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A Complete Theory of Gravitation, Theoretical Modern Physics and a New Mathematics of Concept-context that Replaces the Alchemy of Physics and is the Context to the Theory of Everything

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Abstract

This is a necessarily contextual paper with a conceptual motif [to interest specialists] because physics has found gravity, organisation and modern physics theory difficult to comprehend because, I believe, physics approaches the physical in the same way that alchemists did by ignoring organisation and that is jeopardising social science that desperately needs organisation to manage a threatened world. This paper shows that gravity is possibly both local and universe-wide in a fractal universe based on relativity and shows how badly structured, incomplete and distressed is physics' view and needs this Theory of Everything. A new field of mathematics [concept-context] describes the operation of the mind, simplifies many academic fields by linking them to the physical and adds an orthogonal approach to produce a theoretical modern physics that has been needed for the last 100 years. A universe-wide gravity-like addition to the localised gravitational theory of Newton [attraction] and Einstein [changing path] shows that dark matter and dark energy are a typical top-down guess of an alchemistically based physics and the Theory of Everything [concept] is further strengthened by this context that predicts the two speeds of gravity. Additionally, the reason why light cannot be affected by this new gravity is that the stars would look fuzzy and their paths would be in contravention of the law of least action!

Keywords: Gravity; mathematics of concept-context; dark matter; dark energy; relativity; Newton; Einstein; organisation

Disclaimer: *the subject matter of this paper is new but must be classed as an opinion-piece and cannot be classified as scientific [not being based on past peer acceptance] and is theoretical [not based on the scientific method [measurement]] and its use may conflict with peer acceptance. Secondly, the paper is, in truth, scientific because (1) it is based on absolutes [as it must for comparisons to be made], and (2) on the simplest absolutes [unlike Newtonian physics that is based on the more complicated force equals mass times acceleration]. Thirdly, mistakes [contextual] may occur because I am a generalist, whereas a specialist is a specialist [conceptual] in a subject and would not be expected to make mistakes. This state of affairs is relativity and cannot be eliminated.*

Preamble

Why do Homo sapiens appear so stupid? It could be because, as a group, it does not understand organisation [1], thinks top-down, has no achievable long-term goals, breeds

indiscriminately, consumes resources beyond reasonable limits and conflicts with others and cannot control nor understand governance and it will probably collapse as has happened to countless civilisations in the past. In particular, physics is not a *useful* science but a club of members that practice pseudo-science because they do not use absolutes, exclude new ideas with an incomplete scientific method [measurement] and scientific principle [peer review] to agree that natural laws are what they think they should be. Physicists do not use organisation explicitly, do not define it formally, refuse to believe in it and so keep it from the social sciences where it is needed for social engineering. For example, they think that the universe started as the creation of all energy [Big Bang] at one moment in time, that the universe is 'real', that gravity is a force or 'curved space-time' etc.

Consider 'in physics, gravity (from Latin *gravitas* 'weight') is a fundamental interaction primarily observed as mutual attraction between all things that have mass. . . . Gravity is most accurately described by the general theory of relativity, proposed by Albert Einstein in 1915, which describes gravity not as a force, but as the curvature of spacetime There are some observations that are not adequately accounted for, which may point to the need for better theories of gravity or perhaps be explained in other ways. Dark matter, which would interact through gravitation but not electromagnetically, would account for the discrepancy.' (Wikipedia, Gravity) Note that firstly, 'general relativity states that gravity acts on light and matter equally around it' (Wikipedia, Gravity) and hence results in the bending of light as it passes the sun, but secondly, would not be affected by dark matter creating the need for this paper [2]. This magic dark matter that attracts mass gravitationally, but not photons, is a big ask because 'dark matter constitutes 85% of the total mass, while dark energy and dark matter constitute 95% of the total mass-energy content. (Wikipedia, Dark matter). I believe that something does appear to exist [from measurement] but in a form that can only be comprehended with an improved software of the mind derived from completeness.

A new complete theory of everything is needed and has been published [[3] as an opinion-piece, see disclaimer] that has started to attract attention from physics by their journal redacting the original paper [in neuroscience, possibly a 'closed mind' syndrome]. Why anyone would want to refute an opinion-piece is beyond my comprehension unless it contained 'seeds' of something that might upset someone. I must admit that the affordances, which are the emotions in the brain [that produce the mind [4], were generated through this new theory that was inimical to physics because it contained the [dreaded] organisation that physics has ignored for hundreds of years and suggested that physics actually *must* use it. Under this scenario [and the Open Access publishing model] I am trying to show physics how their claims for this mysterious dark matter and dark energy can be simply explained, not by more mass, but by a formal appreciation that the current theory of gravitation is incomplete and how it could be made more complete.

This paper is not just presenting a new theory of gravity, as has been done in the past [Wikipedia mentions about 20 current contenders], but is being forced [by the redaction] to actively reexamine physics from the bottom-up and question it's practices such as why there is no theoretical modern physics, why haven't Newton's contribution of laws of motion and law of gravitational attraction been derived [from basic principles as would be expected in a science] and so on. It could be that *physics' course for the last few hundred years has been built on alchemy and not on science!* Newton was an alchemist and his contribution of the laws of motion were presented in the alchemist's method [without a formal derivation] which has been carried on for hundreds of years and 'set in stone'. This paper, I believe, shows how simple is the physical [being a fractal] and how simple is gravity when viewed bottom-up and not alchemistically top-down.

Newton's Laws of Motion

As I remember reading, the race was on to find usable laws concerning motion and Newton's ideas were accepted, but they could be a product of alchemy where the variables are thrown into a pot to see if something usable resulted. In other words, no organisation was considered and a 'law' was accepted by general agreement and Newton's laws [*force equals mass multiplied by the acceleration*] became the standard [because it is simple and works]. This alchemist's approach uses force [not energy] which contains the intent of the measurer, uses mass, not as a basic building block, but without understanding that it is a statement of the creation equation [*energy plus organisation is nothing* [5, 3]] which means that a mass [energy and organisation] cannot exist unless the two parts are kept separate [by acceleration] and that is why the statement [force equals mass times acceleration] contains acceleration [as a means of accounting] and further, why 'at rest or uniform motion' is not accountable [the 'classical' case]. In other words, forces only exist when there is acceleration and acceleration is the accounting that leads to Einstein's postulate that acceleration is part of gravity [force] and requires 'curved space-time' to generate the acceleration, a gross complication of a simple path [see below].

In other words, gravity is the context [organisation] of concepts such as mass, gravitational attraction etc. and our universe is built on the equation *energy plus organisation is nothing* as a special case of the general equation *concept plus context is nothing* with the restriction of an accelerating space [for existence], orthogonality of concept and context [independence] and the entanglement between them [from the creation equation]. Inertia [of mass] is an enigma that only comes into effect when the mass is accelerated [or decelerated] and must be part of the accounting of gravity [context] because 'the term "inertia" has come to mean simply the phenomenon itself, rather than any inherent mechanism' (Wikipedia, Inertia) which is stretching the imagination because concepts only exist with a context and the context has been given above that it only comes into play under acceleration. Notice that universal relativity means 'two-ness' and everything has concept and

context except restrictions which are singular and in particular examples are the accelerating space [of the universe] and the unusual gravity of particles but not photons which is the subject of this paper. I believe that, that context is the entanglement of the acceleration with the rest of the organisation [the universe] as an accounting. It should be noted that the principle of least action [another law] was required to explain why light moves in a straight line and I believe that this top-down [alchemistic] law works because the universe can only exist with the lowest energy-organisation combination to give a unique result else the universe becomes chaotic [with two different results for the same operation, magic [6]].

The above is the context, which is complicated [and organisational] and it is much easier to use the alchemists' concepts as long as the physicist realises that there must be theory [context] to go with those concepts, and notice that context is the organisation that physics shuns. One has to ask where Newton's complicated equation came from and it is possible that he generalised Galileo's experimental results [*force equals mass multiplied by the acceleration due to gravity*] for *any* acceleration [alchemy] and further, this result would have led directly into his interest in celestial mechanics.

Newton's Law of Gravitational Attraction

Newton's Law of Gravitational Attraction is the attractive force between two masses that is proportional to the multiplication of the two masses divided by the square of the separation. Consider that 'this is a general physical law derived from empirical observations by what Isaac Newton called *inductive reasoning*. . . . Newton's law of gravitation resembles Coulomb's law of electrical forces, which is used to calculate the magnitude of the electrical force arising between two charged bodies. Both are inverse-square laws, where force is inversely proportional to the square of the distance between the bodies. Coulomb's law has charge in place of mass and a different constant. . . . Newton's law was later superseded by Albert Einstein's theory of general relativity, but the universality of the gravitational constant is intact and the law still continues to be used as an excellent approximation of the effects of gravity in most applications.' (Wikipedia, Newton's law of universal gravitation)

Firstly, 'derived from empirical observations' and '*inductive reasoning*' suggests a guess based on measurement, a feature of alchemy that physics uses today [scientific principle] whereas this theory says that every mass has a quantum gravity that is *the mass [energy and organisation] divided [mathematically] by the separation*. The attraction is simply proportional to the [mathematical] multiplication of the quantum gravities. Notice that relativity is the same as mathematical multiplication [and eliminating relativity is division] and they are available because they have a necessary part in a fractal and not [purely] one of Homo sapiens' prime achievements [the field of mathematics]. It will be shown that this concept [energy attraction] has a context [organisation attraction] that is Einstein's contribution [as another guess] and a further additions will be this theory's explanation of the

'dark matter' effect, cosmic inflation [7] etc. Secondly, gravitation and Coulomb's law are entangled and necessary to the creation [forming atoms] and have the same form as would be expected in a fractal. Thirdly, the inverse square law is a dodgy simplification of why squares appear [8] and fourthly, from above, that 'Newton's law was later superseded by Albert Einstein's theory' is not correct because they are orthogonal showing concept-context, see below.

This new vision of the universe indicates that given the restriction of the necessity of there being an accelerating space, the creation needed time [concept] and distance [context] to create space and we can remove the relativity of the motion to provide absolutes that we can view [see [5, 3]] by [mathematical] division of the dimensions. Thus, (*energy plus organisation*) *divided by time* creates cosmic inflation [7] near time zero that creates space, energy [and organisation] with faster than light expansion and presumably gravity [the acceleration as accepted by physics]. The division of (*energy and organisation*) *by distance* is the innate quantum gravity of a mass and the relativity [mathematical multiplication] of two quantum gravities produces Newton's Law of Gravitational Attraction. Notice that organisation takes the place of the 'curved space' below and that the division of *distance by time* is a constant speed for energy and organisation [speed of light] and suggests that both distance and time are simple [no 'curved' space].

Einstein's Contribution

The simple celestial mechanics of a small body orbiting a larger one is often used to illustrate the attraction of two masses and that the inertial effects [centrifugal force] of the smaller body balance the gravitational attraction but in the universe of this theory everything is relative, as can be seen from the general creation equation [*concept plus context is nothing*] and the attraction [concept] must have a context, which is the continual acceleration [centripetal force] of the small body as it orbits the larger body. This is not a trivial observation because it shows that Newton's attraction and Einstein's curved path [not 'curved space'] are both concept *and* context and secondly, both must be accounted for equally with a sum of zero [as required by the creation equation]. Einstein said [guessed alchemistically] that 'curvature of space' was an equal factor and was proven correct by Eddington's experiment in the attraction [bending of the path] of light as it passed the sun. 'Eddington measured starlight deflections twice those predicted by Newtonian corpuscular theory, in accordance with the predictions of general relativity. Although Eddington's analysis was later disputed, this experiment made Einstein famous almost overnight and caused general relativity to become widely accepted in the scientific community.' (Wikipedia, Gravity) Notice that it is the *curved path*, not the 'curved space' that produces the acceleration and [equal and opposite] contribution to the current theory of gravity.

Also, notice that both Newton's and Einstein's contributions *together* form a simple, similar and complete component [planetary system, galaxy etc.] and form the

universe *as parts* and it will be shown that proto-gravity is behind the aggregation of all these concepts [matter] but not context [photons] and further, atoms are built from the stronger charges [electric] whereas the context to quantum gravity[concept] is the gradation that includes organisation [of the quarks] to the gravity of everything [in the universe, effectively zero at great distance] simply and similarly as would be expected in a fractal. Overall, the universe is a relativity of 'real' and organisation [in measurement] that mirrors the wave-particle duality that is the realisation [to us] of how we can understand everything and must be incorporated as the [organisation] of an interval [of relativity]. In other words, an interval [of reality] must be defined by it's extremes [points that are defined] and that is the reason that we see the wave/particle duality [not that it really exists] and the same for 'real' and organisational. Further, asking an organisational question, as must be done to interrogate a simple organisation of an interval, requires the logical answer of the ends [as defined] dictated by the intent of the question [wave-particle experiment]. In other words, forced by relativity [concept] and a simple fractal's inability to decide where in the middle [context] should be the answer.

Consider that 'gravity is most accurately described by the general theory of relativity, proposed by Albert Einstein in 1915, which describes gravity not as a force, but as the curvature of spacetime' (Wikipedia, gravity) is somewhat different to the above. This suggests that Einstein's contribution is a replacement for Newton's method, which it is not because it is the contextual mate that has an equal effect. Firstly, it took several hundred years to realise that there are two parts to gravity [this paper's contribution is yet to come] and this is shown in the quotation 'describes gravity not as a force, but as the curvature of spacetime' which statement does not realise that both arise from the same effect [relativity, concept], which is that gravity is produced by two *different* effects [context] firstly from quantum gravities and secondly from path acceleration of the masses and their effects are equal because they move [radially] to make them equal. Space is not curved [it is simple with a constant speed of light], but a curved path must be accounted for because of the acceleration involved, and another independent effect will be seen as this paper's contribution. It follows that 'there are some observations that are not adequately accounted for, which may point to the need for a better theory or perhaps be explained in other ways. Dark matter, which would interact through gravitation but not electromagnetically, would account for the discrepancy.' (Wikipedia, gravity)

Secondly, I used the general creation equation [*concept plus context is nothing*] above, and not the equation for our universe [*energy plus organisation is nothing*] because in a fractal [the simple organisation resulting from a simple creation equation] everything is both [mathematically] similar and contains the restrictions of previous fractal elements. It is crucial to understand the function of the multiverse [8] in the pre-organisation of our universe and thirdly, physics' postulation of dark matter and dark energy that, from above that 'dark matter constitutes 85% of the total mass, while dark

energy and dark matter constitute 95% of the total mass-energy content' shows an unbelievable arrogance that the two theories of gravity above are correct *and* complete. This theory insists that physics already omits organisation and will [below] suggest that physics omits the logic [6] inherent in an organisation and will present a logic of fractals that produces a proto-gravity that does not affect photons and may complete our understanding of gravity.

Turning the Alchemy of Physics into a Science by Using Reality

Physics is an alchemy because both measure the results of experiments, which is what Francis Bacon demanded [scientific method] to guard against the 'armchair' musings [theory] of the ancient Greeks whereas this theory demands both [at the same time] because everything is entangled as would be expected with relativity. Thus physics must firstly, know what to do [concept] and how to do it [context] which requires the mind and this theory was developed in neuroscience [5, 4] so that intellect is increased by increasing the number of concepts [experience, knowledge etc.] which produces a great many more contexts [4] and this theory secondly, creates a software to direct the mind that is a more complete theory of the physical and society, which thirdly, requires a bottom-up derivation of all things, and fourthly, relativity must always be used, Fifthly, personal physical development also contributes to thinking and it is obvious that the ability to think is low in Homo sapiens. Hence the need for organisation of mind and body in science [[8], anti-ageing.org].

The missing component of greatest importance might be reality which could be defined as being present [as a concept] at every point in an interval which makes it knowable [as a context] overall and in a fractal [that is continually growing from a simple equation] many paths must be discarded. So, in a fractal everything must firstly, be simple and similar, secondly, a path of the growth must be followed to ourselves and thirdly, a measurement made of the possibilities that could occur. This seems to describe our universe and any observer sees a chain of possibilities [with the restriction of minimum energy and organisation] that were necessary to create the particular scenario and fourthly, an organisation is not a 'black box' and any observer, within or outside can view the surroundings. For example, when we look at the night sky, do those untold billions of stars exist, or are they the billions that would have had to exist for us to be here to ask the question? Likewise the elements of the multiverse, prior to our multiverse [in a direct line] still affect us as is shown in this paper and secondly, an organisation is a communication and will return an answer to a question [affordances, [5]].

Dark Matter and Dark Energy

The title of the paper: *A Complete Truth Is Needed To See The First Moments Of The Creation To Explain Dark Matter, Dark Energy, The Multiverse, Cosmology And Modern Physics*

[8] explains dark matter and dark energy as a result of using a complete truth similar to the above and contains this theory starting from the first moments of the creation because that is where I think that the addition to gravity lies so I will reproduce [from [8] a concise description to illustrate this with some additions to change the viewpoint:

(A) A theory has to have a sensible beginning without elephants, turtles etc. that support a 'real' planet, and the simplest build [for the universe] is from **nothing**.

(B) The building blocks must be **orthogonal and simple** and from within literature we see concepts and context are the basis of every story, so, from (A) **concept plus context is nothing** and they **only exists in a accelerating frame of reference** [to keep concept and context apart logically] and I call the product of this acceleration **space gravity** that acts throughout the space for all time, but may be insignificant after such a long time [hyperbola below].

(C) This postulation of [*concept plus context is nothing*] can only exist with time and distance as dimensions [for the acceleration] and near time zero, removing relativity [by mathematical division to create absolutes] creates a cosmic inflation of the space [in line with physic's theories], increases **space [and time] gravity** and produces an evenness that results in the universe's expansion near time zero in line with 'WMAP image of the (extremely tiny) anisotropies in the cosmic microwave background radiation.' (Wikipedia, Anisotropy).

(D1) The expansion of concept and context is variable [being a time related hyperbola] that creates space, and concepts could be called points and the distance between those points called separation.

(D2) The separation [between the points] could be straight lines [according to the principle of least action] and they would satisfy the equation **concept equals context (squared)** using Pythagoras' theorem [derived in [8] using the definition of orthogonality of a point]. This fits well with the **experimental observations of Born's rule** [5, 8]. Notice that this equation [*concept equals context (squared)*] shows that particles move in parabolic paths [which has nothing to do with gravity and all to do with existence] that **form atoms** because [constant] motion is undefined [unlike acceleration]] and relativity requires that a context be defined and a fractal implies similarity and in later fractals it becomes a restriction. I call this **parabolic gravity** that is a **restriction on the overall space** [to define the interaction of particles] and produces the same path [that results from gravity in a later fractal [law of gravity, product of quantum gravity, the minimalist requirement] as with the motion of two bodies [**distance gravity**]]. While distance gravity is universe-wide it's effective range is possibly limited to star systems as the orthogonality of Newton's and Einstein's contribution seems to suggest that it is one of a number of fractal elements that is somewhat self-contained [similarly to the law of conservation of energy in an accelerating universe]. This required path could be the source of physics' dark matter's gravitational effect [that I call] **parabolic gravity** and be the major long-acting curvature that physics currently attributes to dark matter.

This is a critical point [in physics' understanding] that parabolic gravity acts on particles [concept] and not context [photons [even having the same composition as masses] are a context in a later fractal]. Notice firstly that this theory assumes that photons are matter and similar [but smaller] in content which gives them a different and distinct role, especially in the light of the reduced number of subatomic particles [as is shown in [3]] and secondly, that the [contextual] square is the [mathematical] multiplication that is the relativity of the concepts [points] whilst squaring a concept or point has no meaning and thus producing the requirement of an equation [containing equality not orthogonality]. Thirdly, the key effect [of acting on particles only] comes from a restriction that pertains to a previous fractal considering the vertical versus sideways consideration of the existence of the multiverse and that our universe is the one that is pertinent.

(E1) Our universe is a fractal derived from this simple general equation [*concept plus context is nothing*] and we can specialise this equation to use for particles [instead of points] as a concept [physics considers our universe to result from the Big Bang energy, corresponding to the condensation into subatomic particles]. The particles require a movement organisation [to become particles not points, context] which is a parabolic path [under **parabolic gravity**] that leads to the ability to create atoms. Note that a parabolic path for two particles is needed in atoms, solar systems, galaxies etc. for circular motion. The particles then 'condense' from energy and organisation as a **concept** and have continuous values from zero to infinity and a reality that is continuous over this range. Notice the use of speed to differentiate particles and mass to differentiate those particles from photons.

(E2) The corresponding context is a general term that I call **organisation** because an organisation is a communication [context] that replies to a question where the question is simple, unique and must be held in the measurer's mind when asked [see quotation in [5]]. When the concept becomes a body [not a point] the context becomes parabolic instead of a straight line [because it has to have a destination or path to be defined and accountable [Born's rule versus Pythagoras' theorem]]. This is similar to setting 'x' in algebra as the solution [as would be allowed and expected in a fractal]. Notice that we use the reinvented creation equation [*concept plus context is nothing*] in this fractal because it is used for literature and the construction of the mind-brain [4].

(F) Our universe uses the **dimensions of energy, organisation, distance and time** and the equation *energy plus organisation is nothing* from which can be derived [by eliminating relativity by using the [mathematical operation that we call division] that produces three effects [5]. As distance and time are forced to appear, they would need to be simple to accomplish this simple requirement.

(F1a) **Distance gravity** [(*energy plus organisation*)/*mathematically divided by*]separation] is the **concept** gravity experienced by a particle [and the rest of the universe] and is the relativity of two particles and is Newton's law of gravitation [as the product [mathematical multiplication] of two distance

gravities] and derived in [5] and is a **context** [between two bodies]. This is the gravity experienced by a photon and measured by Eddington and is [according to this theory] the sum of the relativities of the **energy and organisation** [path not Einstein's 'curved space'].

(F1b) **Quantum gravity** is a **context** gravity associated with distance gravity that has the form [(energy plus organisation)/[mathematically divided by]distance] that shows that away from other bodies the attraction [distance gravity] is nearly zero [large distance] whilst at small distances [inside the nucleus] the quarks are organisational and can't be separated from each other. Notice firstly, that as the universe is [apparently] so large that the diminution of gravitational effects is not acting universe-wide and parabolic gravity fulfils this universal accounting. Secondly, quantum gravity, when considered as a concept, has a context that shows the gradation from [nearly] zero gravity to organisation and this context *is not the same* as the logical entanglement that arises from relativity and this so-called **quantum entanglement** has been shown by physical experiment [another physics' enigma, explained by the creation equation].

(F1c) **Time [space] gravity** [(energy plus organisation)/time] is a hyperbola [7] creating cosmic inflation [where energy and organisation growth is extremely large near time zero [because the expression is an absolute]] and decreasing to [currently] just above zero [after 13 billion years]. Matter [according to this theory] is a combination of energy and organisation [an orthogonality] but kept logically separate by acceleration] that increased enormously and that presumably changed **space gravity**.

(F2) **Constant speed of propagation of energy and organisation** is *distance/time*. Notice that distance is a context and time is a concept [both] being continuous from zero to infinity that are relative in a simple way so that distance divided by time is a constant speed of energy and organisation and answers the enigma of the Michelson-Morley experiment [same speed relative to the measurer]. Notice that there are two ways of eliminating relativity, firstly, mathematical division to produce a concept from our point of view and secondly, squaring to create an equality [context].

So, gravity appears to consist of three parts [**time-space acceleration, parabolic logic and quantum-distance organisation**] and possibly explains physics' dilemma. However, from the disclaimer, both generalist [context] and specialist [concept] are needed [for relativity] to properly understand the transition from the present alchemy to a proper science and I proffer this explanation as an advancement in understanding. One can appreciate the allure of the simplicity of the alchemist approach but it is time that physics 'grew up', recognised organisation and allowed the social sciences to manage society. It is interesting that the multiverse that we find ourselves in caters to our reality because the reason why light cannot be affected by this new gravity is that the stars would look fuzzy and their paths would create chaos because paths of light must be minimal [straight lines, law of least action] and not curved.

In other words, the core thought is that Pythagoras' theorem is considered true for sides [contexts], but relativity suggests that it is true for the points [concepts], so a concept [point] squared equals the sum of the projections [sides, orthogonalities] squared and the equation [equality] that *concept is the same as a context squared* is true. The concept of a particle must have a path to follow [context, for relativity] and that must equal the square of its context which is a parabola and must be the same as under charges and local gravity to provide a minimum state [principle of least action]. This contextual proof is matched with the conceptual proof that the orthogonal creation equation *concept equals minus-context* becomes a truth [and produces the symmetry [a fractal is similar but not symmetrical]] by squaring each side.

The Logic of the Half-truth

A planetary system appears gravitationally complete in itself as shown by the completeness of the concept [quantum gravity, Newton's attraction] and concept [change of path, Kepler's laws] that obviously balance [determined by the separation, Eddington's result] suggests that galaxies are stable entities on their own. In a fractal, this relativity of energy and organisation is repeated in the atom and the universe and given that this theory considers that matter is composed of energy and organisation, this relativity provides a picture that can be interpreted [by us] as wave-like or particle-like depending on measurement [or thought measurement, above] or, as a local effect [atom, planetary and galaxy] with restrictions of the overall accelerating space. This view of local galaxies necessitates a context overall that is provided by the context of the parabolic gravity and so there could be a relativity of a universe with a complete gravity, above, together with localised gravity units as suggested below [similar to the conservation of energy]. The reason behind the wave-particle duality is logical because, in a reality that contains wave and particles as orthogonalities, only the extremes can be recorded as there are no instructions to show the in-between and the actual [if there is one] must always be hidden from us [logic of the half-truth].

The logic of the half-truth [13] is that firstly, all logical possibilities seem possible [unless restricted] and secondly, individual possibilities contain concept and context and that both should be recognised [and both have proofs] with the exception of restrictions that are singular. An organisation is built on possibilities and not the probabilities of a 'real' world where something *must* occur [everywhere having a probability]. This leads to the power of the bottom-up derivation from a single postulate, which is, in this case, the relativity in the creation of two orthogonal entities from nothing.

Towards a Mathematics of Concept-context

Firstly, physics' concept of dark energy is that it is somehow needed to explain the supposed acceleration of the universe and [according to this theory] the acceleration would be very small after 3,000 million years [considering the

hyperbolic graph of [(energy plus organisation) divided by time] and would be difficult to measure. Whereas this theory explains the acceleration conceptually [versus the contextual measuring] that it is a logical requirement and the finding, by physics [of the acceleration, dark energy], is surprising because the Big Bang suggests a slowing down over time.

Secondly, from D2 above, the equation **concept equals context (squared)** using Pythagoras' theorem [derived in [8]] is perhaps a simple contextual proof [using the lines as contexts] and a simple conceptual proof might be made on the basis of equality [and the equation] given that two proofs can be made. The creation equation [concept plus context is nothing] becomes concept equals negative context [being orthogonal which is not useful], but conversion to a truth is achieved simply in the square [introduces symmetry] that concept (squared) equals context (squared) and as the square of a concept is meaningless and equates to the concept, the equation becomes *concept equals context (squared)* and this suggests the requirement of a parabolic path for the concept of a particle in D2 that [from above] *'this is a critical point [in physics' understanding] that parabolic gravity acts on particles [concept] and not on photons [even having the same composition [energy plus organisation] as masses] which are a context in a later fractal]*.

This paper may seem simple but it uses a possible new field of the *mathematics of concept-context* [5] that underlies all of the current academic disciplines that do not [at present] seem to include the physical and it's restrictions. Notice that this mathematics [of concept-context] is firstly, simple and based on the creation equation and secondly, it explains the concept of dark matter and shows that it is a real explainable fact [in the light of the measurement] and also thirdly, explains the working of the mind-brain which stores concepts and uses the creation equation in measuring them to convert the affordances [context, [5]] into emotional energy [concepts] that can be compared [context] in the mind-brain. Fourthly, the 'Principia Mathematica (often abbreviated PM) is a three-volume work on the foundations of mathematics written by the mathematician-philosophers Alfred North Whitehead and Bertrand Russell and published in 1910, 1912, and 1913' (Wikipedia, Principia Mathematica) is, I believe, grounding mathematics in logic, whereas in this theory mathematics is based on relativity [of numbers on the number line] and multiplication is a statement of relativity [such as the product of quantum gravities] and division [removing relativity as in creating quantum gravity]. Fifthly, social science depends heavily on organisation for it's understanding and to produce social engineering [9, 10, 11] to direct society to future goals [12] in the same way that materials engineering [technology] arose from physics [albeit a 'crippled' physics]. Sixth, the importance of goals in number theory can be found in [12] and is universal.

Unfortunately, physics seems to have repudiated the paper [5] that has led to this fundamental shift in understanding science [in general] through the logic of the half truth, but truth is not a truth [concept] unless it is generally accepted

[context] and perhaps peer-review is desirable as long as there is a higher level [of intellect] that can be consulted as posited in [8] because 'Who watches the watchers?'. Indeed, lack of a sound basis means that no one has examined physics for hundreds of years that could have prevented it's stagnation. It seems that physics has tried to turn Newtonian physics into an unchangeable Bible to the extent that Einstein was hampered by sticking within it's restrictions but a mathematics of concept-context [as a concept] is an integral context within the structure of organisations and has a place in mathematics, social science and neuroscience.

Conclusion

This paper questions whether physics is a science and finds that the answer lies in the logic of the half-truth because physics is a science that could be called alchemy because it uses measurement [scientific principle], agreement [peer review] and organisation to a limited degree [implicitly and top-down] and physics has become a club with it's in-house journals and restrictions to publication and readership. A true science is, I believe, presented in this paper with results derived from nothing with a universal relativity, bottom-up organisation and the necessity of measurement with theory that can be presented using Open Access publishing. Physics appears to be fighting to hold it's stranglehold but organisation and it's social engineering is necessary for today's social problems and will have to be taken up and used if Homo sapiens is to survive and prosper.

The best that I can do is show how physics' long standing enigmas can be solved by a rethink [of the software] and I believe that this Theory of Everything [concept] and gravitation [context] lays them all to rest with a theory that shows the simplicity of the Big Bang, quantum mechanics, dark energy, the mind, emotion, gravity and so on that physics finds so troubling. Consider, 'current models of particle physics imply that the earliest instance of gravity in the universe, possibly in the form of quantum gravity, supergravity or a gravitational singularity, along with ordinary space and time, developed during the Planck epoch (up to 10⁻⁴³ seconds after the birth of the universe), possibly from a primeval state, such as a false vacuum, quantum vacuum or virtual particle, in a currently unknown manner. Scientists are currently working to develop a theory of gravity consistent with quantum mechanics, a quantum gravity theory, which would allow gravity to be united in a common mathematical framework (a theory of everything) with the other three fundamental interactions of physics.' (Wikipedia, Gravity) The Theory of Everything has been proposed [3] together with the addition of this paper and [8].

Predictions

Using relativity, every conclusion generates predictions [12] and gravity is one of a number of contexts that the universe uses in it's functioning. Consider that 'in October 2017, the LIGO and Virgo detectors received gravitational

