of an object does not exceed the speed of light by volume contraction while the time and the mass remain unaltered independent of the speed. When the absolute speed of an object reaches the speed of light, the mass density of the object becomes infinite, while the mass and time remain unchanged, turning itself into a black hole. Time in a black hole is no different from time anywhere else. Time lapse is independent of the speed of an object even when the object is turned into a black hole.

Increase surface gravity of a blackhole is due to volume contraction. Mass of a black hole is finite. The mass of a black hole is the same as the mass of the object before it turns itself into a black hole. It is the mass density that is infinite, not the mass. What makes the gravitational force of a black hole stronger is not the mass but the reduced radius due to volume contraction, the inverse square radius $1/r^2$. What prevents light coming out of a black hole is a result of total internal reflection due to its high density, not the gravity. Gravity has no effect on light. What diffracts light near a gravitational object including a black hole is the medium density gradient, not the gravity itself. Strong diffraction due to the high-density gradient surrounding a blackhole prevents any light coming out keeping black holes black.

Motion of an object of mass relative to another object of mass is the relative motion. Relative motion is reversible symmetric. Reversible symmetric relative motion cannot change an object and time. The time, mass, and dimensions of an object remain unaltered by the relative motion. Nature guarantees that the relative speed of an object of mass does not exceed the speed of light. The Natural Relativity is the mechanism how the nature fulfills that guarantee without altering the physical characteristics, such as mass and dimensions of an object and time.

Special Relativity is a hypothetical and unrealistic human Crafted Prophecy for guaranteeing that the relative motion of an object does not exceed the speed of light by allowing mass and length of an object and time to change illogically and unrealistically. Special Relativity achieves it by forcing unnatural momentum on massless light, using unnatural linear Lorentz Transformation that is not unique, and allowing mass, and length of an object and time to vary unnaturally with the motion, none of which are real, all of them are manmade. Momentum carrying light particles or photons, Lorentz Transform, Special Relativity, General Relativity, and Quantum Mechanics are all human Crafted Prophecies that can only exist in misguided human imagination, and they are not viable mechanisms of nature.

Natural Relativity does not force any hypothetical unnatural behavior on light or on a moving object and time. Natural Relativity is based on a nonlinear frame-to-frame transform that is unique. There is no time contraction or dilation, no length contraction, no mass dilation in Natural Relativity. Natural Relativity is the ultimate dependable traffic cop of nature that guarantees the relative motion of a moving object does not exceed the speed of light while maintaining the object and time unaltered for all inertial frames. Light remains as massless and momentum-less waves in Natural Relativity. There is no place for artificial manmade wave particle or photon nonsense in Natural Relativity.

Nature guarantees that no relative speed of an object exceeds the speed of light without using hypothetical linear Lorentz Transform, without forcing Maxwell's equations to be relative, without using Special Relativity, General Relativity, and without unnaturally forcing the light to be artificial, momentum carrying, massless light particles or photons. Light is a wave and comes in wave bursts, not as a collection of random particles or photons. Photons by definitions are spatially random. Spatially random light particles or photons cannot generate coherent light beams.

Electromagnetic wave frequencies in a blackbody cavity are discrete and determined by the geometry of the black body. The propagation of electromagnetic waves is deterministic, not probabilistic. Assumptions that had been made in the derivation of photons are false. Movement in wave propagation is always orthogonal to the direction of propagation. There is no motion or momentum in propagation in the direction of propagation. Light has no momentum. Any entity without momentum cannot be a particle. Light is not a particle. Directional light cannot consist of spatially random particles or photons.

Light does not affect gravity, and gravity does not affect light. Both gravity and light affect the medium density. Any change in medium density in turn affects the gravitational force and propagation of light. It is the medium that mediate a look-like appearance of a mutual interaction between the light and gravity. In the absence of a medium, gravity and light have no look-

like mutual interaction.

Gravity and light are mutually independent. Gravity has no existence without a mass. Mass has no existence without gravity. Mass and its infinite span gravity are a single entity. Gravity cannot be a wave. Gravitational effect must be present a without a delay. Although the generation of light requires the motion of charges, and charges have no existence without mass, light has no direct association with a mass or momentum. Light is a result of charges in motion, chomentum, not a result of a mass in motion, momentum [6]. Any entity with a momentum cannot propagate. If light carries a momentum, light cannot propagate at a constant speed in the presence of a gravitational field, and there is nowhere in the universe that is free of a gravitational field.

Massless momentum is a religious belief that exists only in misguided human psychic, not in reality. There is no momentum without a mass. Any entity with momentum could be able to be brought to a standstill by applying equal and opposite momentum. Any entity that has no standstill existence cannot consists of a momentum. There is no momentum in propagation. Only the motion is driven by momentum. Wave propagation is not driven by a momentum.

There is no motion of a charge or chomentum without a mass since charge has no existence without a mass. It is the motion of charge or chomentum that generates waves, not the motion of a mass or momentum [6]. Momentum does not generate waves. The waves generated by motion of CHARGED mass are electromagnetic waves. There are no particle waves.

Both Universal Relativity and Natural Relativity together describe all aspects of motion of objects of mass while guaranteeing that neither the absolute speed nor the relative speed exceeds the speed of light and maintaining that the time and the mass of an object are the same irrespective of the speed of motion. More importantly, light remains naturally as massless and momentum-less waves in both Universal Relativity and Natural Relativity. In Natural Relativity as well as in Universal Relativity, everybody ages at the same rate irrespective of the speed they are travelling, as it should really be in the reality.

Modern Physics rest on a single pillar, Einstein's false proclamation that the propagation of light carries a momentum and hence light is relative. Without this ill-fated Einstein's proclamation, Modern Physics has no existence. For light to be relative, although it is necessary for Maxwells equations to be transformable onto an inertial frame, it is not sufficient. Maxwell's equations must also be transformable to accelerating frames at any instant of time, and the transformation must be unique. Maxwell's equations cannot be transformed onto accelerating frames, and transformation onto an inertial frame is not unique. Any entity that is not uniquely transferable to both inertial frames and accelerating frame is not relative. Light does not propagate relative to objects. No massless entity can be relative. Light cannot carry a momentum. Light cannot be relative. Waves are not relative. Propagation is not relative.

When the single pillar, the false proclamation that light carries a momentum and hence light is relative, that the Modern Physics rest upon cannot stand the winds of reality, legitimate criticisms, that single pillar starts to buckle, and with that the collapse of the entire structure is imminent. The inhabitant of that structure may want to make sure they can escape in time before it collapses. Lorentz, Einstein, Schrodinger, and Heisenberg are all guilty of erecting Modern Physics on a such a vague, dubious, unnatural, and imaginary foundation, breaking both mathematical as well as commonsense scientific laws of nature either knowingly or unknowingly in formulating Special Relativity, General Relativity, and Quantum Mechanics. They are all guilty of misinterpreting the electromagnetic waves generated by the motion of a charge as hypothetical particle waves generated by motion of a mass or momentum. This false interpretation remained hidden, unnoticed for more than a century since a charge has no existence without a mass. There are no particle waves. There are no wave particles. There are no light particles or photons.

Lemma: Mutual Exclusivity

Any entity with a momentum cannot propagate. Any entity that propagates cannot have a momentum. Propagation and motion are mutually exclusive.

XX. IMMINENT COLLPSE OF MODERN PHYSICS

The genesis of the Modern Physics is a false conjecture that the light is relative. For light to be relative, it is necessary that Maxwell's equations must be transferable to inertial frames. For that, you have no other option but to use a linear Lorentz transform. Maxwell's equations are not transformable onto a moving frame using a nonlinear transform. Non-linear transform does not retain the structure of the Maxwell's equations after the transform.

The source of all the unnatural assumptions in Lorentz Transform and Special Relativity lies in the use of a linear transform. The devil in the Special Relativity is in the use of Lorentz transform. On the other hand, it is not possible to bring Maxwell's equations into Special Relativity without a linear transform. Both Lorentz and Einstein had the presumption that the light is relative. Their goal was to use the Maxwell's equations to substantiate the presumption that light is relative at any cost. The high cost was more and more unnatural and artificial assumptions. Although Lorentz and Einstein made some effort to transform Maxwell's equations onto an inertial fame, and it appears on the surface as if that transformation is possible and light is relative, that transformation is not possible.

To transfer Maxwell's equations onto an inertial frame using a linear transform, Lorentz and Einstein

had no option but to deviate from reality and force time to be relative [1]. In addition, they also had to force light to carry a momentum by proclamation. Both enforcements indeed unrealistic and incorrect. Even with such un-natural and artificial forcing of time to be relative, the transformation of Maxwell's equations onto an inertial frame was not possible since the transformation is not unique [2]. Any transformation of nature must be unique.

In addition, for light to be relative, although it is necessary that Maxwell's equations must be transferable onto an inertial frame, it is not sufficient. Maxwell's equations must also be transferable onto accelerating frames at any instant of time, and the transformation must be unique. Maxwell's equations cannot be transferred on to accelerating frames. Transformation of Maxwell's equation onto an inertial frame is not unique. It does not matter how hard you try, or how big a genius you are, the fact of the matter is that the Maxwell's equations are not transferable onto either inertial frames or accelerating frames because Maxwell's equations for propagation light are not relative to begin with.

Any entity that is not transferable onto both inertial frames and accelerating frames at any instant of time is not relative. Propagation of light is not relative. The whole of Modern Physics, including Special Relativity, General Relativity, Quantum Mechanics, and Particle Colliders, is founded upon the false premise that the propagation of light is relative. Since the propagation of light is not relative, the collapse of Modern Physics is imminent, it is just a matter of when.

XXI. **PROPERTIES OF RELATIVITY:**

- Only an entity carrying mechanical energy can be relative.
- Only a mass can carry mechanical energy.
- Only a mass can be in motion.
- Motion in wave propagation is orthogonal to the direction of propagation.
- The energy of a light wave is directly related to the motion in propagation that is orthogonal to the direction of propagation, which is the frequency; e=hf, where h is the Plank constant, f is the frequency, and e is the electromagnetic energy.
- Since there is no motion in propagation of light in the direction of propagation, light has no mechanical energy.
- Only the entities that has motion in the direction of motion can carry a momentum and relative. Object of mass is relative since the motion of a mass is in the direction of motion.
- There is no motion in propagation in the direction of propagation.
- Any entity that has the motion orthogonal to the direction of propagation cannot carry a momentum and hence not relative.
- The motion or variation of light in propagation is orthogonal to the direction of propagation and hence light has no momentum. and light is not relative.
- There is no momentum in wave propagation.
- There is no momentum without a mass.
- Any entity with momentum should be able to bring to a complete stop by applying equal and opposite momentum.
- Any entity that has no standstill existence cannot have a momentum.
- Waves have no standstill existence. Waves cannot carry a momentum.
- Only an entity with mechanical energy can be brought to a complete stop.
- Only an entity that can be brought to a halt can carry a momentum.
- Light has no existence without propagation.
- Light cannot be brought to a halt.
- Any entity that cannot be brought to a stop cannot carry a momentum.
- If light carries a momentum, light cannot have a constant speed in the presence of gravity or any other external forces.
- Light cannot carry a momentum.
- Only an entity that carries a momentum can be a particle.
- Light cannot be a particle.
- Any entity with electromagnetic energy alone cannot be relative.
- Light does not have mechanical energy.
- Any entity without mechanical energy cannot be relative.
- The motion in propagation is orthogonal to the direction of propagation, and hence light is not relative and has no momentum.
- Energy in light is electromagnetic energy. Light has no mechanical energy.
- Any entity that can neither gain nor lose momentum in a collision cannot carry a momentum. Light neither gains nor loses momentum in a collision since the speed of light is a constant determined by the medium, and as a result light cannot carry a momentum.
- Light cannot exert a force on an object of mass.
- A mass is not affected by light. It is only an electrically charged mass that can be affected by light.
- Any entity that has no momentum cannot be relative. Light has no momentum and hence light is not relative.
- $e \neq mc^2$, where e is electromagnetic energy and mc^2 is kinetic energy. Electromagnetic energy and kinetic energy are not the same. You cannot force electromagnetic energy e to be equal to mechanical energy mc^2 by proclamation.
- By dividing electromagnetic energy e by the speed of light c, what you get is non-sense,

not a momentum, p≠e/c.

- Since light has no momentum, light is not a particle. There are no photons.
- Relative distance x′ is independent of time t for any moving object of mass at constant speed on an inertial frame.
- In Special Relativity, hypothetical relative time t′ is independent of distance x for any moving object of mass at constant speed on an inertial frame.
- Space and Time are mutually independent. There is no spacetime.
- Mass of an object is independent of speed of an object.
- Time and time lapse are independent of frame of reference.
- Since light is not relative, Modern Physics must collapse, inevitable, unavoidable.

XXII. **TIME IS NOT RELATIVE**

Blind believers of Special Relativity religious text have nothing else to justify their doctrine, so they try to use anything that has an inkling of time estimation to support it. GPS (Global Positioning System) estimates time of a request of a receiver for completely different reason. If anybody tries to attach GPS to Special Relativity and time dilation, it must be somebody who has no understanding of neither the Special Relativity nor the GPS. GPS and Special Relativity have no connection. GPS is a real engineering system. Special Relativity is hypothetical human Crafted Prophesy.

Believers of Special Relativity are trying to hang on to GPS (Global Positioning System) to justify time dilation and Special Relativity since they have nothing else to hang on to, just like people in a sinking ship trying to hang on to anything and everything that comes on their way to prevent drowning. GPS has nothing to do with Special Relativity. GPS is not possible if time is relative. Besides, Special Relativity only applies to linear motions. GPS satellites are not on linear motion. If you are claiming that GPS is not possible without Special Relativity, you are displaying your ignorance on both GPS and Special Relativity, nothing else [8,9].

Estimation of time of request by a receiver has nothing to do with Special Relativity. GPS estimates the time of request of a receiver to make the system client independent, the same reason why IKEA does not rely on customers screw drivers [9]. Do not taint GPS by trying to attach it to some preposterous claim of hypothetical time dilation that has no existence. Anybody who has any understanding of GPS would not associate it with Special Relativity since they have no connection.

Any engineering system must be designed to be client independent. If an engineer says time is relative, he/she will lose the license to practice. It is only in physics you can make any preposterous claim and continue to hold a job since no license is required. It is the mechanism of a clock that is sensitive to temperature, pressure, speed, etcetera. Time on a display of a clock is simply a result of what the mechanism of the clock does; it is we who put numbers on the dial of a clock and defined it as time. It is the mechanism of a clock that is relative, not the time. Time is a definition. If they have not calibrated the clocks at the factory under certain environment, the numbers on clocks mean nothing. If a clock is in a completely different environment from the environment the clock is calibrated for, then the display of the clock will not represent the right time. If the battery is weak, the display will not represent the right time.

If you place clocks in different pressure or temperatures, you may find time depends on the pressure and temperature too. Are you going to claim that time depends on pressure and temperature too based on those experiments? It is the mechanism of the clock that depends on the environment a clock is in, not the time itself.

Some people have taken a clock on an airplane around the world to prove time is relative. If you are going take a clock on an airplane, instead of one clock, you should take two clocks of different mechanisms, most probably a water clock and an atomic clock, around the world on an airplane. If you do that, you will realize it is the mechanism of a clock that is relative, not the time itself. Time on a clock is just a display of what mechanism does. If you have any experiment that is done to prove time is relative using a clock, please repeat the experiment using two clocks instead of one clock. When you repeat the experiment with two clocks of different mechanisms, most probably a water clock and an atomic clock, pendulum clock and electronics clock, or any two clocks of different mechanisms, you will not only realize it is the mechanism of the clock that is relative, not what is displayed on a clock, but also how foolish the experiment is. What is displayed on the dial of a clock is what the mechanism of a clock does. It is we who defined the reading on the display of a clock as time.

Similarly, if you a taking a clock onto a mountain to show that the time depends on the gravity, instead of taking one single clock, take two clocks of different mechanisms, preferably a water clock and an atomic clock onto a mountain. If you take two clocks of different mechanisms onto a mountain, you will not only realize it is the mechanism of the clock that depends on the gravity, not the time, but also will realize how foolish the experiment is.

If time depends on the speed of motion of an object or frame, then time will be directional since motion is directional. Time cannot be directional. Time cannot depend on the motion of an object. Further, if time is relative, time is not unique [2]. Time must be unique and nondirectional, and hence time cannot be relative. Time is not relative [2,9,12]. Special Relativity based on hypothetical time dilation is a human Crafted

Prophesy (CRAP), a religion, not the reality.

One more thing. If you claim time dilates and length contracts, Newton is going to wake up from his sleep. Because, if time dilates and length contracts, relative motion dynamics will not be frame independent. Relative motion dynamics must be frame independent; that is something we all agree.

XXIII. CONCLUSIONS

Maxwell's equations for propagation of light are not relative. Maxwell's equations for propagation of light are absolute. Propagation of light is absolute. There is no motion or field variation in the direction of the propagation in wave propagation. Wave propagation is a result of motion or cyclic field variation orthogonal to the direction of propagation. The energy of a light wave is proportional to the motion or cyclic field variation orthogonal to the direction of propagation, which is the frequency. Since there is no motion in propagation in the direction of propagation, light waves do not have a momentum or kinetic energy. Therefore, the division of light energy by the speed of light does not produce a momentum, what it produces is nonsense; this nonsense is the genesis of spookiness in Modern Physics. All the ills of Modern Physics lie in Einstein's false proclamation that light carries a momentum. Light does not carry a momentum.

There will not be a propagation if the motion is in the direction of propagation. Without a motion in the direction of propagation, light cannot have a momentum. Wave propagation has no momentum in the direction of propagation. Light has no momentum. Any entity that has no momentum cannot be a particle. Light is not a particle since light has no momentum. There are no light particles or photons. Photon or wave particle is a contagious virus disease that has suffocated the whole of physics and natural sciences, in general, for more than a century. There is no vaccine for this virus. Amputation is the only option.

The claim in Special Relativity that space depends on time and time depends on space is false. Relative distance x' is independent of time t. Relative distance x' depends only on the distance x, speed of the object u, and the speed of the frame v for objects on linear motion on any inertial frame, $x'=\beta_x x$, where β_x is a constant depends only on u and v, which are constants. Since relative distance x' is not a function of time t, there is no spacetime.

Similarly, hypothetical relative time t' in Special Relativity is independent of the distance x. Imaginary relative time t' depends only on the time t, speed of the object u, and speed of the frame v for objects under linear motion on any inertial frame, $t'=\beta_t t$, where β_t is a constant depends only on u and v, which are constants. Since relative time t' is not a function of distance x, there is no spacetime.

Relative time in Special Relativity is not real. Relative time came into being by an artificial false proclamation of a modern-day prophet, Einstein. It is interesting that all the so-called prophets in the history are self-proclaimed, which makes us wonder. If anyone declares today that he/she is a messenger of a creator, he/she would be a laughingstock of the world. It is not surprising why it did not happen thousands of years ago since those were the dark ages where either earth was flat, or sun orbited the earth. However, what is surprising is why people are still believing those dark age religious doctrines.

Time and Time lapse are independent of the frame of reference. Space and time are mutually independent for objects and frames under linear motion. There is no spacetime. Time is not relative. Relative time is a result of forcing hypothetical linear Lorentz transform where it does not belong. Hypothetical spacetime, relative time, and relative mass in Special Relativity are not unique. Nature abhors non-uniqueness. Hypothetical linear Lorentz transform cannot transform Maxwell's equations onto a moving frame uniquely. Special Relativity founded on the hypothetical Lorentz Transform can never be unique. Special Relativity is a mechanism of human mind, not a mechanism of nature.

Light cannot propagate relative to objects or inertial frames since light has no momentum. You cannot force a momentum on an entity that cannot carry a momentum. You cannot assume light to carry a momentum when light cannot have a momentum. Special Relativity is based on forcing an artificial momentum on light that cannot carry a momentum. Light cannot do direct mechanical work. Light can only do electrical work on electrical charges. Light can only exert a force or momentum on electrical charges. Light cannot exert a force or momentum on objects of mass. Assumptions must be realistic. Assumption that light has a momentum in Special Relativity is not realistic. Special relativity is unnatural, hypothetical, and false since light does not have a momentum and light is not relative.

Since light has no momentum, light cannot be a particle. Only a particle of mass can have a momentum, nothing else. There are no light particles or photons. Wave-particle or particle-wave are oxymorons.

There is no momentum in propagation of light. Motion or cyclic field variation in wave propagation and the direction of propagation are 90 degrees out of phase. There is no propagation of light if there is a motion in the direction of propagation of light. Motion of a mass and the direction of motion are in-phase. Motion of a mass has a momentum since the motion is in the direction of motion. There is no momentum in the absence of a mass. Light is not relative and has no momentum. If light consists of a momentum, we could be able to bring light to a complete stop by an equal and opposite momentum. We cannot bring light to a halt by any means since light has no existence without propagation. If light carries a momentum, that momentum must be nullifiable, light must be stoppable, light should be able to gain or lose

momentum, all of which are impossible. Light cannot carry a momentum.

Lemma: Nullifiability

If any entity has a momentum, the momentum of that entity must be able to be nullified and brought to a complete stop by an equal and opposite momentum.

Lemma: Stopability

If an entity has a momentum, we should be able to stop it. Light cannot be stopped. Any entity that does not have a standstill existence cannot carry a momentum. Light has no standstill existence since light has no existence without propagation, and hence light cannot carry a momentum.

Lemma: Losebility and Gainability

Any entity that neither gains nor loses momentum in a collision cannot carry a momentum. Light neither gains nor loses the momentum in a collision since the speed of light is a constant determined by the medium, and as a result light cannot carry a momentum.

It is only a change of medium that can change the speed of light, not an external force or momentum. Speed of light cannot be changed by an external force. If light carries a momentum, speed of light will not be a constant even in a vacuum in the presence of an external force such as gravity. Light cannot carry a momentum. Propagating waves cannot carry a momentum. Only a motion of mass has momentum. If light carries a momentum, Maxwell's equation will no longer hold for propagation of light.

Light cannot be brought to a complete stop by any means since light has no existence without propagation. Light has no momentum. Any entity without momentum cannot be relative. Any entity that cannot have a momentum cannot be a particle. Massless cannot have a momentum. Momentum-less light cannot be a particle, and hence there are no light particles or photons. Light cannot consist of photons since light is not relative.

Although both Newton and Einstein claimed that it is not possible to experimentally obtain the speed of an inertial frame from within the frame, the speed of an inertial frame can be obtained experimentally by an observer on an inertial frame using a burst of light since propagation of light is not relative.

There are two aspect to the motion of an object, absolute motion, and relative motion. Absolute motion of an object is the motion of an object of mass relative to the propagation of light. Motion of object of mass relative to another object of mass is the relative motion. There is no relative motion without absolute motion. Relative motion is reversible symmetric. There is no reversible symmetry in absolute motion.

An observer on a frame can determine the relative speeds of any other frame. An observer on a frame can determine the absolute speed of his/her own frame. As a result, any observer can determine the absolute speed of any other frame.

There is also no relative motion without mass. Massless cannot be relative. For relative motion to exist, there must at least be two objects of mass. It is only an object of mass that can be relative with respect to another object of mass. Light is massless and momentum-less, and hence light cannot be relative. Light cannot propagation relative to objects in motion. If you cannot stop it, it is not relative. If you can stop it, it is relative. There is no motion in propagation in the direction of propagation. Motion in propagation is always orthogonal to the direction of propagation. Propagation of light has no momentum. Propagation of light is absolute, not relative. Motion of masses can be measured relative to the propagation of light since the propagation of light is independent of the motion of masses. Motion of a mass relative to the propagation of light is the absolute motion of that mass. Mass is not relative. Mass is the same for every frame of reference. It is the motion of a mass that is relative.

The aim of Theory of Relativity is to find out how the nature guarantee that the relative speed of an object does not exceed the speed of propagation of light. Theory of Natural Relativity guarantees that no relative speed of an object of mass exceeds the speed of the propagation of light by using a natural non-linear frame-to-frame transform while avoiding any physical changes to the object and the time. No relative motion can change the time and the physical characteristic of an object, namely, the mass and dimensions. Reversible symmetric relativity cannot alter the physical characteristics of an object and time.

For Newton and Einstein, there is no absolute motion, all the motions are relative motions. Neither Newtonian motion mechanics no Einstein theories deal with the absolute motion. Absolute motion is real and there must be a mechanism in nature to guarantee that the absolute motion of an object does not exceed the speed of the propagation of light. Any guarantee that the relative speed of an object of mass does not exceed the speed of light does not prevent the absolute speed of an object from exceeding the speed of the propagation of light. Special Relativity has no mechanism to prevent an absolute speed of an object from exceeding the speed of light. In fact, physics, in general, has no mechanism to guarantee that the absolute motion of an object does not exceed the speed of light.

Universal Relativity [3,4] guarantees that the absolute speed of an object does not exceed the speed of the propagation of light through volume contraction while keeping time and mass of an object unaltered. Absolute motion of an object results in mass density dilation. When the absolute speed of an object reaches the speed of the propagation of light, mass density reaches infinity turning an object of mass into a black hole. Mass of a blackhole is finite, it is the mass density that is infinite. Mass of an object is

independent of its speed. It is the mass density of an object that increases with the speed. Motion of an object cannot generate new mass. Time and mass of a moving object remains unchanged as it turns itself into a blackhole.

Lemma: No Mass Generation in Motion or Collision

Motion of an object of mass cannot generate mass. Collision of objects of mass cannot generate mass.

Although the motion dynamics of an object on an inertial frame under relative motion is frame independent, motion dynamics of an object on an inertial frame under absolute motion is dependent of the absolute speed of the frame. The turning of object into a black hole under absolute motion, as the speed of the absolute motion of an object reaches the speed of the propagation of light, is a good indication of the frame dependence of the absolute motion dynamics.

Relative distance of an object depends on the ratio distance/time, not the time itself. The relative time of an object in Special Relativity depends on the ratio distance/time, not the distance itself. Both relative distance and relative time in Special Relativity depend on the ratio distance/time, which is the constant speed of an object and it is independent of the position and time.

Relative position of an object depends only on the position of the object, the speed of the frame, and the speed of the object; it does not depend on the time for an object moving at constant speed. Relative position is independent of time. In Lorentz Transform and Special Relativity, relative time depends on the time, the speed of the frame, and the speed of the object; it does not depend on the position for an object moving at constant speed. In Lorentz Transform and Special Relativity, relative time is independent of position, and relative position is independent of time for any object moving at constant speed. As a result, space and time are independent. There is no spacetime.

The linear distance between two position in space is independent of the positions. As a result, the time lapse is independent of the positions themselves and depends only on the distance travelled and the speed chosen to travel the distance.

For a given distance from the origin of a coordinate system, position is not unique; there are infinite number of positions with the same distance. To travel a given distance, there are infinite speeds to choose from resulting infinite time lapses. The so-called spacetime interval or the proper time in Special Relativity is not unique since the distance is not unique for a position, and the speed one can choose to travel a distance can be of any value.

The time lapse to a position is independent of the position, and the position is independent of the time lapse. There is no spacetime. Both Special Relativity and General Relativity are not unique, and hence they are not mechanisms of nature. Any mechanism of nature must be unique. Special Relativity and General Relativity are hypothetical, unnatural, unreal, and only exists in the mind of religious believers of Lorentz transform and Special Relativity.

The claim that the deflection of light near the sun confirms the General Relativity is false, simply preposterous. The deflection of light near the sun has nothing to do with the General Relativity. A gravitational object creates a density gradient in the surrounding medium. It is this density gradient of the medium that bends light near the sun. Gravity has no direct effect on the propagation of light. Gravity does not bend light. In the absence of a medium, there will not be a deflection of light near the sun. The claim that gravity prevents light coming out of a black hole is false. It is not the gravity that prevents light coming out of a black hole. It is the total inward reflection light due to the high density that prevent light coming out of a black hole making black holes black.

The Theory of Natural Relativity guarantee that the relative speed of an object does not exceed the speed of propagation of light. Universal Relativity guarantee that the absolute speed of an object does not exceed the speed of the propagation of light. Both Natural Relativity and the Universal Relativity together guarantee that the speed of an object are withing the bounds established by the nature while ensuring that the mass and time remained the unaltered at any speed.

The claim that light affects gravity is a result of experimental and interpretation errors, just as the claim that the gravity bends light is an interpretational error in the observational data. If the experiments that are used to investigate the effect of light on gravity had been done in a vacuum chamber, the conclusions would have been completely opposite. The change of distance between two objects of mass in the presence of light in between the masses has nothing to do with gravity; it is solely a result of light affecting the medium. The change of weight of an object in the presence of light above or below a mass is not a result of light affecting gravity; it is solely a result of light affecting the medium at the location light is present. The change of medium density in the presence of light generates an additional force on an object resulting the net force on the object is different from the gravitational force alone.

Light cannot change gravitational force. The changing weight of an object in the presence of light over or under an object is not an effect of light on gravity, it is solely a result of the effect of light on the medium, air. The diffraction of light near a gravitational object is not a direct effect of gravity on light, it is solely a result of the effect of gravity on the medium surrounding the gravitational object. Gravity cannot bend light. Light has no effect on gravity. It is the medium that undergoes the changes in the presence of gravity or light. It is the changes in the medium in the presence of light that drives the changes in the weight measurement of an object of mass. It is the change of the medium density in the presence of

gravity that changes the direction of propagation of light. There is no diffraction of light or a change in the direction of propagation of light near a gravitational object in the absence of a medium. There is no change of gravitational force between two masses in the presence of light when there is no medium. The propagation of light and gravity are mutually independent.

Any effect of light on a mass is a result of an effect of light on the medium. Any effect of gravity on the propagation of light is a result of an effect of gravity on the medium. It is solely the medium that generates an impression of an interaction between the light and gravity. Light and gravity are mutually independent.

Massless has no momentum. Light has no momentum. A beam of light cannot move an object of mass. Light cannot exert a momentum or a force. Light has no momentum and has no mechanical energy and hence light cannot do mechanical work directly. It does not matter how big wings you are using to harness mechanical energy in space, light cannot move a spacecraft in space since light has no momentum if the space is a vacuum. However, a medium can generate a momentum in space in the presence of light, which you can use directly to do mechanical work. Using large wings, you can harness the momentum generated by a medium in space in the presence of light to put a spacecraft in motion in space.

In the presence of a medium, light changes the density of the medium locally, which in turn generates pressure variations resulting in a momentum in the medium that can be harnessed to put a spacecraft in motion in space. Light cannot generate a momentum on a spacecraft in the absence of a medium. If you can harness a momentum in space to keep a spacecraft in motion in space or to do some work, it is a clear indication that the space is not empty, space has a material medium. If you can get a spacecraft in motion without any power source in space, what you are harnessing is the momentum generated by a material medium because of the density changes in the medium in space due to the presence of light. Make no mistake, light has no momentum to harness. It is the medium that generates a momentum in the presence of light.

The forcing of an artificial momentum on light is one of the biggest blunders in Special Relativity, Quantum Mechanics, and the Modern Physics in general. There is no excuse for such blunders. Today, although many consider the forcing of a momentum on light as a one big blunder, human pride prevents them from accepting it as a blunder, sad reality. Once the universal fact that light cannot carry momentum is accepted, everything in physics will be back in place. Religious doctrines such as Special Relativity, Quantum Mechanics, and the Modern Physics in general will disappear from textbooks, from schools, from universities, from humanity, from earth, for good.

For the propagation of light to be relative, although it is necessary for Maxwell's equations to be transformable onto an inertial frame, it is not sufficient. For propagation of light to be relative, Maxwell's equations must also be transformable onto accelerating frames at any instant of time. In addition, the transformation must be unique for both inertial frames and accelerating frames. The transformation of Maxwell's equations onto an inertial frame is not unique [2,3]. Structure invariant transformation of Maxwell's equations onto an accelerating frame is not possible. As a result, propagation of light is not relative.

Since the Modern Physics is founded upon the false conjecture that the propagation of light is relative, the collapse of Modern Physics is imminent. Since light has no momentum, and does not behave as particles, Quantum Mechanics has no existence [6,7]. Mysterious Quantum Mechanics and Special Relativity have no place in science or in physics, except in voodoo-physics some people seem to practice religiously. If you are a religious believer of Quantum Mechanics, here is an experimental challenge for you to snap out of the hypnotized state.

Quantum Challenge:

Send two atoms through a Stern-Gerlach experiment one after the other. The first one will always align in the direction of the Stern-Gerlach magnetic field (Spin-Up) while the second one will align against the magnetic field (Spin-Down). Take the Spin-Down atom to a different place. Check the Spin using a Stern-Gerlach device. See if you can show it is still Spin-Down. You cannot.

Single atom through a Stern-Gerlach device is always Spin-Up irrespective of the actual spin of the atom [6,5]. Stern-Gerlach device is not a spin setting or spin measuring device. Orientation of an atom in a Stern-Gerlach device is volatile, not permanent. A single atom sent through a Stern-Gerlach device is always Spin-Up irrespective of its original orientation, even when the atom is taken from Spin-Down beam from another Stern-Gerlach device.

It is not possible to change the Spin Magnetic Moment or the spin of an atom permanently. You cannot set a spin of an atom to any direction you want permanently using a Stern-Gerlach Device. You cannot measure the direction of spin of an atom using a Stern-Gerlach device [6].

Corollary:

Stern-Gerlach Device is neither a Spin-Setting device nor a Spin-Measuring device [6].

References

1. Kennedy Robert E., "Einstein's Major Papers, Oxford University Press, 2012.
2. Dahanayake Bandula W., "Maxwell's Equations and Propagation of Light: Not Relative", International Journal of Astrophysics and Space Science, vol. 3, Issue 6, Dec. 2015.

3. Dahanayake Bandula W., "Universal Relativity: Absolute Time and Mass", International Journal of Astrophysics and Space Science, vol. 3, Issue 1, March. 2015. [This paper only applies to Absolute Motion, not to the relative motion. Relative speed must be changed to absolute speed. I failed to distinguish between the two at the time. The derivation is for absolute motion, not for the relative motion. It is only the absolute motion that contracts the volume of a moving object. Relative motion cannot change object and time. No motion can alter mass of an object and time.]
4. Dahanayake Bandula W., "General Universal Relativity (GURL): No Big Bang", International Journal of Astrophysics and Space Science, vol. 4, Issue 4, Aug. 2016. [This paper also applies to Absolute Motion only. Replace the relative motion with absolute motion. The rest remains the same. The derivation is for the absolute motion, not for the relative motion. It was a mistake in my part for not clearly distinguishing the difference. It is the absolute motion that contracts the volume. Relative motion cannot change object and time. No motion can alter mass of an object and time.]
5. Dahanayake Bandula W., "Quantum Oscillator: One-Line Solution; Infinite-Span Wavefunctions are Not States - No Quantum Tunneling (Paused-Time QM is Not Testable by Run-Time Experiments)", Journal of Multidisciplinary Engineering Science and Technology (JMEST), vol. 7 Issue 10, October-2020.
6. Dahanayake Bandula, "Quantum Spin-1/2: Genesis of voodoo-Physics (Theoretical Blunder Wrapped in Bogus Stern-Gerlach Experiment) (From QM non-sense Back TO common-sense Reality), Journal of Multidisciplinary Engineering Science Studies (JMESS), vol. 6, Issue 5, May-2020.
7. Dahanayake Bandula, "Quantum Mechanics: A Double-Slit Blunder", Journal of Multidisciplinary Engineering Science Studies (JMESS), vol.3 Issue 8, August-2017.
8. Dahanayake Bandula, "Quantum Uncertainty: Deception in Inception", Journal of Multidisciplinary Science and Technology (JMEST), vol. 6, Issue 4, April 2019.
9. Dahanayake Bandula, "Universe in a New Light: Inconvenient Reality", Journal of Multidisciplinary Engineering and Science Studies (JMESS), vol. 5, Issue 7, July 2019.
10. Rancourt Louis, "Effect of Light on Gravitational Attraction", Physics Essays, 24, 4 (2011).
11. Rancourt Louis and Philip J. Tattersall "Further Experiments Demonstrating the Effect of Light on Gravitational", Applied Physics Research, vol. 7, No. 4, 2015.
12. Dahanayake Bandula W., "General Orbit Dynamics (GOD): Dark Nothing (No Dark-matter, No Dark-energy, No Space-time, No Surprise)", Journal of Multidisciplinary Engineering Science and Technology (JMEST), vol. 6 Issue 3, March-2019.