## A Theory of Every Thing

## called

## **Quantum Hook Theory**

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This paper is about a new proposal of theory of everything that tries to connect the cosmic world to the quantum world that I can call a quantum hook theory.

I'm a computer scientist, not a physicist by trade. So this paper may contain some errors, please bear with me. Since there are already many proposed theories of everything out there after decades of research, the main question remains unanswered to this day: why are there two separate sets of laws: cosmic law and quantum law. I hope that my attempt using my experience in computer science based analyses may shed some light to this question.

### **Einstein's General Relativity may not tell the whole story**

My theoretical findings would posit that "Matter does not curve spacetime but curves trajectories of all objects moving nearby by a specific quantum means" and "Time relativity is a sequence of that".

My theory comprises a set of core principles that redefine fundamental particles with hypothetical missing parts. If these hypothetical missing parts do exist, then they may fulfill quite well the role of the hypothetical dark matter.

Hereafter are the full description of these core principles:

### **Core Principles of the theory**

My theory contains following core principles:

**Principle #1 (Particle makeup theory):** 

#### **Statements:**

Each particle must be composed of a particle core and one or multiple co-centered quantum gravitational axes; each one of these axes is formed by multiple theoretical infinitesimal attached quantum sub-elements located on each end of the quantum axis that holds the particle core itself.

In order to avoid any possible confusion, these theoretical infinitesimal attached quantum subelements which will be named throughout the book as "brankistron". The name "brankistron" derives from the specific roles of "arms" ("bratso" in Greek) with "hooks" ("ankistro" in Greek) that these theoretical quantum sub-elements play in regard to the particle they belong to.

The difference between the particles that are generally defined and accepted today and the ones from this theory is the new theoretical quantum sub-elements brankistron and the new theoretical quantum axes that serve as the fundamental elements of this theory.

All already discovered particles will be also referred to as "known particles" throughout the paper in order to separate the latter from the theoretical brankistrons and axis thereof.

The images hereafter will show the makeup of a particle according to this theory.



Each brankistron axis of a particle must contain one or multiple pairs of brankistrons distributed evenly on both sides of the particle core. On any brankistron axis, the distance between the particle core and each of its adjacent brankistrons is the same as the distance between brankistrons themselves. The particle core in this makeup is very a brankistron with special characteristics.

The number of brankistrons on each brankistron axis determines the force of the quantum gravitational wave behavior of the particle itself. The more brankistrons a particle possesses, the more particles can move in space in unison, hence the stronger wave behavior the particle expresses.

On the other hand, the number of brankistron axes determines the quantum mass of a particle. The more brankistron axes a particle has, the more it can be hooked on by other particles, hence the more mass the particle has. The brankistron axes must also play a major role in the particle polarization as they determine the direction in which a particle can be polarized.

### **Reasons of being of Principle #1:**

These theoretical brankistrons and brankistron axes must be the underpinning quantum mechanism of all particle behaviors, and as a result dictate the way the quantum world and the cosmic world behave.

The role of each brankistron is to allow known particles to attach to other known particles nearby. The multiple brankistrons determine how two nearby particles can get closer to each other step by step or to form a grid of particles when they move together. So in case of proton, neutron, the attachment will form an atom. By the same mechanism, atoms will then attach to other atoms to form molecules and so on. This theoretical "particle core - brankistron" hooking mechanism is the core of this theory.

### **Principle #2 (mass and charge of particles):**

### Statements:

The particle core theoretically must define the charge of its particle: it can be negative, positive or neutral.

The brankistrons themselves theoretically must be of neutral charge.



The mass of a particle is theoretically defined by the number of brankistron axes the particle owns. Only the brankistron axes matter in this regard.

The reason of being of this principle is that the more brankistron axes a particle possesses, the more "arms" and "hooks" it can use to attach itself to other particles, hence the heavier it becomes. In other words, the mass is a manifestation of how a particle can attach itself strongly or weakly to others.

### Example of Particle hooking inside atom according to principles #1 and #2:

1) In hydrogen atom: The unique electron of the hydrogen atom maintains the bond with the proton inside the nucleus via the electromagnetic attraction.

In this case the brankistron axes of the electron will hook to the cores of the two up quarks inside the proton. After the hooking is done, each up quark of the proton and the electron will share the double brankistron axes. Also during the hooking process of each up quark of the proton and the electron, the brankistrons on their shared brankistron axes will keep the up quark and the electron apart in such a distance so that the electron won't be captured and annihilated (because they have opposite charge). Also as the charge value of the up quark (+2/3e) is smaller than the charge value of the electron (-1e), the up quark cannot absorb the electron to annihilate it.



The same behavior happens with the down quark of the proton and the electron. The electron will hook to the down quark via their brankistron axes. After the hooking is done, the down quark of the proton and the electron will share the double brankistron axes (as the latter hook to each other then align themselves). Also during the hooking process of the down quark of the proton and the electron, the brankistrons on their shared brankistron axes will keep the down quark and the electron apart as they repulse each other (same negative charge). As the charge value of the down quark (-1/3e) is smaller than the charge value of the electron (-1e), the down quark cannot repulse completely the electron to keep the latter too far away. This is where and how brankistrons play the role of stabilizing the particle hooking.

### **Principle #3 (Gravitational behavior of particles):**

#### Statements:

When a particle moves freely in space, its brankistron axes also move freely in space and cannot be blocked by other particle cores, only particle core can be blocked by other particle core.

When two particles get close enough their brankistron axes will cross each other. From this point on, their closest brankistron axes will try to align with other then merge into one. When the merger occurs, the particle core of one particle will move closer to the particle core of the nearby particle until it captures the closest brankistron of the latter and holds it. The involved brankistron does not disappear but is simply embedded inside the capturing particle core.

Followed is the schematic of the particle and brankistrons bonding of any two particles:



There are two possibilities of the encounter of two particles:

- If the two particles are of opposite charge (negative vs. positive), their two particle cores will move incrementally closer to each other and when the latter are face to face they will annihilate

each other. However, the face-to-face may not occur if one of the particle cores is held back by another particle nearby of same charge type because this nearby particle will stop the merging particle cores to go further. In this case, the distance that separates the two merging particle cores is determined by the repulsion force of the blocking particle; and this distance is defined by a finite number of brankistrons.

- If the two particles are of same charge type (negative, positive or neutral), their two particle cores will move incrementally closer to each other until they cannot go further then stop. Because the two particle cores have the same charge type therefore they will keep a minimum distance so that they won't repulse each other anymore (negative vs. negative, positive vs. positive).



- If the two particles are of neutral charge type, one particle core will occupy the closest brankistron of the facing particle core; as a result the two particle cores will be face to face, and there is no more force enough to make these two particle cores to merge into one.



After the two particles are hooked, their brankistron axes will merge into one common brankistron axis for both of these particles. The remaining brankistrons of each particle will be redistributed to both sides of the new common brankistron axis. These redistributed brankistrons are again available for another particle hooking process.

The particle alignment process can continue as long as nothing else stops it. As a result the combined brankistron axis of two or infinite number of particles theoretically must have no limit.

Each time a new particle merges into an existing combined particle line, the pressure of external brankistrons on both ends of the common brankistron axis will increase by one notch. As a result the particle cores at the center of the common brankistron axis will endure the accumulated pressure the most. In other words, the pressure decreases from the center outward (left or right)

proportionally to the number of present particle cores. Due to this pressure, the distance between particle cores gets shorter proportionally toward the center of the brankistron axis.



The closeness limit between a brankistron and its attached particle core defines the spacial size of the related particle. As a result any particle fusion would require an enormous energy to arrange them in an infinitesimal distance.

### **Impacts of principle #3:**

This hypothetical brankistron bonding characteristic may be able to explain why in space, matter of same atom type tends to clump together.

This hypothetical brankistron bonding characteristic may be able to explain also the phenomenon of particle entanglement. Once the spin of one particle is switched, the spin of the other particle switches immediately.

Particle bonding due to particle-to-brankistron hooking dynamic will cause object core compression phenomenon in nature. As a particle can have multiple brankistron axes, a particle located inside the inner layer of the object will endure more brankistron bondings from neighboring particles in all directions than a particle located inside the outer layer of the object. As a result the closer we get to the center of an object, the higher the pressure is and the shorter the distance between particles becomes. If the pressure is extreme, the fusion of particles may occur.

### **Principle #4 (Particle trajectory bending):**

### Statements:

Brankistrons on any brankistron axis of a particle play the role of tiny hooks in space. Therefore the more particles are grouped, the more brankistrons and brankistron axes are combined, therefore the more impact the group of particles has to bend the trajectory of other particles that pass close to them.

The bending force of a cluster of stationary particles is proportional to the number of its constituent particles.

### **Impacts of Principle #4:**

There are at least two cases in which a cluster of free brankistrons can be formed.

The first case is the external area of an object: All brankistrons of particles that form the atoms of an object are hooked to bind their neighboring particles or atoms, therefore there are no free brankistrons in this object core area. However their companion brankistrons located at the spacial outer layer of an object are not hooked yet, therefore will form a cluster of free brankistrons. These free brankistrons are connected to the object via hosting brankistron axes of all particles and atoms that make up this object. This cluster of free brankistrons along with their framework of brankistron axes will cause the gravitational effect of any other objects that get closer to it.



The second case of cluster of free brankistrons is an intersection of two or more clusters of free brankistrons previously described. The related intersection occurs when two or more objects are placed in close distance of each other. The related intersection will cause a balance of two opposite gravitational effects, and as a result will create a zone where any object placed in it can remain stable (not be pulled toward one of the objects). This is how a Lagrange point is formed according to this theory. In this area, each particle is hooked by at least two brankistron axes, each from the opposite object. If the opposite pulling forces of these two brankistron axes cancel out, the particle can stay put. By cumulative effect any object with most of its particles stable will also stay put in this intersection. Of course, the object must be small enough to avoid creating the disturbance from its own gravitational effect.



#### **<u>Principle #5 (How particles move and dual particle-wave behavior):</u>**

#### Statements:

Particles move one brankistron at a time and the movement acceleration of particle is determined

by the compression exerted by number of brankistrons behind the particle.

When particles are ejected en mass, they will move in unison by forming a multi-dimensional matrix of particles; each node of this matrix is a brankistron occupied by a particle core.

### **Explanations:**

As stipulated in the principle #1, a standalone particle, once moves on a specific direction, will continue to move on that direction one step at a time. Each moving step is determined by the theoretical mechanism according to which the particle core tries to occupy the free brankistron ahead of it. Once the particle core occupies the chased brankistron, the same set of free brankistrons repeats itself again ahead of the particle core. The process repeats itself indefinitely, causing the particle moves also indefinitely inside the space fabric.



In the case where two objects face each other, the two objects may have a chance to have their outer layers of free brankistrons join each other. The distance between the two objects will determine the size of the joining section and the strength of merging brankistron axes.

When the two outer layers of brankistrons of the two objects begin to join then the respective brankistron axes of each object will align then merge with their counterparts of the other objects. Each new merged brankistron axis of the two objects will have three sections of free brankistrons: one on the left of the leftmost object, one on the right of the rightmost object and one at the middle of the two objects (these positions can be converted to top bottom configuration). By virtue of the principle #3, the particle cores on the crust of one object will move toward the particle cores on the crust of the other object by trying to occupy the free brankistrons in front of them so that the two crusts of particles can get closer to each other or join as long as the compression exerted by number of brankistrons on both sides of the two objects remains.

This is how the mutual gravitational effect manifests when two objects are close enough to each other.

The following image shows a sample of two merged brankistron axes shared by two objects moving toward each other under pressure of free brankistrons from both sides of the two objects:



Also if one object is fixed (meaning that it is held on firmly by another object such as a planet) then the non fixed object (not held on firmly by other object yet) will be "pulled" toward the fixed object because the non fixed object has more freedom to move than the fixed object.

Because particles move one brankistron at a time according to this principle, the objects must move also one brankistron at a time. All atoms that make up the object are just a 3D matrix of particles that hold on to each other by brankistrons and brankistron axes. The same moving process continues until the particles on the crust of one object join the particles on the crust of the other object. In other word, the moving process will stop when the section of free brankistrons between the two objects no longer exists or the compression exerted by number of brankistrons on both sides of the two objects disappears. When the two objects are joined, their outer layers of free brankistrons will join or merge, creating a virtual object that have shared brankistron axes in all directions.

# As a result, the gravitational movement speed does not depend on the numbers of particles that make up the object involved (in other words the size of the object).

The force that pushes a particle core to move and occupy the free brankistron ahead of it is extremely weak, therefore the moving process of two objects toward each other may take a long time. However the acceleration of the particle moving process can occur if one of the objects is proportionally much bigger than the other. The reason is that in this case, the outer layer of free brankistrons that belong to the bigger object will completely engulf the small object; as a result the extra section of free brankistrons of the bigger object will compress the small object and force it to move faster toward the big object. So the bigger one object is against the other, the stronger gravitation pull the bigger object has.

This theory principle may be able to explain how the equivalence principle works in the quantum level. The equivalence principle stipulates that all objects fall with the same acceleration. Based on classical gravity theories, in this free-fall configuration, there are two fundamental constituent elements: inertial mass (also known as inertial resistance) and passive gravitational mass (also known as weight). Einstein's general relativity posits that the inertial mass and the gravitational mass are the same, therefore two objects with different masses must fall at the same speed. Based on this brankistron based theory, the inertial mass and the gravitational mass are irrelevant in the free fall configuration because when the objects move under the gravitational pull (falling in this case) they have to advance step by step (one brankistron at a time along the brankistron axis that

unite two objects).

Another important consequence of this principle is that particles move in unison as a 2D or 3D matrix based on the shape and the ejection manner of the source of particles. As every particle core of a moving particle tries to occupy the free brankistrons that are located on the left, right, top, bottom, back of the particle core of a preceding particle, the moving particles will automatically form a 3D matrix, and the contour of this 3D matrix is determined by the shape of the source of particles (such as star for light source, etc). As a result, the resulting 3D matrix nature of particle movement is the cause of the wave behavior of particles. If a particle moves alone (or the distance between two consecutive moving particles is far enough), it will behave as a particle. If a particle moves in sequence (one after another rapidly enough or many in the same time) it will behave as a set of coordinated particles that is similar to a "wave". This principle therefore determines the dual particle-wave behavior of all particles.

### Principle #6 (How particle acquire or loose mass):

### Statements:

Particles can loose brankistron axes therefore can loose mass or transform into different type of particle. When a particle looses all brankistron axes, only the particle core remains.

Particle can acquire brankistron axes therefore can gain mass or transform into different type of particle.

In the state of absence of brankistrons, particle cannot hook on other particles, therefore have no gravitational behavior.

### **Explanations:**

In space where brankistron axes move also freely, the latter will hook on any "void" particle they encounter. When a sufficient number of brankistron axes encounter a particle in the same time, a multi-hooking process occurs to cause a magma of brankistrons that surround the encountered particle. In the end of the process, only some of brankistrons will be able to hold on to the encountered particle to give the latter the gravitational behavior. The temporary magma of brankistrons during the process likely creates a big short-lived particle and this may be able to explain the behavior of the Higgs boson and the Higgs field.

Once the particles gain mass, they can hook on other particles.

Particle decay according to this theory is a situation in which the particle looses energy and as a result can no longer holder on to its brankistron axes. By losing its brankistron axes (and brankistrons too), the particle may turn into another type of particle or disappear completely.



### **Principle #7 (How particles exist in different forms):**

### Statements:

The brankistron axis must be the smallest quantum indivisible object in nature. The number of brankistron axes of a particle must determine not only the mass but also the particle forms: photon, electron, positron, neutrino, gluons, protons, neutrons, muons, bosons, etc.

### **Observations:**

Photon is may be one of the simplest forms of particles. Based on this theory, a photon may just be a combination of a particle core and two brankistron axes due to their polarization.

As a result, the more brankistron axes a particle has, the less stable it becomes due to the principle #1 which posits that brankistron axes move freely in space therefore can hit each other constantly and cause the spontaneous association of brankistron axes to be short lived.

### **<u>Principle #8 (How particles cause small objects to revolve around big ones):</u>**

#### Statements:

Particles must entangle as a group during supernova-like events. The entangled particles remain as such indefinitely causing matter to move in sync and big objects lead the move.

### **Explanations:**

This posit is based on the assumption that other particles must behave like the photons in the known SPDC process (Spontaneous parametric down-conversion). In the SPDC process each photon can generate a pair of entangled photons when it hits a crystal.

This posit is based also on already made experiments showing that the quantum entanglement

can work both in microscopic-scale (photons, ions, electron spins) and in macroscopic-scale (Bose-Einstein condensate).

In a supernova, based on this theory principle, these matter ejections into space must cause particles to align themselves by merging their brankistron axes. During this matter voyage into space, a percentage of particles along these merged brankistron axes will theoretically trigger a SPDC-like process. Each particle in this process will propel two entangled particles outward forming a V-shaped trajectory. This V-shaped trajectory gets larger and larger over time as these two entangled particles advance further in space.

The SPDC-like scenario must repeat itself everywhere inside the supernova clouds whenever the conditions allow. As a result when the supernova ends, a giant concentric circle of entangled particles around and from the star core emerges.

When the supernova ends and matter begins to clump with each other to form celestial objects, clumping matter must also keep holding on to these virtual circles of entangled particles. If the virtual circles of entangled particles move, surrounding matter theoretically must move along with them.

Based on this theory principle, combination of trillions of brankistron axes and entangled particles must protect the quantum entanglement of these particles from being destroyed by environmental factors despite their huge distances.



Samle of brankistron axes holding entangled particles

### **Impacts of Principle #8:**

This principle may be able to explain theoretically why and how planets revolve around stars, moons revolve around planets, an so on.

This principle would also help to explain why the hypothetical scenario of violent celestial object collisions is not required as a prerequisite to form planet and moons. This principle provides a theoretically peaceful condition instead.

### **Principle #9 (How particles compress or expand):**

#### Statements:

When a brankistron axis aligns with another brankistron axis, all brankistrons on the shared axis will be compressed or expanded depending on their location on this axis due to the even redistribution of these brankistrons on the new axis. In case of compression, brankistrons move closer and closer to their adjacent brankistrons, and finally can merge into the latter when there is no more room to move. Brankistrons can also merge into their associated particle core. As a result, the location when the maximum number of these mergers reaches a certain threshold, an explosion will occur to free all of them.

### **Impacts of Principle #9:**

This theoretical process may be the actual quantum process of a supernova.

### **Dual Wave-Particle Behavior according to this theory**

This particle-to-brankistron hooking dynamic of this theory may be able to provide another explanation to the well-known light double slit experiment.

Based on the particle-to-brankistron hooking dynamic from the principle #5 of this theory, in this experiment, when the first two particles cross the slits on each side in the same time, these two particles will bond with each other by forming a shared brankistron axis with multiple free brankistrons at the two ends of this axis. From this point on, any subsequent particle that goes through each slit will try to capture the closest free brankistron of the previously created axis. As particles continue to pass through the double slits, these brankistron axes will be formed inside the area between the landing wall and the semi-wall that makes up the double slits. Also as a result these axes must be more or less parallel to the line that connects the double slits. As incoming particles try to capture free brankistrons around their previous particles (left, right, top, bottom) as much as possible, the pattern of columns of landed particles emerges: Particles occupying the leftward and rightward free brankistrons of preceding particles create left and right columns of the central column. Particles occupying the top and bottom free brankistrons of preceding particles create the length of the columns. A prerequisite for this pattern to form is that the shooting time offset between subsequent particles must be reasonably short enough so that each particle has time to catch up the free brankistrons ahead of it.

After a long shooting of particles through the slits, most of the bonded particles will land on the landing wall (behind the slits) in a pattern of parallel columns of particle traces. The density of particles landed on each columns shows also another pattern: The closer a column of landed particles is in regard of the vertical line at the center of the slits, the thicker the column is. This observed increasing column thickness distribution is likely due to the degree of closeness of the wall. The farther away from the slits the wall is set, the more equal thickness of columns of

particle traces will become. This observation can be explained based on this theory: the brankistron axes are formed along the particle shooting through the slits, and in the same time the lengths of brankistron axes will vary a lot. Shorter brankistron axes (with two hooked particles on same axis) are more present and are all located in the inner region; longer brankistron axes (with three hooked particles or more on same axis) are less present because fewer particles are able to reach the outer region of the wall to hook on free brankistrons located there. In other words the column thickness is proportional to the number of brankistron axes that can reach this column.

It is important to notice that, according to this theory, the brankistron axes themselves cannot be stopped by the barrier that contains the slits, so when the particles themselves move through the slits, their particle cores pass through the slits and their attached brankistrons pass through the barrier in the same time.



In case of single slit experiment, the particles lose their possibility to behave like a wave: no parallel columns of particle traces appear on the landing wall. The loss of wave-like behavior of particles can be also explained by this theory: because the particles are shot one after another through the single slit, the brankistron axes created by incoming particles this time form a moving plane different than the one formed in case of opened double slits. The moving plane shared by these new brankistron axes follows the line that starts from the opened single slit and ends at the landing wall. This moving plane is therefore perpendicular to the landing wall. Like in the case of double slit experiment, all incoming particles still create the same pattern of columns inside the moving plane as they move toward the landing wall. However there is a big difference this time, as the moving plane is perpendicular to the landing wall, all of these columns arrive finally at the same location: the landing wall hence a unique column of landed particles facing the opened slit.

There is also a known twist to the double slit experiment. If we put an instrument to detect the particles near each slit (in order to know which slit particles passes through at each shot), the parallel columns phenomenon will disappear; the particles seem to return to their particle-like

behavior: meaning only one column of landed particles appears on the landing wall. This observed disappearance of wave-like behavior of the shot particles can be explained by this theory too: The particle observing instrument involved in this twisted experiment will split each incoming particle into two particles using a special material like crystal. One of these spawn particles continues its path to reach the landing wall; the other particle is directed toward the particle detector surface. The particle splitting forces the twin particles to be entangled therefore to share their brankistron axes. In this case, particles passing through one slit will no longer share brankistron axes with particles passing through the other slit, but share with their twins (generated by the particle detectors) instead. Like in case of single slit experiment, on each slit the moving plane of passing particles and their twins (starting from slit to detector) becomes perpendicular to the landing wall. As a result there will be only two columns of landed particles: one column of landed particles on the landing wall and the other column on the particle detector surface; all the other intermediary columns are absorbed either by the landing wall or the detector surface.

## Potential Indirect evidences of Brankistron based theory

Since the theoretical brankistrons and theoretical axes must be extremely small (must be smaller than the photons, neutrinos, ..) and must not emit light therefore I believe that is why our current state-of-the-art instruments cannot detect them at this point. For now however the indirect manifestations of the theoretical brankistrons maybe out there in plain sight.

I have studied and found some natural or cosmic phenomena that seem to prove indirectly the existence of these hypothetical brankistrons and axes thereof, therefore may be able to validate this theory. These indirect evidences can be classified by following categories:

- Natural force level.
- Earth level.
- Solar system level.
- Galaxy level.
- Cosmic level.

In order to avoid repeating the prerequisite "According to this theory" the notation (ATTT\*) will be used from now on whenever it is needed.

## **Theory's Potential Indirect evidences**

## on Natural Force level

### Image capture and transport by Photons (ATTT\*)

The way the eye or camera captures images sent by photons may manifest the fundamental principle #1 of this theory.

### First observation:

As the fundamental principle #1 of this theory posits, the photons keep an equal distance between them both on the X and Y dimensions thanks to the disposition of brankistrons on each brankistron axis of each photon. As a result, the photons must combine with each other when they move in mass. So when a source of light projects photons outward, each projection of photons will force the latter to combine with each other to form a 2D matrix. How does it work? the particle-core of each ejected photon will direct itself to occupy any brankistron that is closest to the particle-core of the previously ejected photon: left and right on the horizontal brankistron axis of the latter, or top and bottom on the vertical brankistron axis thereof. Then the process continues to form a succession of 2D matrices which in turn becomes a continuous 3D matrix.

Let's examine a case of sunlight shining on a wall. When the photons ejected from the sun arrive altogether in sync in form of a giant 2D matrix of photons on this wall. After hitting the wall these photons will be reflected by this very wall also in sync in form of another giant 2D matrix before reaching our eyes. The energy of each photon after hitting a point on the wall will be altered by the chemical substance of the hit point on the wall to carry the color wave length of this wall point.

### Second observation:

Not only the photons combined with each other in a 2D matrix (X and Y dimensions) to reconstitute the images they get then send, the photons also combine with each other on the Z dimension. Each following photon will keep an equal distance with its preceding photon by one brankistron (point) along the brankistron axis of the latter.

As a result, the set of successive images received at the eyeball/camera will be the same as the set of images taken from the wall by any other means (such as camera).

This particular indirect evidence shows us that the photons when they are projected together from a source will behave in a synchronized manner in three dimensions.

## Energy Transfer (ATTT\*)

The brankistron based theory may be able to show the theoretical quantum mechanism of the energy transfer in the experiment of metallic ball array:



By virtue of the related principles of this theory, the ball array at rest forms a tube-like (or pipelike) of shared horizontal brankistron axes that traverse each ball of the array. Each brankistron axis is a result of the bonding of millions of atom alignments via the particle-to-brankistron hooking principle. Each shared brankistron axis also extends in extra length on both side of the ball array due to the free brankistrons of the atoms that constitute the the balls (ready to hook up with other particles nearby).

The energy transfer in this example is operated via the following steps:

- When the leftmost ball is lifted, its own "tube" of brankistron axes is separated from the one of the ball array.

- When the leftmost ball is released, by Earth's gravity the leftmost ball falls then hits the ball array. At this moment the leftmost ball's own tube of brankistron axes rejoins the tube of brankistron axes of the ball array.

- When the released leftmost ball hits the stationary leftmost ball, the tube of brankistron axes of the entire ball array is compressed on the leftmost end (where the leftmost free brankistrons of the ball array are located).

- The ball array now has one more ball and becomes a new bigger compact object in an instant and as a result, the increase of free brankistrons on the left side of the new bigger ball array will instantaneously generate the amount imbalance of free brankistrons on the right side of the ball array. The whole redistribution of free brankistrons inside the tube of brankistron axes of the entire ball array begins: As the portion of free brankistrons array on the left side of the previous ball array before the hit is instantly compressed, this portion of free brankistrons will be pushed toward the end of the ball array, causing even more imbalance of amount of free brankistrons on the right side of the ball array. So the free brankistron array on the right side of the ball array is expanded instantly.

- As the principle #1 of this theory posits - particles will move to occupy nearby free brankistrons until they reach an equilibrium - the rightmost ball begins to move to the right until there is no more free brankistrons on the right side of the ball array to occupy. There is an additional force: the momentum that pushes the ball to move further right. Because the rightmost ball is attached to the top bar by a string, it cannot move straight further and begins to lift. At some point the momentum is exhausted and the gravity effect of the Earth takes over and the ball is pulled down and begins to move backward toward the ball array.

- When the rightmost ball touches the second rightmost ball which is stationary at this point, the same process of transfer of free brankistrons will cause the same ball movement but this time on the opposite direction.

The alternate lift of rightmost ball then leftmost ball continues but gradually slows down then finally stops. The slowdown is triggered by two facts: first off, the number of free brankistrons on the leftmost side and the one on the rightmost side of the "tube" of brankistron axes of the

ball array get closer and closer to the equilibrium; secondly: the extra lift due to the momentum is gradually reduced by the aerodynamic drag by the air.

### **Theory's Potential Indirect evidences**

### on Solar system level

### **Orbital planes of Planets inside Solar system (ATTT\*)**

The rotation planes of all the planets of the solar system do not share the same inclination angles of orbital planes. The discrepancy of orbital plane inclinations of all eight planets of the solar system with regard to the sun's invariable plane is small: Mercury ( $6.3^{\circ}$ ), Venus ( $2.2^{\circ}$ ), Mars ( $1.7^{\circ}$ ), Earth ( $1.6^{\circ}$ ), Uranus ( $1.0^{\circ}$ ), Saturn ( $0.9^{\circ}$ ), Neptune ( $0.7^{\circ}$ ), Jupiter ( $0.3^{\circ}$ ).



One may ask if this extreme proximity of all planetary orbital planes inside the solar system is just a coincidence or something that would result from an unknown cosmic law.

The angular momentum alone cannot explain such a precision of coordination of orbital planes of the solar system, because had it been so all the planets would have rotated on a common orbital plane.

Based on the brankistron theory, each planet must be bound with the host star – the sun – via a separate brankistron axis. This brankistron axis guides the said planet to revolve around the sun freely without being overlapped/stampeded by other brankistron axes of other planets. This brankistron axis also allows the related planet to revolve around the sun at its own speed. As a result, over time all the sun-planet bound brankistron axes will end up avoiding each other in order to maintain their own stable and independent rotational speed. The distribution process of planet orbital planes is likely obtained from the principle according to which stronger sun-planet bound brankistron axis nudges a weaker one out of its own orbital plane. As a result the inclination angle of each planetary orbital plane is different from others.

We can apply the same principle of distribution process of planet orbital planes detailed above to the distribution process of moon orbital planes defined by their own planet-moon bound brankistron axes. In other words, satellites/moons of each planet cannot share the same moon rotation planes either.

Moreover the resulting moon orbital planes cannot perturb the planet orbital planes either since the sun-planet bound brankistron axes are much stronger than the planet-moon bound brankistron axes. In order to do that, the moons will be forced to rotate with a bigger inclination degrees with regards to the sun-planet orbital planes.

## Thickness of planet cores inside Solar system (ATTT\*)

#### Matter accretes around brankistron axes:

According to this brankistron based theory, the star core must be connected to all matter inside the protoplanetary disk via a framework of brankistron axes which were previously formed during a supernova event. Some of these brankistron axes will trigger the formation of protoplanets then later on planets. How does the quantum process goes step by step? First off, each brankistron axis will combine with its adjacent ones, and matter nearby begin to hook to these axes. As time goes by, each matter clump that was already hooked to these axes gets denser and denser to become a condensed mass, hence some of these matter clumps will become protoplanets. Each of these condensed mass clumps must be in gaseous state first then will change gradually from the gaseous state to solid state as long as the matter accretion continues. The matter accretion creates in the same time a compression pressure due to the outer layers of free brankistrons of the particles that are built up at the core of the condensed mass. As a result these outer layers of free brankistrons keep squeezing these particles further and further.

As brankistron waves spread outward from the hosting star via the brankistron axes, the distance to form planet is relevant. The length of brankistron axes diminishes as the distance gets longer, so does the density of the formed planet cores because fewer brankistron axes are present at such a distance, therefore the brankistron axes do not have enough combined force to coalesce matter into solid cores, hence the outer planet will remain gas planets; the center of their core may be solid but the outer layer remain in gaseous state.

#### Inner planets of the solar system have thick core:

The four inner planets of the solar system are rocks (such as Mercury, Venus, Earth and Mars) where as the other four outer planets are gas balls (Jupiter, Saturn, Uranus, Neptune). It seems to show a pattern here: solid first then gaseous after.

The core thickness of Mercury, Venus, Earth and Mars can be explained by this brankistron based theory. According to this brankistron based theory, for any proto-planet that is close to its hosting star, the size of the shared brankistron axes of the hosting star and the protoplanet must be very dense. As a result, these brankistron axes will cause matter to accrete around them much more and get highly compressed. As the process of matter accretion gets much longer, the protoplanet will have a bigger solid core. As long as the brankistron axes are dense and strong, the process of matter accretion continues, the protoplanet's solid core keeps growing. As some distance threshold further out from the hosting star, the brankistron axes get scarcer and scarcer then the matter accretion process diminishes and the protoplanet's solid core stops growing; meanwhile the matter accretion may continue to form the soft outer layer of the protoplanet until it fully stops.

The thickness or thinness of planet cores may not be a random fact after all.

This potential additional cosmic mechanism mentioned above may be an indirect evidence of this brankistron based theory.

## Tidal locks of planet and moons (ATTT\*)

The tidal lock phenomenon between planet-moon or star-planet is quite common in the solar system: Moon of Earth - Mercury of Sun - Phobos and Deimos of Mars – Thebe, Io, Europa, Ganymede, Callisto,.. of Jupiter – Pan, Atlas, Prometheus, Pandora, Janus,.. of Saturn – Miranda, Ariel, Umbriel, Titania and Oberon of Uranus – Proteus and Triton of Neptune – Charon of Pluto.

Based on the principle #3 of this brankistron based theory, the brankistron axes of the planet and the ones of the planet's moon try to align then combine with each other constantly. This process will generate in the end a common brankistron axis for the two celestial bodies. The angular momentum transfer between these two celestial bodies will increase the density of their combined brankistron axes. This increase of density of combined brankistron axes of the two celestial bodies at some point becomes so strong that it locks the moon in question into a riveted position so that the two celestial objects become one virtual celestial object. There is also one more condition for that to happens: the related moon must be close to the planet enough so it won't be perturbed by another attraction force that can come from a nearby planet or star.

The second possibility comes from the principle #8 of this brankistron based theory. Based on this principle, the quantum entanglement of a number of particles that occurs during the supernova event (as the origin of the star system's formation) continues to cause atoms and particles that are present both inside the proto-planet and the proto-moon in question to remain bound together. This special quantum entanglement based bonding will cause these two celestial bodies to physically immobilize each other forever (unless a foreign celestial object comes by and hits one of them then as a result knocks the two out of their bonding). In order for the related bonding to remain constant, the shared brankistron axes of the two bodies must be stronger than the gravitational pulls from nearby planets or their planet's hosting star.

The brankistron based theory may be able to explain why the tidal lock phenomenon occur virtually with all planet-moon relationships of the solar system. As to sun-planet relationship, Mercury is the only planet that is tidally locked with the sun: this tidal lock may be explained by

the fact that Mercury is very close to the sun and does not have moon, therefore the shared brankistron axis between Mercury and the sun is strong enough to keep Mercury tidally locked. The second planet that might have been tidally locked with the sun is Venus; however Venus is further away from the sun than Mercury, and also it rotates around itself in opposite direction of the sun's rotation on its axis, therefore the shared brankistron axis between Venus and the sun is not stable nor strong enough to keep Venus tidally locked.

The brankistron axis based explanation may be able to explain better the case of tidal lock in which two celestial objects rotate around each other and the common barycenter of these two celestial objects is outside of their centers (i.e. Pluto and its moon Charon).

## **Reverse self rotation of Venus (ATTT\*)**

Venus is indeed the only planet in the solar system that rotates on its axis clockwise instead of counterclockwise like all other sibling planets therein.

Based on this brankistron based theory, Venus must begin by rotating on its pole's axis clockwise like all other planets because the shared brankistron axes of Venus and the sun must behave the same as they do on other planets. Now because Venus is farther away from the sun than Mercury, the binding force of the shared brankistron axes between Venus and the sun is not strong enough to keep Venus tidally locked with the sun. Moreover because Venus has no moon and not tidally locked with the sun, its rotation on its pole's axis is not stable. The angular momentum of this rotation gets stronger and stronger over time, at some point it ends up by causing Venus to flip its pole. As a result Venus begins to rotate on its axis clockwise. Because Venus rotates on its pole's axis clockwise, the brankistron axes of Venus from now on move in the opposite direction from which the brankistron axes from the sun do. As a result the opposite momenta created the sun and Venus cancel out, hence Venus remains flipped.

## Uranus' horizontal pole (ATTT\*)

Unlike other planets in the solar system that have their pole's axis very much perpendicular to their common solar orbital planes, Uranus' pole lies practically on the solar orbital plane.

This brankistron based theory may be able to explain the peculiar behavior of Uranus:

Based on this brankistron based theory, each moon of Uranus must have a shared brankistron axis with its host planet Uranus. As a result the 27 shared brankistron axes of these moons in this scenario would have to share the same rotational movement plane with the star-planet shared brankistron axis (sun-Uranus in this case). This scenario cannot last. Probably the moons of Uranus have forced Uranus itself to lie its pole lie on the sun's orbital plane. In this existing

scenario, Uranus revolves freely around the sun and Uranus' moons rotate also freely around Uranus without any of them colliding in a same orbital plane.



## Saturn's rings (ATTT\*)

This brankistron based theory may be able to explain why Saturn has rings while other sibling planets of the solar system do not.

According to the brankistron based theory, the brankistron axes originated from Saturn must form a web of particle hooking axes around it. As a result matter gradually coalesce around them to form small celestial objects; these objects continue to coalesce while holding on to these brankistron axes. As Saturn itself was (and still is) in a gaseous state, therefore it could not generate enough brankistron axes, in turn could not cause all small celestial objects to coalesce further to form moons. In the same time due to the quantum entanglement of matter triggered by the original supernova which marks the beginning of the formation process of the solar system, the framework of entangled atoms and particles inside Saturn's disk must remain alive.

Also as Saturn's brankistron axes are connected to each other due to the quantum entanglement of matter from the original supernova that triggers that formation of the solar system, Saturn's asteroids will rotate around their host planet in the direction ordered by atoms and particles inside Saturn's core.

## Lagrange Points (ATTT\*)

Based on the Brankistron based theory, in a star system, the star and each planets produce themselves joined brankistron axes from their respective cores, therefore:

Any celestial object located inside the L4 and L5 points is like a ring inserted into two rods separated from each other at an angle of large degrees (as shown in image below). If the two rods move then the "hooked" ring will move along. The rods in this analogy are the joined brankistron axis of star-celestial object and the one of planet-celestial object.



Jupiter's Trojan asteroids may bolster the brankistron based theory because they make the brankistron axes relevant: the brankistron axes originated from the sun core join the brankistron axes originated from Jupiter. The intersection between these brankistron axes allow matter to accrete by hooking to them then form asteroids over time. The asteroids once formed remain hooked to these jointed brankistron axes and remain in this area.



## Binary planet system inside Solar system (ATTT\*)

### Brankistron Quantum entanglement through Multiple asteroid systems:

Many binary asteroid systems have been found in the solar system.

Some of them are: 90 Antiope, 2006 VW139, 2017 YE5 and 69230 Hermes, 243 Ida and it moon Dactyl.

The Yarkovsky–O'Keefe–Radzievskii–Paddack effect (aka YORP effect) is known to be the creation cause of binary asteroid systems.

The brankistron based theory may be able to provide a different explanation:

Likely the two rocks were formed by matter accretion around their joined brankistron axes then kept rotating ever since around this axis. Some of their respective atoms and particles from both objects are entangled and the resulting shared web of entangled particles just keeps the two celestial objects at their birth distance. In the same time, as the atoms and particles of both rocks inside this binary asteroids system are entangled with atoms and particles of the proto-sun via their other joined brankistron axes between the proto-sun and this binary asteroid system. As a result the two rocks rotate as a binary asteroid system around the proto-sun.

## **Theory's Potential Indirect evidences**

## on Galaxy level

### How Stars create orbits around them (ATTT\*)

The particle fusion process that occurs at the core of the star, based on this theory, is responsible for the creation of "orbits" around them. Here is how.

The progressive pressure due to compression of particles via the particle-to-brankistron dynamic of this theory occurs continuously but must have phases. During each phase the pressure mounts gradually. At some point the pressure gives, liberating the external layer of brankistrons of the star core, pushing it outward likely as an spherical orbital layer around the star.

Every time a new brankistron layer is pushed out, the old orbital layer is pushed out again creating a second orbital layer. The process continues and creates a concentric multi-layers of brankistron waves around the star. Each push-out will cause the mass of brankistron waves to diminish, and as a result the closest orbital layer has the strongest bonding force.



## Star and planet formation (ATTT\*)

Based on the particle-to-brankistron dynamic and the brankistron concentric orbital multi-layer creation dynamic of this theory, the star and planet formation can be explained as followed:

### 1) Planet formed by accretion of matter:

The related matter accretion process goes in following steps:

- As a massive object, any star will generate many concentric orbital layers of free brankistrons around it in successive waves. These free brankistron layers are held together by brankistron axes generated from the star core like a dense web.

- Now as free brankistrons clump together along the brankistron axes generated from the star core, and with the help from the centrifugal force caused by the star rotation on its own axis, will cause the free brankistrons clumps to form different circular grooves/rails that will force nearby atoms and particles to hook on.

- Because of the supernova triggered quantum entanglement between matter at star core and matter inside the orbital layers, matter inside the orbital layers continues to tag along the star core and ends up revolving around the star core.

- Over time newly formed planets continue to move along the brankistron grooves/rails.

- The brankistron concentric orbital multi-layer creation dynamic continues, creating the invisible orbits of free brankistrons layer around the hosting star, and that continuous waves of free brankistrons will keep planets from "falling" into the star. The planet cannot "fall" into the star because after every cycle of ejected free brankistron layer, the amount of distance that the planet gains by "eating" free brankistrons of previous free brankistron wave is wiped out by the arrival of a new wave of free brankistrons ejected from the star core that pushes the planet further away.



As the planet continues to revolve around the star due to the supernova triggered quantum entanglement between matters of the two celestial bodies, and also due to their joined brankistron axes, its constituting matter continues also to hook on free brankistrons inside the star ejected free brankistron layer ahead of it. This particle-to-brankistron hooking mechanism will make the planet to get closer to the star therefore will make the planet "fall" a bit further into the star. This force of the incremental fall will be canceled out by the centrifugal force that tries to eject the planet from the star's orbit in the opposite direction. At some point the two opposite forces reach their equilibrium then the planet will stay stable in this optimal orbit.



### 2) Planet capture:

When a visiting planet goes nearby a star, it may cross any orbital layer of free brankistrons of the latter. If the star orbital layer's pull strength is strong enough, the planet will likely be hooked one of the brankistron axes of the star then begin to "fall" along the latter. At some point the "fall" stops as the brankistron equilibrium on the joined planet-star brankistron axis is reached. Also because of the joined brankistron axis, the planet is hooked to the star, therefore can no longer escape the star and keeps revolving around the latter.

## How planets revolve around stars (ATTT\*)

Based on this brankistron based theory, there may be two hypothetical scenarios that would cause the planets to revolve around the hosting star.

### Scenario #1: Planets revolving around star at planet birth

As we know so far, when a star explodes into a supernova, matter is ejected from the core of the dying star to form a giant cloud of matter. What happens next is one of the major hypotheses of this theory.

The hypothetical event in this situation based on this theory is that when the star explosion occurs, all ejected matter from the star core will create inside the ejected cloud of matter a giant web of entangled particles with the center at the core of the dying star. These said entangled particles would be born by a process that must be similar to the already known quantum process SPDC (spontaneous particle down conversion).

The SPDC (spontaneous particle down conversion) process is a natural quantum process in which a photon hits a crystal then emits spontaneously two entangled photons that are propelled

along a cone-like trajectory. Not all photons hitting a crystal will generate two entangled photons but the known ratio is reasonably high to make it happen quire often.

The cone-like trajectory of entangled particles from the star core outward will form gradually multiple rings of entangled particles around the dead star. This process continues to create multiple concentric rings of matter.

As the star core turns around on its axis, the web of entangled particles just moves along and as a result revolves around the star core. This whole web will play the role of the framework of the star system in order to allow non entangled matter to accrete and bind itself to the web. Over time, non entangled matter condenses itself along these brankistron axes to form planets.

### Scenario #2: Planets revolving around star at planet capture:

Each celestial object (mass) generates constantly from its core a finite number of brankistrons via their brankistron axes that swirl around the object.

As posited, a set of brankistron axes of a celestial object will meet then merge with another set of brankistron axes of a nearby celestial object when the two sets encounter each other.

The brankistron axes emanated from the star core - due to their massive number of brankistrons must be stronger than the brankistron axes emanated from a visiting celestial object. As a result the brankistron axes emanated from the star core will gradually force the brankistron axes emanated from the celestial object to align with them then form a set of joined brankistron axes in the end.

Once the two set of brankistron axes of the star and the celestial object join, the process of redistribution of the two zones of free brankistrons between the star and the celestial object begins because of their imbalance. This imbalance creates a compression force that pushes particles of the celestial objects to move toward the free brankistrons of the star as the latter is much more abundant. At some point the contraction process stops to reach a position of equilibrium along the joined axis in which the captured celestial object can become stable.

Furthermore the contraction process continues as long as two celestial objects continue to produce and emit brankistron axes outwards and the latter continue to join. As a result, the celestial object will stop going in a straight line but rather in a curve around the star.

To be precise, a bigger object does not curve space around it but rather curves the trajectory of any nearby moving celestial objects.

## **Theory's Potential Indirect evidences**

### on Cosmic level

### Gravitational lensing (ATTT\*)

### Light bent when passing from behind a galaxy:

The brankistron based theory has its own explanation for the gravitational lensing:

When a photon from the star behind a galaxy passes around the latter, its brankistron axes will likely encounter the ones that are generated by this galaxy.

At every joined location, the photon as a particle will try to occupy the first free brankistron of the encountered brankistron axis from the galaxy. Since there is a gigantic number of brankistrons on the brankistron axis of the galaxy source, these brankistrons will compress their owned brankistron axis just a bit to allow the intruding photon from the light source to "join in".

The photon bending process continues as the photon of the light source traverses the external layer of the galaxy.

### Dark Matter (ATTT\*)

Based on this brankistron based theory, hypothetical dark matter is not needed to fix some unusual behaviors of galaxies or existence of galaxies with very slow density of stars. Brankistrons and neutrinos may be sufficient to explain these behaviors. Brankistron axes help to hold stars and planets together. Brankistron axes also help stars and stars systems to align and form webs of stars, hence galaxies. Neutrinos guide galaxies to regroup and form galaxy clusters and so one.

### Dark Energy (ATTT\*)

Let's imagine that our universe is not unique and has at least one neighbor. In this hypothetical scenario, the brankistron based theory may be able to explain the universe expansion phenomenon.

Because our universe grows and at some point it becomes big enough so that some galaxy clusters at the border line of our universe can "see" their counterparts in the neighboring universe. The "see" action here means in the brankistron theory that the brankistron axes of galaxy clusters of two universes cross each other for the first time then begin to align themselves and join then all the celestial objects (galaxy clusters) hooked on their joined brankistron axes begin to stretch out. So the force that we call "Dark energy" would be in fact resulted from the stretching of all celestial objects in one universe by their counterpart in the neighboring universe.

## **Theory's Potential Indirect evidences**

### on Quantum level

This is one of the core aspect this brankistron based theory of everything: the brankistron axes of the electron will combine the brankistron axes of the up quarks to form a core axis to hold these two particles together.

### Casimir Effect (ATTT\*)

The Casimir effect experiment consists of placing two neutral plates inside a vacuum of few nanometers apart. After a while the two plates get pushed toward each other to joint together.

The brankistron based theory may be able to explain this phenomenon:

The imbalance between the mass of free brankistrons between the two plates and the masses of free brankistrons at both ends of the two plates creates a compression force. The atoms on the surfaces of both plates that face each other are the first atoms to be exerted by this compression force. As a result of this compression force, a slow process of particle-to-brankistron hooking occurs and will continue as long as there are free brankistrons between the two plates to make the imbalance mentioned before alive.

## Brankistron field (ATTT\*)

Based on the brankistron theory, the brankistron field must exist and has no charge.

As particles regroup with each other via their brankistron axes, the excess of brankistrons outside the group create a field that contain only brankistrons. Each end of these brankistron axes uses its free brankistrons (not occupied by particles yet) to capture nearby particles when the latter get too close to them. The brankistron field of a particle looks like a sphere whose center is where the particle resides.

The brankistron field does not curve or compress space around the particle/group of particles but rather lures nearby counterparts to join them by aligning their brankistron axes in order to form a bigger group of particles.

## **Theory's Potential Indirect evidences**

### on Atom level

Brankistron behavior at Atom scale (ATTT\*)

Based on this theory, the particle-to-brankistron hooking dynamic is the core quantum mechanism at the atom level.

When an electron gets close to a nucleus (proton and neutron), one of its brankistrons will be captured and held on to by the nucleus itself.

The particle's movement however is within the limit defined by a sphere whose radius is defined by the length of the brankistron axis of the particle. This sphere is also known as a cloud/shell of energy.



## Atoms alignment based Gravitational wave (ATTT\*)

By electromagnetism, inside an atom a neutron can align with its proton counterpart to form an axis. This axis becomes one brankistron axis of the atom (among others).

Any neutron-proton pair of an atom will align with its counterpart inside an adjacent atom to form again a longer brankistron axis.

Because an atom can have a large number of protons and neutrons, the atom becomes a nucleon "ball" with multi-dimensional brankistron axes.

The brankistron axis becomes longer and longer as atoms align themselves in all directions. In the end it can reach the celestial object length (planets, stars, galaxies, clusters of galaxies).

Moreover if any change along the brankistron axis (compression or expansion such as star mergers...) can cause the brankistron to expand or reduce, hence the gravitational wave.

Below is a schema of how a neutron and a proton inside an atom align with each other via their respective brankistron axes:



## Conclusion

The theory of everything that I present here is a result of my study and research. In the end I was able to come up with a quantum model of matter that seems to fit well in both worlds. It may be possible that some indirect evidences of its existence are there among us if this quantum model of matter is correct. I believe that I have found a dozen of potential indirect evidences: some seem to be clear-cut to me, others are less. Two indirect evidences that stands out the most to me are:

The first is the parallel between the dual particle-wave behavior of the photon demonstrated via the light double slit experiment and the image capture by photons and projection thereof on human eye retina.

The second is the way how planets and moons of the solar system rotate on orbital planes with such a meticulous coordination.

The third is that the quantum entanglement must have an extremely important role but hidden so far: make matter curve trajectory of surrounding matter. This theoretical model tries to explain the why rather than the how provided by Einstein's general and special relativity theories.