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Quantum Uncertainty and Superposition: Deception in Inception; LHC-Blunder

(Direct Manifestation of a Fallacious Model)

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***Abstract*—Particles are not waves. Waves are not particles. No particle could be in multiple states concurrently. The notion of microscopic particles being at multiple states concurrently stemmed from hidden fallacies of the Quantum Mechanics (QM) itself. QM is rooted on the claim that matter particles behave as waves, and the [position, Momentum] Pair constitutes a Fourier Transform Pair (FTP); both claims are false. There is no inherent uncertainty in a FTP. Although the matter particle wave based on de Broglie conjecture is necessary to make the false claim that the [position, Momentum] Pair is a FTP, it is not sufficient. For the [position, Momentum] Pair to be a FTP, a matter particle must also be at infinitely many positions and momentums concurrently; the genesis of Quantum Uncertainty and Quantum Superposition. It is our forcing of the [position, Momentum] Pair to be a FTP in Quantum Mechanics that required the state of a matter particle to be at infinitely many states concurrently. For a given position at any given time, the momentum of a particle is unique, and vice versa. The [position, Momentum] Pair is not a FTP, and as a result, Heisenberg Uncertainty Principle (HUP) is false. HUP has neither an uncertainty nor a principle. HUP is a result of Fourier Transform Ignorance. Schrodinger provided a hypothetical wave equation for the mythical de Broglie particle wavelength by representing the observables of a matter particle as Eigen-Values under the invalid assumption that mechanical energy is quantized. Mechanical energy does not come in quanta. Eigen-Values are not unique, and hence the observables cannot be represented uniquely by Eigen-Values. Uncertainty of the state of a particle in the Schrodinger equation is the direct result of its non-unique representation of the observables as Eigen-Values. The state of a charge particle cannot be inherently probabilistic or uncertain since the uncertainty of a charge particle breeds radiation. If electrons in an atom are uncertain or probabilistic, then, the resulting radiation energy loss leads to the collapse of the atom; QM is suffering from the very problem it is invented to prevent. Angular momentum is a vector. Vectors cannot be quantized. The angular momentum of an electron in a multi-electron atom is not conserved, and hence cannot be quantized. As a result, the Bohr Atom is invalid. The only path an electron in an atom can take without a radiation loss is a circular orbit at uniform speed. The orbital motion remains universal independent of the size whether it is orbiting electrons under electrostatic forces or orbiting objects under gravity. Nothing is uncertain for particles while everything is uncertain for living conscious beings. Quantum Uncertainty and Superposition are the direct manifestations of a fallacious model present only in the model itself, not in the nature. Quantum Mechanics is a mathematically-invalid Crafted Prophecy (mainly-CRAP); a deception in inception, not a natural phenomenon, not the reality. It does not matter how high energies are used, a collision of two protons does not produce more protons. When charge particles are accelerated and then decelerated in a collision in the Large Hadrons Collider (LHC), it generates extraneous electromagnetic radiation bursts (ex-EMBs), which are non-separable from the inherent electromagnetic wave bursts (in-EMBs) unleashed in the disintegration of the colliding particles. It is the inclusion of these ex-EMBs as a product of particle collision that led to a bogus new particles zoo with the false impression of new mass creation. A collision in LHC does not create mass. LHC is simply useless, unless the ex-EMBs are removed from the crash site. LHC is a big-money design blunder. Relative-time and time-dilation are bogus. Time is not relative. No time-dilation is required for muons to reach the ground. If time is relative, Global Positioning System (GPS) is not possible. GPS does not rely on clients' data for the same reason why IKEA does not rely on the customers' screwdrivers; it is to make the GPS client independent.**

Keywords—Quantum-Mechanics; Superposition; Bohr-Atom; Particle-Waves; Relativity; Uncertainty; Schrodinger-Equation; GPS; LHC

I. INTRODUCTION

When Maxwell's equations were introduced, Lorentz made an effort to transform the Maxwell's

equations on to a moving frame in order to examine if the Maxwell equations hold true relative to a moving frame; this effort was not completely successful [1]. Later, continuing on the Lorentz's work, Einstein thought, though incorrectly, that he succeeded by modifying the Lorentz transform for a moving frame using a parameter from the Special Relativity as a transformation factor and demonstrating that the Maxwell equations hold true relative to a moving frame of uniform speed; the fallacy of that claim went unnoticed for long time to come. This led to the misconception that the electromagnetic waves or light were relative. The light is in fact not relative [6]. The modified Lorentz transform came to be known as the Lorentz-Einstein transform [1]. The transformation of the Maxwell equations on to an inertial frame obviously intermingled with the Theory of Special Relativity through its use of the transformation factor from Special Relativity. In Special Relativity, it was claimed that the time is relative and depends on the space – the origin of the space-time. Further, it was argued, if the light is relative, the light must have a momentum. The fact is that the mass-less has no momentum. Propagation of light has nothing to do with momentum. Electromagnetic energy has no association with a mass and hence has no momentum. It is only the mechanical energy that is associated with mass and hence has a momentum. Yet it was assumed incorrectly that the light possesses a momentum. It was also argued incorrectly, if the light has a momentum, since the light is travelling at the speed of light c, the energy e of the light could be written as,

$$e=pc \tag{1.1}$$

where, e=electromagnetic energy, p=momentum, c=the speed of light.

The relationship e=pc is invalid and meaningless, yet it is everywhere physics. It is theoretically incorrect, logically invalid. Since light is not relative [6], it does not hold true.

In 1901, Max Plank suggested that the electromagnetic energy comes in discrete quantities proportional to the frequency, e=hf, where, h is the Plank constant, f is the frequency of electromagnetic wave. When you see this relationship, e=hf, you cannot stop asking the question, 'how long do I have to wait to get energy e from a wave of frequency f?' Without a specified time duration, the relationship e=hf itself is simply meaningless. Extending on the Plank's work, Einstein further stipulated that the light consists of particles, and the energy of a so-called light particle is given by the Plank's energy-frequency relationship, e=hf. These so-called light particles later came to be known as photons, mass-less particles. Although the photons are mass less, if the light is relative, then the mass-less photos appears to have a momentum. A mass-less particle having a momentum is indeed very counter intuitive to the definition of momentum since the momentum is defined as the mass of an object times its velocity. Further, the concept of mass-less particles is imaginary, not real. In fact, there are no mass-less particles in nature. Light do not constitute particles [5,6]. However, for now, let us consider how the momentum of a photon was incorrectly linked to the wave length, and how it was extended to matter particles in the de Broglie conjecture.

The energy of a photon or a light particle is given by,

$$e=hf \tag{1.2}$$

where, e=the electromagnetic energy of a photon, h=Plank constant, f=electromagnetic frequency.

Combining equations (1.1) and (1.2),

$$pc=hf \tag{1.3}$$

Since $c=f\lambda$, where, c is the speed of light and λ is the wave length of the electromagnetic wave, we have,

$$p=h/\lambda \tag{1.4}$$

$$1/\lambda=p/h \tag{1.5}$$

So, if the light is relative, in the case of so called photons or light particles, we have,

$$\lambda=h/p \tag{1.6}$$

According to this relationship, if the light is relative, the momentum of a so-called light particle or photon is inversely proportional to the wave length of the electromagnetic wave. Even though the light has no mass, and mass-less objects cannot have a momentum, the assumption that the light is relative presented a justification to assign a momentum to a mass-less photon or a light particle; the genesis of all the ills and the spookiness in modern physics. This is where physics took a turn out of the reality, out of scientific realm to a mysterious wonderland.

On the other hand, if the light is not relative, then the light has no momentum, and as a result, the relationship $\lambda=h/p$ has no existence in reality,

$$\lambda\neq h/p \tag{1.7}$$

When the light is not relative, the Special Relativity does not hold true and everything that is based on the Special Relativity will collapse, and become meaningless or non-existent. As it is shown in [6], light is not relative. As a result, the Special Relativity as well as any development based on Special Relativity will collapse, no longer hold true, or fall apart. However, it was only recently that the light was proven to be not relative [6]. There had been many developments taken place under the assumption of 'light is relative' before it was proven that the 'light is not relative' as a mathematical fact.

While many activities on Special Relativity, under the assumption of light is relative, are being taken place, a modern day prophet appeared with a revelation; it was de Broglie. De Broglie appeared with a crafted prophecy (CRAP) that the relationship $p=h/\lambda$ holds true not just photons, but for any matter particle, any object, or any mass in the universe; there was no proof, just a claim. De Broglie conveyed this mysterious revelation to Einstein, who was doing his own kind of preaching and chanting, 'time is relative, mass is relative, and light is relative', using his own semi-proof as the reason. It is important to remember, if you are using a mathematical transform to show that

the light is relative, that transform must be unique. The Lorentz-Einstein transform that is used to show that the light is relative is not unique. When the Lorentz-Einstein Transform is not unique, the Special Relativity does not hold true, and it is meaningless and non-existent. When Einstein heard of the de Broglie conjecture, he was intrigued to notice the duality between his conjecture where 'the waves are assumed to behave as particles' and the de Broglie's conjecture where 'the matter particles or masses were assumed to behave as waves'. Instantly, seen the reciprocity, Einstein was a staunch believer of the de Broglie conjecture, who responded promptly, "you have uncovered a veil".

Although there was no proof to the idea that λ=h/p applies to any object of mass, one by one believers congregated religiously to the temple of λ=h/p for any matter particle. Some even used a beam of matter particles in place of a beam of light that is used in the double-slit experiment with a phosphor screen to falsely justify this false claim. It was also claimed that the bright spots in the form of fringes that appear on the phosphor screen for an input beam of matter particles in the double-slit experiment is a justification that a matter particle acts like wave with λ=h/p. What they didn't bother to recognize is that the bright spots on the phosphor screen in the double-slit experiment is not a result of matter particles colliding with the screen. The fact is that there is no one-to-one relationship between the input particles and the bright spots on the phosphor screen in the double-slit experiment. Even a single charged matter particle can produce fringes of bright spots on the phosphor screen in the double-slit experiment [3]. If they have bothered to check for particles behind the double slit barrier, they would have found none. All the particles will be stopped by the double-slit barrier. When a moving charge particle is stopped at the double-slit barrier, it will generate electromagnetic waves that pass through the two slits and interfere on the phosphor screen generating an interference pattern. It is the peaks of these interfering electromagnetic waves that appear on the screen as bright spots, not some mysterious particles with mysterious behavior colliding with the phosphor screen.

So, surprisingly, as it has been the custom in the Quantum Mechanics, whenever they see the momentum p, all they have to do is, divide the plank constant h by the momentum p, they have a mysterious matter particle wave of wavelength λ=h/p. Nobody knows what is even waving here in a matter particle. As we have seen in the development towards the de Broglie conjecture, whenever they see the energy e, it doesn't matter what kind of energy it is, they plug in e=hf, e=pc or $e=mc^2$. Now, they have an additional arsenal. Whenever they see the momentum, they plug in λ=h/p. Nobody knows what is waving in a matter particle at de Broglie wavelength. Just like a rabbit comes out from a magician's hat, a wavelength λ for a matter particle pops out from the de Broglie conjecture. De Broglie proclaimed that a particle behaved as a wave of wavelength λ=h/p. However, de Broglie did not have a wave or could not explain what was waving in a matter particle. For some reason, it was never revealed to himself from the same dark beyond. However, if there is a wave length, there must be a wave equation. You cannot have a wavelength without a wave, or wave without a wavelength. Even though, de Broglie couldn't find a way to bring up some kind of mysterious wave equation for the mysterious relationship λ=h/p of a matter particle of mass m, one of his contemporaries could. It was Schrödinger who could make few incorrect, invalid or both mathematically and logically illegal maneuvers to find a wave function that fits de Broglie conjecture.

At first, Schrödinger made the incorrect assumption that the de Broglie conjecture was true. Then, he argued that for a matter particle to have a wavelength there must be some kind of wave of that wave length. Schrodinger looked for ways to create those mythical de Broglie waves or matter particle waves. He tried to find a way to fit the plane wave equation into a matter particle. He turned to the process of reverse engineering. He made use of what he already had. He had the ubiquitous relationships e=hf and λ=h/p. Schrodinger assumed that e=hf and λ=h/p were true for a matter particle of mass m, which were indeed not true as we are going to show later. He disregarded the distinction between the electromagnetic energy and the mechanical energy, and treated them as equal. He also use the plane wave equation ψ(x,t),

$$\psi(x,t)=A\exp(j2\pi x/\lambda)\exp(-j2\pi t/T) \quad (1.6)$$

where, t=time, T=period, 1/T=f, f=frequency, 2π/T=ω, the angular frequency, x=position, λ=wavelength
1/λ=s, s=srequency, 2π/λ=k, k=angular srequency or wave number, A is the amplitude.
Schrodinger's logic was quite simple. Why not plug in E=hf and λ=h/p in the plane wave ψ(x,t) and see what it leads to. So, by doing exactly that, Schrodinger obtained,

$$\psi(x,t)=A\exp(jpx/\hbar)\exp(-jEt/\hbar) \quad (1.7)$$

where ħ=h/2π.

There was one more thing that Schrodinger had to take into consideration, the energy content of a matter particle. The total energy of a matter particle is the kinetic energy and the potential energy of the matter particle, the mechanical energy. The total mechanical energy of a matter particle, E_m is given by,

$$E_m=(p^2/2m)+E_P \quad (1.8)$$

where, E_P= potential energy of the matter particle,
m=mass of the matter particle, E_m=the total energy of the matter particle, p=the momentum of the matter particle.
It was assumed blindly that the energy E in equation (1.7) is same ass mechanical energy E_m, or $E=E_m$. With that wrong assumption, the quantum mechanical wave was born. With the wave equation,
ψ(x,t)=A exp(jpx/ħ)exp(-jEt/ħ),

together with mechanical energy relationship of the particle of mass m,
$E_m=(p^2/2m)+E_P$, and $E=E_m$,
spooky new claims started to emerge. We will see later how these two equations give rise to the famous wave equation bearing Schrodinger's name. However, there is one more thing that has to be made clear. By looking at the function exp(jpx/ħ), if one claims that the position and the momentum of a matter particle to be a Fourier Transform pair, that person has no clue to what the Fourier Transform is. As we are going to show later, although the functions exp(jkx) and exp(-jωt) are Fourier Transform functions, the functions exp(jpx/ħ) and exp(-jEt/ħ), where $E=E_m$, can never be Fourier Transform functions.

The mere ignorance of the Fourier Transform led people to consider that exp(jpx/ħ) and exp(-jEt/ħ), where $E=E_m$, to be Fourier Transform functions; this incorrect interpretation led to the following incorrect conclusions:

1. (x, p) is a Fourier Transform pair (not true)
2. (E, t) is a Fourier Transform pair (not true if E is mechanical energy)
3. $\Delta x\Delta p\geq h$, the Heisenberg uncertainty principle (not true)
4. $\Delta E\Delta t\geq h$, the Heisenberg uncertainty principle (not true if $E=E_m$)

where, Δx=the precision of the position, Δp=the precision of the momentum, ΔE=change of energy, Δt=change of time.

Mechanical energy does not come in quanta and hence $E_m\neq hf$

Heisenberg uncertainty principle ($\Delta x\Delta p\geq h$, $\Delta E\Delta t\geq h$), which states that the precision of the position of a matter particle can only be attained at the expense of the precision of the momentum of a matter particle and vice versa; this became a household cliché. However, as we are going to demonstrate later, the Heisenberg uncertainty principle does not hold true since [position, Momentum] Pair and [mechanical energy, time] Pair do not constitute Fourier Transform pairs.

When we plug in e=hf and λ=h/p in the wave equation to obtain the Schrodinger equation or the wave function for a matter particle, we are representing the observables such as the position, momentum, and energy as Eigen-Values of operators. In the Schrodinger equation, the observables are Eigen-Values. This is the genesis of the quantum spookiness – the downward slide of the physics into mystique. Schrodinger equation has turned science into mysterious black magic where matter particles appear and disappear with no known reason. Houdinification and Voodoofication have taken the prominence over reality in quantum physics with the representation of the observables as Eigen-Values in the Schrodinger wave equation.

As it is shown in [6], the Lorentz-Einstein Transform (LET) is not unique. As a result, time is not relative [6,7,8]. Time does not depend on space. There is no space-time. Since the light is not relative, λ=h/p relationship does not hold true; it is incorrect, λ≠h/p. De Broglie conjecture λ=h/p is non-existent, invalid and meaningless. In fact, as far as light is concerned, the momentum has no meaning since light has no mass. Light does not propagate relative to observers or moving objects. Once the light is out of a source, the direction of light is determined by the density gradient of the medium, nothing else. Momentum has a meaning only for objects with mass. Therefore, for light or electromagnetic waves, or for any kind of wave λ≠h/p. Light is never a particle [5,6] and λ≠h/p. The relationship λ=h/p is not just wrong, no such relationship exists.

Copenhagen Interpretation or more accurately the Berlin-Hagan Interpretation is simply a particle voodoo-fication or black magic, not the reality.

[position, Momentum] Pair of a particle is not a Fourier Transform Pair and hence Heisenberg Uncertainty Principle does not hold true.

Here, we show that the Heisenberg uncertainty principle (HUP) does not hold true. The position x and the momentum p of a matter particle are not a Fourier Transform Pair (FTP). Eigen-Values cannot uniquely represent the state of a real world system or a particle, any particle whether it is microscopic or macroscopic. If the observables are represented as Eigen-Values, observables will not be unique. The wide spread belief that a quantum matter particle can be in many states concurrently is a result of Fourier Transform Ignorance (FTI). Schrodinger equation does not hold true. There is no inherent spookiness to quantum matter particles. The state of a quantum matter particle is certain. What made the matter particles spooky is the non-unique representation of the observables of a matter particle in the Schrodinger equation; spookiness is not an inherent characteristic of the matter particles themselves. It is not possible to correct the fundamental error in Quantum Mechanics, the error due to the non-unique representation of observables of a matter particle in Quantum Mechanics, just by turning to a Black-Magic Interpretation known as Copenhagen Interpretation or more accurately, Berlin-Hagan Interpretation (Copenhagen Interpretation with a major influence from Berlin).

Vectors cannot be quantized.
Time-varying quantities cannot be quantized.

The angular momentum of an orbiting electron is a vector. Vectors cannot come in quanta. Vectors do not come in quanta. Vectors cannot be quantized. The angular momentum of an electron in a multi-electron

atom is not conserved. It is the total angular momentum of all the electrons in an atom that is conserved. Non-conserved quantities such as angular momentum of an electron in a multi-electron atom cannot be quantized. Hence, the Neil Bohr Atomic model that was founded upon the quantized angular momentum of an electron is incorrect, invalid.

II. **De Broglie BIZARENESS**

According to the de Broglie conjecture, any object of momentum p behaves as a wave of wavelength λ=h/p. De Broglie wavelength depends only on the momentum p, not the object itself; the object could be microscopic or macroscopic. This creates a conundrum; for a given momentum, there is no way to distinguish whether the object is microscopic or macroscopic. If a microscopic matter particle of mass m and a macroscopic object of mass M have the same momentum p, their wave behavior will be the same; they have the same wavelength; they have the same wave function. As a result for given matter particle wave, there is no way to distinguish if the matter particle wave is a matter particle wave of a slow-moving macroscopic object of mass M or a matter particle wave of a fast-moving microscopic matter particle of mass m. If there is a matter particle wave, it could be due to a macroscopic object of momentum p or due to a microscopic matter particle of momentum p. If the position of a microscopic matter particle of momentum p is uncertain as it preaches in the Quantum Mechanics, the position of a macroscopic object of momentum p will be equally uncertain by the same characteristic probability.

Theorem: Bizarreness Theorem

Both microscopic and macroscopic objects have the same wavelength if the momentum of the microscopic object is the same as the momentum of the macroscopic object, and hence the behavior of a macroscopic object at lower speed near stand-still will be identical to the behavior of a microscopic matter particle at a higher speed.

Proof: Consider a microscopic object of mass m travelling at speed v. Then, the momentum of the microscopic matter particle p is given by, p=mv. The de Broglie wavelength λ is given by, λ=h/p. Substituting for p, we get,

$$\lambda=h/(mv). \quad (2.1)$$

Let the mass of a macroscopic object be M. Now, we can rewrite the microscopic matter particle wavelength λ as,

$$\lambda=h/[M(m/M)v], \quad (2.2)$$

where, M>>m.

If λ=h/p holds true, then, λ=h/[M(m/M)v] must hold true too. Let,

$$V=(m/M)v, \quad (2.3)$$

then, we get,

$$\lambda=h/(MV), \quad (2.4)$$

where V<<v.

This is the de Broglie wavelength for a macroscopic mass M at speed V, where V=(m/M)v.

The de Broglie wavelength λ of a microscopic matter particle of mass m travelling at speed v is also equivalent to the de Broglie wavelength λ of a macroscopic mass M travelling at speed V=(m/M)v. Therefore, if microscopic matter particles behave as waves and have strange ghostly behavior, all the macroscopic objects including planets and galaxies should also behave as waves. If the position of a microscopic matter particle of mass m at speed v is uncertain, then the position of a macroscopic object of mass M at speed V=(m/M)v will also be equally uncertain, just like the microscopic particle of mass m at speed v. If a microscopic matter particle of mass m at speed v is ghostly, a macroscopic matter particle of mass M at speed V=(m/M)v will also be equally ghostly.

Surprisingly, if the de Broglie conjecture is true, a macroscopic object will have strange ghostly behavior at lower speeds, near standstill. If it is not possible to locate an electron travelling closer to the speed of light in an atom with certainty, it is also not possible to locate nearly stand still (slow moving) objects, planets and galaxies with certainty. The slower the speed of a macroscopic object, the higher is the uncertainty of its position. If a position of an electron of mass m at speed v is probabilistic, then, there exists a lower speed, V=(m/M)v where the position of any object of mass M, whether that object is a golf ball, a planet, or a galaxy, will also have the same probabilistic characteristic as of an electron in an atom.

If we are not able to determine the position of an electron in an atom with certainty, we will also not be able to determine the position of a slow moving macroscopic object with certainty. If it is not possible to determine the position of an electron with certainty, and it is only possible to determine the probability of finding an electron in certain place at certain time in an atom, it will also be the case for a slow moving golf ball, a planet, or a massive object at near stand-still. If de Broglie conjecture is true, the slower the speed of a macroscopic object or nearer the stand-still the massive object is, the harder will it be to determine the position of the object with certainty, which is indeed a contradiction. The de Broglie conjecture is inconsistent and incorrect.

Corollary:

If the de Broglie conjecture is true, the behavior of an electron of mass m travelling at speed v will be the same as the behavior of the earth of mass M traveling at speed V=(m/M)v, where M>>m, V≈0.

Corollary:

If the de Broglie conjecture is true, it is not possible to locate a slow moving near stand-still planet or any slow moving near stand-still object with certainty as much as it is not possible to locate a fast moving electron with certainty.

Corollary:

The de Broglie conjecture is a contradiction to the certainty of the position of a slow moving, or near stand-still, massive object. The slower is the speed of a massive object, the more certain is its position. The de Broglie conjecture of mass behaving as a wave of wavelength λ=h/p does not hold true.

This shows the bizarreness of the de Broglie wavelength or the wave behavior of a matter particle. If a microscopic matter particle behaves as a wave determined by the momentum of the matter particle, then, there also exists infinite number of slower speed macroscopic matter particles having the same behavior as the microscopic matter particle since they all can have the same de Broglie wavelength. This is possible since the momentum of a microscopic object at high speed can be made to be equal to the momentum of a macroscopic object simply by lowering the speed of the macroscopic object. According to the de Broglie conjecture, wavelength of a matter particle is determined only by the matter particles momentum, not by its mass or size itself.

If particles behave as waves, a planet, star or a galaxy at near standstill will have the same de Broglie wavelength as an electron moving near speed of light.

A macroscopic object at near stand-still can have the same momentum as the microscopic matter particle or an electron. Hence, there is no way to restrict the wave matter particle criterion to microscopic matter particles themselves. There is no way to restrict the Quantum Mechanics to microscopic matter particles themselves. However, de Broglie conjecture becomes a contradiction to the slow moving, near standstill macroscopic objects. The de Broglie wavelength and the idea of wave behavior of microscopic matter particles are inconsistent, incorrect, and it is a conceptual as well as a mathematical blunder.

If a particle travelling at speed v on a linear path has a de Broglie wavelength, it will be a contradiction since a particle on a linear path cannot be a wave.

To see the bizarreness of the de Broglie conjecture, consider a particle travelling at speed v on a linear path. According to the de Broglie conjecture, this particle has a wavelength λ=h/p. How can a particle travelling on a linear path have a wave behavior? This is a contradiction. A particle cannot have a linear path and a wave behavior at the same time.

III. FOURIERTRANSFORM PAIR [time, Frequency]

Let us consider a time domain signal ψ(t). The signal ψ(t) is a continuous signal in time domain. If the function ψ(t) is a periodic function in time with period T_o, we have the Fourier Series representation,

$$\psi(t) = \sum_{n=-\infty}^{\infty} \Psi(n\omega_o)\exp(jn\omega_o t) \quad (3.1)$$

$$\Psi(n\omega_o) = \int_{-T_o/2}^{T_o/2} \psi(t)\exp(-jn\omega_o t)dt \quad (3.2)$$

where, ω is the angular frequency given by,

$$\omega_o = 2\pi/T_o \quad (3.3)$$

T_o is the period of repetition of ψ(t), and n is an integer,

$-\infty<n<\infty$, $-\infty<t<\infty$, frequency $f_o=1/T_o$.

When $T_o\rightarrow\infty$, we have the Fourier Transform pair,

$$\Psi(\omega) = \int_{-\infty}^{\infty} \psi(t)\exp(-j\omega t)dt \quad (3.4)$$

$$\psi(t) = \int_{-\infty}^{\infty} \Psi(\omega)\exp(j\omega t)d(\omega/2\pi) \quad (3.5)$$

A. Fourier Transform Pair Requirements

For the pair [ψ(t),Ψ(ω)] to be a Fourier Transform pair, the frequency ω should be free to have infinitely many values concurrently, at any given time. Similarly, the time should be free to have infinitely many values at the time range of the signal ψ(t) at any given frequency ω.

The frequency ω should not be single valued or distinct. The frequency ω should be multi-valued. Many frequencies, ω_1, ω_2, ... should exist concurrently without restriction. This does not constitute a ghostly behavior where a single object appears in multiple states concurrently. All the frequencies here are distinct and present concurrently at the same time. No object or mass can represent the frequency ω since it is not possible for an object to be at many different frequencies concurrently.

We can have all the frequencies ω_1, ω_2, ... concurrently. If ω is tied to a state of a physical system or object with mass m, then [ψ(t),Ψ(ω)] pair is not a Fourier Transform pair since the state of a system or an object of mass m is unique at any time t.

If ω can only be at a single value ω_m at any time t, when ω is tied to an object of mass m as in the case of de Broglie matter particle wave, then,

$$\Psi(\omega)\neq 0,\ \omega=\omega_m \quad (3.6)$$

$$\Psi(\omega)=0,\ \omega\neq\omega_m \quad (3.7)$$

As a result we have,

$$\psi(t) = \int_{-\infty}^{\infty} \Psi(\omega)\exp(j\omega t)d(\omega/2\pi) \quad (3.8)$$

$$\psi(t) = \Psi(\omega_m)\exp(j\omega_m t) \quad (3.9)$$

Although exp(-jωt) is an orthogonal space of infinitely

many dimensions, if ω is single valued, then, exp(-jωt) becomes a single dimensional space exp(-jω$_m$t). If you substitute something else for angular frequency ω that cannot take unlimited range of frequency ω concurrently at the same time, then, it is no longer going to be a Fourier Transform pair.

If we want to substitute a different variable p in place of ω, it is important to make sure that the p is not singled valued like a state of a system or a matter particle with mass m, in order to maintain the infinitely many dimensional orthogonal bases necessary for it to be a Fourier Transform function. In other words, the substituted parameter p in place of ω should be able to be at infinitely many values concurrently with no restriction at any given time. Since a physical object or a person cannot be here and there or at infinitely many places at the same time, any parameter associated with a physical object or a person cannot be substituted for ω. Orthogonal basis exp(-jωt) with a physical object or a person as ω would not be an orthogonal space of infinite dimensions unless the physical object or the person is a mythical mass-less ghost, god or an angel in a fairy tale. Then again, there are no ghosts or gods in reality; they exist only in human mind, nowhere else in the nature or in the universe. The ghosts and gods are the mental concepts human have created for their own advantage; they are not a product of nature. The ghosts and gods only exist in human mind, not in nature.

B. **Electro Magnetic Waves**

There are no wave particles. Electromagnetic waves do not have to be consisted of particles for electromagnetic energy to be quantized. Electromagnetic waves do not consist of spatially random particles or photons. Directional light rays are not possible If light consists of spatially random photons. Electromagnetic waves come in bursts of universal time duration h/e, where, h is the Plank constant and 'e' is the quantum energy or the smallest electromagnetic energy in a burst [5,4]. In the case of an electromagnetic wave of frequency ω, each electromagnetic burst of angular frequency ω consists of energy, E given by,

$$E=\omega\hbar \qquad (3.10)$$

where, ħ=h/2π.

Since E=ne, where e is the quantum energy or smallest energy a burst of electromagnetic wave could contain, and n is an integer, we have,

$$\omega=ne/\hbar \qquad (3.11)$$

Definition: Quantum Energy

Quantum energy e is the smallest electromagnetic energy a burst of electromagnetic wave can consists of. Electromagnetic energy E of any electromagnetic wave burst will be an integer multiple of the Quantum Energy, E=ne.

Since n can be any integer and E=ne, the electromagnetic energy E, although discrete, can be at infinitely many values concurrently at the same time. The electromagnetic energy E is not a single valued quantity. Therefore, we can substitute ω=ne/ħ in the orthogonal basis function exp(-jωt) to form an equivalent orthogonal function exp(-jnet/ħ). In any Fourier Transform, the Fourier Function exp(-jωt) can be replaced with the function exp(-jnet/ħ) since the function exp(-jnet/ħ) provides an orthogonal space of infinite dimensions. The Fourier Transform function must be an orthogonal function of infinitely many dimensions, and the function exp(-jnet/ħ) satisfy these conditions since -∞<n<∞.

Now, we can substitute for ω, ω=ne/ħ in the Fourier Transform Pair [ψ(t), Ψ(ω)] in equations (3.4) and (3.5) to obtain,

$$\Psi(ne/\hbar)=\int_{t=-\infty}^{\infty}\psi(t)\exp(-jnet/\hbar)dt \qquad (3.12)$$

$$\psi(t)=\sum_{n=-\infty}^{\infty}\Psi(ne/\hbar)\exp(jnet/\hbar) \qquad (3.13)$$

This gives us a new Fourier Transform Pair [ψ(t),Ψ(ne/ħ)]. We obtained it from the Fourier Transform pair [ψ(t),Ψ(ω)]. This is possible because we can have infinitely many different wave bursts of energy, E=ne, -∞<n<∞ concurrently, at any time t. Just as in the case of orthogonal space exp(-jωt), the space exp(-jnet/ħ) is an orthogonal space of infinite dimension.

Although electromagnetic energy E, where E=ne, can be at multiple values concurrently at the same time, the mechanical energy E_M, where E_M≠ne, of a matter particle is unique, and cannot be at multiple values concurrently. As a result, the mechanical energy E_M of a matter particle cannot replace the angular frequency ω in a Fourier Transform Function irrespective of whether a matter particle is microscopic or macroscopic. Mechanical energy has no independent existence without an associated matter particle and does not come in quanta.

Property:

For electromagnetic waves, the orthogonal space exp(-jωt) as well as the orthogonal space exp(-jnet/ħ) are of infinite dimension. As a result, Both exp(-jωt) and exp(-jnet/ħ) are Fourier Transform Functions. Both [time t, Frequency ω/2π] and [time t, Electromagnetic Energy ne/ħ] are Fourier Transform Pairs. This does not apply for matter particles.

C. **Non-electromagnetic Waves**

This is where, for almost a century, things have taken a completely wrong turn. Everybody has forgotten the fact that the energy comes in different forms. Not all the different kind of energies is the same. Electromagnetic energy is not the same as the

mechanical energy. The famous $e=mc^2$ is in itself a violation of this fact since e is electromagnetic energy and mc^2 is the kinetic energy. Electromagnetic energy e is not equal to mechanical energy mc^2, or $e \neq mc^2$. One form of energy can be converted to another by suitable means, but they are not equal. Conversion of one form of energy to another form of energy is never complete and is always associated with a loss.

It is only the electromagnetic energy E that is proportional to frequency f, and can be written as,

$$E=hf \quad (3.14)$$

$$E=\hbar\omega \quad (3.15)$$

where, $\hbar=h/2\pi$, and h is the Plank constant.
This relationship holds true only for electromagnetic waves. In the case of mechanical energy E_M,

$$E_M \neq hf \quad (3.16)$$

Mechanical energy does not come in energy bursts or quanta. Unlike electromagnetic energy, mechanical energy is the result of moving bodies. Mechanical energy is a result of moving masses. As a result, mechanical energy is continuous. Mechanical energy constitutes the kinetic energy due to a moving mass and the potential energy due to the relative position of the mass.

Quantum Mechanics deals with the motion of quantum matter particles, matter particles with mass. In Quantum Mechanics, the wave function $\psi(x,t)$ is not an electromagnetic wave. As a result the relationship e=hf does not apply for the wave function in Quantum Mechanics. Since the frequency of $\psi(x,t)$ is not an electromagnetic frequency, $\omega \neq E_m/\hbar$ for a matter particle wave of mechanical energy E_m. For a matter particle wave, the frequency ω in $\exp(-j\omega t)$ cannot be replaced by $E_m/\hbar$.

Electromagnetic energy E can be at infinitely many different values concurrently at the same time, since the angular frequency ω can take infinitely many different values concurrently at the same time. Therefore, $\exp(-jEt/\hbar)$ provides an orthogonal basis of infinite dimension similar to $\exp(-j\omega t/\hbar)$. However mechanical energy E_m of a matter particle and its position x are unique at any given time. The mechanical energy E_m and the position x of a matter particle are single valued at any time. As a result, for a matter particle of mass m, the function $\exp(-jE_mt/\hbar)$ is single dimensional at any given time; it does not provide an orthogonal basis of infinite dimension to be a Fourier Transform function.

The Schrodinger equation is a result of the illegal substitution of the mechanical energy $E_m/\hbar$ in place of frequency ω. In the case of mechanical energy, $E_m \neq \hbar\omega$, and hence it is not possible to substitute $E_m/\hbar$ in place of ω as it had been done in the development of the Schrodinger equation. Hence, the Schrodinger equation is theoretically incorrect and does not hold true.

Property:

Mechanical Energy E_m of a matter particle is continuous, and $E_m \neq hf$.

Property:

The mechanical energy E_m at any given time t is unique for a given matter particle of mass m. As a result, function $\exp(-jE_mt/\hbar)$ is single dimensional and hence does not represent a Fourier Function.

D. **[**time, Frequency**] and [**time, Energy**] Trade-Offs**

The frequency bandwidth of any signal in frequency domain is greater than the inverse time width of the signal in the time domain. If signal in time domain is uniform within the time width Δt, or we have a rectangular pulse of time width Δt, then, its Fourier Transform will be a sinc function with the main lobe ranging from frequency $-1/\Delta t \leq f \leq 1/\Delta t$; the majority of the area will be concentrated within the main lobe even though there exists infinitely many lobes in the spectrum. The frequency spread or the bandwidth of any signal will be always greater than $1/\Delta t$. In order to recover the time domain signal from the frequency domain signal, the bandwidth must be at least the width of the main lobe in the frequency spectrum.

Although the [time, Frequency] Fourier Transform Pair exists for any time domain signal, the [time, Energy] Fourier Transform Pair exists only for electromagnetic signals, nothing else. Let us consider the time-frequency band trade-off for any signal as well as the time-energy band trade-off for an electromagnetic signal separately.

Property:

The [time t, Frequency ω] Pair is a Fourier Transform Pair for any signal in time.

Property:

The [time t, Energy E=ne] Pair is a Fourier Transform Pair only for electromagnetic signals, not for any other signals, where n is an integer and e is the Quantum energy or the smallest energy a burst of electromagnetic wave can consists of.

[time, Frequency**] Trade-Off**

For a Fourier Transform Pair $[\psi(t), \Psi(\omega)]$, the information content on both signals are the same. The frequency spread of $\Psi(\omega)$ is always greater than the inverse of the time spread of the time domain signal $\psi(t)$. If the frequency spread of $\Psi(\omega)$ is Δf and the time spread of $\psi(t)$ is Δt, then, in order to recover the time domain signal $\psi(t)$ from the frequency domain spectrum $\Psi(\omega)$, the bandwidth Δf must be chosen such that,

$$\Delta f \geq 1/\Delta t \quad (3.17)$$

$$\Delta f \Delta t \geq 1 \quad (3.18)$$

$$\Delta\omega\Delta t \geq 2\pi \quad (3.19)$$

The equality occurs when the signal $\psi(t)$ is a Gaussian function. For a Gaussian time domain signal $\psi(t)$, the frequency domain signal $\Psi(\omega)$ is also a Gaussian function.

For any time domain signal
$\Delta f \Delta t \geq 1$

Fourier Transform Pair Band Rule:

The precision both in time and in frequency is not achievable. The precision in time is achievable at the expense of the precision in frequency and vice versa, $\Delta f \geq 1/\Delta t$. In other words, a signal can't be both time limited and frequency limited.

Any [time, Frequency] Pair is bounded by the Fourier Transform Pair Band Rule. The signal can be electrical or mechanical. Any time-frequency Fourier Transform Pair [ψ(t), Ψ(ω)] is subjected to this band limitation.

Lemma:

For any time domain signal, irrespective of whether the signal is electromagnetic or not, the frequency bandwidth Δf and the time width Δt are constrained by, $\Delta f \Delta t \geq 1$. Equality holds when the signal is Gaussian.

Corollary:

The relationship $\Delta f \Delta t \geq 1$ does not hold true for matter particles.

[time, Energy**] Trade-Off:**

In the case of electromagnetic waves, we can replace ω by E/ħ to obtain the Fourier Transform Pair [ψ(t), Ψ(E/ħ)], where E=hf. This substitution strictly limited to electromagnetic signals. This substitution cannot be made with mechanical waves. For electromagnetic waves, since ψ(t) and Ψ(E/ħ) are a Fourier Transform Pair, a signal ψ(t) cannot be both time limited and electromagnetic energy limited. As a result, if the time width of the signal ψ(t) is Δt and the energy bandwidth of the signal Ψ(E/ħ) is $\Delta E/\hbar$, then,

$$(\Delta E/\hbar)\Delta t \geq 2\pi \quad (3.20)$$

$$\Delta E \Delta t \geq h \quad (3.21)$$

where ΔE is the change in electromagnetic energy.
The product of ΔE and Δt cannot be less than the Plank constant h. This is an inherent physical constrain that has nothing to do with an observer.

This relationship applies only to electromagnetic waves. Even though this is relationship looks the same as one half of the Heisenberg principle, it is has nothing to do with the Heisenberg principle. Heisenberg derived his time and energy relationship for quantum matter particles or matter particles of mass. The relationship, $\Delta E \Delta t \geq h$, given here in equation (3.21) does not hold true for any matter particle of a mass whether it is microscopic or macroscopic; it only applies for electromagnetic waves.

Energy of a matter particle is mechanical energy. Mechanical energy does not satisfy the relationship E=hf; for mechanical energy, $E_m \neq hf$. The Heisenberg uncertainty principle is based on the assumption that the position and the momentum of a matter particle are a Fourier Transform Pair; this assumption is wrong. The [position, Momentum] Pair of a matter particle can never be a Fourier Transform Pair. Further, the Heisenberg uncertainty Principle also assumes that the mechanical energy is the same as the electromagnetic energy, which is also wrong. As we are going to demonstrate later, the position and the momentum of a matter particle do not constitute a Fourier Transform Pair, and as a result, the Heisenberg uncertainty principle do not hold true for any matter particle of mass. For matter particles, the [time, Energy] and the [position, Momentum] are not Fourier Transform Pairs.

Lemma:

For electromagnetic waves, the change in the electromagnetic energy ΔE during a time interval Δt is limited by the inverse relationship, $\Delta E \Delta t \geq h$.

Corollary:

The relationship $\Delta E \Delta t \geq h$ does not hold for matter particles since the mechanical energy associated with a matter particle does not come in quanta.

It is only for electromagnetic energy
$\Delta E \Delta t \geq h$.
This is an inherent physical limitation. It has nothing to do with an observer.

Mechanical energy, energy of a particle does not come in quanta

E. **Duration of a Light Burst or Quantum Duration**

Since the electromagnetic energy is quantized and there is a minimum energy a burst of electromagnetic energy can have, the minimum energy change achievable is the quantum energy, and hence,

$$\Delta E \geq e \quad (3.22)$$

where e is the quantum energy, ΔE is the change of energy.
From equn. (3.21), we also have, $\Delta E \Delta t \geq h$.
The relationship $\Delta E \Delta t \geq h$ must hold true when ΔE is minimum, i.e. when $\Delta E = e$. In other words, we have,

$$e\Delta t \geq h \quad (3.23)$$

$$\Delta t \geq h/e \quad (3.24)$$

Since h and e are both universal constants, the ratio h/e is also a universal constant. As a result, the minimum width of an electromagnetic wave burst or the Quantum Duration will be h/e, a universal constant. The minimum width of an electromagnetic wave burst is independent of the frequency.

Lemma:

The minimum time required for the change of electromagnetic energy is h/e, a universal constant, and it is independent of frequency. No change of electromagnetic energy can take place within a time period less than h/e.

Corollary:

Electromagnetic energy comes in wave bursts of constant duration h/e. The duration of an electromagnetic burst is a universal constant that is independent of the frequency.

Corollary:

Light comes in bursts of frequency $f_n=(ne)/h$, n=1,2,… with a time duration h/e, where e is the quantum electromagnetic energy and h is the Plank's constant .

Time and Frequency Bounds

Since the precision in time Δt and the precision in frequency Δf are bounded by the relationship $\Delta f \Delta t \geq h$, the precision in time can be achieved at the expense of the precision in frequency, and the precision in frequency can be achieved at the expense of the precision in time. Both the precision in time and frequency cannot be achieved concurrently. This holds only for time-frequency waves; this does not hold for any so called matter particle waves. As a matter of fact, as we are going to show later, there are no matter particle waves. Particles are not waves. Waves are not particles.

Certainty in Time and Frequency

The time spread Δt of the signal $\psi(t)$ in time domain and the frequency spread Δf of $\Psi(f)$ in frequency domain do not represent uncertainty or indeterminacy in time or in frequency. There is no indeterminacy in frequency or in time. It is certain that the width of the signal is Δt. It is certain that we need at least frequency with of $\Delta f=1/\Delta t$ in order to recover the time domain signal from the frequency domain. It is certain that all the frequency components $\Psi(f)$ within the frequency band Δf are also present concurrently at any time.

To represent a wave of time width Δt, we need at least a frequency band of $1/\Delta t$; all the frequency components within the frequency band Δf must be present all the time. All the frequencies within the band Δf are certain; there is no uncertainty in the frequency components. This is not an uncertainty scenario where there is a single frequency component, which could be anywhere within the band width Δf. In the case of time-frequency Fourier Transform Pair, all the frequency components within the frequency band Δf must be present with certainty concurrently at the any given time. This basic nature of the Fourier Transform had been violated or miss-interpreted in Quantum Mechanics; it is this violation that gave rise to the so-called spookiness of quantum matter particles in Quantum Mechanics.

The term uncertainty is frequently used in Quantum Mechanics. The term uncertainty indicates that there is something, and it has to be somewhere, but we do not know where the thing is. A thing, a mass or a matter particle can only be at one place at any given time. A thing, mass or a matter particle cannot be everywhere concurrently at the same time, and hence matter particles of mass have no place in the Fourier Transform.

Property:

There is no uncertainty in a Fourier Transform Pair. Uncertainty cannot exist in a Fourier Transform Pair. What exist in a Fourier Transform Pair are the certainty and the determinacy. Fourier Transform is a deterministic process, not a stochastic process. All the frequency components within the frequency band Δf are present concurrently at any given time.

Corollary:

There is no uncertainty or indeterminacy in a Fourier Transform Pair. Fourier Transform is a deterministic process.

Precision Rule:

The higher the precision that is achieved in time domain, the lower the achievable precision in frequency domain. Similarly, the higher the precision that is achieved in frequency domain, the lower the achievable precision in time domain. It is not possible to achieve precision in both time domain and frequency domain; there has to be a compromise.

Lemma:

It is not possible to achieve precision in both time t and frequency f simultaneously, where ($f=\omega/2\pi$).

This only applies for waves. This does not apply for particles. Particles are not waves. Particles are not going to become waves just because somebody started calling particles waves; a baseless misguided representation.

Quantum Superposition: No Such Thing

Although [time, Frequency] Pair is a Fourier Transform Pair, the [position, Momentum] Pair of a particle is not a Fourier Transform Pair. Quantum superposition is an outcome of forcing the [position, Momentum] Pair of a matter particle to be a Fourier Transform Pair in a mathematical model. The [position, Momentum] Pair of a matter particle cannot be a Fourier Transform Pair since the position and the momentum of a matter particle must be unique at any given time t. Quantum Superposition is not a natural phenomenon present in nature, it is an artificial human enforced phenomenon on particles.

Although it is obvious, why the [position, Momentum] Pair cannot be a Fourier Transform pair will be considered later.

IV. SPATIAL FOURIER TRANSFORM PAIR

[position, Srequency]

The term srequency refers to the spatial frequency $1/\lambda$, where λ is the wave length. It is the spatial domain equivalent of time domain frequency 1/T,

where T is the period. The wave number k=2π/λ is same as the angular srequency. The wave number k and the srequency s are related by the relationship, s=k/2π. In time domain, we have frequency f=1/T, where T being the period in time. Similarly, in spatial domain we have srequency s=1/λ, where λ is the wavelength in spatial distance.

Let us consider a spatial function ψ(x), where ψ(x) is a function of spatial distance x. As it is possible to represent a time domain function in frequency domain, a spatial domain function ψ(x) can be represented in angular spatial frequency k domain using the Spatial Fourier Transform.

If the spatial function ψ(x) is periodic with spatial period λ_o , we have the Fourier series representation,

$$\Psi(nk_o) = \int_{-\lambda_o/2}^{\lambda_o/2} \psi(x)\exp(-jnk_ox)dx \quad (4.1)$$

$$\psi(x) = \sum_{n=-\infty}^{\infty} \Psi(nk_o)\exp(jnk_ox) \quad (4.2)$$

where, k is the angular srequency (angular spatial frequency) or the wave number, given by,

$$k=2\pi/\lambda \quad (4.3)$$

$k_o=2\pi/\lambda_o$, λ_o is the spatial period of repetition of ψ(x), and n is an integer, $-\infty < n < \infty$, $-\infty < x < \infty$.

When $\lambda_o \rightarrow \infty$ in equations (4.1), (4.2) and (4.3), we have the Spatial Fourier Transform pair for a continuous spatial function ψ(x),

$$\Psi(k)= \int_{-\infty}^{\infty} \psi(x)\exp(-jkx)dx \quad (4.4)$$

$$\psi(x)=\int_{-\infty}^{\infty} \Psi(k)\exp(jkx)d(k/2\pi) \quad (4.5)$$

In time domain, the Fourier Function exp(-j2πt/T) represents an orthogonal basis of infinite dimensions, where the angular frequency ω is given by,

$$\omega=2\pi/T, \quad (4.6)$$

T is the period in time, or the frequency f=1/T.
Similarly, in the case of spatial domain, we have the spatial domain orthogonal basis of infinite dimensions exp(-jkx), where the spatial frequency or the angular srequency k is given by,

$$k=2\pi/\lambda, \quad (4.7)$$

λ is the wave length.

The wavelength λ is not single valued or unique. The wavelength λ can take infinitely many values at any given position x. The wavelength λ is multi-valued, and all the values are certain; there is no uncertainty here. For the function exp(-jkx) to be a Spatial Fourier Function, it is required for the orthogonal space exp(-j2πx/λ) to be of infinite dimensions of λ at any given position x. Therefore, the wave number or the angular srequency k is not unique; it must be multi-valued, and all the values are certain; there is no uncertainty here. The angular srequency k must have infinitely many values with certainty at any given position x concurrently at any given time; it is not a probability distribution. Similarly, for any given wavelength λ or angular srequency k, the position x must have infinitely many values with certainty concurrently at any given time; this is also not a probability distribution. Both position x and the srequency k in a Spatial Fourier Transform function cannot be unique, and cannot be uncertain. There should not be anything preventing for the position x and the angular srequency k having infinitely many values with certainty concurrently at the same time. As we see later, the Quantum Mechanics has violated this condition. The Quantum Mechanics has tried to compensate the violation of this condition by Houdinifying the matter particles, or by forcing matter particles to be magical or spooky; it is not just silly, it is absolute nonsense.

Since the wavelength λ in the Spatial Fourier Transform is multi-valued or not unique, angular spatial frequency k is also multi-valued and not unique. The function exp(-jkx) represents an orthogonal basis of infinite dimension, and hence, the pair [ψ(x), Ψ(k)] is a Spatial Fourier Transform Pair. We have already seen that the function exp(-jωt) represents an orthogonal basis of infinite dimension, and hence the pair [ψ(t), Ψ(ω)] is a Fourier Transform Pair. Hence, the [time t, frequency (f=1/T)] pair has the same characteristic as the [position x, srequency (s=1/λ)] pair.

If we replace λ with a quantity that is a function of the mass of an object, then λ will be unique, and cannot have infinitely many values concurrently at the same time. An object cannot be at many places concurrently at the same time. The position of any mass is unique at any given time. The position of any object or matter particle is unique at any given time. So, it is not possible to replace λ with a quantity that is proportional to the mass of a matter particle or object. If we replace λ with a quantity that is a function of the mass of a matter particle, then, the function exp(-j2πx/λ) becomes single dimensional, and it no longer represents a orthogonal space of infinite dimension or Spatial Fourier Transform Function.

Quantum Superposition: No Such Thing

Although [position x, Srequency (s=1/λ)] Pair is a Fourier Transform Pair, the [position, Momentum] Pair of a particle is not a Fourier Transform Pair. Quantum superposition is an outcome of forcing the [position, Momentum] Pair of a matter particle to be a Fourier Transform Pair in a mathematical model. The [position, Momentum] Pair of a matter particle cannot be a Fourier Transform Pair since the position and the momentum of a matter particle must be unique at any given time t. Quantum Superposition is not a natural phenomenon present in nature, it is an artificial human enforced phenomenon on particles.

More on why it is absolutely not possible for the [position, Momentum] Pair to be a Fourier Transform Pair will be considered later.

A. Position and Srequency Trade-off

As we have seen, in the [time t, Frequency f=ω/2π] Fourier Transform Pair, a wave in time cannot be both frequency limited and time limited at the same time. Similarly, in the case of [position x, Srequency s=k/2π] Fourier Transform Pair, a wave in space cannot be both position limited and srequency limited. If the space range of ψ(x) is Δx, and the srequency bandwidth of Ψ(k) is Δk/2π, then, in order to recover ψ(x) from its srequency counterpart Ψ(k), the srequency bandwidth must be at least 1/Δx. In other words,

$$\Delta k/2\pi \geq 1/\Delta x \quad (4.8)$$

$$\Delta k.\Delta x \geq 2\pi \quad (4.9)$$

where, Δx=the range of x in ψ(x),
Δk=the angular srequency bandwidth or the range of k in Ψ(k), k is the angular srequency, k=2π/λ, λ is the wave length.

$$\boxed{\Delta k.\Delta x \geq 2\pi}$$

Since srequency s=k/2π, and Δs=Δk/2π, we also have, Δs.Δx≥1, where, Δs is the srequency bandwidth.

$$\boxed{\Delta s.\Delta x \geq 1}$$

The equality occurs when the signal ψ(x) is Gaussian.

Important Observations:

- The angular srequency k can take infinitely many values with certainty concurrently within the bandwidth Δk at any x at any time. There is no uncertainty here.
- The position x can take infinitely many values with certainty concurrently at any given angular srequency k at any given time. There is no uncertainty here.

Precision Rule:

It is not possible to achieve precision in both space domain and srequency domain simultaneously. The higher is the precision of the position x, the lower is the precision of the spatial frequency or the srequency k/2π. The lower is the precision of the position x, the higher is the precision of the spatial frequency or the srequency k/2π.

Lemma:

It is not possible to achieve the precision in both the position x and the srequency s simultaneously, where (s=k/2π).

Noteworthy:

1. When we say position, it is the distance x representing a position in space. The position can take infinitely many values at any given time with no restriction, -∞<x<∞, for a given time t.
2. The spatial distance x cannot be a position of a matter particle or a mass since position of a matter particle or mass is unique and can have only a single value at any given time t.
3. Δx is not an uncertainty or indeterminacy of position. It is the range of x that the function ψ(x) takes or spans. At any time, ψ(x) takes all the values of x within the range Δx concurrently with certainty at any given time, a behavior only a wave could satisfy. All the positions x in ψ(x) are certain at any given time. There is no uncertainty here. No object, matter particle or mass could satisfy this condition since a state of an object, mass or matter particle is unique at any given time. A mass, object or matter particle cannot be at different locations concurrently at the same time, a ghostly feature; there are no ghosts or gods. To claim a mass or a matter particle to be at multiple locations at the same time is utter insanity, human lunacy, not reality and simply preposterous.
4. Δk is not an uncertainty in angular spatial frequency or angular srequency. It is the range of angular srequencies that is required to represent a space domain function ψ(x) as an angular srequency domain function Ψ(k). In other words, it is the range of angular srequencies that is required to recover the space domain function ψ(x) from the angular srequency domain function Ψ(k). All the angular srequency components Ψ(k) are certain at any given time. There is no uncertainty here. The angular srequency function Ψ(k) takes all the srequencies within the angular srequency band Δk concurrently for a given position x at any given time, a task only a wave could satisfy. No mass, object or matter particle could satisfy this condition.
5. If we want to replace angular srequency k with a different parameter p, then, that p must also be able to take infinitely many values with certainty concurrently for a given position x, at any given time. That p must have the exactly the same characteristic as k. That p must be able to have infinitely many values concurrently with certainty at a given position x, at any given time. That p must be multi-valued with certainty just like k. If p is related to a mass m of an object as it is in the case of momentum p, then, p is unique at any given x and p is not able to satisfy this condition. As a result, angular srequency or wave number k cannot be replaced with momentum p. Quantum Mechanics is mathematically incorrect in its very foundation since Quantum Mechanics starts with the substitution of the spatial srequency k by the momentum p/ħ of a particle.

Lemma:

In the Spatial Fourier Transform Pair [ψ(x), Ψ(k)], where k=2π/λ, if the wavelength λ is replaced by any other parameter p to create a new Fourier Transform Pair[ψ(x), Ψ(p)], that p must not be unique; p should

be multi-valued at a given position x, at any given time; that p should be able to have infinitely many values with certainty at any given x, at any given time. Uncertainty cannot exist in a Fourier Transform Pair.

Corollary:

In the Spatial Fourier Transform Pair [ψ(x), Ψ(k)], where k=2π/λ, it is not possible to substitute any arbitrary parameter p in place of k to create a new Fourier Transform Pair [ψ(x), Ψ(p)]. The angular srequency k cannot be replaced by a parameter p/ħ that is a function of the mass of a matter particle since any parameter associated with a mass is unique at any given position, at any given time.

Corollary:

For a given matter particle of mass m and velocity v, the momentum p and the mechanical energy of the particle E_m are unique at any given time, and hence the functions exp(-jpx/ħ) and exp(-jE_mt/ħ) are one dimensional.

Lemma:

The functions exp(-jpx/ħ) and exp(-jE_mt/ħ) are not Fourier Functions since they do not constitute orthogonal spaces of infinite dimension. They are single dimensional.

B. **Heisenberg Uncertainty Principle:**

The uncertainty Heisenberg talking about is simply a misnomer. No such principle exists. It is a result of a misunderstood Fourier Transform.

We have already seen the space width Δx and the srequency bandwidth Δk/2π constraint associated with the Spatial Fourier Transform Pair [ψ(x), Ψ(k)]. Let us consider we have the Spatial Fourier Transform Ψ(k) of spatial domain signal ψ(x) of spatial width Δx. In order to recover ψ(x) from the angular srequency or spatial frequency domain Ψ(k), we need the spatial frequency bandwidth Δk/2π to be at least 1/Δx. In other words, we have relationship ΔkΔx≥2π for [position x, Srequency k/2π] Fourier Transform Pair. Heisenberg derived his so-called Uncertainty Principle by incorrectly extending this spatial width Δx and spatial frequency bandwidth Δk/2π inequality ΔkΔx≥2π to matter particles by using the fairytale, hypothetical matter particle and wave duality proposed by de Broglie, the mythical de Broglie wavelength for matter particles.

The mythical de Broglie conjecture proclaims that every matter particle behaves as a wave of wavelength λ given by,

$$\lambda=h/p \qquad (4.10)$$

where, p is the momentum of the matter particle.
This invalid relationship that defies the nature came from nowhere without a proof.
Since k=2π/λ, we have,

$$p=k\hbar \qquad (4.11)$$

$$\Delta p=\hbar\Delta k \qquad (4.12)$$

From the Spatial Frequency Fourier Transform Pair [position x, Srequency k/2π] inequality, we have,

$$\Delta k\Delta x \geq 2\pi. \qquad (4.13)$$

It is obvious that we cannot combine eqn. (4.13) with eqns. (4.11) or (4.12) since a mass cannot be a constituent of a Fourier Function. If we disregard the fact that λ=h/p for a given matter particle is unique at any given time and hence cannot be substituted for λ in the angular spatial frequency k, and substitute blindly for Δk in eqn. (4.13) from eqn. (4.12) without paying any attention to the fundamental characteristic differences between angular srequency k and the momentum p of a matter particle, we have,

$$(\Delta p/\hbar)\Delta x\geq 2\pi \qquad (4.14)$$

$$\Delta p\Delta x\geq h \qquad (4.15)$$

This is the Heisenberg uncertainty principle that indicates the precision in the momentum of a mass or matter particle can only be achieved at the cost of the precision in the position of the matter particle and vice versa. This widely known Heisenberg uncertainty principle is flowed from the very start. It made the assumption that the position and the momentum of a matter particle constitute a Fourier Transform Pair. In fact, as we are going to demonstrate next, the [position, Momentum] Pair of a matter particle does not constitute a Fourier Transform Pair. As a result, the Heisenberg uncertainty principle does not hold true.

Lemma:

Heisenberg Uncertainty Principle does not hold true since [position, Momentum] Pair does not constitute a Fourier Transform pair.

V. [position, Momentum] PAIR IS NOT A FOURIER TRANSFORM PAIR

Quantum Mechanics is built on the idea that the [position, Momentum] Pair of a matter particle is a Fourier Transform Pair. How did this strange, absolutely incorrect claim come to be? We want to find out how this preposterous claim “the [position, Momentum] Pair of a matter particle is a Fourier Transform Pair” came to being. We are going to show why the [position, Momentum] Pair of a matter particle can never be a Fourier Transform Pair. It appears, whoever made this erroneous claim that the [position, Momentum] Pair of a matter particle is a Fourier Transform Pair, as well as whoever supported that claim, have no understanding of Fourier Transform itself. You cannot create a new Fourier Transform Pair simply by substituting any arbitrary new variable blindly for another variable in an existing Fourier Transform Pair. That is exactly what had been done to make that invalid claim.

So far, we considered the time domain signals or waves and the spatial domain signals or waves. In both cases, we had orthogonal spaces of infinite dimensions. The function exp(-jωt) has infinite dimensions since the angular frequency ω is free to take infinitely many values concurrently at any given time t, and time t can take an infinitely many values

concurrently at any give angular frequency ω. Similarly, the function exp(-jkx) also has infinitely many dimensions since the angular spatial frequency k or the srequency k/2π is free to take infinitely many values concurrently at any position x, at any given time, and the position x can take an infinitely many values concurrently at any given srequency k/2π, at any given time. Therefore, both exp(-jωt) and exp(-jkx) are Fourier Functions. We can use Fourier Transform Function exp(-jωt) to transform a time domain function ψ(t) into frequency domain function Ψ(ω), and the conjugate Fourier Transform Function exp(jωt) to transform a frequency domain function Ψ(ω) into time domain function ψ(t). Similarly, we can use the Spatial Fourier Transform Function exp(-jkx) to transform a spatial domain function ψ(x) into srequency domain function Ψ(k), and the conjugate Spatial Fourier Transform Function exp(jkx) to transfer a srequency domain function Ψ(k) into a spatial domain function ψ(x). However, the same duality cannot be expected if the angular srequency k in the Fourier Transform function exp(-jkx) is replaced by some other parameter p that cannot have infinitely many vales concurrently at any give position x, at any given time. If we want to substitute another parameter p for k, we must first assure that the parameter p can be at infinitely many values concurrently for any given position x, at any time t, and the position x can be at infinitely many values concurrently for a given p, at any time t.

Let us consider the spatial signal ψ(x) and its Spatial Fourier Transform counterpart Ψ(ω),

$$\Psi(k)=\int_{-\infty}^{\infty}\psi(x)\exp(-jkx)dx \quad (5.1)$$

$$\psi(x)=\int_{-\infty}^{\infty}\Psi(k)\exp(jkx)d(k/2\pi) \quad (5.2)$$

where, k=2π/λ, and λ is the wavelength.

Lemma:

The function exp(-jkx) can be a Fourier Function if and only if,

1. The angular srequency k is multi-valued, and k can take infinitely many values concurrently at any give position x at any given time.
2. The position x is multi-valued, and x can take infinitely many values concurrently at any given angular srequency k at any given time.
3. The function $\exp(-jk_m x)$ is orthogonal to $\exp(-jk_n x)$, ∀k, m≠n, $-\infty<x<\infty$.
4. The function $\exp(-jkx_m)$ is orthogonal to $\exp(-jkx_n)$, ∀x, m≠n, $-\infty<k<\infty$.

As we are going to see, if the spatial srequency is replaced by the momentum of a particle p/ħ, none of these conditions will be satisfied.

A. **Einstein's Photon or Wave-Particle Blunder**

In 1905, Einstein had a special revelation or a Crafted Prophesy (CRAP). Einstein claimed that "the light is made of particles and the energy E of a light particle is give by E=hf". Einstein's light particles that later came to be known as Photons are random in space by design, by assumption at the derivation. However, Einstein failed to realize that if the light consists of random particles or photons that are spatially random, then, the light cannot take a straight path. In the case of blackbody cavity, if the photons are distributed randomly as it was assumed in the derivation of photons, directional light will be not possible. The light indeed takes a straight path and hence light cannot consist of random particles.

With the Einstein's proclamation "the light consists of spatially random particles", the concept of mass-less particles or photons were born. The energy of a photon is said to be given by E=hf, where f is the frequency. In addition, according to the Special Relativity, the light is considered to be relative and as a result, the light has a momentum. Light or electromagnetic energy has no associated mass and hence no associated momentum. It is only the mechanical energy that is associated with a momentum since the mechanical energy has no existence without an associated mass.

Mass-less matter particles cannot constitute momentum, yet suddenly, there appeared a mass-less particle or photon travelling at speed c that is claimed to have a momentum from the assumption that the light is relative. The fact is that the light is not relative [6]. It was argued, if there is a photon or mass-less particle of energy E travelling at speed c, then,

$$E=pc \quad (5.3)$$

where, p is the momentum of a photon, c is the speed of light.

The speed of light c is given by c=fλ, where, f is the frequency and λ is the wave length of the electromagnetic wave. The energy E of a photon is also given by,

$$E=hf \quad (5.4)$$

Combining E=pc and E=hf, for electromagnetic waves, we have, pc=hf. Substitution of c=fλ led to the relationship,

$$\lambda=h/p \quad (5.5)$$

According to this relationship, the wavelength of a photon is inversely proportional to the momentum of the photon. This is somewhat strange since photons are mass-less matter particles, and mass-less matter particles cannot constitute a momentum. Further, the electromagnetic energy has no association with a mass and hence so called photons cannot have any association with a mass. A photon of wavelength λ has a momentum p given by,

$$p=h/\lambda \quad (5.6)$$

The momentum of a photon or mass-less particle is inversely proportional to the wavelength of the electromagnetic wave, λ. Now, consider the angular srequency or the angular spatial frequency k given by,

$$k=2\pi/\lambda \quad (5.7)$$

Combining eqns. (5.6) and (5.7), we get,

$$k=p/\hbar \quad (5.8)$$

where, $\hbar=h/2\pi$.

According to equation (5.8), the wave number or the angular srequency k is proportional to the momentum of the photon or light particle, a mass-less particle; this is the start of a mysterious path, the downfall that the physics has taken for close to a century. How did this happen? The concept of mass-less particle or photons and the relationship $p=h/\lambda$ are based on the Special Relativity, which consider the light to be relative. If the light is not relative, the particle-view of light as well as the wavelength and momentum relationship of a mass-less particle or photon, $p=h/\lambda$ will collapse with it. In fact as it is shown in [6], light is not relative and hence the Special Relativity is no longer holds true; any outgrowth of the Special Relativity does not hold true either.

While all these going on surrounding the mysterious idea of random mass-less particles of light or photons, and the Special Relativity based on the erroneous idea that the light is relative, de Broglie was paying a close attention to them in Paris, France. He was desperately searching for something to do for his graduate thesis. De Broglie was especially taking notice of the new mysterious light particle or photon where the wavelength and the equally mysterious momentum of a mass-less particle are related by the relationship $p=h/\lambda$. Out of nowhere, suddenly, de Broglie had a revelation, a mysterious prophesy, de Broglie Crafted Prophesy (dbCRAP).

B. DeBorglie's Matter particle Wave and Quantum Mechanics Blunder

Einstein already had a revelation that light consists of spatially random particles that travel at the speed of light c, which led to the idea of mass-less particles or photons having momentum and the relationship between the wavelength and momentum of a mass-less particle $p=h/\lambda$. Suddenly out of nowhere another prophet appeared with an extension to the Einstein's revelation. It was de Broglie. We thought those self-proclaimed prophets or self-proclaimed messengers could only appear with self-advancing human Crafted Prophesies (hCRAP) only in the earth centric dark ages or when the earth was considered to be flat. It appeared to be not so. Here, we are in the era where heliocentricity is only limited to the solar system, yet, de Broglie also had a human Crafted Prophesy (hCRAP). This is somewhat less surprising since most of the people are still holding on to the flat-earth era human Crafted Prophesies (hCRAP) about a creation by some unknown beyond.

De Broglie declared that the relationship $\lambda=h/p$, which was derived for light particles or photons, should also be true for any matter particle, object or mass of momentum p. He disregarded the fact that the light is associated with electromagnetic energy while any matter particle is associated with mechanical energy. Electromagnetic energy and mechanical energy are two different entities; they are not the same. With this de Broglie's baseless declaration, everything in the universe, big or small, mass or mass-less, started waving; a universe filled with so called matter-waves. Every object became a wave. Waves were everywhere. Nobody knew what was waving.

There is one thing de Broglie was blind to. That is, by assumption, the photons are spatially random. Without this assumption there would be no photons. In the derivation of photons or light particles, Einstein made the assumption that a photon can be anywhere in the space with equal probability [1,5]. If matter particles or matter particles of mass are assumed to behave as mass-less light particles or photons, then the matter particles will be spatially random too with equal probability whether we like it or not; any mass will be spatially random, and as a result, there is an equal probability that a matter particle or mass can be anywhere in the space. The problem is that the matter particles are gravitationally bound and hence cannot be spatially random. The so called light particles or photons are not gravitationally or electro-statically bound and hence can be spatially random according to the assumption that was made in the derivation of photons. De Broglie assumption forces the position of a matter particle or mass to be inherently uncertain by an invalid assumption.

Since the so called photons are not bounded by the gravitational or electro-static forces, photons can be assumed to be spatially random. However, the same cannot be extended to matter particles since the matter particle behavior is guided by electro-static, electromagnetic forces and gravity. There is no reasonable justification for the de Broglie's extension of the characteristic of photons to matter particles.

Corollary:

All the matter particles are gravitationally and electro-statically bound and hence cannot be spatially random.

Lemma:

If a mass or matter particle to be expected to behave as a photon, then the position of the mass or the matter particle will be uncertain by assumption.

The Proof is straight forward since the photon was derived under the assumption that a photon has an equal probability of being anywhere in the space, or spatially random. When you force matter particle to behave as so called photons, you are forcing the matter particles to be spatially random. You are forcing the positions of matter particles to be uncertain by assumption. Unlike photons, positions of matter particles cannot be uncertain or probabilistic since they are subjected to electro-static, electromagnetic and gravitational forces. States of matter particles are not probabilistic, but you are forcing them to be probabilistic by assumption in an unrealistic model.

Suddenly, with de Broglie's conjecture, any matter particle with a mass m started waving with a wave length λ given by, λ=h/p, with p being the momentum of the matter particle. The double-slit experiment with a phosphor screen was carried out using a beam of electrons as the input, and it was observed that there were fringes of bright spots on the phosphor screen. It was argued that in order to have fringes of bright spots on a phosphor screen of the double slit experiment for an input beam of electrons, the electrons must be behaving as waves. This is simply a double-slit blunder [3]. The interference pattern of bright spots on the phosphor screen in the double-slit experiment is not a result of particles colliding with the phosphor screen. When charge particle are stopped at the double-slit screen, it generates electromagnetic waves that travels through the slit and generates an interference pattern on the screen. The bright spots correspond to the peaks of the interfering electromagnetic wave pattern on the screen. There are no particles beyond the double-slit barrier [3].

With the proclamation that all the matter particles are waves of λ=h/p supported by the misinterpreted double-slit experiment, what was given birth to was the so-called Quantum Mechanics. An invalid wave and matter particle duality paved the foundation for the Quantum Mechanics. This foundation is incorrect for several reasons. For one, light is not relative [6,7,8]. Since the light is not relative, E=pc relationship does not hold for mysterious photons or mass-less light particles. As a result the relationship λ=h/p does not hold true even for mass-less light particles or photons. If λ=h/p does not hold for photons or light particles, there is nothing to extend to any matter particle of mass m. De Broglie conjecture falls flat on its own where it began when the light is not relative. The de Broglie conjecture that any matter particle is a wave of wavelength λ=h/p collapses right where it started. Further, the light is always a wave and never a particle [5].

Let us continue with the ubiquitous meaningless relationship λ=h/p for a matter particle, where p is the momentum of the matter particle, and λ is the wavelength. If a matter particle has a mass m and velocity v, the momentum p of the matter particle,

$$p=mv \tag{5.9}$$

So, for any matter particle of mass m and speed v, the de Broglie wavelength λ is given by,

$$\lambda=h/mv \tag{5.10}$$

Consider an electron of mass m and the speed v, and a planet of mass M and speed V. The de Broglie wavelength of the electron, λ_e is given by,

$$\lambda_e=h/mv \tag{5.11}$$

The de Broglie wavelength of the planet, λ_M is given by,

$$\lambda_M=h/MV \tag{5.12}$$

If the speed of the planet is such that the momentum of the planet is the same as the momentum of the electron, we have,

$$MV=mv \tag{5.13}$$

$$V=(m/M)v \tag{5.14}$$

If a planet has the speed V, where,
V=[(mass of the electron)/(mass of the planet)]v,
then, the de Broglie wavelength of an electron will be the same as the de Broglie wavelength of a planet. In this case, the behavior of a macroscopic object, a planet, will be equivalent to the behavior of the microscopic object, an electron. If the location of an electron is uncertain, then, the location of both the electron and a planet or any object will be equally uncertain. In the case of a microscopic object such as an electron, the slower the speed of an electron is, smaller the momentum and hence more uncertain is its position. Similarly, if we have to locate an object, in the case of a macroscopic object such as a planet, determining the location of a planet will be as hard as determining the location of an electron even when the planet is near stationary since both electron and a planet have the same wavelength when the speed of the planet V=(m/M)v, M>>m. What is true in the nature is complete opposite; the nearer the object to the stationary state, the easier it is to locate, or less uncertain its position should be. This is a good indication of the contradictory nature of the de Broglie conjecture and the Quantum Mechanics in general.

Corollary:

If the de Broglie conjecture and the Quantum Mechanics hold true, then, the behavior of a fast moving quantum matter particle with momentum p will be equivalent to the behavior of a slow moving near stationary macroscopic matter particle such as a planet with the same momentum p.

Corollary:

If the de Broglie conjecture and the Quantum Mechanics hold true, then, the location of a massive object such as planet at near standstill will be as uncertain as a fast moving electron, a contradiction.

Corollary:

If the de Broglie conjecture and the Quantum Mechanics hold true, then, the de Broglie wavelength of a microscopic matter particle of momentum p will be the same as the de Broglie wavelength of a macroscopic object of momentum p.

Corollary:

There is nothing in the de Broglie matter particle wavelength λ=h/p that distinguishes it according to the size or mass of a particle. Size or mass does not matter here, only the momentum matters.

C. The Genesis of Quantum Mechanics

The Quantum Mechanics came to being with the introduction of de Broglie's delusionary matter particle wave length λ=h/p, and the subsequent replacement of wavelength λ in the plane wave equation by it. However, before we substitute for λ in the plane wave equation by the so-called de Broglie hypothetical

matter particle wavelength λ=h/p, we have to see if the so-called de Broglie wavelength λ of a matter particle of momentum p has the same characteristics as the wavelength λ of a plane wave. If they both have the same characteristic we can substitute one in place of other, otherwise we cannot. The characteristics of the so-called de Broglie wavelength λ of a matter particle are significantly different from the characteristics of the wavelength λ of a plane wave due to several reasons:

1. The position, x of a matter particle is unique at any given time. No matter particle can be in multiple locations concurrently at the same time. The location of a matter particle at any time has a single value. A matter particle cannot be at infinitely many locations concurrently at the same time. The exact location of a matter particle is certain even though the exact location of the matter particle is unknown to an observer. We may be uncertain about the location of a matter particle, but as far as the matter particle is concerned, the location of the matter particle is certain at any time; the matter particle is at a specific location at a specific time. We may choose to model a matter particle unrealistically as if the matter particle can be at infinitely many locations at the same time, but that model does not represent the actual nature of a matter particle in reality, in the nature.
2. It is not just the position of a matter particle that is unique at any given time; the velocity of a matter particle is also unique at any given time. A matter particle cannot have multiple velocities at the same time. Since the mass of a matter particle is unique and the velocity of a matter particle is also unique, the momentum of a matter particle is also unique. The momentum of a matter particle has a single value at any given time irrespective of whether the particle is microscopic or macroscopic. A matter particle, whether it is microscopic or macroscopic, cannot have infinitely many momentums concurrently at the same time. It does not matter what the size of a matter particle is, the momentum of a matter particle cannot have multiple values concurrently.
3. Any physical characteristic associated with a matter particle is unique.
4. There is no boundary that separates microscopic particles from the macroscopic particles. Any physical characteristic associated with a microscopic matter particle must also apply to a macroscopic matter particle. If a state of a microscopic matter-article is probabilistic, then, the state of a macroscopic matter particle must also be probabilistic. Since the state of a macroscopic matter particle or object is not probabilistic, the state of a microscopic matter particle cannot be probabilistic.
5. State of a matter particle is unique irrespective of whether the matter particle is microscopic or macroscopic. It is we who put matter particles into categories, microscopic and macroscopic, without even knowing the boundary that separates them. For the nature, matter particle is a matter particle, big or small. Probability plays no part in the nature. Probability is a concept developed by humans to make predictions from large collection of data. The nature does not make its decision by rolling dies. It is the gamblers who make decision based on the outcome of rolling dies. In fact the probability theory was first developed to determine how to divide a bet when the outcome of a game could not be determined conclusively when the game had to be stopped due to bad weather.
6. If the microscopic particle with momentum p behaves as a wave of wavelength λ, then, a macroscopic object of any mass with the same momentum p should also behaves as a wave of wavelength λ. A macroscopic object near standstill will have the same de Broglie wavelength as a microscopic object such as an electron moving close to speed of light. If de Broglie conjecture holds, the characteristic of a microscopic particle will be same as the characteristic of a macroscopic object near standstill. How can a macroscopic object near standstill be as uncertain as a fast moving electron?

You may arbitrarily force a matter particle in a mathematical model to be at infinitely many momentums concurrently at the same time; there is nothing preventing you from doing that on paper. In fact, that is exactly how the Quantum Mechanics was originated. However, such a model does not represent the reality. Since there are many people who still believe in the concepts of mythical ghosts and gods, and who make offerings and sacrifices to those imaginary ghosts and gods – the concepts developed by the ancient people who believed that the earth was flat (flat-earth people) – the development of Quantum Mechanics by forcing a matter particle to be at infinitely many locations and at infinitely many momentums concurrently at the same time is somewhat less surprising even though it is absolutely impossible and wrong. Why in the universe anybody offer a goat to a guy who creates goats, if such a creator exists? Couldn't the creator create an extra goat for himself or herself if he needs one? If we make a mathematical model of a matter particle by forcing a matter particle to be present at infinitely many states at the same time, or by Harry-Potterization or Houdinification, you are in fact injecting your belief of black magic and ghosts in to the nature of a matter particle, which is indeed not the reality. No doubt, Houdinification and Harry-Potterization may indeed help you to sell million copies of your books. If you say that a quantum particle is at infinitely many states at the same time, in effect, what you are saying is that any microscopic object of momentum p or any macroscopic particle or object, golf ball, planet or galaxy of any mass with the same momentum p is at

infinitely many states at the same time since the matter particle wavelength is determined by the momentum alone, not by the size of an object. The state of an object of any mass is unique irrespective of the size of the object. The de Broglie wavelength $\lambda=h/p$ of a matter particle does not say anything about the size of the object.

Now, with the understanding that the position and the momentum of any mass, object, or a matter particle is unique, let us see what happen when de Broglie conjecture is applied to a matter particle.

If we have a matter particle of mass m moving at speed $V=V_o$ at time $t=t_o$, we have the momentum p_o at time t_o. Since the velocity of a matter particle is unique,

$$p=p_o \text{ at } V=V_o, \text{ at time } t=t_o \quad (5.15)$$

$$p=0, \text{ or } p \text{ does not exist at } V\neq V_o, \text{ at time } t=t_o \quad (5.16)$$

$$\text{where, } p=mV \quad (5.17)$$

V is the speed of the matter particle at any time t.

If we use the de Broglie conjecture where a matter particle of mass m and velocity V with momentum p=mV behaves as a wave of de Broglie wavelength λ given by $\lambda=h/p$, we have,

$$\lambda=\lambda_o \text{ , when } p=p_o \text{ , at time } t=t_o \quad (5.18)$$

$$\lambda=0, \text{ or } \lambda \text{ does not exist when } p\neq p_o, \text{ at } t=t_o \quad (5.19)$$

$$\text{where } \lambda_o = h/p_o \quad (5.20)$$

$p_o = mV_o$, V_o is the speed of the matter particle at $t=t_o$. The wavelength λ has a non-zero value only at $p=p_o$ or $V=V_o$ at time $t=t_o$. Since the velocity of a matter particle is unique, the momentum of a matter particle is unique. When the momentum of a matter particle is unique, the de Broglie wavelength of a matter particle is unique, if such a wave exists.

We have seen that the position x in space and the wave number or angular srequency k are a Fourier Transform Pair. The [position x, Srequency k/2π] Pair is a Fourier Transform Pair. The Fourier Function exp(-jkx) provides an orthogonal space of infinite dimension that is required for the Fourier Transformation. Let us see if this can be extended to de Broglie matter particle waves while retaining Fourier Transform duality; you will see that it is not possible.

In the case of a matter particle, the de Broglie wavelength λ of the matter particle wave is given by,

$$\lambda=h/p \quad (5.21)$$

Since the wave number or the angular srequency k is given by,

$$k=2\pi/\lambda \quad (5.22)$$

we have,

$$k=p/\hbar \quad (5.23)$$

where $\hbar=h/2\pi$.

Now, if we replace the angular srequency or the wave number k with $k=p/\hbar$ in the Spatial Fourier Transform Function exp(-jkx), we get the function exp(-jpx/ħ). Now the question is whether the function exp(-jpx/ħ) is a Fourier function or has the same properties as the Fourier Function exp(-jkx). Although the function exp(-jkx) is a Fourier Function, the function exp(-jpx/ħ) is not a Fourier Function. Here is why?

At any time $t=t_o$, since the state of a matter particle is unique, a matter particle can only be at $x=x_o$ with momentum $p=p_o$, and hence,

$$A\exp(-jpx/\hbar)=A\exp(-jp_ox_o/\hbar) \quad (5.24)$$

where, $A\neq0$, when $x=x_o$, $p=p_o$, at time $t=t_o$

When $x\neq x_o$, $p\neq p_o$, at time $t=t_o$, $A=0$, and hence,

$$A\exp(-jpx/\hbar)=0, \quad (5.25)$$

where, A is the amplitude.

Since particle can only be at $x=x_o$, $p=p_o$ at time $t=t_o$, the function exp(-jpx/ħ) for a given particle does not exist when $x\neq x_o$, $p\neq p_o$, at time $t=t_o$. So, the function exp(-jpx/ħ) is a scalar quantity for a given matter particle at any given location at any given time. The function exp(-jpx/ħ) is not a Fourier Function for a matter particle. Even though exp(-jkx) is a Fourier Function of infinite dimension, exp(-jpx/ħ) is only single dimensional for a given particle. The function exp(-jpx/ħ) is not a orthogonal basis of infinite dimension or a Fourier Function

Lemma:

Even though exp(-jkx) is an orthogonal basis of infinite dimension at any time t, the function exp(-jpx/ħ) for a matter particle of mass m is single dimensional at any time t.

Theorem: Position and Momentum

The function exp(-jpx/ħ) does not constitute an orthogonal space of infinite dimension of p and x. As a result, exp(-jpx/ħ) is not a Fourier Function. The [position x, Momentum p/ħ] Pair is not a Fourier Transform Pair.

The proof follows directly since the position x and the momentum p of any matter particle are unique irrespective of whether the matter particle is microscopic or macroscopic. The momentum of a matter particle is unique since the velocity of any matter particle is unique at any given time. A matter particle cannot have infinitely many different speeds or momentums at any given location at any given time. Similarly, a matter particle cannot have infinitely many locations for a given speed or a momentum at any given time. The state of a particle irrespective of its mass is unique at any time.

D. **[**position, Momentum**] Pair of a Matter Particle: Not a Fourier Transform Pair**

The idea of the [position, Momentum] Pair came into view with the de Broglie crafted prophesy (dbCRAP) that a matter particle behaves as a wave of wavelength $\lambda=h/p$, and the mindless and blind substitution of $k=p/\hbar$ in the [position, Srequency] Spatial Fourier Transform Pair. The [position, Srequency] Spatial Fourier Transform Pair for the spatial function ψ(x) is given by,

$$\Psi(k)=\int_{-\infty}^{\infty}\psi(x)\exp(-jkx)dx \quad (5.26)$$

$$\psi(x)=\int_{-\infty}^{\infty}\Psi(k)\exp(jkx)d(k/2\pi) \quad (5.27)$$

where, $k=2\pi/\lambda$, and λ is the wavelength.

If we substitute the meaningless, non-existent and dreamed-up de Broglie wavelength λ for a matter particle, $\lambda=h/p$ or equivalently $k=p/\hbar$, we will get a [position x, Momentum $p/\hbar$] Pair, but that does not mean it is a Fourier Transform Pair. The new [position x, Momentum $p/\hbar$] Pair is not necessarily going to have the same characteristics as the [position x, Srequency $k/2\pi$] Pair just because we obtained the [position x, Momentum $p/\hbar$] Pair from the [position x, Srequency $k/2\pi$] Pair through a direct substitution.

Under the assumption of invalid and non-existent wave and matter particle duality, if we use equally non-existent de Broglie wavelength $\lambda=h/p$ or dbCRAP for a matter particle in a true and meaningful [position x, Srequency $k/2\pi$] Fourier Transform Pair, what we get is a non-existent and meaning-less [position x, Momentum $p/\hbar$] Pair,

$$\Psi(p)=\int_{-\infty}^{\infty}\psi(x)\exp(-jpx/\hbar)dx \quad (5.28)$$

$$\psi(x)=\int_{-\infty}^{\infty}\Psi(p)\exp(jpx/\hbar)d(p/h) \quad (5.29)$$

Since the velocity of a matter particle must be unique, the momentum of a matter particle must be unique. At any given time, a matter particle, whether microscopic or macroscopic, can only move in a single direction at a single speed. A matter particle cannot have multiple velocities concurrently at a given position at the same time. Therefore, the momentum cannot have multiple values at a given position concurrently at the same time. Both the velocity and the momentum of a matter particle cannot be multi-valued at a given position at any given time.

Let the position x and the momentum p of a matter particle at time $t=t_o$ be,

$$x=x_o\ ,\ p=p_o\ ,\ \text{at } t=t_o \quad (5.30)$$

Then, the eqns. (5.28) and (5.29) become,

$$\Psi(p)=\int_{-\infty}^{\infty}\psi(x)\exp(-jpx/\hbar)dx = \psi(x_o)\exp(-jp_ox_o/\hbar) \quad (5.31)$$

$$\psi(x)=\int_{-\infty}^{\infty}\Psi(p)\exp(jpx/\hbar) = \Psi(p_o)\exp(jp_ox_o/\hbar) \quad (5.32)$$

It is clear that the $\psi(x)$ and $\Psi(p)$ are not a Fourier Transform Pair. Since x and p are unique for any matter particle at any given time, $\exp(-px/\hbar)$ is defined only at $x=x_o$ and $p=p_o$ at $t=t_o$. So for the case of spatial function $\psi(x)$ of a matter particle, we have,

$$\psi(x)=\psi(x_o),\quad \text{when } x=x_o\ ,\ t=t_o \quad (5.33)$$

$$\psi(x)=0,\quad \text{when } x\neq x_o\ ,\ t=t_o \quad (5.34)$$

$$\Psi(p)=\Psi(p_o),\quad \text{when } p=p_o\ ,\ t=t_o \quad (5.35)$$

$$\Psi(p)=0\ ,\quad \text{when } p\neq p_o\ ,\ t=t_o \quad (5.36)$$

In the case of matter particles, $\exp(-jpx/\hbar)$ is simply a scalar quantity at any given time since a matter particle has a unique position and a momentum; it is not a orthogonal basis of infinite dimensions. It does not matter whether a matter particle is microscopic or macroscopic, $\exp(-jpx/\hbar)$ does not constitute and orthogonal basis; it is not a Fourier Function.

Lemma:

The [position x, Momentum $p/\hbar$] Pair of a matter particle is not a Fourier Transform Pair.

Theorem: The Fallacy of Quantum Mechanics

The Quantum Mechanics do not hold true since the [position x, Momentum $p/\hbar$] Pair of a matter particle do not constitute a Fourier Transform Pair.

E. Matter particles do not have Any Inherent Uncertainty

Since the [position x, Momentum $p/\hbar$] Pair of a matter particle is not a Fourier Transform Pair, the precision of the position Δx is not affected by the precision of the momentum $\Delta p/\hbar$. The Heisenberg uncertainty principle comes into play if and only if the [position x, Momentum $p/\hbar$] Pair of a matter particle is a Fourier Transform Pair. Therefore, the Heisenberg Uncertainty is a result of the lack of understanding, or perhaps miss-understanding, of the Fourier Transform, or the Fourier Transform Blindness.

Since the [time t, Frequency $\omega/2\pi$] Pair is a Fourier Transform Pair, it is not possible to achieve precision both in time domain as well as in the frequency domain simultaneously. Similarly, as we have already seen, the [position x, Srequency $k/2\pi$] Pair is a Fourier Transform Pair, and as a result, it is not possible to achieve precision in both position and srequency or the spatial frequency simultaneously. No such compromise exists between the position and the momentum of a matter particle since the [position x, Momentum $p/\hbar$] Pair of a matter particle is not a Fourier Transform Pair.

We know the [time t, Frequency $\omega/2\pi$] Pair is a Fourier Transform Pair, because we obtain the frequencies by taking the Fourier Transform of a function of time. Similarly, we know that the [position x, Srequency $k/2\pi$] Pair is a Fourier Transform pair, because we obtain the srequency by taking the Spatial Fourier Transform of a spatial function of position. However, there are no momentums to obtain

for a matter particle since a matter particle only has one momentum; momentum of a matter particle is unique. We cannot obtain the momentum of a matter particle by taking the Fourier Transform of the function of position of a matter particle using the transformation function exp(-jpx/ħ) since exp(-jpx/ħ) does not represent an orthogonal basis of infinite dimension. For any matter particle of mass m and velocity v at time t, the exp(-jpx/ħ) is scalar. The function exp(-jpx/ħ) is a one dimensional vector in the space of x and p, and hence exp(-jpx/ħ) is not a Fourier Transform Function.

As we have seen before, the Heisenberg uncertainty principle, $\Delta p \Delta x \geq h$ only exists if and only if the [position x, Momentum p/ħ] Pair of a matter particle constitutes a Fourier Transform Pair. However, as we have shown, the [position x, Momentum p/ħ] Pair does not constitute a Fourier Transform Pair. As a result, Heisenberg Uncertainty Principle is simply incorrect and invalid. As it appears, the Heisenberg Uncertainty Principle has arisen as a result of a lack of clear understanding of the theory of Fourier Transform. The Heisenberg Uncertainty Principle is simply a Fourier Transform Blunder.

If we want to make the Heisenberg Uncertainty Principle to hold true for a matter particle at least on paper, that can only be achieved by artificially imposing strict, unrealistic, and physically impossible spooky condition into the mathematical model of a matter particle. We have to force the position and the momentum of a matter particle to be at infinitely many positions and at infinitely many momentums concurrently at the same time. We have to force the position and the momentum of a matter particle to be not unique. In other words, we have to make matter particles to be spooky. We have to impose the Quantum Superposition. That is exactly how the Quantum Superposition came to being.

If the position and the momentum of an electron are not unique, the result is the loss of energy due to radiation leading to the ultimate collapse of the atom; uncertainty of a charge particle breeds radiation. It is not able to avoid the radiation loss of an electron by forcing a probabilistic behavior on an electron. The position and the momentum of an electron must be unique. The position and momentum of any particle or object must be unique. If a charge particle is at infinitely many states at the same time, it requires infinite energy. If a state charge particle is uncertain, it results in radiation loss. Quantum Mechanics fails in the very problem it is expected to address.

F. **Collapse of a Matter particle Due to Uncertainty**

Although we cannot change the nature of a matter particle, we can force a matter particle to behave the way we want in a mathematical model on paper. If we force the position and the momentum of a matter particle to be not unique, and let the matter particle have multiple positions and multiple momentums concurrently, we are making the matter particle to be at infinitely many states concurrently, at the same time. We are, in effect, making a matter particle to behave as a ghost (there are no ghost or gods in nature; they only exist in minds still got stuck in the dark ages, flat earth era minds). If we force a matter particle to be at infinitely many positions at a given momentum, and infinitely many momentums at a given position concurrently, at the same time, then only do we have exp(-jpx/ħ) representing an orthogonal space of infinite dimensions making the position and the momentum of a matter particle to be a Fourier Transform Pair. Then only we can use the function exp(-jpx/ħ) as a Fourier Transform Function to take the Fourier Transform of the function ψ(x) to obtain momentum spectrum Ψ(p).Then only do we have a Fourier Transform Pair [ψ(x), Ψ(p)] or the Fourier Transform Pair [position x, Momentum p/ħ].

That is exactly what the developers of the Quantum Mechanics have done. These developers have covered up theoretical and conceptual blunder in Quantum Mechanics simply by enforcing a ghostly behavior on quantum matter particles in a mathematical model and claiming that quantum matter particles can be at infinitely many states concurrently, at the same time; this is the origin of the Voodoo Science, Houdinified or Harry-Potterized Science. If this is true, it is not just the quantum matter particles, even macroscopic objects or even planet size objects can be at many different states at the same time since the momentum of a massive object at very low speed or near stand-still can be the same as the momentum of a quantum matter particle or an electron. If a quantum particles or microscopic particles are ghostly, so should the macroscopic particles or any mass irrespective of its size.

The ghostly behavior or quantum superposition of matter particles in Quantum Mechanics is manmade or human imposed nonsense. The Quantum Mechanics is built upon a forced ghostly behavior on matter particles. This ghostly behavior is not an inherent physical behavior of matter particles in nature. Matter particles, whether they are microscopic or macroscopic, do not behave as ghosts; state of a matter particle is unique. There are no ghosts or gods; they only exist exclusively in human consciousness, nowhere else. The ghosts and gods that originated in the dark ages, thousands of years ago, appear to exist in continuum to date only in minds that are blind and closed to questioning, and closed to the truth; human minds are contagious for blind customs that are closed to the truth, seeded in the upbringing and the family dynamics.

The momentum of a matter particle cannot take infinitely many values concurrently at a given position at any time. Electrons can't be in multiple states concurrently at the same time. Electrons cannot have multiple positions or multiple momentums concurrently. As it is done in Quantum Mechanics, if one unrealistically assumes that an electron in an atom or a matter particle, in general, is at infinitely

many states concurrently at the same time, the energy requirement or the energy loss of the matter particle will be infinite. If the position of an electron in an atom is uncertain, then the electron will collapse due to the radiation energy loss, an unavoidable circumstance. Any uncertainty in the position of a charge particle results in radiation loss. Undoubtedly, it will make the Quantum Mechanics to collapse as well since the Quantum Mechanics is not able to provide what it is expected to provide, a motion of a charged matter particle without collapse, a motion of charged matter particle without radiation loss. The Quantum Mechanics with its all the invalid assumptions still cannot provide what it is expected to provide, a motion of a microscopic charge particle without radiation loss.

Lemma:

The [position x, Momentum p/ħ] Pair of a matter particle does not constitute a Fourier Transform Pair.

Corollary:

For a matter particle to be at infinitely many states concurrently, at any time requires infinite energy, and hence a matter particle cannot be in multiple states concurrently at a given time.

Lemma:

The only possible path an electron in an atom take without loss of energy is a circular orbit at constant speed. An electron on a circular orbit at constant speed does not radiate and as a result, the electrons on circular orbits at constant speed are stable.

Lemma:

Quantum Mechanics representation of an electron at infinitely many states concurrently at the same time is not possible due to the infinite energy requirement. No mass can ever be at multiple states concurrently. It doesn't matter how small a matter particle is, there is no exception to the common sense.

Certainty Principle:

The precision of the position and the momentum of a matter particle are mutually independent. There is no inherent property in a microscopic or macroscopic matter particle that prevents from achieving precision in both position and the momentum of a matter particle.

Proof: As we have seen, the [position x, Momentum p/ħ] Pair of a matter particle is not a Fourier Transform Pair. When the [position x, Momentum p/ħ] Pair of a matter particle is not a Fourier Transform Pair, Heisenberg Uncertainty Principle no longer holds true. As a result, the precision of the position is independent of the precision of the momentum of a matter particle.

When we are talking about the precision, what we are talking about is not an effect of an observer or the measuring instruments on the measured object or matter particle. What we are talking about is limitations that are inherent in a system. System inherent limitations are present irrespective of whether observers or measuring instruments are involved or not.

It is important to realize that the Heisenberg Uncertainty Principle is not an observer effect that is common in physics, where observers and measuring instruments are involved. What is stated in the Heisenberg Uncertainty Principle is an inherent limitation of a matter particle if and only if the [position x, Momentum p/ħ] Pair of a matter particle is a Fourier Transform Pair. The Heisenberg Uncertainty Principle does not hold true because the [position x, Momentum p/ħ] Pair of a matter particle is not a Fourier Transform Pair. It has nothing to do with observer or observing instrument effect. The inherent physical precision limitation is only present in Fourier Transform Pairs. This precision limitation is present in [time t, Frequency ω/2π] and [position x, Srequency k/2π] Pairs irrespective of any observer.

Noteworthy Precision Compromises:

- In the case of [time t, Frequency ω/2π] Pair, the precision in time Δt and precision in frequency Δf are inversely related irrespective of whether measurement is taken or not since [time, Frequency] Pair is a Fourier Transform Pair. You cannot achieve precision in both time and frequency. You only can achieve precision in time by compromising the precision in frequency.
- Similarly, in the case of [position x, Srequency s] Pair, the precision in position Δx and the precision in srequency Δs are inversely related irrespective of whether measurement is involved or not since [position x, Srequency s] Pair is a Fourier Transform Pair, where $s=k/2\pi$, k is the wave number or angular spatial frequency. You cannot achieve precisions in both position and srequency. You only can achieve precision in position by compromising the precision in frequency.
- However, in the case of a matter particle, the [position x, Momentum p/ħ] Pair is not a Fourier Transform Pair and hence there is no tradeoff between the precision of the position Δx and the precision of the momentum Δp. Precision of the position is independent of the precision of momentum of a particle.

Lemma:

The Heisenberg Uncertainty Principle does not hold true since the [position x, Momentum p/ħ] Pair of a matter particle does not constitute a Fourier Transform Pair.

Corollary:

The theory of Quantum Mechanics, in general, does not hold true since the [position x, Momentum p/ħ] Pair of a matter particle is not a Fourier Transform

Pair.

As we have seen, the [position x, Momentum p/ħ] Pair of a matter particle does not constitute a Fourier Transform Pair. The [position x, Momentum p/ħ] Pair of a matter particle at any given time is unique, and as a result, exp(-jpx/ħ) does not represent an orthogonal basis of infinite dimensions that is necessary to transform a function of position into a function of momentum and vice versa. If the [position x, Momentum p/ħ] Pair constitutes a Fourier Transform Pair, then, if we have a delta function of position, we require infinitely many momentums concurrently at any time to represent the position in the momentum domain. This is impossible since no mass can have infinitely many momentums concurrently for a given position x, at any time. Similarly, if the [position x, Momentum p/ħ] Pair constitutes a Fourier Transform Pair, then, for a delta function of the momentum of a matter particle, we need a function of infinite positions for a given momentum concurrently, at any time to represent the momentum in the space of position. This is also impossible since no matter particle ever be at infinitely many positions concurrently for a given momentum, at any time. To claim the position and the momentum of a matter particle a Fourier Transform Pair is simply preposterous; Fourier Transform Ignorance.

If the [position, Momentum] Pair is a Fourier Transform Pair, then, it should be possible to obtain the momentum by taking the Fourier Transform of a function of position. This is not possible. You cannot obtain the momentum of a particle by taking the Fourier Transform of a function of the position of a particle. Similarly, you cannot obtain the position of a particle by taking the inverse Fourier Transform of a function of the momentum of a particle. These are meaningless.

Since the [position x, Momentum p/ħ] Pair of a matter particle does not constitute a Fourier Transform Pair, there is no inherent compromise between the precision of the position Δx and the precision of the momentum Δp of a matter particle. The precision of the position Δx of a matter particle is independent of the precision of the momentum Δp of a matter particle. The Heisenberg Uncertainty Principle does not hold true. The Heisenberg Uncertainty is incorrect with certainty. The nature has no uncertainty in its behavior. The nature is certain about all its associated natural phenomena. Uncertainty present only in the human mind, not in the nature. The nature throws no dies. There is no game of chance in the nature. The nature does not take chances; only conscious minds do. All that the species with conscious minds decide to do is not the nature. Heisenberg Uncertainty is invalid with certainty. Furthermore, as we have shown before, the precision limitations between variables have nothing to do with uncertainty, everything to do with reconstruction bandwidth. If you have smaller time width, you need larger frequency bandwidth. If you have a larger time width, you need smaller frequency bandwidth; there is no uncertainty in the Fourier Transform. Even the word uncertainty used in uncertainty principle is invalid, meaningless.

> The position and momentum of a particle do not constitute a Fourier Transform Pair and hence there is no theoretical compromise between the precision of the position and the precision of the momentum of a particle.

> You cannot obtain the momentum of a particle by taking the Fourier Transform of position and vice versa.

Corollary:

The uncertainty exists only in the human consciousness, not in the nature. The nature has no uncertainty.

> Heisenberg Uncertainty Principle is Invalid. There is no inherent uncertainty between the position and momentum.

VI. OBSERVABLES OF A SYSTEM CANNOT BE REPRESENTED BY EIGEN-VALUES

In Quantum Mechanics, the observables of a system are represented as the Eigen-values of operators of the system. The so-called wave function of a matter particle itself is a result of this Eigen-Value representation of observables in a system. Since the observables of any system are unique, their representation must also be unique. Now, the question is 'can we represent the observables of a system as the Eigen-Values of operators of a system?'

Consider the plane wave function ψ(x,t) given by,

$$\psi(x,t)=A\exp(jkx)\exp(-j\omega t) \quad (6.1)$$

Differentiating with respect to ω, we get,

$$\frac{\partial\psi}{\partial\omega} = -jt\psi \quad (6.2)$$

$$j\frac{\partial\psi}{\partial\omega} = t\psi \quad (6.3)$$

Here, time t is the Eigen-Value of operator $j\partial/\partial\omega$. Can this be true?

Now, let us multiply equation (6.3) by a scalar quantity α,

$$j\alpha\frac{\partial\psi}{\partial\omega} = \alpha t\psi \quad (6.4)$$

where, α is a scalar quantity, $-\infty<\alpha<\infty$.

Since α can be any scalar, we can have infinite number of Eigen-Values. The Eigen-Values of an operator are not unique. If the time t is represented as an Eigen-Value of the operator $j\partial/\partial\omega$, then, time t will not be unique. The time must be unique. Therefore, the time t cannot be represented as an Eigen-Value of $j\partial/\partial\omega$. This is true for any observable of a system. The observable of a system cannot be uniquely represented as Eigen-Values of operators. The Eigen-Values are not unique. If we choose to represent the observables as Eigen-Values of operators, the

observables will be multi-valued or not unique; the observables will have multiple values concurrently. The observables are multi-valued not due to an inherent characteristic of the system itself, but due to the nature of the Eigen-representation itself. By representing observables of a system as Eigen-Values, we have forced the observables of a system to be multi-valued concurrently.

Lemma:

The observables of any system are unique. The mathematical representation of the observables must also be unique.

Lemma:

The observables of a system cannot be represented as the Eigen-Values of a system since Eigen-Values are not unique.

Lemma:

It is the Eigen-Value representation of a system in Quantum Mechanics that makes a quantum matter particle appears to be in multiple states concurrently, not an inherent physical nature of a system. State of a quantum matter particle or any other matter particle is unique.

Lemma: Universality of Mechanics

There is no objective physical boundary that separates microscopic matter particles from macroscopic matter particles. The mechanics that govern the matter particles must be universal, independent of size of the matter particles.

Similarly, if we differentiate the plane wave given in equation (6.1) with respect to the angular spatial frequency (angular srequency) or the wave number k, we get,

$$\frac{\partial \psi}{\partial k} = jx\psi \quad (6.5)$$

$$-j\frac{\partial \psi}{\partial k} = x\psi \quad (6.6)$$

The position x is given by an Eigen-Value of the operator -j∂/∂k. Here again, since the Eigen-Values are not unique, the observable, the position, in this mathematical representation is not unique. Although the position of a matter particle is unique in nature, the Eigen-Value representation of the observables makes the position of a matter particle not unique. It is absolutely preposterous to represent a matter particle in a mathematical model that is not unique, and claim that the state of a matter particle is not unique in the nature. The state of any matter particle is unique in the nature irrespective of its size. Our non-unique representation of the state of a matter particle is not going to make the actual physical state of a matter particle not unique.

The position of a matter particle is unique. The mathematical representation of a matter particle must be such that the position of a matter particle is unique. The position of a matter particle cannot have multiple values concurrently at the same time. As a result, the position of a matter particle cannot be represented as an Eigen-Value of operator -j∂/∂k. The observables of a matter particle cannot be represented as Eigen-Values.

If we represent the position of a matter particle as an Eigen-Value of operator -j∂/∂k, the position of a matter particle may appear as uncertain since the Eigen-Values are not unique. This appearance of uncertainty of the position of a matter particle is not an inherent property of a quantum matter particle. The uncertainty of the position of a matter particle is solely the result of the Eigen-Value representation of the observables in the Quantum Mechanics itself.

Corollary:

The apparent uncertainty of the state of a quantum matter particle is exclusively in the Quantum Mechanical Model itself; it is not an inherent property of a matter particle. The state of a matter particle is always certain irrespective of the size of the matter particle.

Corollary:

The uncertainty of the state of a matter particle in Quantum Mechanics is solely the result of the Eigen-Value representation of the observables in Quantum Mechanics itself, a human mistake.

VII. NO UNCERTAINTY IN POSITION AND MOMENTUM

Einstein's preposterous conjecture that the light or electromagnetic waves consisted of spatially random mass-less particles, which were later came to be known as photons, together with the equally preposterous conjecture that the light is relative, led to a meaningless relationship for the so-called photon,

$$p = h/\lambda \quad (7.1)$$

where, λ is the wave length and p is the so called momentum of a mass-less photon.

This relationship is meaningless since the so-called light particles or photons are mass-less. A mass-less particle cannot have a momentum. Light does not propagate due to a momentum. Propagation of light has nothing to do with momentum. Light has no momentum. Momentum is always associated with a mass. Momentum has no existence without a mass since by definition $\mathbf{p}=m\mathbf{v}$, where m is the mass and the $\mathbf{v}$ is the velocity of the mass, $p=|\mathbf{p}|$. You can't get around the need of mass for momentum simply by redefining the momentum as energy divided by square speed, $p=E/v^2$. Here the energy is mechanical energy. Mechanical energy has no existence without a mass. You cannot define the momentum as $p=E/v^2$ for something that has no mass since mass less particle has no mechanical energy. You cannot substitute electromagnetic energy in place of mechanical energy since electromagnetic energy is not the same as the mechanical energy. So, the definition of a momentum for so called light particles or photons as $p=h/\lambda$ is simply meaningless.

Later, de Broglie appeared with even more preposterous conjecture or de Broglie Crafted Prophesy (dbCRAP). De Broglie prophesied 'if a wave of wave length λ behaves as a mass-less particle of momentum p given by p=h/λ, any mass or a matter particle of momentum p must also behave as a wave of wave length λ', given by,

$$\lambda=h/p \quad (7.2)$$

where p is the momentum of the mass or the matter particle, λ is the de Broglie wavelength of the so-called matter particle wave.

This is simply the wishful thinking. Not the reality. It is similar to someone in the flat-earth era declaring that everything is a creation by an entity from the dark beyond. Now, suddenly, by proclamation or by a de Broglie Crafted Prophesy (dbCRAP), all the matter particles started waving. Nobody even knew what is waving in a matter particle or nobody even care what is waving. Suddenly, particles are waves and waves are particles. With de Broglie Crafted Prophesy (dbCRAP), almost a century long era of Quantum Mechanics was born. This is the start of human made quantum matter particle spookiness; it is the start of the Houdinification of matter particles. Human made un-natural spooky mask was put on the nature, and claimed that 'the nature was spooky'. Microscopic particle moving near the speed of light with momentum p will be as spooky as a massive object at nearly stand still with momentum p. it is the momentum that decides the wavelength of an object, not its size.

From here on, everyone incorrectly considered mass and energy as equivalent or one and the same. Incorrectly, electromagnetic energy and the kinetic energy were considered equivalent. Without this erroneous equivalence or the substitution of electromagnetic energy in place of mechanical energy, Einstein's famous meaningless equation $e=mc^2$ would not have been there since e is electromagnetic energy and mc^2 is mechanical energy. Electromagnetic energy is not equal to mechanical energy; they are not one and the same. Electromagnetic energy is quantized, while the mechanical energy is continuous. Not all the energies are created equal.

In Quantum Mechanics, electromagnetic parameters were mixed up with mechanical parameters; no hold bar, every impossibility is a possibility. If and when faced with an impossible outcome due to this electromagnetic energy and mechanical energy mixed-up, that impossibility was treated as a strange or spooky behavior of quantum matter particles in the nature. Mysteriousness took hold over causality. Welcome to the land of blind substitution, the Quantum Mechanics. So let us start substituting blindly.

We know that the angular srequency or wave number k is given by,

$$k=2\pi/\lambda \quad (7.3)$$

Substituting for λ in de Broglie wave given in equation (7.2), we get,

$$p=\hbar k \quad (7.4)$$

where $\hbar=h/2\pi$.

Quantum Mechanics further incorrectly assumes that the energy E_m of a matter particle is given by,

$$E_m=hf \quad (7.5)$$

Since $\omega=2\pi f$, we incorrectly have, $E_m=\hbar\omega$ (this equality is invalid since the mechanical energy is not quantized)

$$\omega=E_m/\hbar \quad (7.6)$$

Now, we have the relationships that form the foundation of the Quantum Mechanics,

$$p=\hbar k \quad (7.7)$$

$$E_m=\hbar\omega \quad (7.8)$$

Quantum Mechanics can be viewed as painting with $p=\hbar k$ and $E_m=\hbar\omega$ on the canvas of the plane wave equation ψ(x,t), where,

$$\psi(x,t)=A\exp(jkx)\exp(-j\omega t) \quad (7.9)$$

Everything in Quantum Mechanics has the origin resting in these three equations:

$$p=\hbar k$$
$$E_m=\hbar\omega$$
$$\psi(x,t)=A\exp(jkx)\exp(-j\omega t)$$

Schrodinger equation originated from here. Heisenberg Uncertainty Principle got its start from here. The preposterous idea that 'a matter particle is in a multiple states concurrently' at the same time is seated and germinated in here. Quantum Superposition reveals its ugly head here. These three simple and innocent looking equations had the power to turn the science into Houdinified and Voodoofied non-science. Since general public has a thirst for mystery and spiritual side, Houdinified and Voodoofied non-science writers could brag about how they could sell multi-million copies while laughing all the way to the bank. Let us see how these relationships popped up from blind substitution of electromagnetic energy in place of mechanical energy, and mechanical energy in place of electromagnetic energy has turned the science into a Houdinified science or non-science, physics into Voodoofied physics or non-physics.

It was incorrectly assumed that it was possible to replace the angular srequency k in the plane wave equation ψ(x,t) by the momentum p/ħ of a matter particle and the angular frequency ω in ψ(x,t) by the kinetic energy $E_m/\hbar$ of a matter particle to obtain the so called wave function of a matter particle,

$$\psi(x,t)=A\exp(jkx)\exp(-j\omega t) \quad (7.10)$$

$$k=p/\hbar \quad (7.11)$$

$$\omega=E_m/\hbar \quad (7.12)$$

This meaningless blind substitution leads to the so-called wave function for a matter particle with mass m,

$$\psi(x,t)=A\exp(jpx/\hbar)\exp(-jE_mt/\hbar) \quad (7.13)$$

where, the momentum p=mV, and V is the speed of the matter particle, E_m is the mechanical energy of the matter particle.

We obtained this wave equation for a matter

particle by blindly replacing the angular srequency k by momentum p/ħ of a matter particle of mass m. Even though the angular srequency k has nothing whatsoever to do with a mass, the momentum p of a matter particle has everything to do with mass. We have forced the existence of angular srequency k to depend on the mass. The momentum has no existence without a mass. You cannot replace the angular srequency or the wave number k in the wave equation with a parameter p that is proportional to the mass of an object since the state of a mass is unique. This is the biggest unseen blunder in Quantum Mechanics.

The mentality at the early days of the development of Quantum Mechanics was a simple one; let us just substitute p/ħ for k and E_m/ħ for ω in the wave equation and see what it will lead to. If some problem comes up, we can escape that problem by forcing it into the nature as a special characteristic of nature that nobody seems to have a grasp yet. We can call it a strangeness of nature or it is a strange phenomenon of quantum matter particles, and claim that the behavior of quantum matter particles is mischievous. What separates a quantum matter particle from any other object? In fact, there is nothing that differentiates a quantum matter particle from any other object. There is no boundary that separates quantum matter particles from any other object. There is no well defined boundary that separates microscopic particles from macroscopic objects. How small is too small?

According to the de Broglie conjecture, any object should behave exactly as any quantum matter particle does since it is the momentum that decides the behavior of a particle not the mass or the size of a matter particle itself. If a large object has a momentum that is the same as the momentum of a quantum matter particle, their behavior cannot be any different from each other since the behavior of a quantum matter particle is determined exclusively by the momentum of a matter particle alone, nothing else, not the size of the object or mass. The fact of the matter is that the angular srequency k cannot be replaced by the momentum p/ħ of a matter particle of mass m, and the frequency ω cannot be replaced by the mechanical energy of a matter particle E_m/ħ. Let us see why?

The angular srequency k in the wave equation can take infinitely many values concurrently at the same time. If we substitute the momentum p/ħ of a mass m in place of the angular srequency k, then, only a single angular srequency k_m can be present at any given time since the momentum of a matter particle at any given velocity is unique and the velocity of a mass at any given position is unique. At any given time, the velocity of a mass m is unique and hence the momentum of the mass is unique. By replacing the wave number or the angular spatial frequency (angular srequency) k with the momentum p/ħ of a matter particle of mass m, we have turned Fourier Function into a non-Fourier Function. This is a major unseen or 'deliberately chosen not to see' error in Quantum Mechanics. If this fact had been seen then, the Quantum Mechanics would have been dead even before it had been born – by abortion.

Now, let us consider the substitution of the energy E_m/ħ of a matter particle in place of the angular frequency ω in the wave equation. The wave function of a matter particle is not an electromagnetic wave; it is a mechanical wave if it exists. The energy of a matter particle is mechanical energy, not electromagnetic energy. Electromagnetic energy depends on the acceleration of a charge, not on the mass and speed of the object that carries the charge. Although the electromagnetic energy E of an electromagnetic wave burst of frequency f is given by E=hf, the mechanical energy of a matter particle does not satisfy that relationship. Mechanical energy is not quantized. Mechanical energy does not come in quanta. Mechanical energy is continuous. For mechanical energy E_m of a matter particle, we have $E_m \neq hf$. The substitution of $\omega=E_m/\hbar$ in the case of a matter particle wave is incorrect and invalid; it violates the laws of nature. You cannot include unnatural acts in a mathematical model and blame it on nature.

Further, the angular frequency ω in the wave equation can take infinitely many values concurrently at the same time. Once we substitute energy of a matter particle E_m/ħ in place of the angular frequency ω in the wave equation, we are restricting it to a single value ω_m since the energy of a matter particle at any given time is unique. A matter particle cannot have infinitely many E_m concurrently at the same time. By making the invalid substitution of the energy of a matter particle E_m/ħ in place of ω in the wave equation, we have turned, in effect, a Fourier Transform Function into a non-Fourier Transform Function.

Property:

Electromagnetic energy depends on the acceleration of a charge, not on the mass and the speed of an object that carries the charge. Mechanical energy depends on the speed of a mass, not on the charge a mass contains.

Property:

The energy E_m of a matter particle is mechanical energy. The mechanical energy is continuous. Mechanical energy does not come in quanta. The mechanical energy of a matter particle cannot be written as the product of the Plank constant and frequency, $E_m \neq hf$.

Property:

It is only the electromagnetic energy E that comes in wave bursts, or that is quantized. It is only the electromagnetic energy that can be represented as the product of the Plank constant and frequency, E=hf.

If you replace k by p/ħ and ω by E_m/ħ in the wave equation, what you get is nonsense, Quantum Mechanics.

Mechanical energy is continuous. Mechanical energy does not come in quanta.

Corollary:

Although the angular srequency k and the angular frequency ω can be at infinitely many values concurrently at the same time, the momentum p and the mechanical energy E_m of a matter particle cannot.

Corollary:

The momentum p of a matter particle is unique and can only be at a single value at any given time. Similarly, the energy E_m of a matter particle is unique and can only be at a single value at any given time.

VIII. OBSERVABLES IN QUANTUM MECHANICS ARE UNCERTAIN BY HUMAN FALLACY

Now, let us consider the so-called wave function ψ(x,t) of a matter particle of mass m, momentum p, and energy E_m , where,

$$\psi(x,t)=A \exp|(jpx/\hbar) \exp(-j E_m t/\hbar) \quad (8.1)$$

Differentiating ψ(x,t) with respect to x and t, we get,

$$\frac{\partial\psi}{\partial x} = j(p/\hbar)\,\psi \quad (8.2)$$

$$\frac{\partial\psi}{\partial t} = -j(E_m/\hbar)\psi \quad (8.3)$$

Rearranging equations (8.2) and (8.3), we get,

$$-j\hbar\frac{\partial\psi}{\partial x} = p\psi \quad (8.4)$$

$$j\hbar\frac{\partial\psi}{\partial t} = E_m\psi \quad (8.5)$$

As it was done in the Quantum Mechanics, one glance at these two equations (8.4) and (8.5) tells us:

- The Eigen-Values of the operator -jħ∂/∂x is the momentum p of a matter particle, where p is an observable.
- The Eigen-Values of the operator jħ∂/∂t is the energy E_m of a matter particle, where E_m is an observable.

Does that mean, we can now say that the Eigen-Values of an operator provide the observables of a matter particle of a system? Absolutely not. No, we cannot. If we presume that the observables of a matter particle are the Eigen-Values of operators, then, we are making one crucial error that will haunt us literally. That is exactly the reason the Quantum Mechanics has been haunting us literally from the very beginning. That is exactly why Quantum Mechanics is ghostly.

As we have seen before, we know that the Eigen-Values are not unique. The observables of a matter particle or any system must be unique. When we model a matter particle or any system, the state of the matter particle or the system in our mathematical model must be unique. Therefore, the Eigen-Values of operators cannot be used to represent the observables of a matter particle or a system.

The momentum of a matter particle cannot be represented as the Eigen-Values of an operator since the momentum of a matter particle must be unique. The energy of a matter particle cannot be represented as the Eigen-Values of an operator since the energy of a matter particle must be unique. The state of a matter particle, whether the particle is microscopic or macroscopic, cannot be represented as Eigen-Values of operators. The observables cannot be represented as the Eigen-Values of operators.

The Eigen-Value representation of position and time can be obtained by differentiating ψ(x,t) with respect to p and E,

$$\frac{\partial\psi}{\partial p} = j(x/\hbar)\psi \quad (8.6)$$

$$\frac{\partial\psi}{\partial E} = -j(t/\hbar)\psi \quad (8.7)$$

Rearranging equations (8.6) and (8.7), we get,

$$-j\hbar\frac{\partial\psi}{\partial p} = x\psi \quad (8.8)$$

$$j\hbar\frac{\partial\psi}{\partial E} = t\psi \quad (8.9)$$

These equations (8.8) and (8.9) tells us,

1. The position x of a matter particle is an Eigen-Value of the operator -jħ∂/∂p.
2. The time t is given by an Eigen-Value of the operator jħ∂/∂E.

Since the Eigen-Values are not unique, if we use Eigen-Value of an operator to represent the position of a matter particle, then, the position of the matter particle will be uncertain. The uncertainty of the location of a matter particle in Quantum Mechanics is not an inherent property of a matter particle. The uncertainty of the position of a matter particle is in the Eigen-Value representation of the observables in the mathematical model used in the Quantum Mechanics. It is we who made the position of a matter particle uncertain using the Eigen-Value of an operator to represent the position of a matter particle. It is not the nature at fault here. We cannot blame the nature for the uncertainty of the position of a matter particle in Quantum Mechanics. If we represent the position of a matter particle as the Eigen-Value of an operator, then, we are forcing the position of the matter particle to be uncertain by design in the Quantum Mechanics mathematical model since the Eigen-Values are not unique. Uncertainty of the position of a matter particle in Quantum Mechanics is a result of human fallacy.

Corollary:

If the position of a matter particle is modeled as an Eigen-Value of an operator, then, the position of the matter particle will be uncertain since the Eigen-Value is not unique.

Corollary:

If the momentum of a matter particle is modeled as an Eigen-Value of an operator, then, the momentum of the matter particle will be uncertain since the Eigen-Value is not unique.

Similarly, if the time is modeled as an Eigen-Value

of an operator, the time will be uncertain since the Eigen-Value is not unique. Time cannot be uncertain. Time must always be certain. Time must be unique. This is in itself a good indication that the uncertainty is not in the physical state of a matter particle. The uncertainty is inherent in the Eigen-Value representation of the observables in the Quantum Mechanical Model itself. It is not possible to represent the reality as Eigen-Values of operators. If you represent an observable as an Eigen-Value, you are, in effect, allowing that state to be at infinitely many multiple states concurrently. If you represent the reality as the Eigen-Values of operators, then, you are forcing the nature to be uncertain or ghostly. Don't blame the nature for your ghostly misrepresentations of nature.

Lemma:

The observables of a physical system cannot be represented as the Eigen-Values of operators since the Eigen-Values are not unique.

Corollary:

The uncertainty in the position and the momentum of a matter particle that is purported to be present in Quantum Mechanics is not an inherent property of the nature of matter particles themselves. The uncertainty of a matter particle in Quantum Mechanics is due to the Eigen-Value representation of the observables of a matter particle in the Quantum Mechanics.

Now, we have a clear idea about the reasons for the misconception about the quantum matter particles. The long held belief that the position and the momentum of a matter particle were uncertain is incorrect, not true. The position and the momentum of a matter particle are certain. Further, the Heisenberg Uncertainty Principle, which incorrectly states that 'it is not possible to obtain the precision in both the position and the momentum of a matter particle', is incorrect. The precision involved in Heisenberg Uncertainty Principle has nothing to do with observers or measuring instruments. It is observer independent precision, an inherent physical limitation. The precision involved here is not a limitation of a measuring instrument as it is very often incorrectly portrait to be in physics textbooks.

Precision of the position of a matter particle is unaffected by the precision of the momentum. There is no inherent physical phenomenon that limits the precision of the position and the momentum of a matter particle since the [position, Momentum] Pair is not a Fourier Transform Pair.

> Heisenberg Uncertainty Principle has neither uncertainty nor a principle.

Corollary:

The Heisenberg Uncertainty Principle is Incorrect since the [position, Momentum] Pair of a mass is not a Fourier Transform Pair.

> The precision of position is not affected by the precision of momentum and vice versa.

The precision involved in Heisenberg Uncertainty Principle has nothing to do with the effect of observer or the measuring instruments on the object that is being measured. We know that there is an inherent physical phenomenon that limits the precision of time and frequency since [time, Frequency] Pair is a Fourier Transform Pair; it is not an observer effect or measuring instrument effect. Similarly, we know that there is an inherent physical phenomenon that limits the precision of position and srequency since the [position, Srequency] Pair is a Fourier Transform Pair; it is not an observer effect or measuring instrument effect. However, since the [position, Momentum] Pair of a mass is not a Fourier Transform Pair, the precision of position is not affected by the precision of momentum and vice versa.

Corollary:

State of a matter particle is always certain in the nature. The human perceived uncertainty is in our mathematical model of a matter particle in Quantum Mechanics; the uncertainty is not in the behavior of a matter particle itself. Although the behavior of a matter particle appears uncertain to us as a result of the invalid and incorrect mathematical model we are using in Quantum Mechanics, the behavior of a matter particle is absolutely certain to the nature, to the particle itself. Nothing in nature is uncertain to the nature.

> The precision involved in Heisenberg Uncertainty Principle has nothing to do with the effect of observer or the measuring instruments on the object that is being measured.

IX. NATURE OF QUANTUM MATTER PARTICLES

Now, we know that the de Broglie conjecture is false. There is no wave particle duality. Light is not relative. There are no photons or mass-less particles. All the different types of energies are not the same. Mechanical energy is continuous. Mechanical energy is not quantized. Only the electromagnetic energy is quantized or comes in wave bursts. Heisenberg uncertainty principle incorrect since the [position, Momentum] Pair of a mater particle is not a Fourier Transform Pair. The state of a matter particle cannot be modeled uniquely using Eigen-Values. Let us summarize the nature of matter particle:

1. The position and the momentum of a matter particle are certain, and unique.
2. If the observables of a matter particle are modeled as Eigen-Values of operators, then, the observed state of a matter particle will be uncertain since the Eigen-Values are not unique.
3. The precision of the position of a matter particle

has no effect on the precision of the momentum of a matter particle and vice versa. The Heisenberg Uncertainty Principle is incorrect; not true.

4. The position and the momentum of a matter particle are not a Fourier Transform Pair. If one tries to force the position and the momentum of a matter particle to be a Fourier Transform Pair, it must be a person who has no real understanding of the Fourier Transform and how it works. One must be totally Fourier Transform ignorant in order to make such a false claim that the [position x, Momentum p/ħ] pair of a matter particle is a Fourier Transform Pair. Just as a non-existent creator is not going to suddenly come into existence just because some flat-earth era Crafted Prophecy (CRAP) claimed that the universe and everything in it is a creation of a so-called creator, the [position x, Momentum p/ħ] Pair of a matter particle is not going to become a Fourier Transform Pair just because someone in Berlin-Hagan claimed it to be so.
5. The Heisenberg Uncertainty Principle is a result of forcing the [position x, Momentum p/ħ] pair of a matter particle to be a Fourier Transform Pair in Quantum Mechanics; result of a mathematically ill-legal act. You cannot force the nature to be something that it is not just because you want it to.
6. A theoretical blunder in Quantum Mechanics is being covered up by Copenhagen Interpretation or more appropriately by Berlin-Hagen legislated enforcement of an uncertainty on quantum matter particles; simply a desperate face saving measure to cover up an ignorant mistake.

So, there is no truth to the widely proclaimed spookiness of quantum matter particles. Quantum matter particles are not spooky or ghostly. Although, the dominant forces acting on a microscopic matter particle may be different from a macroscopic matter particle, the mechanics governing the behavior of quantum matter particles is no different from any other object or macroscopic matter particles. This is understandable since there is no physical line demarcating the microscopic matter particle from macroscopic particle. The behavior of quantum matter particles is as natural as any matter particle. The state of a quantum matter particle is unique. There is nothing mysterious about the behavior of a quantum matter particle. All the mysteries are in the ill-conceived and false Theory of Quantum Mechanics and the mathematical model itself. Quantum Spookiness is a human concoction. Whether a matter particle is microscopic or macroscopic, the behavior of the matter particles is the same; there is no spookiness. The only thing that differs from microscopic to macroscopic matter particle is the dominant force. In the case of microscopic particles the dominant force is the electrical force while the dominant force for the case of macroscopic objects remains as the gravitational force. Although one type of force may dominate the other depending on the size of the matter particle and its static electric charge, matter particles are subjected to both electrical as well as gravitational forces without boundary.

The state of a matter particle is not determined by an observer. No matter particle can change its momentum without an energy input. Both circular momentum and linear momentum are conserved. The state of a matter particle cannot be random or probabilistic. It costs energy for a matter particle to be in a random or probabilistic state. A charge particle is subjected to radiation loss if its state is probabilistic. It is we who invented probability as a mathematical tool to analyze the data when the underline physics of a system that generated the data is not known to us. The underline physics of any system is clearly known to the system itself or the nature, and hence there is no reason for the nature to seek the help of probability. It is we who model matter particles using probability. It is we who made matter particles random in a mathematical model. Probability is a man made concept, not a natural phenomenon present in nature. Nature does not do probability. Nature does not make decision by throwing dies. We use the probability to model systems when we have no clue to the actual underline physics of the systems that they are governed. Uncertainty present in Quantum Mechanics is a result of a theoretical blunder we have created, not an inherent behavior of quantum matter particles.

For a person, quantum matter particle seen through the eyes that have not yet realized the human blunder in Quantum Mechanics, it may appear as if the matter particle is in a state of uncertainty. Yet, as far as the quantum matter particles are concerned, the state of a matter particle is unique and certain. The position of a matter particle is unique. The momentum of a matter particle is unique. A matter particle cannot be at infinitely many states concurrently, at the same time. It is we who are asking a matter particle to be at infinitely many states concurrently at the same time by forcing the position and the momentum of a matter particle to be a Fourier Transform Pair even though they can never be in reality.

It is a great mistake to force the position and momentum of a matter particle to be a Fourier Transform Pair in a mathematical model, because they can never be in reality. No mass can ever be at several states concurrently at the same time. Any change in momentum does not come free; it cost energy to change the momentum. It cost energy to change the position of a matter particle randomly. The only path an electron in an atom can take without costing energy is a circular orbit at uniform speed; an electron orbiting the nucleus at constant speed do not radiate [3,4].

Uncertainty breeds radiation.

If the position and the momentum of an electron in an atom are uncertain, it leads to radiation loss resulting in the collapse of the atom.

Corollary:

It cost energy for a matter particle to behave probabilistically. It cost energy for a matter particle to change its momentum. If an electron in an atom behaves probabilistically, it will collapse due to radiation energy loss.

Nothing is uncertain to the nature.
Everything is uncertain for living-beings.

Corollary:

An electron orbiting the nucleus in an atom on a circular orbit do not radiate [4,3].

Corollary:

The only path an electron in an atom can take without losing energy is a circular path at uniform speed.

Corollary:

No mass can be at multiple states concurrently irrespective of its size.

Lemma:

Uncertainty of a charge particle breeds radiation.

X. THHE FALLACY OF SCHRODINGER

The Schrodinger equation is one of the corner stone of the Quantum Mechanics. Although it is obvious that the Schrodinger equation is a result of several theoretical blunders, everybody seems to have embraced it blindly either knowingly going with the wind (you must follow what we teach if you want to pass the course) or unknowingly.

How did Schrodinger arrive at the equation that is named after him? It is in fact more appropriate to say that the Schrodinger equation is a result of reverse engineering. Schrodinger first took a meaningless, never proven, impossible and unrealistic de Broglie conjecture or de Broglie Crafted Prophesy (dbCRAP), which states that a mass with momentum p behaves as a wave of de Broglie wavelength λ given by λ=h/p; a mysterious false claim the Quantum Mechanics was founded upon. The relationship λ=h/p does not even hold for electromagnetic waves, not to mention how meaningless it is for a matter particle or a mass. The dbCRAP is as dubious, mysterious, and unrealistic, invalid and phony as dead man rising; utter nonsense.

If a matter particle wave is determined by its momentum, a fast moving microscopic matter particle with momentum p and a slow moving macroscopic object with the same momentum p will have the same wave length. The slower is the speed of massive object the more uncertain its position will be according to the de Broglie conjecture. It did not matter to Schrodinger how ridiculous or meaningless the de Broglie conjecture was, he took the de Broglie conjecture and ran away with it only to come back with a wave equation for a matter particle even though he had no clue to what was waving in his wave equation.

Taking the de Broglie conjecture as true, Schrodinger reasoned, 'if a matter particle behaves as a wave, then, it should satisfy the plane wave equation subjected to the energy constrained of a matter particle at any given time'. So, Schrodinger started with the energy constrained of a matter particle,

$$E_m=E_K+E_P \quad (10.1)$$

where, E_m is the total mechanical energy of a matter particle of mass m, E_K is the kinetic energy of the matter particle, and E_P is the potential energy of the matter particle.

Noteworthy:

The total energy E_m here is mechanical energy, not electromagnetic energy. Mechanical energy and electromagnetic energy are not the same. Mechanical energy of a matter particle is not quantized. Mechanical energy of a matter particle does not come in wave burst of frequency f. It is only the electromagnetic energy that is quantized. Electromagnetic energy has no relation to the mass of a particle. It is only the mechanical energy that is related to the mass of a particle. Electromagnetic energy is related to the electric charge a matter particle carries and to its acceleration. It is only the electromagnetic energy that is proportional to the frequency of the wave burst, not the mechanical energy. Schrodinger paid no attention to this difference. Schrodinger erroneously treated mechanical energy of a matter particle as electromagnetic energy.

For a matter particle of mass m and momentum p, we have the kinetic energy E_K, where,

$$E_K=p^2/2m \quad (10.2)$$

Now, we have the total mechanical energy E_m,

$$E_m=p^2/2m+E_P \quad (10.3)$$

where p=momentum of the matter particle, m=the mass of the matter particle, and E_P=the potential energy of the particle, if any.

At this point, all Schrodinger had to do was constrain the wave equation to the energy of a matter particle given by equation (10.3). Schrodinger started with the wave plane wave ψ(x,t), where,

$$\psi(x,t)=A\exp(jkx)\exp(-j\omega t) \quad (10.4)$$

To convert this plane wave to a matter particle wave, all Schrodinger had to do was to manipulate it using the non-existent and utterly meaningless de Broglie wavelength of a matter particle together with the energy constrained the matter particle had to satisfy. A matter particle has a mass m, velocity **v**, and energy

E_m. The velocity **v** and the mass m of a matter particle can be bundle together as the momentum **p**. After that Schrodinger had to find a way to force feed the momentum p, p=|**p**| and the energy E_m of a matter particle into the plane wave ψ(x,t) given in equation (10.4). The end result, the so-called matter particle wave, would only be possible on paper, not in nature. A mass can never be a wave in nature. The path Schrodinger took was the blind-substitution in a blind-faith. The adherence of the people to a blind-faith is not that of a surprise since there are many people who are still adhering fanatically to the flat-earth era nonsensical spiritual dogmas that avoid or prohibit any questioning of their faith, and are totally blind to the truth, even to this day.

The de Broglie conjecture claims that a matter particle behaves as a wave. The de Broglie conjecture comes with a specific relationship that ties the momentum of a matter particle to a so-called matter particle wavelength λ, where,

$$\lambda=h/p \qquad (10.5)$$

There is nothing here that limits this relationship to a microscopic matter particle; it should equally apply to macroscopic matter particle too. In fact, both a microscopic matter particle and a macroscopic matter particle can have a same matter particle wavelength λ if the momentum of the microscopic matter particle is the same as the momentum of the macroscopic matter particle, which indeed will happen when a macroscopic matter particle is near stationary, or the speed of a macroscopic object is very slow.

Since the angular srequency k=2π/λ, we have,

$$k=p/\hbar \qquad (10.6)$$

At this point, Schrodinger had a mean to inject the momentum p of a matter particle into the plane wave ψ(x,t). All he had to do was substitute p/ħ in place of the angular srequency k in the plane wave ψ(x,t).

How could he inject or force the energy E_m of a matter particle into the plane wave ψ(x,t)? This is the question Schrodinger had to find an answer to if he wanted to proceed any further. Here, what Schrodinger wanted was an equation for so-called matter particle wave of de Broglie wave length λ. Schrodinger knew that there was energy-frequency relationship for electromagnetic waves given by,

$$E=hf \qquad (10.7)$$

$$E=\hbar\omega \qquad (10.8)$$

where, E is the electromagnetic energy of an electromagnetic wave burst of frequency f.

We know that a matter particle wave of de Broglie wavelength λ is not an electromagnetic wave and therefore it is not possible to use the relationship E=hf in the case of a so-called matter particle wave. The energy in a matter particle is mechanical energy. The mechanical energy is not the same as the electromagnetic energy. Energy comes in different flavors. Not all the different types of energies are the same, although one form of energy can be converted to another form of energy. Further, the mechanical energy is not quantized; mechanical energy is continuous. It is only the electromagnetic energy that comes in quanta. The total energy of a matter particle E_m is continuous. So, the relationship E=hf does not hold true for any matter particle of mass m, or $E_m \neq hf$. There is no way to overcome this problem. When there is no possible meaningful and correct way to overcome this problem, the only option left was to make a blind substitution. So Schrodinger chose the option of blind substitution; just stick in hf wherever the energy term E_m is encountered and see what happens. The outcome was quite impressive that no one cared notice if what he did was correct or even sensible.

Although we know E=ħω does not apply for a matter particle of mass m, why not assume it and proceed to see where it will lead us. After all, the ubiquitous $E=mc^2$ does not hold true since light is not relative and the electromagnetic energy E is not equal to the kinetic energy of a mass mc^2; $E \neq mc^2$. Yet, the relationship $E=mc^2$ is already in use in the derivation of λ=h/p for a so called photon or a mass-less light particle, the very idea that was later extended to a matter particle of mass m by de Broglie. Nobody really noticed the contradiction and the inequality of energy in $E=mc^2$ relationship. In addition, nobody realized that the light is not relative either. If Einstein could use the mechanical energy in place of electromagnetic energy, why could Schrodinger not. Schrodinger used E=ħω relationship even though in his case the energy E is the mechanical energy and ħω is only applicable to electromagnetic energy. Schrodinger knowingly or unknowingly threw away the reasoning and used the relationship E=ħω to overcome the difficulty he had in getting the energy constrained of a matter particle into the plane wave ψ(x,t).

Having equipped with a mean to inject the mechanical energy of a matter particle into the plane wave ψ(x,t), all Schrodinger had to do was substitute for ω in the plane wave ψ(x,t) using the relationship,

$$\omega= E_m/\hbar \qquad (10.9)$$

Now Schrodinger has a wave equation for a matter particle,

$$\psi(x,t)=A\exp(jpx/\hbar)\exp(-jE_mt/\hbar) \qquad (10.10)$$

OK, both Schrodinger as well as Einstein used equalities that do not hold true in the nature; they used relationship completely incorrect, non-existent or rather insane. On the other hand, insane concepts are no stranger to humans. All the religious believes are even out of this world insane, yet majority of people seem to believe them blindly, perhaps due to fear. But, Schrodinger had what he needed; an equation that expresses the time evolution of the state of a matter particle or a so-called matter particle wave.

The wave equation of a matter particle shows the time and space evolution of a matter particle of a given momentum and given energy. However, Schrodinger had one more thing to do. He had to make the matter particle wave to be constrained to the energy relationship given in equation, $E_m=p^2/2m+E_P$ given in equation (10.3).

By differentiating ψ(x,t) in eqn. (10.10) with respect to x and t, we get,

$$\frac{\partial \psi}{\partial x} = j(p/\hbar)\psi \quad (10.11)$$

$$\frac{\partial \psi}{\partial t} = -j(E_m/\hbar)\psi \quad (10.12)$$

We can rewrite these equations as,

$$-j\hbar\frac{\partial \psi}{\partial x} = p\psi \quad (10.13)$$

$$j\hbar\frac{\partial \psi}{\partial t} = E_m\psi \quad (10.14)$$

The observable, momentum p is an Eigen-Value of the operator $-j\hbar\partial/\partial x$. The observable, the energy E_m of a matter particle is an Eigen-Value of the operator $j\hbar\partial/\partial t$. The energy relationship of a matter particle is given by,

$$E_m = p^2/2m + E_P, \quad (10.15)$$

If we treat the entities in eqn. (10.15) as operators, the operation of Equation (10.15) on ψ gives,

$$E_m\psi = (p^2/2m)\psi + E_P\psi \quad (10.16)$$

Substituting equations (9.13) and (9.14) in the energy relationship of a matter particle given in equation (10.15), (10.16) Schrodinger arrived at what is known as the Schrodinger equation for a matter particle of mass m,

$$j\hbar\frac{\partial}{\partial t}\psi = -(\hbar^2/2m)\frac{\partial}{\partial x}\frac{\partial}{\partial x}\psi + E_P\psi \quad (10.17)$$

The wave function of a matter particle is the Eigenvector corresponding to the zero Eigen-Value of the operator,

$$[j\hbar\frac{\partial}{\partial t} + (\hbar^2/2m)\frac{\partial}{\partial x}\frac{\partial}{\partial x} - E_P] \text{ , where,}$$

$$[j\hbar\frac{\partial}{\partial t} + (\hbar^2/2m)\frac{\partial}{\partial x}\frac{\partial}{\partial x} - E_P]\psi = 0 \quad (10.18)$$

When the potential energy $E_P = 0$, we have,

$$j\hbar\frac{\partial}{\partial t}\psi = -(\hbar^2/2m)\frac{\partial}{\partial x}\frac{\partial}{\partial x}\psi \quad (10.19)$$

The 3-Dimensional matter particle wave equation can be obtained by substituting ∇^2 in place of $\frac{\partial}{\partial x}\frac{\partial}{\partial x}$, where,

$$\nabla^2 = \frac{\partial}{\partial x}\frac{\partial}{\partial x} + \frac{\partial}{\partial y}\frac{\partial}{\partial y} + \frac{\partial}{\partial z}\frac{\partial}{\partial z} \quad (10.20)$$

So, Schrodinger arrived at his 3D Schrodinger equation for a matter particle,

$$j\hbar\frac{\partial}{\partial t}\psi = -(\hbar^2/2m)\nabla^2\psi \quad (10.21)$$

Property:

According to the Schrodinger Wave Equation, a matter particle can be at multiple states concurrently at the same time or ghostly since the observables of a matter particle are represented as Eigen-Values in the Schrodinger Wave Equation. The Eigen-Values are not unique. The purported ghostly behavior of a matter particle is a result of a non-unique representation of observables, a human misrepresentation or human error; it is not a natural phenomenon of a matter particle. There are no ghosts or gods.

The Schrodinger equation can be found everywhere, in chemistry, physics, mathematics, engineering, and many other disciplines. We even had to memorize it to get through the exams. Here, we went through its inception to demonstrate why it does not hold true in nature, to show why it is fundamentally incorrect. We went through the derivation to unravel the errors buried hidden in the development of the Schrodinger equation. The Schrodinger equation is one of the classic examples where a mathematical theory and its derivation shows total disregard or total blindness to the reality. It is this blindness to the reality in the derivation of the Schrodinger equation that later appeared as non-reality of the reality, or weirdness of reality. It is not just the Schrodinger equation, even the Einstein's mass-energy relationship $e=mc^2$ is also resulted from the total ignorance or blindness to reality; light is not relative and (electromagnetic energy) ≠ (mechanical energy), or $e \neq mc^2$.

Almost a century old modern physics was founded upon Einstein's mass-energy relationship $e=mc^2$ and the Schrodinger equation, yet both these equations are totally incorrect. Why $e \neq mc^2$ is given in [6,7]. Here, we have shown what is wrong with the Schrodinger equation and the so-called matter particle waves in general.

What is wrong with the Schrodinger Equation?

1. Schrodinger equation is based on invalid, incorrect, non-existent and meaningless de Broglie conjecture or de Broglie Crafted Prophecy (dbCRAP) where a mass is considered a wave of wavelength λ=h/p, with p being the momentum of the mass and h the Plank constant. The de Broglie wavelength λ=h/p came to being under the assumption that the light is relative, and the misguided assumption that the light consists of particles, which came to be known as photons. As it is shown in [6], the light is not relative, and the light is never a particle [5]. Since light is not relative, light has no momentum. Therefore, the relationship λ=h/p does not hold even for light; for light λ≠h/p. De Broglie conjecture is incorrect, invalid, and a conceptual blunder. dbCRAP is just crap. A mass or a matter particle of any sort does not behave as a wave. There is no such thing called de Broglie waves, and the relationship λ=h/p is invalid, non-existent, λ≠h/p. It doesn't matter whether a matter particle is microscopic or macroscopic, a matter particle is never a wave; a mass can never be a wave.
2. The double-slit experiment has always been used to justify the de Broglie conjecture; this is simply a double-slit blunder [3]. The interference pattern appears on the phosphor screen of the double-slit experiment to an input beam of electrons had been used to justify the de Broglie conjecture that claims the matter particles behave as waves. This conclusion of the double-slit experiment is incorrect. There is no one-to-one correspondence between the incoming particles

and the bright spots demarcating fringes on the phosphor screen of the double-slit experiment [3]. In the double-slit experiment, no matter particle reaches the phosphor screen since the path of the electron beam is blocked by the double-slit barrier; the slots on the barrier are not along the path of the beam of electrons or matter particles. Further, even a single charged matter particle can produce an interference pattern on the phosphor screen of the double-slit experiment although the pattern is fleeting on the screen for a single charged matter particle. The interference pattern of a single charged matter particle can be made to sustain on the phosphor screen by using a beam of charged matter particles. The interference pattern on the phosphor screen of the double-slit experiment is not a result of electrons colliding with the phosphor screen itself. Instead, the interference pattern on the phosphor screen is a result of electrons being stopped at the double-slit barrier. When an electron or any charged matter particle is suddenly stopped at the double-slit barrier, the result is electromagnetic radiation or electromagnetic wave bursts that will pass through the slots on the double-slit barrier. These electromagnetic waves passing through the slot interfere on the phosphor screen to produce an interference pattern [3]. The peaks of the interfered electromagnetic wave front appear as bright spots on the phosphor screen creating interfering pattern of bright spots demarcating fringes. If a particle detector is used in place of the phosphor screen, no particle will be detected since there is no hole or slit on the double-slit barrier along the path of the charged matter particles, and all the incoming particles were blocked by the double-slit barrier. There are no particles behind the double-slit barrier. So, the interference pattern or fringes produced on the phosphor screen of the double-slit experiment for an input beam of charged matter particles is not due to the collision of matter particles with the phosphor display screen. There is no theoretical or experimental validation for the de Broglie conjecture. De Broglie conjecture is false. Matter particles are not waves.

3. Without the de Broglie conjecture and its associated insane matter particle wavelength $\lambda=h/p$, there will be no Schrodinger equation. In fact, the phrase 'matter particle wave' is itself a misnomer. A wave is not a particle, and a matter particle or mass cannot be a wave. The state of a matter particle at any time is unique. A matter particle has a unique position and a unique momentum at any given time. It costs energy for a matter particle to change the momentum. It costs energy for the state of a matter particle to be uncertain or probabilistic. Uncertainty of a charged matter particle breeds electromagnetic radiation. A matter particle cannot be at multiple states concurrently at the same time irrespective whether the matter particle is microscopic or macroscopic. If the state of an electron in an atom is uncertain or probabilistic, then, the electron will be unstable due to radiation energy loss, and as a result, there would be no stable atoms. In other words, if the Quantum Mechanics were true, there would be no stable atoms.

4. Schrodinger equation utilizes an invalid relationship for mechanical energy, $E_m=\hbar\omega$. Without this relationship, there will be no Schrodinger equation. The relationship $E=\hbar\omega$ holds true only for electromagnetic energy, not for mechanical energy of a matter particle. In the Schrodinger equation, we are dealing with the mechanical energy of matter particles. Although the relationship $E=\hbar\omega$ hold true for electromagnetic energy of a wave burst, it does not hold for mechanical energy. The relationship $E=\hbar\omega$ does not hold for any wave other than electromagnetic waves. In the case of the mechanical energy E_m of a mass or a matter particle, $E_m\neq\hbar\omega$. For a matter particle, the relationship $E_m=\hbar\omega$ is not just plain wrong, it is simply nonsense. Mechanical energy of a matter particle is continuous. Mechanical energy is not quantized. Mechanical energy does not come in quanta. Mechanical energy of a matter particle cannot be represented by the relationship $E_m=\hbar\omega$ as it had been represented in the Schrodinger equation. Further, matter particles are not waves and waves are not particles. As a result, $E_m=\hbar\omega$ is meaningless or no-existent for a matter particle or a mass. For any mass, $E_m\neq\hbar\omega$. When $E_m\neq\hbar\omega$, there will be no Schrodinger Wave Equation.

5. The derivation of the Schrodinger equation utilizes two Eigen relationships, $-j\hbar\partial\psi/\partial x=p\psi$, and $j\hbar\partial\psi/\partial t=E_m\psi$, in addition to the energy constrained of a matter particle $E_m=p^2/2m+E_P$, where m is the mass, p is the momentum and E_P is the potential energy. Since the momentum p is an Eigen-Value of the operator $-j\hbar\partial/\partial x$, the momentum p is not unique. Similarly, since E_m is an Eigen-Value of the operator $j\hbar\partial/\partial t$, the energy E_m is not unique. The Eigen-Values are not unique. As a result, any observables represented by Eigen-Values are not unique. The Schrodinger equation is a result of representing the observables, momentum p and the energy E_m, of a matter particle as Eigen-Values. Therefore, the observables in the Schrodinger equation, the momentum and the energy of a matter particle, are not unique. The state of a matter particle in the Schrodinger equation is not unique. The non uniqueness of the state of a matter particle is not a characteristic of the matter particle itself. The non-uniqueness of the state of a matter particle is the characteristic of the Schrodinger equation itself. The state of a matter particle is not unique due to the Eigen-Value representation of the state of a matter particle in the Schrodinger equation; it is not due to any

uncertainty in the physical state of the matter particle itself. When we model the observables of a matter particle as Eigen-Values, we are in effect making the observables non-unique; we are making a matter particle to be at infinitely many states concurrently. The physical state of any matter particle, whether it is a quantum matter particle or not, is always unique. The physical state of any matter particle is always certain. It is the underline mathematical model that is used in the development of the Schrodinger equation that gives the illusion of uncertainty. The quantum matter particle uncertainty is the result of Eigen-Value representation of the observables of a matter particle in the Schrodinger equation. The quantum uncertainty or the quantum spookiness resulted from the Schrodinger equation is an inherent characteristic of the mathematical model used in the Schrodinger equation; it is not an inherent characteristic of quantum matter particles. There is no quantum spookiness. Quantum uncertainty is a not so quantum Human Blunder, a human fallacy that might take some time for us to fully accept, or even comprehend what a mess that had been created.

6. If the state of a quantum matter particle is uncertain, that uncertainty comes at a price. Uncertainty of a matter particle costs energy. If the state of a quantum matter particle is probabilistic with a probability distribution described by the wave function, then, that probabilistic behavior comes at a price. It cost energy for a matter particle to have a probabilistic behavior. In addition, if a state of a charged matter particle or electron in an atom is uncertain or probabilistic, then, that uncertainty will lead to radiation energy loss, which results in the ultimate collapse of the atom. The state of an electron in an atom cannot be described by the Schrodinger equation since that description leads to the collapse of electrons as a result of radiation energy loss due to the uncertainty of charged matter particles. The only path an electron in an atom can take without being subjected to radiation energy loss is a circular orbit at uniform speed [4]. Even though the Quantum Mechanics was developed to address the radiation energy loss due to the motion of electrons in an atom, the Quantum Mechanical model suffers from the very same radiation energy loss it was trying to address. In the development of Quantum Mechanics, faced with the new difficulties that required immediate attention, the initial problem of radiation loss due to the motion of charge matter particles that the Quantum Mechanics was supposed to address took a back seat or remained forgotten.
7. It is only a magician like Houdini who can disappear in one location and reappear in another location, an act of illusion, human trickery and simple deception, not reality; an act of deception is only for living human. Particles are not into the act of deception. In reality, it doesn't matter how microscopic a matter particle is, a matter particle, a mass or an object cannot simply disappear in one place and reappear in another place as it is suggested by the probabilistic interpretation of the so-called wave function based on the Schrodinger equation. The appearing and re-appearing act can only happen in human mind. It is human who claimed that any matter particle can disappear and reappear just like Houdini the magician. It is human who claim the universe and everything is a creation of some creator entity. If the universe is a job of a creator entity, that entity hasn't done a praiseworthy job. Just see, how much useless resources are there in the universe. In our solar system alone, all the planets are either useless balls of rock or deadly gas balls, except the earth. Further, why should any creator entity creates life on earth in a way that one species has to eat the other species to survive; a cruel act of a cruel creator, if such a creator ever exists. That creator entity must be pure evil to create creatures that have to eat other creatures to survive. Universe is a bad design. No entity with any intelligence would have created the universe as it is. No creator entity with any intelligence would have wasted so much real estate as it has been done. No one with any intelligence would have created life in a way one species has to eat another species for survival. If an engineer had been assigned the task of designing a universe, and that engineer had come up with the same design of the universe, what would have been the fate of that engineer? That engineer would have lost his/her head in the town square. During the time when earth was considered to be flat, or flat-earth era, far back in the history, some people appeared self-proclaiming that they were the messengers of a creator entity. 'Who proclaimed it' is important here. It is a self-proclamation. How can a guy who believes that the earth is flat be a messenger of a creator?
8. According to the Schrodinger wave equation, which is based on the de Broglie conjecture, if a matter particle has a momentum p, then, the matter particle behaves as a wave; it does not matter if the matter particle is a microscopic or macroscopic. The position x of the matter particle at any time t is described by the wave function $\psi(x,t)$. On the other hand, the momentum p is determined by the change in the position of the matter particle. Since the position of a matter particle is determined by the so-called wave function of the matter particle, the momentum is determined by the wave function of the matter particle. In the absence of an external force, the momentum of a matter particle can change neither in time nor in position. In other words, in the absence of an external force, $\partial p/\partial t=0, \forall t$, and $\partial p/\partial x=0, \forall x$. Therefore, the momentum of a matter

particle cannot be defined by a wave function.

The conditions $\partial p/\partial t=0$, $\forall t$, and $\partial p/\partial x=0$, $\forall x$, can satisfy if and only if the momentum p is a constant. The linear-momentum of a matter particle can be a constant when a matter particle is at uniform speed on a linear path. The circular-momentum of a matter particle is a constant on a circular orbit. A charged matter particle at uniform speed on a linear path or on a circular orbit does not radiate [4,3]. Both the linear momentum and the circular momentum are conserved. An electron in an atom cannot have a linear path. Hence, the only stable path an electron in atom can take without being subjected to radiation is a circular orbit at constant speed. The position of a matter particle at a given time is not determined by a wave function. A matter particle cannot have wave behavior. The Schrodinger equation and the de Broglie conjecture do not hold true for any matter particle.

Lemma:

There are no matter particle waves. No wave function exists for any mass.

In the absence of an external force, as in the case of an electron in an atom, a change of circular-momentum of an electron cannot take place and hence the momentum cannot be determined by a so-called wave function or by a probability distribution in an appearing and disappearing act. An electron or any matter particle can take only a path that conserves the linear-momentum or the circular-momentum in the absence of external force. The only paths that conserve the momentum of a charged matter particle are the linear paths and circular orbits at uniform speed. In the case of an electron in an atom, a straight linear path is not possible. As a result, the only paths electrons can take in an atom are the circular orbits at uniform speed [4, 3]. Since charged matter particles on circular orbits at uniform speeds do not radiate, an atom with electrons orbiting on circular orbits is stable.

Lemma:

The only path an electron can take while maintaining the stability of the atom is a circular orbit at uniform speed.

It is only a magician like Houdini who can disappear in one place and reappear in another place without a trace; a deceiving-act only the humans are capable of performing. A real matter particle or an object cannot disappear in one place and re-appear in another place without a trace. Quantum Mechanics is a mean to Houdinify matter particles under the disguise of science; an absolute deceiving act. It is the Human who do magic, not the nature. Unlike Human, the nature does not have any reason to pretend it to be something else that it is not. Matter particles are matter particles, not waves. Waves are waves, not particles. The state of a matter particle is unique. There are no Ghosts or Gods. There is no uncertainty in the state of a matter particle. A matter particle cannot be at multiple states concurrently at the same time. For a matter particle to be at infinitely many states concurrently, it requires infinite energy. A matter particle cannot be at multiple states concurrently. In the Schrodinger Wave Equation, a matter particle is at infinitely many states concurrently since the observables are represented non-uniquely as Eigen-Values. If you represent the state of a matter particle non-uniquely, you will get multiple states. That does not mean a matter particle is at multiple state concurrently in the nature. There is no place for probability in the state of a matter particle. Probability is a tool developed by Human to make inferences from data under incomplete knowledge. Nature has the complete knowledge of itself. Nature does not have to turn to probability. The nature doesn't do probability. Probability and statistics are tools created for human by human. Probability is not tools of nature.

Corollary:

With a non-unique representation of the state of a matter particle in Quantum Mechanics, you cannot expect to have unique observables from a matter particle.

Corollary:

It is only with a unique representation of the state of a matter particle in a mathematical model, you can expect to have unique observables from a matter particle.

Corollary:

It is impossible to have unique observables for a matter particle using the Schrodinger Wave Equation since the Schrodinger Wave Equation was derived representing the observables non-uniquely as Eigen-Values.

Corollary:

Schrodinger Wave Equation is theoretically incorrect, invalid and non-existent in nature. If the Schrodinger equation is artificially forced upon the particles in nature, you are forcing the particles to be un-natural in nature.

XI. FALLACY OF THE BOHR ATOM

The atomic model of Neil Bohr or as it is widely known, Bohr-Atom, is based on the assumption that the angular momentum of an electron is quantized. In the Bohr atom, the magnitude of the angular momentum $\boldsymbol{\ell}$ of an electron is represented as,

$$\ell=nh,\ \forall n, \qquad (11.1)$$

where $\ell=|\boldsymbol{\ell}|$, n is an integer and h is the Plank constant.

For an orbiting electron in an atom, the angular momentum $\boldsymbol{\ell}$ is given by,

$$\boldsymbol{\ell} = m\mathbf{r} \times \mathbf{v} \quad (11.2)$$

$$\mathbf{v} = \frac{\partial \mathbf{r}}{\partial t} \quad (11.3)$$

where, × denotes the cross product, **r** is the direction vector from nucleus of an atom to the electron, m is the mass of the electron and **v** is the velocity of the electron at any time t.

The direction of the angular momentum $\boldsymbol{\ell}$ is perpendicular to the plane of **r** and **v**. For clockwise motion, the direction of $\boldsymbol{\ell}$ will be into the plane and for the counter clockwise motion the direction of $\boldsymbol{\ell}$ will be out of the plane.

It is only a scalar quantity that can be quantized or can come in quanta. The angular momentum $\boldsymbol{\ell}$ is a vector. Vectors do not come in quanta. Vectors cannot be quantized. If you quantize the magnitude ℓ of the angular momentum $\boldsymbol{\ell}$, the direction information is lost. There is no way to assemble the angular momentum vector $\boldsymbol{\ell}$ back from the quanta. If you cannot assemble an angular momentum vector quantity back from its magnitude quanta, what is the purpose of quantizing?

The amplitude of a vector cannot come in quanta, and hence $\ell \neq nh$, where, ℓ is the magnitude of vector $\boldsymbol{\ell}$ or $\ell = |\boldsymbol{\ell}|$. Therefore, the foundation of the Bohr atomic model is incorrect or meaningless. There is only one thing that comes in quanta in the nature. It is only the electromagnetic energy that is quantized in the nature, nothing else. Electromagnetic energy is a conserved scalar quantity and hence can come in quanta or can be quantized.

Property:

A vector cannot be quantized. A vector does not come in quanta.

Corollary:

Angular momentum $\boldsymbol{\ell}$ is a vector, and hence the angular momentum cannot be quantized, $\boldsymbol{\ell} \neq nh$.

An Electron in Multi-Electron Atom:

The angular momentum of an electron in multi-electron atom is not conserved [10]. The angular momentum of an electron in multi-electron atom is time-varying. Time-varying quantities do not come in quanta. Time-varying quantities cannot be quantized. It is the total angular momentum of all the electrons in an atom that is conserved, not the angular momentum of an electron.

Corollary:

Bohr Atomic model is invalid since the angular momentum is a vector, and vectors do not come in quanta; vectors cannot be quantized.

Vectors do not come in quanta.
Vectors cannot be quantized.

The angular momentum of individual electrons in multi-electron atom is not conserved, and hence cannot be quantized.

XII. LARGE HADRONS COLIDER (LHC) AND NEW PARTICLE ZOO: DESIGN BLUNDER

With the intention of uncovering the fundamental particles of matter, in the Large Hadrons Collider (LHC), charge particles are accelerated to very high speeds close to the speed of light and let them crash to each other. These crashes leave bright splashes. Then, the crash site is analyzed to reconstruct the particles from the remnant of the crash. So far, these crashed-test analyses have left a new particle zoo. As it turned out, this new particle zoo is mainly a result of misrepresentation of the observation. Here is why. What is at the crash site is not just debris from the collision of particles. It is a mixture of the debris from the actual physical collision of particles and the unwanted extraneous electromagnetic radiation bursts due to acceleration, deceleration, collision, and stopping of charge particles.

When charge particles are accelerated, it generates electromagnetic radiation bursts. When accelerated charged particles crashed into each other, it generates electromagnetic wave bursts. When a moving charge particle is stopped, it generates electromagnetic radiation bursts. What you observe at the crash site of the particles in the LHC are these extraneous electromagnetic radiation wave bursts in addition to the actual debris from the crash itself. These extraneous radiation wave bursts are not particles. We do not want them in our analysis of crash site. But we have no say to get rid of them. You cannot claim these bright extraneous electromagnetic radiation wave bursts particles. It is the misinterpretation of these extraneous electromagnetic radiation wave bursts as particles that has led to a bogus new particle zoo in nuclear physics. It is the misinterpretation of these extraneous electromagnetic radiation wave bursts that led to the erroneous claim that the collision of two protons results in more protons. It is the misinterpretation of these extraneous electromagnetic radiation wave bursts that led to the erroneous claim that a collision generates more mass than what was put in.

It does not matter how high the speeds of two colliding particles are, a collision of two protons does not produce three or more protons. You cannot generate more mass than what you put in by particle collisions. However, by increasing the speeds of the colliding protons, you can generate more and more extraneous high frequency electromagnetic wave bursts, increasing the crash site contamination with extraneous radiation bursts. If you do not isolate these extraneous electromagnetic radiation burst due to acceleration and deceleration of charge particles from the physical debris of the crash itself, your crash site analysis will produce more mass than what you put in, more particles than what resulted from actual physical crash of particles themselves. In other words, by colliding particles in LHC, you will generate imaginary

particle zoo.

> Particles collision in LHC does not provide sensible results unless the material debris due to particle collision is separated from the extraneous electromagnetic radiation bursts due to the acceleration, collision and stopping of the charge particles.

It is not possible to separate the extraneous electromagnetic radiation bursts due to the acceleration and deceleration of charge particles from the actual physical debris of the crash itself. To complicate matter even further, the actual crash also produces inherent electromagnetic wave burst in the disintegration of particles in the collision. It is not possible to distinguish the inherent electromagnetic wave bursts due to the disintegration of particles in the crash from the extraneous electromagnetic radiation bursts due to the acceleration and deceleration of charge particles. By accelerating the particles further and further, you can increase the energies of the colliding particle, but at the same time, you are also increasing the contaminating extraneous electromagnetic radiation bursts at the crash site; a contradictory situation.

Every time charge particles crash at very high speeds in the LHC, the results will be different since no two crashes are the same. The extraneous electromagnetic radiation bursts present at the crash site will be different for each crash. The exact replication of the same crash is not possible in LHC. The analysis outcome of every crash will be different since the extraneous electromagnetic radiation bursts due to acceleration and deceleration of colliding particles vary from crash to crash.

Electromagnetic radiation wave bursts are not photons, not particles. There is no such thing called photon. Particles are not waves. Waves are not particles. The new particle zoo generated by analyzing the crash site of the collision of charged particles at very high speeds is not real, simply bogus since it includes not just the debris from the crash itself but also the extraneous electromagnetic radiation bursts due to the acceleration and deceleration of charge particles. They are a result of misinterpretation of observation. You cannot interpret extraneous electromagnetic radiation bursts as particles. The results from particle collision in Large Hadrons Collider (LHC) is misleading and meaningless unless the physical debris due to the collision itself is separated from the extraneous electromagnetic radiation bursts generated due to the charge particles acceleration, and deceleration in the crash.

Electromagnetic radiation wave bursts have no mass, $e \neq mc^2$. It is the misrepresentation of the extraneous electromagnetic radiation energy due to the acceleration and deceleration of colliding particles as mechanical energy associated with a mass using $m=e/c^2$ that gave the illusion of mass increase in a collision between two particles in LHC. It does not matter how high the speed of two colliding particles are, a collision of particles does not generate new mass. Electromagnetic energy is not the same as the mechanical energy, $e \neq mc^2$, where e is the electromagnetic energy and mc^2 is the mechanical energy. Even though the mechanical energy has no existence without an association of a mass, electromagnetic energy has no association with a mass. Existence of electromagnetic energy does not depend on a mass. You cannot give a mass to electromagnetic energy without converting it to mechanical energy as it is done in electric motors.

> New particle zoo derived by colliding particles in LHC is bogus.

Building bigger and bigger particle accelerators is not going to help to uncover the fundamental particles of matter. Bigger the acceleration, stronger the extraneous electromagnetic radiation bursts contaminating the crash site. Unless proper decontamination is done to get rid of contaminating extraneous electromagnetic radiation bursts, the results produced by LHC are misleading, meaningless, and useless. The isolation of the extraneous electromagnetic radiation bursts due to acceleration and deceleration from the inherent electromagnetic wave bursts due to the disintegration of particle in the crash is not possible. If you analyze the crash site of the collision of two protons without decontaminating the site of extraneous electromagnetic radiation bursts due to the acceleration and deceleration of charge particles, you may misinterpret the crash site to get even bigger bogus new particle zoo.

As it stands, you can use LHC to prove anything you want since every crash leads to a different contaminated site. However, any proof based on LHC crash site analysis is bogus, fake. With current LHC, crashing of two charged peaches may appear to give you more peaches, apples and bananas due to the presence of extraneous radiation. The appearance can be deceiving. Crashing of two charged peaches in an even bigger LHC may appear to give you not just more peach, apples and bananas, but some pineapples and avocados too due to presence of stronger extraneous radiation. In actual fact, you won't get more mass than what you put in. It appears to produce more mass because you have misinterpreted extraneous radiation as mass. You analyze the collision site without removing the extraneous radiation that has nothing to do with the outcome of the collision. Misinterpreting collision data contaminated with unwanted extraneous electromagnetic radiation wave bursts due to the acceleration and deceleration of charge particles is not a way to explore the fundamental particles of nature. What you end up with LHC collision data

analysis is simply garbage.

It doesn't matter how fast particles collide in LHC, collisions do not generate more mass.

The fact is that you cannot create new mass by colliding particles at high speed in a particle accelerator, $e \neq mc^2$ [6]. It is the misinterpretation of the extraneous electromagnetic radiation wave bursts due to the acceleration and deceleration as particles that gave the impression of mass creation or new particle creation. There is no mass creation in LHC. There is no new particle creation in LHC. LHC can only expose the constituent elements of particles used in collision.

Electrically charged particles cannot be used in the LHC collisions due to its inability to separate extraneous radiation from inherent radiation.

Definition: Extraneous Radiation

Extraneous radiation is the electromagnetic radiation wave bursts due to the acceleration of the charge particles, and the deceleration of the charge particles upon the collision.

For meaningful results, these extraneous radiation bursts must be isolated and removed before the analysis of the collision data. Failure to do so will have disastrous consequence. Isolation of extraneous radiation from inherent electromagnetic wave bursts is not possible. That is the reason why LHC is useless.

Definition: Inherent Radiation

Inherent radiation is the electromagnetic wave bursts unleashed in the disintegration of particles as a result of the collision.

Collision site analysis should only contain the inherent electromagnetic radiation bursts and the material debris.

What a collision of particles can do is expose the constituents of colliding particles, nothing more. We can get a glimpse at those constituent elements if we can separate the real debris of the collision from the extraneous electromagnetic radiation wave burst due to acceleration and deceleration of particles; this is an impossible task since the disintegration of particle due to collision also produces inherent electromagnetic wave bursts.

Large Hadrons Collider (LHC), as it stands, is useless. Building bigger and bigger Hadrons Colliders will be even more useless since it will create even stronger higher frequency extraneous electromagnetic radiation bursts due to the acceleration and deceleration of charge particles. For the LHC to be of any use, a way to isolate the real outcome of a physical crash of two particles from the extraneous electromagnetic radiation bursts due to the acceleration and deceleration must be found; otherwise, LHC will be a bogus result generator, wasting time and money, and a lot of it.

LHC is cannot accelerate electrically neutral particles.
LHC produces rubbish when charged particles are collided.

It may appear as if LHC will work as expected if neutral particles are used in the collision. If two electrically neutral peaches crash together, you will not get the impression of having more peaches, apples, and bananas like two colliding electrically charged peaches. When electrically neutral particles crash together, what you get are the constituent elements of two particles and inherent electromagnetic wave bursts due the particle disintegration, nothing more; exactly what is expected. There are no extraneous electromagnetic radiation bursts to contaminate the crash site when electrically neutral particles crash together. Unfortunately, LHC cannot accelerate electrically neutral particles. This is the LHC dilemma with no possible escape. You cannot use charged particles in the collision since the extraneous electromagnetic radiation bursts due to acceleration and deceleration of charged particles cannot be isolated from the inherent electromagnetic wave bursts due to the disintegration of the particles in the crash and the material debris. You cannot use electrically neutral particles either since LHC cannot accelerate electrically neutral particles. LHC is design to be a failure. LHC is a design blunder.

XIII. GENERAL ORBITING DYNAMICS (GOD)

Orbiting Star Systems and Orbiting Galactic Systems are General Orbiting Systems. Keplerism does not apply for General Orbit Systems [10]. Although the Newtonism in general form is universal, Keplerism is not universal. Keplerism only applies to approximate orbit systems such as Solar system where masses of orbiting planets are negligible compared to the mass of the sun. In the case of General Orbiting Systems, the masses of the orbiting objects are not negligible compared to the orbit center mass. New Eccentricity Vector $\mathbf{e}$ of the k^{th} orbit of a General Orbiting System consisting of n objects of masses, m_i, i=1,2,…,n and the orbit center mass M is given by,

$$\mathbf{e} = -(1/GM_{eff})\,\boldsymbol{\ell}\times\mathbf{v} - (\sec\theta_{eff})\nabla_{eff}r_{eff}$$

where θ_{eff} is the angle between $\mathbf{r}$ and $\mathbf{r}_{eff}$, ∇ is the spatial gradient operator or Del operator, $\boldsymbol{\ell}$ is the Rotation Vector or the normalized angular momentum (angular momentum per unit mass) given by,

$$\boldsymbol{\ell}=\mathbf{r}\times\mathbf{v},\ \mathbf{v}=\frac{\partial}{\partial t}\mathbf{r},$$

$\mathbf{r}$ is the position vector of orbiting object k with respect to the orbiting center mass M, G is the gravitational parameter, and M_{eff}, $\mathbf{r}_{eff}$ are given by,

$$M_{eff}=M\{1+\textstyle\sum_{\forall i\neq k}[(m_i/M)(r/d_i)^3]\}$$
$$\mathbf{r}_{eff}=\mathbf{r}-\textstyle\sum_{\forall i\neq k}[(m_i/M_{eff})(r/d_i)^3]\mathbf{r}_i$$

$$\nabla_{eff}=(\partial/\partial x_{eff}, \partial/\partial y_{eff}, \partial/\partial z_{eff})$$

$m=m_k$, $r_{eff}=|\mathbf{r}_{eff}|$, $\mathbf{v}=\mathbf{v}_k$, $\mathbf{r}=\mathbf{r}_k$, and $\mathbf{r}_i$ $\forall i$, is the position vector of i^{th} mass relative to the orbiting center mass M, $r=|\mathbf{r}|$, $\mathbf{d}_i=-\mathbf{r}+\mathbf{r}_i$, $d_i=|\mathbf{d}_i|$, and d_i is the distance to the i^{th} orbiting mass m_i relative to the k^{th} orbiting object of mass m_k.

In estimating the speed of a star or galaxy, it is the orbit dynamics of a General Orbiting System that has to be used. If Keplerism is used in estimating the speed of a star or a galaxy, the estimate will be only a small fraction of the actual speed. The mythical Dark Matter is a result of using Keplerism where it does not belong [10]. There is no Dark Matter.

Solar System:

The approximate Eccentricity Vector **e** for an orbit in the Solar System is given by [10],

$$\mathbf{e}= -\frac{1}{GM}\boldsymbol{\ell}\times\mathbf{v} -\nabla r$$

where, $\nabla=(\partial/\partial x, \partial/\partial y, \partial/\partial z)$, $\boldsymbol{\ell}=\mathbf{r}\times\mathbf{v}$, $\mathbf{v}=\frac{\partial}{\partial t}\mathbf{r}$, $r=|\mathbf{r}|$, m_i is the mass of the i^{th} planet, M is the mass of the sun, G is the gravitational parameter, and $m_i<<M$, $\forall i$.

XIV. UNIVERSE IN A NEW LIGHT

The Special Relativity and the Quantum Mechanics have been the foundation of the Modern Physics. When Special Relativity no longer holds true, and the Quantum Mechanics no longer holds true, the so-called Modern Physics is in need of a complete overhaul – Quantum Renaissance. When Special Relativity does not hold true, the General Relativity does not hold, and hence our current view of the universe requires a complete overhaul – the universe in a new light:

(a) Light [4,5,6,7]:

a1). Light is not relative.

a2). Light comes in wave bursts of constant duration.

a3). For a burst of light E=hf, where E is the electromagnetic energy of the burst, f is the frequency, and h is the Plank constant. The magnitude of an electromagnetic wave has nothing to do with electromagnetic energy. The magnitude is related to the power of the signal while frequency is related to the electromagnetic energy. The power and electromagnetic energy of a wave burst are not the same.

a4). The duration of a burst of light, τ is a universal constant, τ=h/e, where 'e' is the quantum energy.

a5). Frequency spectrum of light is quantized, and the n^{th} frequency component f_n is given by, $f_n=ne/h$, n is an integer.

a6). Light does not propagate relative to moving bodies.

a7). Light is never a particle and always a wave; there are no mass-less light particles or photons.

a8). Once a burst of light is out of a source, it has nothing to do with the source anymore; electromagnetic bursts are source independent once they are released from the source; the path light takes is completely determined by the medium alone.

a9). Light follows a density gradient of the medium. That is absolutely the reason for the diffraction of light near a gravitational object.

a10). The diffraction or the bending of light near a gravitational object indicates that there is a medium surrounding the gravitational object. In the presence of a medium, gravitational object creates a density gradient. It is this density gradient surrounding a gravitational object that diffracts the light.

a11). The observed diffraction of light near the sun is an indication that there is a gaseous medium surrounding the sun.

a12). The gravity has no direct effect on the light. The effect of gravity on light is through the medium.

a13). Gravity has no effect on light in the absence of a medium; gravity does not alter the path of light in the absence of a medium.

a14). Gravity does not bend light by itself. In the presence of a medium, gravity creates a density gradient; it is this density gradient that bends light.

a15). Since the frequency of the light is the electromagnetic energy, the electromagnetic propagation energy loss leads to a frequency down shift, a red shift. This is the reason why the further a star is the redder it appears. This frequency shift of light due to electromagnetic propagation energy loss limits our range of visibility. The maximum distance a burst of light can travel before being frequency down shifted below the range of visible frequency spectrum is the visible universe. The visible universe is observer dependent. The visible universe of an observer on one planet will be different from the visible universe of an observer on another distant planet. The visible universe is a moving 3D-horizon.

a16). The cosmic microwave background is the light from distance sources that is frequency down-shifted below the visible frequency range of light.

a17). The idea that cosmic microwave background is the result of some remnant or left over from a big-bang (BIG-NONSENCE) is simply preposterous; there was never a big-bang.

a18). If we send a burst of light, our out-of-the-visible-region-neighbors will receive it in the microwave band, just as we receive their light bursts in the microwave band.

a19). Light has no momentum. Electromagnetic energy has no associated mass. It is only the mechanical energy that has an associated mass since the mechanical energy has no existence without a mass.

a20). Mass and Electromagnetic Energy are not one and the same, $e\neq mc^2$.

a21). Electromagnetic spectrum is not continuous.

a22). Electromagnetic spectrum is quantized, $f_n=ne/h$, where n is an integer, e is the quantum energy, and h is the Plank constant.

(b) Time [5,6,7,8,10]:

b1). There is no time. It is only the present that exists.

The past does not exist. The future does not exist. The past and the future exist only in the human consciousness.
b2). Time is a definition. Time is a moment, not a dimension. We define time using the perpetual motion of objects.
b3). Time must be unique.
b4). Time is not relative.
b5). If the time is relative, the time will not be unique.
b6). If the time is relative, the time will be directional.
b7). Time is independent of the frame of reference.
b8). It is not possible to create another spatial dimension simply by multiplying the time t by the speed of light c. What exists in time is this moment, the point. Neither the past nor the future has real existence. It is only for the human that yesterday and tomorrow have any meaning.
b9). The time is the same everywhere in the universe.
b10). We define time based on the repetitive motion of the objects in the nature.
b11). You cannot time travel in any direction; you can travel neither forward nor backward in time.
b12). You cannot travel into the past as much as you cannot travel into the future.
b13). Neither the past nor the future exists. It is only the present that exists. The past and the future exist only in our consciousness.
b14). Time does not depend on the space; there is no space-time.
b15). Gravity has no effect on time; gravity can affect only the objects with mass.
b16). Time is independent of gravity or anything else.
b17). You cannot time travel; it is always time that travel, not you.
b18). You cannot change the time. You may change the hands or the indicators on a clock, but that is not going to change the time. You can travel as fast as you can, but that is not going to change the time; it may only change the display on your wristwatch. Travelling fast does not make you any younger. You cannot stop getting old by travelling faster, but a variety of good nutritious whole food together with a regular dose of physical activities may help you to look and feel younger.
b19). There was no beginning of time. There will not be an end of time. What is there is only the present, this moment. The present is always present, nothing more. That is the beauty of time.
b20). Time must be unique and non-directional, hence time cannot be relative.
b21). If you do not like the space you are in you can move to a different space. However, if you do not like the time you are in, you have no option, you just have to bear it or you can complain about it, or waste it by working on Quantum Mechanics, multi-verse, inflation, General Relativity, or big-bang – that is of course if you are not already wasting it on facebook, twitter or social media; mega time wasters. You realize you have wasted time on facebook or social media only after you have spent substantial time on it.

(c) Relativity [6,7,8,10]:
c1). Relativity is a perception, not the reality. The perceived volume of an object depends on the observer's frame of reference.
c2). The special relativity does not hold true since light is not relative.
c3). The general relativity does not hold true since light is relative.
c4). A moving object contracts in all directions; the volume of an object depends on the observer's frame of reference; time and mass are independent of the observer's frame of reference.
c5). There is no space-time. Space is not a function of time; time is not a function of space. In the presence of a space-time, speed of light cannot be a constant since the light has to follow the space-time curvature.
c6). If the Special Relativity is true, there will be Shear Electro-Magnetic (SEM) waves that travel at a speed that depends on the frame of reference.
c7). If the light is relative, it will generate the Shear Electromagnetic (SEM) waves in addition to the Transversal Electromagnetic (TEM) waves. Although the speed of the Transverse Electro-Magnetic (TEM) wave is a constant, the speed of the Shear Electro-Magnetic (SEM) waves depends on the frame of reference. As a result, if the light is relative, the speed of light can no longer be a constant.
c8). A mass of any object is independent of the speed of the object.
c9). A moving body contracts in all direction leading to a volume contraction, resulting in mass density dilation.
c10). It is the mass density that depends on the frame of reference, not the mass of an object.
c11). An object of mass m moving at an acceleration g is not the same as an object of mass m that remains still on an object of gravity g.
c12). Einstein's Principle of Equivalence does not hold true. If an object is at acceleration g, the state of object is not defined at time t=c/g; physics do not apply when time reaches c/g.
c13). $e \neq mc^2$; Electromagnetic energy e is not equal to the kinetic energy mc^2.
c14). Mass of an object and the mechanical energy are equivalent since mechanical energy is associated with a mass.
c15). Mechanical energy cannot exist without an object of mass.
c15). Mass of an object and electromagnetic energy are not equivalent since the electromagnetic energy has no association with a mass.
c16). Unlike mechanical energy, electromagnetic energy does not require an object of mass for its existence.

The speed of light, c can be a constant only on a linear path.

Light cannot follow the geodesic at constant speed.

(d) Matter particles [3,4,5,6]:

d1). Matter particles are not waves. Particles have mass.

d2). There is no wave particle duality; particles are not waves and waves are not particles.

d3). The de Broglie matter particle wavelength λ=h/p is simply meaningless. It does not hold true for matter particles. This relationship does not even hold for electromagnetic waves or light.

d4). The [position, Momentum] Pair of a matter particle is not a Fourier Transform Pair.

d5). Heisenberg Uncertainty Principle does not hold true since the [position, Momentum] Pair of a matter particle is not a Fourier Transform Pair. There is no uncertainty in the position or the momentum of a matter particle. It cost energy for a matter particle to be uncertain. Uncertainty is not free.

d6). The Position of a matter particle is certain, not probabilistic. The momentum of a matter particle is certain, not probabilistic. If a state of a charge particle is probabilistic, it results in radiation energy loss.

d7). If a variable of a function depends on the state of mass of an object, that function cannot be a Fourier Function since the state of a mass at any given time is unique. The position and the momentum of a matter particle cannot be variables of a Fourier transform function since the position and the momentum of a matter particle are unique at any given time. The state of a matter particle is not going to seize to be unique just because Quantum Mechanics claims it to be not unique. Just because you pass legislation (Berlin-Hagan Interpretation) for the state of a particle to be uncertain, state of a particle is not going to be uncertain.

d8). The position of a matter particle is unique irrespective of the size of the particle. The momentum of a matter particle is unique irrespective of the size of the particle.

d9). The angular srequency k in the Fourier Function exp(jkx) should be able to take infinitely many values concurrently at any given position at any given time. Since the momentum of a matter particle at any given position at any given time is unique, the angular srequency k cannot be replaced by the momentum of a matter particle p/ħ. If it is replaced, the function exp(jpx/ħ) will not be a Fourier Function.

d10). If you force the [position, Momentum] Pair to be a Fourier Transform Pair in a mathematical model, then, the position and the momentum become uncertain or matter particle will be at multiple states concurrently only on paper, in a mathematical model, not in the nature.

d11). Matter particles do not have to obey human enforced Berlin-Hagan legislation (Copenhagen Interpretation); you cannot impose legislation on the nature of particles.

d12). The state of a matter particle is certain; it is only that we do not know what that state is; there is no uncertainty. Our lack of knowledge of the state of a particle does not make the state of the particle uncertain.

d13). The nature does not use probability. Nature doesn't have to use probability since nature has the complete knowledge of the underline process at its disposal. Probability is for the people who have no complete knowledge of the underline process. Probability and statistics are the tools that we have created to make inferences about the behavior of processes in the absence of exact knowledge about the working of the nature.

d14). Nature does not make decision by throwing dies.

d15). We don't have the complete knowledge of how the nature works. So, we use the probability to gain at least some understanding under some assumptions. Our use of the probability to explain some natural phenomena does not mean that the nature uses probability in its working. The nature is not probabilistic.

d16). Where there is no human ignorance, there will never be probability and statistics. Probability and statistics flourish under the human ignorance.

d17). The nature knows what it does with certainty. It is we who don't know how the nature works. Our ignorance made us to force uncertainty on the nature.

d18). In the era of flat-earth, it was our ignorance that facilitated for some individual with self-motivated agenda to form the concept of a mythical creator. It is the man who created a creator, not the other way around. The gender bias that exists in all the religions is a good indication that those religions are a man's creation; all the religions openly favor men while discriminating women openly.

d19). Why do we still believe ancient religious dogma founded by people in the dark-ages who believed that the earth was flat? If there is a creator, and the founders of the religious dogma are the messengers of that creator, shouldn't they have known the world is not flat? This is a good indication that it is the so called messengers themselves who created the concept of a non-existent imaginary creator.

d19). Universe cannot be a creation of a creator entity.

(e) Matter particle Wave Equation [3,4,5,6]:

e1). A matter particle has a mass. There are no mass-less particles. Waves are not particles. Particles are not waves. Particle-wave is a misnomer. Although everybody talks about photons, no one knows what photons are. Coherent light rays are not possible if light consists of photons since photons by definition are spatially random.

e2). No mass can be a wave.

e3). Matter particles, whether they are microscopic or macroscopic, are not waves. There is no demarcation point that separate microscopic particles from macroscopic particles. There is no such thing called particle-waves.

Particle-wave is an oxymoron

e4). Observables of a matter particle cannot be represented as the Eigen-Values of operators since the Eigen-Values are not unique.
e5). Observables in Schrodinger equation are uncertain or not-unique since the observables in the Schrodinger equation are represented as the Eigen-Values of operators.
e6). Kinetic energy or Mechanical energy E_m of a matter particle is not electromagnetic energy, and hence $E_m \neq hf$ for moving matter particles; angular frequency ω in a plane wave cannot be replaced by $E_m/\hbar$ since $\omega \neq E_m/\hbar$.
e7). There are no particle waves or de Broglie waves; $\lambda \neq h/p$. Particle wave is an oxymoron.
e8). In the de Broglie wavelength $\lambda=h/p$, there is nothing to indicate whether it is a microscopic matter particle or macroscopic matter particle. The so-called matter particle wavelength λ does not reveal anything about the size of the matter particle. A microscopic matter particle such as a fast moving electron or slow moving near stationary macroscopic object such as planet or a galaxy can have the same de Broglie wavelength λ. If the position of a fast moving electron is uncertain, then the position of a baseball at near standstill will also be equally uncertain.
e9). If the de Broglie conjecture is true, a slow moving massive object can have the same momentum as a fast moving electron. If the momentum of an electron is the same as the momentum of a slow moving, nearly stationary massive object, they both have the same wavelength, and hence the same uncertainty. How can a slow moving massive object that is nearly at stand still be equally uncertain as an electron?
e10). Who decides the boundary between the microscopic and macroscopic matter particles anyway? If microscopic particles behave differently from the macroscopic particles, what happens at the boundary?
e11). The spatial wavelength λ in the spatial Fourier Function $\exp(j2\pi x/\lambda)$ cannot be replaced by h/p , where p is the momentum of a matter particle. In the Fourier Function $\exp(j2\pi x/\lambda)$, λ should be able to take infinitely many values for a given position x concurrently. However, if the λ is replaced by h/p, then, the $\exp(px/\hbar)$ does not represent an orthogonal basis of infinite dimension since p is unique for given x at any given time. If λ in the spatial Fourier Function $\exp(j2\pi x/\lambda)$ is replaced by h/p, then the function $\exp(px/\hbar)$ will be single dimensional.

A particle cannot have multiple positions at any given time. The mass of a matter particle is unique, and the velocity of a matter particle is unique at any given position x at any given time, and hence the momentum p of a matter particle is unique at any given position x at any given time. You cannot expect $\exp(jpx/\hbar)$ to be a Fourier Function simply by claiming that a microscopic matter particle can be in infinitely many states concurrently, a characteristic no matter particle possess. There is nothing to distinguish the de Broglie wavelength of a microscopic matter particle such as an electron with momentum p from the de Broglie wavelength of a macroscopic matter particle with the same momentum p such as a planet; they both have same wavelength when they both have the same momentum.
e12). Schrodinger equation resulted from the erroneous, illogical, and misguided substitution of frequency f in a plane wave by E_m/h, and λ by h/p blindly; these substitutions are invalid.
e13). The energy E_m of a matter particle, the sum of kinetic energy and the potential energy, is mechanical energy and hence $E_m \neq hf$.
e14). The uncertainty of the observables of a matter particle in the Schrodinger equation stems from the Eigen-Value representation of the observables of a matter particle. The Eigen-Values are not unique, and hence the observables represented by Eigen-Values are not unique. No system can be modeled using Eigen-Values uniquely. No unique model is possible with Eigen-Value representation.
e15). The state of a matter particle is absolutely certain as far as the matter particle is concerned. It is we who are uncertain about the state of the matter particle. Our ignorance about the state of a matter particle does not make the actual state of a matter particle uncertain.
e16). We cannot make a state of a matter particle to be probabilistic simply by enforcing the Berlin-Hagen legislation (Copenhagen Interpretation in association with Berlin) on matter particles. Matter particles in nature have no obligation to comply the Berlin-Hagen legislation.
e17). It is we who imposed uncertainty on the observables of a matter particle by representing them as Eigen-Values of operators.
e18). State of a matter particle is certain.
e19). The position and the momentum of a matter particle are unique.
e20). Matter particles do not decide where they should be by throwing dies.
e21). The position and the momentum of a matter particle are NOT probabilistic. It cost energy for a matter particle to be probabilistic. If the state of a charge particle is probabilistic, it will result in radiation loss, the very problem we were trying to prevent.
e22). We may make matter particles as spooky as we want in a mathematical model; that does not make matter particles to be any spooky in reality.
e23). Just because we brute force somebody or something to be uncertain in a mathematical model on paper does not mean that somebody or something is

uncertain in nature.
e24). Matter particle spookiness is human made phenomenon, not nature made.
e25). Nature is the certainty, certainty is the nature.
e26). Consciousness is uncertainty, uncertainty is consciousness.
e27). Uncertainty is being conscious, being human, and not being a cucumber, matter particle or an object.
e28). The nature without certainty is impossible.
e29). Consciousness without uncertainty is impossible.
e30). When accelerated charge particles are collided in a particle accelerator, what you get are electromagnetic radiation bursts. These electromagnetic bursts are not particles. Those so called new particles found in hadrons collider are not new particles. They are electromagnetic radiation wave burst s from the collision.
e31). S**o** called new particles soup found in hadrons collider is a direct result of misinterpretation of the electromagnetic radiation wave burst as particles. Every time you repeat a collision, a slight variation in the acceleration and collision result in different electromagnetic radiation bursts. If you interpret these bursts as particles, you will discover bogus new particles every time you repeat a collision.
e32). When protons collide at high energies in an accelerator, collision does not create more protons; it generates electromagnetic radiation bursts. Don't interpret these radiation wave bursts as particles. They are not particles. Electromagnetic wave bursts are not particles. Particles are not waves.

(f) Electrons in Atoms [3,4,5,10]:
f1). Electrons moving on a circular orbit at constant speed do not radiate.
f2). Electrons in an atom cannot be uncertain or probabilistic since any uncertainty of a charge particle results in radiation energy loss and ultimate collapse as a result.
f3). Schrodinger equation with its inherent uncertainty of the state of a matter particle, due to its Eigen-Value representation of the observables, cannot represent the state of an electron in an atom since the uncertainty result in radiation energy loss and ultimate collapse of the atom as a result.
f4). The one and only stable path of motion an electron can have in an atom is a circular orbit at uniform speed.
f5). Angular momentum of an electron is a vector. A vector cannot come in quanta. A vector cannot be quantized.
f6). There is no way to reassemble a vector from magnitude quanta.
f7). The Bohr atomic model assumes that the magnitude of the angular momentum of an electron comes in quanta. Since angular momentum is a vector, the magnitude of a vector cannot come in quanta. A vector cannot be quantized. As a result the Bohr Atomic Model does not hold true.
f8) Angular momentum of an electron in a multi-electron atom is not conserved. It is only the total angular momentums of all the electrons in an atom that is conserved.
f9) Quantity that is not conserved cannot be quantized. Angular momentum of an electron in a multi-electron atom cannot be quantized.

> Vectors cannot be quantized.
> Non-Conserved quantities cannot be quantized.
> As a result, angular momentum cannot be quantized. Bohr atom is BOGUS.

(g) Mass of Earth [7,8,9,10]:
g1). Mass of the earth is not a constant. Orbit of a planet is not time-invariant.
g2). When we burn hydrocarbon compound, the burning is never complete. It can produce hydrogen gas in addition to other carbon and oxygen compound and energy. This produced hydrogen gas will be leaked out into the space since the gravitational force of the earth is not strong enough to hold on to it. Even though the hydrogen is the most abandon element in the universe, earth atmosphere contains no hydrogen; this is a testimony to the earth's lack of gravity to hold the hydrogen on. The loss of hydrogen results in the loss of earth's mass.
g3). The conversion of the mass into electromagnetic energy results in mass loss. Massive scale extraction and consumption of fossil fuel or hydrocarbon reduces the mass of the earth.
g4). Every spaceship that leaves the earth, or any mass that leaves the earth, reduces the earth's mass.
g5). Nuclear decay results in a mass loss.
g6). Plants, bio mass in general, generate mass.
g7). The destruction of the forest reduces the ability of the earth to generate mass.
g8). Every meteorite or asteroid that hits the earth increases its mass.
g9). Every meteorite or asteroid that hits the earth changes the earth's momentum.
g10). The mass of the earth decreases with time when we are destructing the mass creating bio-mass.
g11). The mass of any planet decreases with time if it has no mechanism to generate mass.
g12). The mass of the sun is decreasing with time due to its inner fuel consumption to generate electromagnetic energy. Sun's mass decreases millions of tons every second.
g13). As the mass of the sun decreases, orbits of the planets in the solar system contract.
g14). As the mass of a planet decreases, the planet's orbit undergoes a contraction.
g15). The decreasing mass of the earth and the decreasing mass of the sun result in the contraction of the earth's orbit leading to Global Warming.
g16). The majority of the mass loss of the earth is mainly due to human activities such as excessive hydrocarbon consumption, bio-mass destruction, and

the space exploration endeavors where rockets are being sent to outer space.
q17). NASA is partly responsible for earth's mass loss, and hence a major contributor to the Global Warming.
g17). As far as the earth is concerned, the mass loss is preventable.
g18). The Global Warming is Preventable.
g19). Underground resources are the property of whole population on earth, not just few people live above that patch of land. Harnessing and distribution of the underground wealth must be done sustainably under tight constraint by a global consortium.
g20). How much of underground resources should be extracted is a decision of the whole population on earth, not just few people live above that patch of land since the extraction and the consumption affect the whole globe not just the patch of land where the underground resources were extracted from.
g21). If the inhabitant of one country is engaged in activities that accelerate the reduction of the earth's mass leading to Global Warming, its negative consequences will affect not just the people in that country; it affects the entire species on the planet. No activity that leads to the degradation or the eventual destruction of the livability on the planet and the health of earth should be left alone in the hand of few people in one patch of the earth or one country.
g22). The health of the planet earth depends on its ability maintain its mass such that its orbit remains in the Goldilocks zone.
g23). The equilibrium between the mass generation by the plants, mass increase from the collision with meteorites and asteroids, and the mass loss due to various means keeps the earth in the Goldilocks' zone, the zone that facilitates the life on earth.
g24). The earth and everything on and in it is not a creation of some creator entity. The claim that all the resources of a country (a patch of land) were a gift given to the inhabitant of that country by the so-called creator is self-advancing lunacy. Anybody who offer sacrifices (animals, food, flowers, even good looking boys and girls as Mayan's did) hoping to please an invisible so-called creator, hoping to receive more favors, should realize that any creator, if there is one, who is capable of creating the universe and everything in it should be able to create on its own whatever the so-called creator wants, whether it is a goat, man, women, flower, food or whatever. The so-called creator does not have to depend on the people of a tiny planet that only constitutes a negligible part of the entire universe for the creator's needs; after all, the guy is the creator who creates; why can't the creator creates whatever the creator needs for him/herself. As for our praying (or perpetual begging and bugging) to an invisible, imaginary, mental image of a so-called creator, one thing is clear; no creator, if there is any, would be able to withstand someone who was given everything to achieve whatever he/she/it wanted, yet keeps asking for more and more in so-called prayers (begging and bugging) several times a day; the creator's response for prayers of the misguided people would be "I have given you every darn thing you need for good living; get a life, leave me alone".
g25). Religions, the concept of a creator, and the faith are a good measure of height of human-ignorance or human-stupidity; after all, the concept of a creator and the religions are the product of the people who believed the earth was believed to be flat. Why are we still following flat-earth era religious dogma?
g26). The flat-earth-era religious dogmas have no place in the round-earth-era.
g27). It is the man who created the creator, not the other way around.
g28). Why are we here? Don't expect to find the answer in dark-age religious doctrines founded by ancient militant who thought earth was flat. You may have to discover it yourself. Discarding of the mysterious religious dogmas as well as mysterious opportunistic dogmas such as Quantum Mechanics would be a practical start to see the light (as a true wave).

(h) Universe [7,8,9,10]:
h1). Electromagnetic energy is electromagnetic frequency. When electromagnetic energy propagates a long distance, it loses energy. This propagation loss results in a frequency down-shift since the electromagnetic energy and electromagnetic frequency are equivalent.
h2). The frequency down-shift due to propagation loss is the reason why "the further a star is the redder the star appears to us". The frequency down-shift due to propagation loss is the reason why we are not able to see the stars beyond a certain distance, or why our visible universe is limited.
h3). Although the electromagnetic propagation loss, and hence the frequency down-shift is insignificant for short distances, for light from stars that travels extremely long distances, this propagation loss and its resulting frequency down-shift is significant.
h4). The red-shift of light from distance star is a measure of its distance. The further the star is the redder the star appears.
h5). If the light from a star is frequency down-shifted below the visible band, that star is beyond our visible region.
h6). The Visible Universe is the maximum distance the light can travel before being down-shifted below the visible frequency band.
h7). Cosmic Microwave Background is not some leftovers from a mysterious, hypothetical Big-Bang as it was claimed to be; there was no Big-Bang.
h8). The Cosmic Microwave Background is due to the light from distant stars that is already frequency down-shifted below the visible region due to propagation loss.
h9). The visible universe is a moving 3D-horizon. Our visible universe is different from the visible universe of somebody else at a distant in a distant galaxy. The

range of the visible universe will be different from different location since the rate of electromagnetic energy loss with the distance may vary from path to path. Since this difference may be fairly negligible, it is fair to say that the range of visible universe is almost the same from any location in the universe.
h10). If we send a light burst, our out-of-the-visible-region neighbors will receive if in the microwave band.
h11). The observed galactic red-shift or frequency down-shift is due to propagation loss.
h12). The frequency down-shift or red shift of light can only be attributed to the motion of the source only for short distances where the frequency shift due to the propagation loss is negligible.
h13). The use of galactic red shift or frequency down-shift of light from distant galaxies to claim that the universe is expanding is simply preposterous, misguided, and utter nonsense.
h14). The distances light has to travel from distant galaxies to reach us are so enormous and measured in light year. As a result, the electromagnetic energy loss along the path and hence the frequency down-shift is significant.
h15). The Universe is NOT expanding. The idea of universe expansion is simply preposterous.
h16). The increasing or decreasing galactic red shift is due to the radial motion of galaxies.
h17). If the mass of a galaxy increases, the orbit of the galaxy dilates. Similarly, if the mass of a galaxy decreases, the orbit of the galaxy contracts accordingly.
h18). The orbit dilation or contraction, which is a direct result of the change of the mass of a galaxy or a planet, takes place always at acceleration.
h19). Universe is NOT accelerating.
h20). There is/was no Big-Bang (Big-Nonsense).
h21). The universe was not originated from a mythical singularity; the universe was not created by a mystical creator. There is no house of a creator up in the sky.
h22). The age of the universe cannot be obtained as the inverse of the Hubble Constant since the speed of the radial motion in the Hubble relationship is not a constant.
h23). If the age of the universe is obtained as the inverse of the Hubble Constant, the age of the universe will be a constant; forever young.
h24). Space does not expand or contracts. It is only the matter that expands or contracts due to change in temperature, pressure, or motion.
h25). Since the galactic red-shift is due to electromagnetic propagation energy loss, the concept of expanding universe has no validity, simply insane, pure nonsense.
h26). Since light is not relative, the General Relativity does not hold true. As a result, the concept of expanding universe has no theoretical backing either.
h27). The concept expanding and accelerating space in the universe is simply preposterous.
h28). The concept of expanding and accelerating universe is a result of a theoretical, as well as an experimental blunder.
h29). Since the range of light is limited, it is not possible for us to calculate the total mass and the energy of the universe.
h30). There is NO Dark Energy.
h31). There is NO Dark Matter [10]. The Dark Matter is a result of forcing lightweight Keplerism where it does not belong. Keplerism is an approximation that only applies for Solar System. Keplerism does not apply for heavyweight orbiting systems such as stars and galaxies. Newtonism in general form that takes into account the mutual interactions between orbiting objects must be used for heavyweight orbiting systems such as stars and galaxies [10]. Stars and galaxies are not orbiting faster; the estimated speeds were lower due to estimation error.
h32). The idea that we can estimate the amount of matter and energy in the universe using light or electromagnetic waves is simply preposterous.
h33). We cannot estimate the total matter and energy in the universe.
h34). The matter beyond our visible region appears to us as dark simply because when the light from those objects reaches us the light is already out of the visible region due to the frequency down-shift caused by the propagation loss.
h35). The idea of Multi-verse is simply a load of crap (Crapology-101) not worth talking about, waste of time (more accurately the waste of the moment, the present).
h36). The idea of Inflation is mythical and dreamy nonsense (Mythology 101).
h37). The universe has neither a beginning nor an end.
h38). There is no beginning of time; there is no end of time. There is no time, period. What is there is only the present, this instant, or this moment. Yesterday exists only in memory. Tomorrow is perceived only in memory. There is no yesterday universe. There is no tomorrow's universe. What is there is the universe at this moment.
h39). Time is a definition, a human definition.
h40). There is no grand designer. No designer with any intelligence would have created so many objects that have no real use, useless real estate. Just in our Solar System itself, there are many planets, yet, except the earth, the rest are useless; they are either useless rocks or giant gas balls.
h41). If an Engineer had designed this universe, the designer must have lost his/her head in the Town Square for creating so much useless real estate or for wasting resources.
h42). Why should any creator, even with a little bit of intelligence, design the living species in a way one living species has to eat another living species to survive? It is cruelty at its highest. No designer could be that cruel. Even a totally ignorant designer couldn't be that cruel and wasteful.
h43). The universe and the life on earth cannot be a work of a Grand Designer. Just because thousands of

years ago, in the dark ages (flat-earth era), some groups militarily forced scientific ignorance on people and made them to accept that the universe and the life on earth as a creation of a Grand Designer for their selfish personal advantage, we don't have to continue to believe these human Crafted Prophesies (hCRAP) blindly today in a scientifically advance age (round-earth era). Blind faith is the biggest obstacle to the search for the truth. The cruelty associated with blind faith has always been so extreme that everyone pretends not to see.

h44). If you had created the universe, would you have chosen those "self proclaimed messengers of a creator" as your messengers? Why do you have to offer prayer and sacrifices to a creator; can't the creator create anything creator wants? Do you have to offer a goat to a guy who creates goats? Why does a creator accept offerings knowing full well that it is always somebody else that is sacrificed for somebody's personal gain? If you are the creator and you have created an entity giving everything that entity requires, do you want that entity to go on asking for more several times a day or perhaps every waking minute in a prayer (begging-bugging) toward you? Common sense fails equally when it comes to all the religions as well as Quantum Mechanics and General Relativity. Quantum Mechanics and General Relativity have become the new religion with physics professors as shamans in the temples of universities.

h45). $e \neq mc^2$.

h46). Heisenberg Uncertainty Principle $\Delta x \Delta p \geq h$ does NOT hold true.

h47). Heisenberg relationship $\Delta E \Delta t \geq h$ does NOT hold true for particles. This relationship holds true only for electromagnetic energy.

h48). The observables cannot be Eigen-Values. Observable are unique. Eigen-Values are not unique. You cannot use non-unique parameters to represent unique parameters. If you represent unique parameters with non-unique parameters, you are forcing those parameters to be spooky. Quantum spookiness is a human creation, not a natural phenomenon.

h49). A moving body contracts in all directions.

h50). Gravity does not bend light. It is the density gradient of a medium that bends light. A gravitational object creates a density gradient in a medium surrounding the gravitational object.

h51). There are No Gravitational Waves. Inverse square gravitational fields are not waves [4,10].

h52). Mass and Gravitational Field of infinite span are a single entity.

h53). The mass loss of the sun in the solar system results in the orbit contraction of all the planets in the solar system.

h54). The loss of mass of a planet in the solar system results in its orbit contraction.

h55). Global Warming is the result of the orbit contraction of the earth due to its mass loss as well as the mass loss of the sun.

h56). Vectors do not come in quanta. Vectors cannot be quantized.

h57). Angular momentum of an electron in an atom is a vector, and hence angular momentum does not come in quanta.

h58). Bohr Atom is invalid since it requires the angular momentum to be quantized. Angular momentum is a vector, and a vector cannot come in quanta. Angular momentum of individual electrons in a multi-electron atom is not conserved and hence cannot be quantized.

It is the total angular momentums of all the electrons that is conserved.

h59). Time is absolute.

XV. GLOBAL POSITIONING SYSTEM (GPS) HAS NOTHING TO DO WITH SPECIAL RELATIVITY OR GENERAL RELATIVITY:

The claim that 'Global Positioning System (GPS) is not possible without Special Relativity' is bogus, simply preposterous; that claim has no basis. It is only the physicists who make this claim. Physics books are full of this claim. No engineer makes such a claim. The fact of the matter is that GPS has nothing to do with Special Relativity or General Relativity [10]. GPS does NOT use even a single equation from Special Relativity or General Relativity. It appears that the people who claim, 'GPS is not possible without Special Relativity', preaches it as a verse from a religious text on a pulpit in front of a classroom. If you try to explain who and where Special Relativity is used in GPS, you will realize the foolishness of such a claim.

GPS does not consider time to be relative. The design of GPS requires no knowledge of Special Relativity or General Relativity. If time is relative, GPS, as we know it, is not possible since low orbit satellites are not orbiting at constant speed. GPS is designed to avoid the dependence of data from land receivers in the estimation of locations since there are billions of land receivers with varying hardware under varying environmental conditions. Requests from land receivers are handled with data from four or more satellites in the vicinity of the requesting land receiver alone for providing uniform service worldwide independent of the hardware of the receivers and the environment they are in. Since the satellites in the vicinity are approximately more or less in the same environment, the use of four or more satellites in the vicinity minimizes any environmental bias. Since no data from the client receiver is used, the result is not affected by the hardware variations of the receivers. The avoidance of the client data in the location estimation makes GPS client independent.

Any time drift of the clocks on satellites due to effect of changing environment on the mechanisms of the clocks can be corrected by synchronizing them periodically with a high precision master clock on ground. If the time from the requesting receiver had been incorporated in the location estimation, this

would be an impossible task since there are billions of land receivers from differing manufacturers with different hardware in differing environment conditions. Just by adding data from one more satellite than necessary could eliminate the need for time from a requesting land receiver. When four or more satellites are used in position estimation, it does not matter if the requesting land receiver had the right time or not; it does not even matter whether the land receiver clock is completely out of order. GPS can provide the service even if the requesting land receive clock is not working. GPS does not involve any time correction.

It is just like ordering a table at IKEA. IKEA knows that you have a screwdriver. But, IKEA does not use your screwdriver. IKEA cannot rely on your screwdriver. IKEA does not know if that screwdriver you have is the right fit for the job. So to be certain that you can assemble the table, IKEA sends you a screwdriver with the package. In that way, IKEA is certain that the customers have all the tools required to assemble the table properly. No Customer can complain that they did not have the tools to assemble the table they received. Assembly requirements are client independent.

GPS is no different. In GPS, any land receiver requesting for location information is given all the data necessary to calculate its location. No land receiver can complain that it could not calculate its location since its clock was out of order, or it got its location wrong because its clock was not functioning properly. GPS is certain that every land receiver is given all the data necessary for calculating their locations; there is nothing to complain about. In GPS, you do not have to use your own screwdriver (clock) to assemble the table (location). GPS does not rely on the clock of a land receiver requesting the location information for the same reason why IKEA does not rely on a customer's screwdriver when a customer purchase order for a table, although the IKEA is well aware that the customers are in procession of screwdrivers.

Although, all the land receivers have clocks in them, their accuracy varies. Although the satellites are equipped with high accuracy clocks, the land receivers contain low accuracy cheap clocks since there are billions of land receivers. The accuracy of land receiver clocks varies from manufacturer to manufacturer. The environments the land receiver clocks are in differ from the environment the satellites are in. The mechanism of a clock depends on the environment a clock is in and hence the displayed time of a clock. Further, for providing uniform service independent of the type of land receiver that is used, the position has to be estimated using the data from the satellites alone without relying on any data from land receivers.

When a receiver at location (x,y,z) at time t sends a request for its location, four or more satellites in the vicinity send their location and the request received time, (x_i,y_i,z_i,t_i), where, i is an integer and i≥4. Now, we have four or more equations,

$$(x_i-x)^2+(y_i-y)^2+(z_i-z)^2=[c(t_i-t)]^2,\ i=1,2,3,4,\ldots$$

where, c is the speed of light.

We have four unknowns (x,y,z,t) and four or more equations. A receiver can solve these equations to get its location (x,y,z) at time t, (x,y,z,t). Even when the clock on a land receiver is out of order, land receiver can find its location since the time from the land receiver clock is not involved. There is nothing for a client to complain about. There is no client data dependence. No client screwdriver is required for assembling the table. The estimated location is independent of local receiver data or client data. Any future improvement to the GPS can be made independent of the local receivers or clients. The reliability of the GPS system is maintained since it is independent of clients. There is no Special relativity here. There is no General Relativity here. To claim that 'GPS is not possible without Special Relativity' is simply preposterous, baseless, wrong, and self serving. In fact, GPS is not possible if the time is relative. It is a good thing that the time is not relative.

GPS does not rely on the clock of a client for the same reason why IKEA does not rely on your own screwdriver when you purchase a table.

Time is a human definition. It is the mechanism of a clock that is relative, not the time itself. A clock is an engineered device. As with any other engineered device, a clock displays right reading only when the clock is in an environment that meets the designer specifications. A clock displays deviated time when the clock is in an environment that is different from the design specifications. The display time of a clock and time are not synonymous. The mechanism of a clock and hence displayed time on a clock is affected by speed, gravity, electromagnetic forces, and the ambient conditions the clock is in. What is relative is the mechanism of any engineered device, not what is being measured. Clocks are no exception.

We all have seen how the time on a clock start to drift when the battery of a clock is draining out, or when the winding on a clock is loosening. When the battery is replaced or spring is rewound, and the time is synchronized, clock is back to normal. It is the mechanism of a clock that depends on the, strength of the battery or the tightening of winding, gravitational force, electromagnetic force, speed, temperature, pressure and other environmental factors; not the time itself. No relative time correction is involved in GPS. Time is not relative. Time is absolute [6].

The claim that 'GPS is not possible without Special Relativity and General Relativity' is simply BOGUS.
GPS has nothing to do with Relativity.

If time is relative, GPS is not possible.

XVI. MUONS DO NOT REQUIRE TIME DILATION TO REACH THE GROUND

> No time dilation is required for muons to reach the ground.
> The presence of muons at ground level cannot be attributed to a mythical time dilation.

The claim that the 'muons cannot be present at ground level without time dilation' is also a bogus claim. The presence of muons at ground level does not require a mythical time dilation in Special Relativity. Although, the half-life of muons is much less than the time required for muons to travel to the ground, the half-life of muons says nothing about the life-time of individual muons. Half-life is a population statistics.

Even though the half-life of muons is a small fraction of the time required for muons to reach the ground, it does not prevent for some muons having life-time long enough to reach ground and even hang around for a while at ground level. We know that the average wealth of a person on the planet is no more than few dollars. Yet, there are multi-billionaires. Average wealth of population says nothing about the individual wealth. Half-life of muons says nothing about life-time of individual muons. Population statistics says nothing about a single individual. Population statistics can only be used to compare one population with other populations. Population statistics make no predictions about individuals.

> Half-life of muons says nothing about life-time of individual muons.

Mythical time dilation is not required for muons to reach the ground [10]. The presence of muons at ground level cannot be attributed to a mythical time dilation. If you are still using the half-life of muons to support a mythical time dilation, you are fooling yourself; you are displaying your lack of understanding of statistics. Time is absolute. Special Relativity and General Relativity do not hold true [6,7,8].

XVI. CONCLUSIONS

The Bohr Atom is based on the mischievous idea that the angular momentum of an electron is quantized. Angular momentum is a vector, and vectors cannot be quantized. Vectors do not come in quanta. A magnitude of a vector cannot come in quanta separately. It is not possible to assemble a vector back from the magnitude quanta. It is only a scalar quantity that can be quantized or can come in quanta. In addition, it is only a CONSERVED SCALAR quantity that can come in quanta. It is only a conserved scalar quantity that can be quantized. The angular momentum of an electron in a multi-electron atom is not conserved. It is the total angular momentums of all the electrons in an atom that is conserved. As a result, the Bohr atomic model is incorrect, and invalid. Angular momentum of an electron is a vector, an entity that cannot be quantized or does not come in quanta.

The Quantum Mechanics is fundamentally incorrect; a misguided fake theory hidden under equally flawed mathematics, a deception in inception. No particle can be in a multiple states concurrently, quantum or microscopic particles are no exception. The position and the momentum of a quantum particle are not probabilistic. The state of a quantum particle is certain, not probabilistic. State of a charge particle cannot be probabilistic if it is to remain stable since the uncertainty results in radiation loss. The idea that the behavior of microscopic particles is distinctly different from the macroscopic particles is incorrect, invalid, and misconceived. If one claims microscopic matter particles behave differently from the macroscopic matter particle, how small a matter particle should be for it to behave differently? How small the mass of a quantum matter particle should be for it to behave probabilistically? How small a matter particle should be for it to be in multiple states concurrently? Who or what determines the boundary between mass of a matter particle below which a matter particle is at multiple states concurrently? Why does a matter particle's ability to be in multiple states concurrently disappear when the mass is above certain threshold value? When we ask these questions, we realize that the behavior of a microscopic matter particle cannot be any different from the behavior of a macroscopic matter particle. If a quantum matter particle is at infinitely many state concurrently, shouldn't the probability of finding a matter particle at any state be one, or certain. The behavior of any mass or particle must be under one guiding principle, which is independent of the size of the mass or particle, whether the mass or particle is microscopic or macroscopic.

The Modern physics is based on the erroneous idea that the light is a mass-less particle, and equally erroneous idea that the propagation of light is relative to an observer. Light is not a particle. There are no photons or mass-less light particles. Light is not relative. Light does not travel relative to observers. Simultaneity of two lightning flashes is not determined by an observer. Simultaneity of events is independent of observers. Light comes in bursts of constant duration, and the light is always a wave. The relationship, electromagnetic energy e=hf is utterly meaningless without specified time width, where h is the Plank constant and f is the frequency. How long do we have to wait to get energy e from an electromagnetic wave of frequency f? One day? Two years? Do we have to wait for an eternity?

Electromagnetic energy comes in wave bursts. It is the electromagnetic energy in a burst of electromagnetic wave that is proportional to its frequency, e=hf. The duration of a burst of light is a

universal constant. The duration of a burst of light is independent of its frequency. Since the light is not relative, light has no momentum. Only an object that has a mass can have a momentum. Only an object with mass can be relative. Special Relativity started with a drawing the path of a vertical pulse of light from a bottom of a horizontally moving train as vertical relative to the train. When this is done, you have already given the light a mass. In Special Relativity, light received a mass by proclamation, not as a reality.

The idea that the light or electromagnetic waves have a momentum is simply preposterous. You cannot generate a pseudo-momentum p for an electromagnetic wave simply by dividing the electromagnetic energy e by the speed of light c, $p \neq e/c$, as much as it is not possible to generate a mass m from dividing the electromagnetic energy e by c^2, $m \neq e/c^2$. No wave has a mass, and no mass is a wave. There is no mass-wave duality. There is no wave-particle duality. Since the light has no momentum, the relationship between the wavelength λ and the momentum p, λ=h/p is meaningless and non-existent for electromagnetic waves or light; λ≠h/p for light, or for so-called photons. Light is not relative [6].

Time is not relative. Global Positioning System (GPS) avoids using the clock of a land receiver requesting the location information for the same reason why IKEA avoids the reliance of a screwdriver of a customer when a customer purchase a table. Whenever a location request is made, GPS hands over all that are necessary for estimating the location to the receiver. There is no reliance on client screwdriver to assemble the table just arrived. The estimation of the position in GPS is independent of a client receiver data. GPS is independent of the client. This allows the GPS system to be upgraded without the compliance of clients or independent of clients. GPS is client independent, just like IKEA. When you make a request, GPS sends you the total package to estimate the location, just like IKEA sends you the total package to assemble a table. IKEA does not rely on the customer's screwdriver for assembling a table; the same is the case with GPS.

GPS has nothing to do with Special Relativity or General Relativity. If you are still preaching in front of a classroom pulpit that 'GPS is not possible without Special Relativity' like a verse from an ancient religious text, try to explain where and how Special Relativity is actually used GPS; you simply cannot, because it is not use anywhere in GPS. Only a person who knows nothing about GPS would make such a claim; no engineer made such a claim. You cannot use GPS to justify fake time-dilation in Special Relativity that has no mathematical validity [6]. Anybody who thinks time-dilation is real must be hallucinating; it is time to snap out of it.

In order to claim that the matter particles are waves, de Broglie agreed with Einstein and assumed that the light consists of particles or photons. De Broglie further assumed incorrectly that the relationship λ=h/p is true for mass-less light particles or photons. Then, de Broglie incorrectly conjectured that the same relationship could also be extended to any particle not just for photons, and hence any matter particle of mass m should also behave as a wave of λ=h/p; there was no proof; it was just a proclamation. Since light is not relative, has no momentum, and has no mass, λ=h/p relationship does not hold for light, and as a result there is nothing there for de Broglie to sensibly extend to matter particles. If light is not relative, there are no photons or mass-less light particles. If there are no photons or mass-less light particles, the relationship λ=h/p is no longer there. The relationship λ=h/p is simply meaningless and it does not apply to light or matter particles. Light has neither a mass nor a momentum. On the other hand, a matter particle has mass as well as a momentum. There are no mass-less particles. Particles are not waves. Waves are not particles. There is no wave-particle duality. Particle waves and wave particles are oxymoron.

The position and the momentum of a matter particle are unique. At any time, the position of a matter particle has a single value. At any time, the momentum of a matter particle has a single-value for a given position. A particle that has a mass cannot be at multiple places concurrently, at the same time, irrespective of whether a matter particle is microscopic or macroscopic, tiny or massive. A particle that has a mass cannot have multiple momentums concurrently for a given position, at the same time. A matter particle cannot be at multiple states concurrently at the same time. The momentum of a matter particle cannot be multi-valued. The position of a matter particle cannot be multi-valued.

For the position and the momentum of a matter particle to be the Fourier Transform Pair, the position of the matter particle has to have infinitely many values concurrently, for a given momentum, at any given time. In other words, a matter particle must be at infinitely many places concurrently. In addition, for the position and the momentum of a matter particle to be Fourier Transform Pair, the momentum of a matter particle must have infinitely many values concurrently for a given position, at any given time. In other words, a matter particle must have infinitely many momentums concurrently at the same time. Since state of the matter particle at any given time is unique, the position and the momentum of a matter particle are always unique. A mass cannot be at multiple states concurrently. As a result, the [position, Momentum] Pair of a matter particle do not constitute a Fourier Transform Pair. It is not possible for us to make or to force the position and the momentum of a matter particle to be a Fourier Transform Pair by declaration when they are not in reality.

The Quantum Mechanics was founded upon the declaration that "the position and the momentum of a matter particle are a Fourier Transform Pair", a

declaration that is simply preposterous. The Quantum Mechanics was created by forcing the position and the momentum of a matter particle to be a Fourier Transform Pair in a mathematical model. It is this invalid forcing of the position and the momentum of a matter particle to be a Fourier Transform pair in a mathematical model that led us to concoct in our heads a false fairytale view that a matter particle in nature is in multiple states concurrently; it is not the reality of a matter particle. The state of any matter particle at any time is unique irrespective of whether the particle is microscopic or macroscopic. It is simply ridiculous to make an artificial and mythical claim, 'a quantum particle is at multiple state concurrently', simply because we want to make the [position, Momentum] Pair of a particle a Fourier Transform Pair, knowing the fact that the Quantum Mechanics collapses if the [position, Momentum] Pair is not a Fourier Transform Pair. Matter particles are not obligated to follow human declarations, or a Berlin-Hagan Legislation. You cannot ask the nature to behave in a certain way in order to save the Quantum Mechanics –weird, misconceived declarative-theory.

Since [time t, Frequency f] pair constitute a Fourier Transform pair, a wave cannot be both time limited and frequency limited, $\Delta t\Delta f \geq 1$, where Δf is the frequency bandwidth of the wave, and Δt is the time span of the wave. Similarly, since the [position x, Srequency k/2π] pair constitutes a Fourier Transform Pair, a wave cannot be position-span limited and srequency limited, $\Delta x\Delta k \geq 2\pi$, where Δk is the angular srequency bandwidth of the wave, and Δx is the position span of the wave. Similarly, if the [position x, Momentum p/h] pair of a matter particle is a Fourier Transform Pair, then a signal cannot be both position-span limited and momentum bandwidth limited, $\Delta x\Delta p \geq h$, where Δp is the momentum bandwidth of the wave, and Δx is the position-span of the wave, which is the Heisenberg Uncertainty Principle. If the [position x, Momentum p/h] Pair is a Fourier Transform Pair, the bandwidth limitation associated with a Fourier Transform Pair, whether it is a time-frequency, position-srequency, or position-momentum, is an inherent property of a system itself; it is not an observer effect or the effect due to the interference of measuring instruments. If the [position x, momentum p/h] Pair is not a Fourier Transform Pair, the Heisenberg Uncertainty does not hold true.

However, the [position x, momentum p/h] does not constitute a Fourier Transform Pair. As a result, $\Delta x\Delta p \geq h$ inequality does not hold true. Heisenberg's claim that the precision of position can only be obtained at the expense of the precision of the momentum, and vice versa, is incorrect. The precision of the location of a matter particle is independent of the precision of the momentum of a matter particle. Similarly, the precision of the momentum of a matter particle is independent of the precision of the position of a matter particle. Heisenberg Uncertainty Principle is incorrect. The state of a matter particle is certain. As far as a matter particle is concerned, there is no uncertainty about the state of matter particle. Our ignorance of the state of a matter particle does not mean that the state of a matter particle is uncertain as far as the matter particle itself is concerned in the nature. Nothing in the nature is uncertain as far the nature itself is concerned.

It does not matter how much we try or how much we want to, we can't make the [position x, Momentum p/h] Pair of a matter particle to be a Fourier Transform Pair in reality. However, we can force the [position x, Momentum p/h] Pair to be a Fourier Transform Pair in a mathematical model on paper as it is done in the Quantum Mechanics, which is indeed unnatural, unrealistic and downright silly. If we do that, in effect, what we are doing is forcing the position x and momentum p/h to be at infinitely many values concurrently, just like any Fourier Transform function should, which is indeed an impossibility in reality since the position and the momentum of a matter particle in nature are unique.

Compromising the reality is what has been done in Quantum Mechanics by forcing the position x and the momentum p/h of a matter particle to be a Fourier Transform Pair. Quantum Mechanics is built upon by forcing the position x and the momentum p/h of a matter particle of mass m to be a Fourier Transform Pair in a mathematical model on paper, not in reality. That is exactly the reason why Heisenberg Uncertainty Principle appears in Quantum Mechanics; it represents an unrealistic, wishful and dreamy mathematical model, not the reality of the nature. That is why a matter particle had to be considered to be at infinitely many states concurrently; it is only possible in a mathematical model on paper, not in reality. A particle cannot be at multiple states concurrently; it is not a physical reality; it can only exist in human mind, not in nature. Human imagination, human mathematical models do not always reflect the true reality; the wide spread human belief that the universe, and everything in it, is a creation by a non-existent unrealistic imaginary mythical creator, and the forceful and violent enforcement of that belief on others show how extreme, brutal, and unrealistically one-sided human mind can be; the case in point. The false belief that a matter particle of mass m is in infinitely many states concurrently at the same time is no different from the false and misguided religious belief that the universe is a creation of a creator entity; just nonsense.

Schrodinger equation in Quantum Mechanics is built upon the wishful thinking of wave-particle duality where a wave is assumed to behave as a particle of momentum p, and a matter particle of mass m and momentum p is assumed to behave as a wave; a complete nonsense. It is not just wrong, totally unrealistic; simply preposterous. Schrodinger equation utilizes the invalid de Broglie conjecture that a matter particle of mass m behaves as a wave of wavelength $\lambda=h/p$, and the relationship between the

electromagnetic energy and its frequency f given by, E=hf or E=ħω. We have already seen that the de Broglie conjecture does not hold true, λ≠h/p. Further, the energy of a matter particle is mechanical energy, not electromagnetic energy. The relationship E=hf or E=ħω applies only for electromagnetic energy in electromagnetic waves, not for mechanical energy. The relationship E=hf does not apply for mechanical energy of matter particles. Without the relationships λ=h/p and E=hf, there would be no Schrodinger equation or Quantum Mechanics in general. The Schrodinger equation does not hold true when λ≠h/p and E≠hf as it is the case.

The foundation the Schrodinger equation is built upon is false. It is not possible to build a solid structure of fundamental reality on a false fairytale foundation of unreality; the structure has to falls apart sooner or later. Sooner it is we find why Quantum Mechanics is wrong the better it is, since it facilitates us to determine the true nature of matter particle that is fundamentally sound and naturally sensible. It is hard to comprehend why a totally nonsensical concept like wave-particle duality had taken hold in human mind for so long, almost a generation. On the other hand, when we see the percentage of people who are hoping to find solutions to their problems by offering prayers and sacrifices to an imaginary nonexistent creator, it is somewhat less surprising. We are still in an era where many are seeking answers to their problems from thousands of year old, flat-earth era, violent religious dogma than from any form of scientific truth. With this kind of flat-earth era religious mind set, it is no wonder why people are still adhering to the Quantum Mechanics where a particle is considered to be in multiple states concurrently, or voodoofied particles.

In the development of the Schrodinger equation, the observables of a matter particle are represented as the Eigen-Values of operators. The Eigen-Values of operators are not unique. As a result, the Eigen-Values of operators cannot uniquely represent the observables. The Eigen-Values of operators cannot be used to represent the state of a matter particle. The state of a matter particle is unique at any given time, and hence the state of a matter particle cannot be represented by Eigen-Values of operators as it is done in the Schrodinger equation. This is the primary reason for the spookiness of the Quantum Mechanics; it is a human made spookiness. The spookiness is a result of the non-uniqueness of the observables in the Schrodinger equation. This is why Schrodinger equation is unable to provide the unique state of a matter particle even though the state of any matter particle is naturally unique. It is the mathematical model that is used in the derivation of the Schrodinger equation that lacks a uniquely defined state for a matter particle, not a matter particle in the nature.

The reason why the Schrodinger equation cannot give us a unique state of a matter particle is that the Eigen-Value representation of the state of a matter particle that is constituted in the Schrodinger equation is not unique. Without a unique representation of the state of a matter particle in a mathematical model, you cannot expect unique observables from the model. When the Eigen-Values are the observables as it is in the Schrodinger equation, the observables you get from the Schrodinger equation cannot be unique, and the result is the lurking quantum spookiness that is never a phenomenon present in the nature itself. The nature is not spooky. The spookiness originated as a result of human ignorance or vagueness in the mathematical modeling of a behavior of a particle in reality. If you are modeling reality, the mathematical model used must represent the reality uniquely. The spookiness is a human creation. True nature is never any spooky; true nature is always a matter of fact. Spookiness is in the human consciousness. Just see any place of religious worship, you can witness how human have created a form of vast spookiness and blind aura of extremism, a place where logic has no meaning, a place where you are expected not to question, a place where you are expected to surrender. Quantum Mechanics is also has become such a place.

A valid, concrete and accurate theory does not require an additional support of a mysterious and unnatural interpretation that is not far from the flat-earth era religious dogma. Why do human still believe in flat-earth-era religious dogma? A valid, correct and accurate theory by itself should be able to explain the natural phenomenon the theory is based on. The requirement of an additional mysterious unnatural interpretation for a theory is an indication that the theory itself is questionable. Any interpretation is subjective. We develop theories to overcome the subjectivity, to eliminate the need for an extra interpretation. The Copenhagen Interpretation or more accurately, the Berlin-Copenhagen (Berlin-Hagen) Interpretation of Quantum Mechanics is simply an artificial, mysterious and unnatural valiant effort to cover-up the errors inherent in the Schrodinger equation and Heisenberg uncertainty principle. The Berlin-Hagen Interpretation claims that the very act of observation makes the wave function of a matter particle to collapse. A particle interaction with another particle is no different from a particle being observed. In that sense, simple act of interaction of a particle with another should make wave function to collapse and as a result there will never be a wave function since particles do not exists in isolation in nature.

The fact is, if there exist a wave function for a matter particle, then, the simple act of observation is not going to make it to collapse. An observer cannot make a wave function of a matter particle, if there is one, to collapse or disappear. If a simple act of interaction with an observer makes the wave function of a particle to collapse, the wave function of a particle will always be in a collapse state since every particle is always being observed by other particles as well as waves; in other words, there will be no wave functions

to begin with.

I am alive because I am uncertain.
I am dead when I am certain.
Uncertain are conscious beings.
Certain are particles.

Only the living species with a conscience can change their behavior when they are being observed, not the matter particles. A robber in action can change the plan if he/she realizes that he/she has been watched, not the wave function of a matter particle, if it exists. The Berlin-Hagen Interpretation is a face saving mechanism in the extreme for the developers of the Quantum Mechanics and the Schrodinger equation. The Berlin-Hagen Interpretation is a valiant effort to deflect the criticism and cover-up the inherent uncorrectable errors in the Schrodinger equation and the Quantum Mechanics in general. How can you expect certainty in the observations from a mathematical model where the observables are represented non-uniquely as it is in the Schrodinger equation? What Berlin-Hagen Interpretation is trying to do is to transfer human mistakes into the nature and wash their hands. Let us not make the mistake of transferring our ignorance of matter particles as well as our ignorance of Fourier Transform on to the matter particles themselves in the nature; let us accept our Quantum Mechanical Blunder and continue with a clean slate to understand the true nature. Quantum Mechanics is fake science; a religious mantra uttered without any understanding of what is being uttered.

If [ψ(x), Ψ(f)] is a Fourier Transform Pair, by taking Fourier Transform of ψ(x), we can obtain Ψ(f). Similarly, by taking Inverse Fourier Transform of Ψ(f), we can obtain ψ(x). However, it is not possible to obtain the momentum of a matter particle by taking the Fourier Transform of the position of a particle. Similarly, it is not possible to take the position of a particle by taking the Inverse Fourier Transform of the momentum. In Quantum Mechanics, the position and the momentum of a matter particle are forced to be a Fourier Transform Pair by design in a mathematical model on paper. This is the source of the unnatural spookiness of the Quantum Mechanics. When we are forcing the position x and the momentum p of a matter particle to be a Fourier Transform Pair, we are, in effect, making the position x and the momentum p of a matter particle of mass m and velocity v to be at infinitely many states concurrently at the same time in a mathematical model, and expecting a real matter particle to behave the same way although no real matter particle of mass m could be at infinitely many states concurrently at the same time in the nature.

When the observables such as the position x and the momentum p of a matter particle are modeled as the Eigen-Values of operators in the Schrodinger equation, the observables are not unique in a mathematical model, not in a real matter particle in the nature. All the unnatural, weird and spooky phenomena attributed to Quantum Mechanics are due to the invalid and incorrect conditions that are forced upon on a mathematical model of a quantum matter particle by human in the process of developing Quantum Mechanics. No mass can ever be in multiple states concurrently, irrespective of its size, in the nature. There is no spookiness in the quantum matter particles or in any matter particle in the real world, universe, or in the nature. There is no spookiness that is inherent in the quantum matter particles. Widely rumored quantum spookiness is, indeed, a result of a mathematical blunder inherent in the Theory of Quantum Mechanics itself.

All the natural phenomena are causal. No natural phenomenon is probabilistic. The nature does not play dies to determine what state a matter particle should be in. Probability is a human description, not a nature's prescription. We employ probability when we have no idea what the underline physics of a system is. Probability is not a science, and science is not a probability. Probability is a human invented tool for data interpretation in the absence of the complete understanding of the underline physics of the system that generated data. The underline physics of a system is always there, but when we do not know what it is, we turn to probability to obtain some understanding at very least. Probability originated as a tool for gambling during the time of Pascal.

The behavior of a quantum matter particle is not probabilistic. It is we who made the matter particles to be probabilistic in a mathematical model to cover-up our mistakes in the development of Quantum Mechanics. It costs energy for a matter particle to be probabilistic in reality in the nature; it is not free. This loss of energy of a matter particle due to the probabilistic behavior of a matter particle leads to the ultimate collapse of the matter particle. It costs energy for a matter particle to be at an uncertain state. A matter particle cannot afford to be uncertain due to this energy requirement in the nature. A matter particle cannot be at infinitely many states concurrently at the same time without having unlimited source of energy to draw upon. A matter particle cannot change its momentum without losing or gaining energy. A matter particle cannot be at infinitely many states simultaneously without infinite supply of energy.

If the position of an electron in an atom is uncertain, it will lose energy due to radiation. If the state of an electron is probabilistic, it will lose energy due to radiation. If the momentum of an electron is uncertain, it will lose energy due to radiation. If an electron in an atom is at infinitely many states concurrently at the same time, it requires unlimited supply of energy. Uncertainty of a matter particle and a matter particle is being at infinitely many states concurrently at the same time are not the same. Uncertainty is probabilistic; we know that there is a matter particle somewhere, but we don't know exactly where the matter particle is, it is either here or there somewhere. However, if a matter particle is at

infinitely many states concurrently, there is no uncertainty; it is not probabilistic, it is a certainty. Electrons in an atom cannot be probabilistic since it leads to energy loss due to radiation, or cannot be at infinitely many states concurrently since it requires an infinite energy. No mass can be at infinitely many states concurrently at the same time. No mass can be in an uncertain or a probabilistic state since it consumes energy for it to be uncertain or probabilistic. No charge particle can be in a state of uncertainty or a probabilistic state since it results in electromagnetic radiation energy loss.

Schrodinger equation cannot provide the unique state of a matter particle since the observables in the Schrodinger equation are represented as Eigen-Values. The Eigen-Values are not unique, and as a result the observables from the Schrodinger equation are not unique. There is no uncertainty in the position and the momentum of a matter particle. The precision of the momentum of a matter particle is independent of the precision of the position of the matter particle. There is no inherent physical characteristic of a matter particle that limits the achievable precision in both the position and the momentum concurrently at the same time. The position and the momentum of a matter particle are not a Fourier Transform Pair. No mass can be a parameter of a Fourier Function. If you artificially force the position and the momentum of a matter particle to be a Fourier Transform Pair in a mathematical model on paper, then, what you get is the Heisenberg Uncertainty Principle, not the reality. Since the position and the momentum of a matter particle can never be a Fourier Transform Pair in reality, the Heisenberg Uncertainty Principle is mathematically incorrect, theoretically invalid, naturally un-natural, and simply non-existent; it is a Fourier Transform Blunder at highest level, yet everyone has been blinded to it. One has to be completely ignorant about the Fourier Transform in order to claim the position and the momentum of a matter particle a Fourier Transform Pair; no one with slightest understanding of the Fourier Transform can make that claim. No variable associated with a mass of a matter particle or object can ever be a Fourier Transform Function in order to be a part of a Fourier Transform Pair. The way Heisenberg Uncertainty Principle was first derived is a good indication that it is an outcome of the Fourier Transform Ignorance.

The interference pattern of bright spots on the phosphor screen of the double-slit experiment for an input beam of electrons had been used to substantiate the de Broglie conjecture, which proclaims that a matter particle behaves as a wave; a double-slit blunder [3]. The interference pattern of bright spots that appear on the phosphor screen of the double-slit experiment for an input beam of electrons is not due to the collision of electrons or matter particles with the phosphor display screen. No electron or matter particle can cross the double-slit barrier to the other side in the double-slit barrier since there is no slit on the double-slit barrier along the path of the electron beam. The two slits on the double-slit barrier are not along the path of the beam. The two slits are away at equidistance form the point that a beam hits the double-slit barrier. As a beam of electrons hit the double-slit barrier, all the electrons or matter particles in the beam are stopped by the double-slit barrier. No matter particle ever reaches the phosphor display screen on the other side of the double-slit barrier.

You do not need a beam of electrons to generate an interference pattern on the phosphor screen. In fact, even a single charged matter particle can produce an interference pattern in the double-slit experiment. When a charged matter particle is suddenly stopped by an obstacle, just as the double-slit barrier in the double slit experiment does, the result is electromagnetic radiation. This generated electromagnetic wave bursts or radiation passes through the two slits, which are slightly off to the point where a matter particle collided with the double-slit barrier, and interfere on the phosphor screen creating an interference pattern of fringes. The bright spots on the phosphor screen correspond to the peaks of the interfered electromagnetic wave bursts on the phosphor screen. Since the interference pattern due to a single incoming charged matter particle is fleeting, the use of a beam of charged matter particles allows us to sustain the interference pattern on the screen. Any particle with a charge or combination of charge particles as in a molecule will generate an interference pattern of bright spots on the phosphor screen of the double-slit experiment. Even a neuron will generate an interference pattern since a neuron disintegrates into charge particles as it collides with the double-slit barrier resulting in electromagnetic wave bursts.

When charge particles collide at high speed in an accelerator, the collision will generate electromagnetic radiation bursts. These radiation bursts are not particles. It is the misinterpretation of these electromagnetic wave burst as particles that gave birth to bogus new particle zoo. When two protons collide at high speed, they do not generate more protons; the collision will generate electromagnetic radiation bursts. You cannot interpret these electromagnetic radiation burst as particles. Electromagnetic radiation bursts are not particles. Particles are not waves. Every time when particles are collided in the hadrons collider, the slight variation in acceleration and collision generate different electromagnetic radiation burst resulting a different crash site outcomes. If you interpret these wave burst as particles every time a new collision is carried out, you will indeed generate a new bogus particle jungle.

Particles do not behave as waves. Waves do not behave as particles. There is no wave-particle duality. The de Broglie conjecture is incorrect, meaningless, and utter nonsense. Light is not relative [6], and as a result the Special Relativity and the General Relativity are incorrect. When light is not relative $E \neq mc^2$.

Heisenberg Uncertainty Principle, Schrodinger equation, Dirac equation, and the Quantum Mechanics in general are simply the results of a Theoretical Blunder. Time is not relative. Mass is not relative. Time is not a function of space. There is no space-time. Time for a person in motion is not a mixture of time and space for another person at standstill or in motion at different speed. One person's time is not a mixture of time and space for another person. State of an electron in an atom cannot be probabilistic or uncertain. Bohr atomic model is incorrect since the angular momentum of an electron is a vector and a vector cannot be quantized. The angular momentum of an electron in a multi-electron atom is not conserved, and hence the angular momentum of an electron in an atom cannot be quantized. It is the total angular momentum of all the electrons in an atom that is conserved. Only the conserved scalar quantities come in quanta. Only the conserved scalar quantities can be quantized. The only stable path an electron in an atom takes, without loss of energy due to radiation, is a circular orbit at uniform speed [4,3]; any other path leads to radiation energy loss making an electron in an atom unstable. The state of any mass is unique. No mass can ever be in multiple states concurrently. The spookiness is a human creation; it exists only in the human consciousness. The spookiness is not an inherent characteristic of the nature. Spookiness is just a big money maker for some since it sells books (Harry-Potter-ization). The nature is not spooky.

The state of the universe does not hang on the critical values of universal constants. There are no universal constants. What are there are universal parameters that are able to undergo change without affecting the overall stability. The planetary model of the atom is stable since the electrons on circular orbits do not radiate. Although the decreasing mass of the sun leads to the orbit contraction resulting in Global warming, the main cause of the Global warming is orbit contraction due to the mass loss of the earth. The destruction of the forest reduces its ability to generate mass. Hydrocarbon consumption reduces the mass of the earth. Hydrogen fuel cells can accelerate the mass loss of the earth. Space explorers that leave the earth reduces the mass of the earth contributing to Global Warming. Mass of a planet is not a constant. The orbit of a planet is not a constant. The mass of a planet and the orbit of a planet are dynamic, not static. The orbit of a planet is determined by the mass of the planet and its orbiting speed. Our action determines the rate of mass loss of the earth, and hence the rate of earth's orbit contraction. The rate of Global Warming is determined by the rate of the orbit contraction due to the mass loss of the earth as well as the mass loss of the sun.

Since the Modern Physics is built upon the foundation of Special Relativity, when the Special Relativity does not hold true, the demise of the Modern Physics, as we know it, is inevitable. If you still want to hold on to Quantum Mechanics Doctrine and its voodoo spookiness, the only option is to become a Quantum Priest just like those university professors who stick to the text without questioning. You can start preaching Quantum Mechanics Spookiness-Mantra just like the priests in flat-earth era religious doctrines who still manage to garner a following by subjugation and fear. What is inevitable is a Quantum Renaissance out of the Quantum Spookiness. However, there are few facts to remember:

- Propagation of light is not relative.
- Not all energies are created equal. Electromagnetic energy is not the same as the mechanical energy. If they had been the same shouldn't have had electricity crisis.
- Simultaneity of events has nothing to do with observers. Simultaneity of events is observer independent.
- Time for one person in motion is not a function of space and time for another person at standstill or in motion at different speed. One person's time is not a mixture of another person's time and space. Time is absolute.
- Mass is independent of the speed. It is the mass density that depends on the speed.
- Gravity is not a wave. Gravity does not propagate. Mass and its static gravitational field of infinite span is a single entity. So called gravitational waves are multi-million dollar human fantasy waves.
- Particles are not waves and waves are not particles. No wave-particle duality.
- When charge particles collide at high speed in hadrons collider, what it generates are electromagnetic radiation bursts, not more particles. You cannot interpret these electromagnetic radiation bursts as particles; they are not particles. When two protons collide at high speed, it does not generate more protons; it generates electromagnetic radiation bursts.
- Electromagnetic waves have no momentum.
- The [position, Momentum] pair can never be a Fourier Transform Pair.
- A state of a system cannot be modeled using Eigen-Values since Eigen-Values are not unique.
- State of a system must be unique. Time must be unique.
- When particles collide at very high speed in the Large Hadrons Collider (LHC), crash site contains genuine debris from the collision of the particles as well as unwanted extraneous electromagnetic radiation bursts generated as a result of acceleration and deceleration of charge particles. Since they are non-separable, what you get by analyzing the crash site of particles in LHC is a bogus new particle zoo.

Once you realize these facts, Quantum Mechanics and its spookiness become non-existent in the mind, eternally. As a matter of fact, they never had a real existence in the first place, outside the human mind in the nature.

It is time to stop making the bogus claim that 'GPS is not possible without the Special Relativity'. This claim is false and has no basis to it. In fact, it is quite the contrary; GPS is not possible if time is relative or Special Relativity holds. GPS has nothing to do with Special Relativity or General Relativity. When you make a GPS request, you get the total package, just like when you make a purchasing order to IKEA for a table. GPS is client data independent, just like IKEA is client independent.

The claim that the 'muons cannot be present at ground level without time dilation' is also a bogus claim. The presence of muons at ground level does not require a mythical time dilation. Although, the half-life of muons is only a small fraction of the time required for muons to reach the ground, the half-life of muons says nothing about the life-time of individual muons. Half-life is a population statistics. Insufficient half-life does not prevent for some muons having life-time long enough to reach ground and even hang around for a while at ground level. The detection of muons at ground level cannot be attributed to a mythical time dilation. Mythical time dilation is not required for a muon to reach the ground. Time is absolute. Special Relativity and General Relativity do not hold true [6].

If you are thinking that a collision between two charged peaches at very high speed generates more peaches, apples, and bananas, you must be in a hallucination; snap out of it. It does not matter how high speeds you collide two protons, you cannot produce more protons. By colliding particles at high speed in a Large Hadrons Collider (LHC), you cannot generate more mass than what you put in. You get the impression of generating more mass simply because you misinterpret extraneous electromagnetic burst generated due to the acceleration and the deceleration of charge particles as a part of debris from the collision. Electromagnetic radiation burst are not particles. Crash site of particles in LHC contains the debris from the collision as well as the extraneous electromagnetic radiation bursts from the acceleration and the deceleration of the charge particles. If you analyze the crash site of LHC without separating the remnant of actual particles collision from the extraneous electromagnetic radiation bursts due to the acceleration and deceleration of charge particles, what you get is a bogus particle zoo with an indication of fake mass creation by the collision; that is exactly what you got.

It is not possible to separate the inherent electromagnetic wave bursts due to the disintegration of particles in the crash from the extraneous electromagnetic radiation bursts due to the acceleration and deceleration of the charge particles. It does not matter how big accelerators you use, you cannot generate mass by the collision of particles at high speed, $e \neq mc^2$. You cannot have more mass than what you put in. You cannot misinterpret extraneous electromagnetic radiation energy due to acceleration and deceleration to call it as mass generation by the collision. Extraneous radiation is not a part of the debris from the collision. Bigger the accelerator, the stronger are the extraneous electromagnetic radiation bursts that will contaminate the genuine inherent elements in the crash site giving the fake impression that it is creating even more mass in the collision.

LHC is in a dilemma. LHC does not work with charged particle since it is not possible to remove extraneous radiation from the inherent radiation at the crash site. If you analyze the crash site without removing the extraneous radiation, what you get is a bogus particle zoo with the impression of fake mass generation by the collision, not the reality. In addition, LHC does not work with neutral particles since LHC cannot accelerate neutral particles. LHC is in limbo. Large Hadrons Collider (LHC) is a design blunder. LHC has already done irrecoverable harm to our understanding of the nature by feeding us misunderstanding.

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