

## Insightful Details on How Everything Developed From Nothing

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### Abstract

This paper modifies a theory of how everything evolved from nothing that is based on scientific evidence and thereby further supports the ontological viewpoint that all existence is merely different combinations of divided halves of nothing attracted to their opposites. Specifically, it provides an alternative explanation for the formation and composition of basic particles from divisions of nothing. This finding has important implications for social interactions, which are merely fractal reflections of the reality underlying all existence.

**Keywords:** Insightful; Everything; Nothing; Scientific; Explanation; Ontological

### Introduction

In order to provide true knowledge, explanatory concepts in the social realm must be consistent with scientific observations on the micro-level substances that underlie the reality of the beings whose interactions social theories seek to explain. As a result, there is a need in social research for a unified theory of the basic physics of social beings that involves the nature of being itself. As pointed out by Omnes [1], a unified, consistent theory of being that reflects the reality of quantum physics is very important in ontology and philosophy in general. However, deep philosophical issues relating to whether social beings represent mere illusions and whether perceptions of such beings are detailed symbolic categorizations of the nature of existence or rough generalizations of the true state of everything are important in all. A major contribution to ensuring such consistency has been provided by Leuten [2], who, using a very diverse cross-section of scientific evidence stemming from over a thousand interdisciplinary sources, explained how everything is composed of various combinations of divided nothingness that evolved from nothing. (Other authors such as Krauss [3], who explained how quantum gravity and cosmic inflation enable a universe with no net energy to last longer than virtual particles springing out of a vacuum, have suggested that the universe evolved from nothing, but they leave far larger gaps in developing theories or hypotheses on the details of how such a universe could have arisen endogenously from nothing. The origin of the observed laws of quantum mechanics and all the exotic particles in existence isn't clarified in any way that is much different than assuming a deity appeared out of nothing and created quantum physics as well as everything else. Whether a deity creating quantum physics or the counterintuitive nature of the complex scientific facts of that theory is postulated as the original entity from which everything else follows still doesn't explain the origin of any existence whatsoever. To date, modern scientists haven't been able to accurately model even simple interactions between positrons and electrons in groups [4], much less explain how or why they and other assumed basic particles exist. As a result, an integrated philosophy of being consistent with the existing scientific evidence, such as that developed by Leuten [2], is especially important in fastening together loose ends for a complete understanding of the nature of everything).

The development of the universe observed by people is clarified to result strictly from divisions of nothing that are attracted to their other divided halves which move in opposite directions in time in a fashion consistent with the reality of quantum physics, the existence of whose laws the theory in turn explains. (The theory of quantum physics is well

accepted to reflect or categorize reality Omnes [1], but the reason that theory's laws exist along with the four dimensions and everything else was first clarified by Leuten [2]. For instance, a division of nothing in nothing had to create something like a temporal dimension in order to permit the divided pieces or processes of nothing to actually exist, albeit at separate points in nothingness that are temporally divided. Thus was born the time dimension with its separated temporal units through which positrons and electrons travel in opposite directions [4].

These units of time that keep track of discrete events in space [5] must consist of a past and future of equal length in order for the temporal divisions and the time dimension itself to sum to zero so that they can arise out of nothing because they themselves are composed of mere divisions of nothing [2]. Spatial dimensions had to arise when divided halves of nothing re-unify to form photons that could no longer be divided by distinct temporal units and thus had to exist at separate points in time outside that dimension. Their apparent location in divided points in different units of time forms space. Within the resulting multidimensional universe, the mutual tug of matter travelling forward in time and antimatter moving backwards curves the points in space-time to merge, after an eternity in both directions at the latest, and thus collapse to zero, as with everything else in nothing [4].

Has added to the evidence on this subject that indicates all being is endogenous to these processes and that there is no external entity or creator. (There is no original division of nothing that started this process, and there is no external cause [2]. In fact, the lack of a temporal dimension in pure undivided nothing results in the existence of no time constraints, thus permitting the passage of an infinite amount of time within the 0 existing points of a temporal dimension of nothing. With an infinite amount of nonexistent time within the 0 points of space that also exist in nothing, it is inevitable that a division of nothing occurs that results in nothing but halves of nothing attracted to their opposites. When this natural pull to reunite results in a merger of opposites in the same point of space-time, a whole nothing is again formed, as is consistent with the nature of particles and antiparticles

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which consist solely of electromagnetic fields attracting their opposites that have no substance whatsoever. It is also consistent with the nature of the photons which result from the merger of particles and antiparticles, as photons exist instantaneously in all moments of time because such reunited whole pieces of nothing aren't divided by the temporal dimension [4].

These contributions of interdisciplinary knowledge to understanding deep philosophical questions provide detailed explanations for the existence of what is observed or experienced by any individual human being, whose own self and consciousness are also deduced to have evolved from clearly specified processes for those divisions of nothing. Although Leuten [4] has detailed most of the steps involved in everything evolving from nothing that are well-substantiated with cited scientific evidence, some aspects of how individual halves of nothing developed into the most basic entities like atoms are based on hypotheses admitted to be mere educated guesses that could be modified and corrected with further logical reasoning. The major source of such philosophical uncertainty is created by the existence of particles like quarks, which are the observed components of all nucleons, and neutrinos which require further clarification on how they arise from divisions of nothing that create only two simple types of entities, which are exact and mutually attracting opposites of one another. This paper deduces how divisions of nothing could form into the primitive but somewhat more complex forms that characterize the universe's basic particles, which comprise all being and observed reality. It thereby modifies an existing theory that explains the details of how everything seems to have evolved from divisions of nothing by itself. (The recent evidence of patterns from a large collider of forces that are consistent with the mathematics of a Higgs boson but that are inconsistent with leading string theories of the universe [6]. supplies yet greater motivation to expand on [2]. Explanation for everything. In particular, the very existence of forces consistent with the existence of a Higgs boson might simply reflect the mathematical construct of that still unobserved particle, which can just represent some of the effects of probability wave functions of halves of nothing concentrated in points of space-time that are maximized by frozen attractions of fermions of opposite charges. Since the Higgs boson can only explain about 1% of anything's mass, leaving 99% unexplained, and since the question of what might determine the mass of that hypothesized particle remain unanswered [7] theory of everything that may account for all of mass seems to merit more attention than the Higgs itself).

The modifications seem to lead to implications that are not only more testable than Leuten [2] theory but also more likely to be confirmed in scientific tests. As such, the modified theory here may be of even greater relevance to philosophers seeking revolutionary new insights on the nature of everything as well as to physicists pursuing path-breaking inventions derived from the mathematical implications of such insights in quantum physics. Novel hypotheses on the nature and purpose of consciousness are drawn that may also be examined in further research. In Section I, this research logically shows how the two basic entities consisting of positrons and electrons can very plausibly form into particles like protons, neutrons, and more exotic particles in a fashion that is consistent with scientific observation, cosmic phenomena, and well-accepted quantum theory. The theory developed here leads to hypotheses that may be scientifically examined and tested using quantum mathematics and observations in physics relating to extreme conditions such as black holes, as indicated in Section II. Although Leuten [2] has developed an alternative hypothesis on the composition of quarks, nucleons, and neutrinos, it required split probability wave functions of potential for an individual entity that

exist simultaneously in collapsed form within the same universe at separate and potentially widely dispersed points in space, as may be very unlikely and that may be extremely difficult to test outside a black hole. While it has proven possible to split a wave function of an atom into separated entities and then even recombine them (Aaron) [8], the logically deduced hypothesis on the composition of quarks and other basic particles that is developed in this paper seems much more plausible, or at the very least represents an additional possibility that may be more easily testable/verifiable scientifically. Although [2] developed an alternative hypothesis on the composition of quarks, nucleons, and neutrinos, it required split probability wave functions of potential for an individual entity that exist simultaneously in collapsed form within the same universe at separate and potentially widely dispersed points in space, as may be very unlikely and that may be extremely difficult to test outside a black hole. While it has proven possible to split a wave function of an atom into separated entities and then even recombine them [8], the logically deduced hypothesis on the composition of quarks and other basic particles that is developed in this paper seems much more probable, or at the very least represent an alternative or additional possibility that may be more easily testable/verifiable scientifically. (Confirmation with the scientific evidence is important for metaphysical theories in order to give them practical meaning, in contrast to arbitrary postulation of doctrines of unknown origin or cause such as with respect to assuming an external creator or a set of laws whose existence isn't explained).

This paper adds to the evidence on the true nature of all being that is based on simple divisions of nothing and that then lead to the appearances of all "reality" observed by conscious individuals who themselves evolved from the resulting processes of attractions of opposite halves of nothing. With the perspective of the new theory, an analysis of consciousness and its development from nothing is provided in Section III that leads to new insights how the electromagnetic brain waves caused by the attraction of opposite halves of nothing (which travel in different directions in the temporal dimension) lead to consciousness, which itself enables the combinations of divided nothingness that make up human beings to adapt to the future through improved forecasting and planning. This section provides new insights on the nature and origin of conscious thought, which is hypothesized to have created each multiverse through the quantum collapsing of the wave functions of possibility associated with dividing nothing by it. Potential tests of the hypotheses on consciousness are explained in Section IV. Section V supplies a conclusion on the theory.

## Logical Conclusions on how Atoms Develop Divisions of Nothing

Divisions of nothing into the simplest forms of electromagnetic fields of attraction moving in opposite directions in time in the form of positrons and electrons may explain the construction of more complex combinations of them that are currently assumed by science to be basic particles such as quarks [2]. Quarks, which are the fundamental substances of atomic nuclei, include up and down versions of them that have charges of  $2/3$  and  $-1/3$ , respectively [9]. They combine in threes to form protons, which have two up and one down quarks, and neutrons, which have two down and one up quarks, none of which have ever been observed alone [10].

The spontaneous creation of positrons and electrons out of nothing that happens all the time, often without the mutual annihilation involved in merging [11], may simply explain the origination and nature of nucleons and their quark components. In particular, quarks

could form when two electron-positron pairs simultaneously pop up close enough to each other in a square formation for the mutual electromagnetic pull of the electrons on opposite corners of the square to draw the positrons toward them into equidistant mutual tugs that freeze their movement and spins in two spatial dimensions. (Most divided pairs of nothing travel in all three spatial dimensions as well as in time. Divisions of nothing that cause the opposite identical halves to move in different temporal directions while being attracted to each other can move in space when they merge at the same point in time with light photons, which are reunited halves of nothing travelling instantaneously through all temporal points and thus moving only across the spatial dimensions. Still divided pieces of nothing that combine with those photons also move in space as well as through time in alternate infinitesimally small moments called Planck units. When still divided pieces of nothing switch between travel in time to spatial movement, they spin the direction of their component charge(s) through space, and when they switch back from movement in space to travel in time, they also spin but in the opposite direction. The spin produces a second spatial dimension because the switching between movement in space and time slows the passage of temporal moments and bends space-time. The curving of time back on itself as the divided pieces of nothing move toward the end of time in opposite temporal directions (when the past meets the future as in the connection between universes and anti-universes in black holes) creates the third spatial dimension. However, it is possible to trap particles in a smaller number of dimensions, such as with magnets Brooks [12], thereby creating the partial particles which have characteristics of quarks and other entities typically assumed to be "basic" just as atoms once were).

So trapped in a 2-dimensional relationship, the resulting form might break up into partial particles with fractional charges. In particular, each of the four fermions in such a formation would have  $1/3$  of their charges directed toward each of their opposite halves of nothing, so that  $2/3$  of their charges are constantly focused internally within their squared formation, leaving only  $1/3$  of each fermion's charge directed externally. The pair of net  $1/3$  external charges (for a total of  $2/3$ ) and two  $-1/3$  charges thus resemble one up quark (with a charge of  $2/3$ ) and two down quarks (each with a charge of  $-1/3$ ) that sum to the net charge of  $2/3 - 1/3 - 1/3 = 0$  for a neutron as well as to the summed  $1 - 1 + 1 - 1 = 0$  charge of the component fermions. Because the  $-1/3$  charges are observed to be on the outside of the neutron spinning around an assumed middle  $2/3$  quark Smith [10], this hypothesis is fully consistent with scientific observations of the neutron, as the middle quark seems to reflect the sum of the two external charges of  $+1/3$  apiece for the two positrons trapped in attractions to their identical opposites in a squared formation spinning on the axis formed by the negatively charged electrons on its corners.

Protons likely also represent formations of fermions of opposite charges frozen in two dimensions via an equidistant attraction of their opposites. Based on the scientific evidence, protons seem to consist of a particle trio of one electron and two positrons trapped in a triangle of attractions that freezes the electron in equidistant mutual tugs on each of the positrons, which are both attracted to the electron but prevented from unifying with it because they are the same distance from it and can't both merge with a single opposite. The mutual repelling of the two positrons that binds those two in place via a permanent attraction to a single electron in a triangular formation leads to partial particles resembling quarks insofar as the positrons would have  $+2/3$  of their total charge directed internally because  $+1/3$  of each's is trapped in the attraction to the electron while the electron would have only  $1/3$  of its full charge of  $-1$  pointed externally due to a pair of its  $-1/3$  charges

directed toward the two equidistant positrons. Only the external charges of the three trapped fermions consisting of  $2/3 + 2/3 - 1/3 = 1$  are then observable to the outside world. Given that the location of particles becomes so uncertain that they tend to blur into adjacent spaces at cold temperatures when spatial movement over time is limited Brooks [13], a threesome of positrons and electrons frozen from moving from their two-dimensional relationship might easily blur into appearing as a single nucleon with three component partial charges in the form of quarks bound by a strong force. The full and component charges of both protons and neutrons that have been observed and that appear to smear two identical types of the hypothesized quarks on the outside around a loner quark in the middle Smith [10] are thus fully consistent with the hypothesis of nucleons consisting of electrons and positrons trapped in mutual attractions to each other.

Signs of gluons, which are widely thought to create the strong force that holds quarks together [9] but only appear to exist within quarks and nucleons themselves [14] and have never actually been observed, may only reflect the effects of the trapping of the attractions of fermions to each other and interactions with new divisions of nothing in the space between them [2]. The virtual points that appear to hold nucleons together may also merely represent such interactions. All the observed internal dynamics of nucleons may thus be explained. The binding of halves of nothing electromagnetically bound into a fixed position relative to their identical opposites in two dimensions of space that can revolve as a whole formation in all four dimensions and spin around with the partial charges on the outside.

It has been scientifically found that partial particles with partial charges form when electrons are trapped in 2-dimensional space [12], and so this theory of nucleons is consistent with actual observations. Thus, each observed quark in a neutron (proton) likely represents a fractional particle that is created when two electrons and two positrons (three fermions) are frozen into a 2-dimensional square (triangular) relationship. Besides forming in empty space, the frozen positions of trapped fermions of which nucleons are composed could have originated in situations of quantum singularity such as exist in black holes [2]. (Movement is constrained in a black hole [15]. Since particles with partial charges can form when there are restrictions on travel through space [12]; it seems quite likely that quarks and nucleons could form there. Black holes have characteristics very similar to those of exotic quantum particles [16] that exhibit singularities [15], which should enable fermions to be frozen into trapped positions. Because this universe is believed to have originated in a tiny space where there were singularities that cause gravity to be infinite [17] and because quarks and other exotic particles are thought to have sprung from the Big Bang that developed from this singular relationship. It seems very probable that the simple electromagnetic attractions of divided halves of nothing trapped in frozen relationships there formed many of the basic particles that have been observed by science [2]. Some scientists think that black holes devour information [18] and perhaps even evaporate energy in gravitational waves that have never been observed. However, in reality the energy and information in black holes likely form into separate anti-universes that travel backwards in time, just as black holes in anti-universes construct universes like the one in which we live, all in a circular association without a beginning or end [2]. The other universes to which black holes represent portals in a fashion mathematically consistent with quantum theory [19] may be moving in the opposite temporal direction because the singularity of a black hole allows particles which have entered to absorb more than an infinite number of photons which themselves are pulled by gravity into that same space or are created upon the merging of particles and

antiparticles tugged into the confines of a black hole. These particles would then move faster than light itself, thereby resulting in them switching the direction of their temporal travel. The initial inflation of this universe that created the multiverses of quantum physics [20] can be explained by such phenomena, as the black holes of anti-universes would result in the particles drawn into them moving forward in time at spatial speeds in excess of light photons until they slowed as photons are released as energy to create the expanding space that followed the Big Bang. The initial spatial inflation at speeds in excess of that of light thought to have occurred shortly after that explosive birth of the universe may be explained by this hypothesis).

Pairs of quarks that are observed to exist for very short periods of time outside a nucleon's triangular or square formation may represent other combinations of electrons and positrons in different geometric shapes that are unstable. Other basic particles, such as the mysterious and hard-to-detect neutrinos, may also derive from fermions trapped in equidistant attractions that are related to those in nucleons and that could originate in a similar fashion within extreme conditions like black holes. For instance, the myriad of nuclear explosions at the center of stars might conceivably result in neutrons absorbing a virtually unlimited number of photons created by these energetic processes. (The extreme gravitational pull of the concentrated mass of stars that bends space-time can result in the densely packed forms of the entire stellar body to explode [21] in a supernova that produces the light of ten billion suns [22], each of which also creates an enormous number of the photon particles of light. Such explosions of fermions in a small space reflect divisions of nothing reuniting to form light photons. There is no limit to how many photons can be in the same point of space-time as their instantaneous travel through time results in them having no concentrated presence at any temporal point. In addition, since they are their own antiparticles, their merging in the same space effectively results in them recreating themselves without changing form. Photons, which can also break back up into particle-antiparticle pairs, may be absorbed by fermions that then emit them in individual or multiple units as their energy is expended to enable movement or spinning).

Once doing so, the neutrons with their four fermions trapped in a two-dimensional square formation might move almost solely in the spatial dimensions at virtually the speed of light and thus have little or no mass. (When photons merge with charged fermions still moving in a single direction in time at a finite speed, the photons allow the absorbing particles to move in space instead of just in the temporal dimension [2]. The absorption of an almost infinite number of photons might create a near singularity that causes the absorbing particles to travel virtually always in space like photons with only a rare spin to travel in time. However, the still divided pieces of nothing that form neutrinos can't switch between backwards and forward movement in time like light photons, which do regularly spin in all four dimensions as those reunited halves of nothing called photons merely change temporal directions when they switch between spatial and temporal travel, insofar as they move instantaneously through space either backwards or forwards). Driven by the virtually infinite energy, these particles would only very rarely change to travel through time, and so their spin, which reflects their switching between temporal and spatial movement, generally appears to be fixed. (Instead of moving in space, absorbed photons can cause fermions to change their spin direction more rapidly, or oscillate between being directed in time or space if there are electromagnetic fields that inhibit the fermions' spatial travel over time. In particular, inhibited from spatial movement, they merely switch to temporal travel more frequently. However, because the entire square of four fermions trapped in 2-dimensional space that comprise

a neutrino can move through space as a whole as the component fermions are able in their frozen position to absorb an equal number of photons, the entire square formation is driven to travel spatially by the virtually infinite number of absorbed photons that, whose very large number results in that movement in space to be very rapid and occur without changing the spin direction).

Their frozen spatial position and spin direction, which inhibit their magnetic field from occupying all 4 dimensions of space-time, along with their net zero charge, might enable them to move through four-dimensional electromagnetic fields of matter that do change the direction of their spin and exist in all 4 dimensions without normally reacting with them. (A magnetic field, which changes the direction of its spin when it completes a full rotation with respect to switching from spatial to temporal travel and then back to movement in space, varies its electrical pointing in all three dimensions of space as it spins around. The direction of the electromagnetic influence or pointing for a field is normally reflected as a wave of possibility across all points in space, and so it appears to exist in or occupy all the spatial dimensions with some probability, unless it is polarized or collapsed on a single direction by contact with another wave function that has already collapsed onto a particular point on its potential. As an electromagnetic field alternates between clockwise and counterclockwise spinning its pointing in space, it influences/bends surrounding space because its switch between temporal and spatial travel and back slows the movement through time of the point in space-time that it occupies. Spin changes that reflect the recurring completion of switching between spatial to temporal travel and back again therefore inhibit the movement of the space-time points they occupy from moving temporally with the surrounding points. A change in spinning direction thus results in a quantum disconnect between points in space-time that creates a 4-dimensional field. Particles that don't bend space-time because they don't switch their spin can't react with other electromagnetic fields as their fields don't pass through the curved points of space-time occupied by fields which do change their spin).

In particular, the neutral charge of neutrinos neither attracts nor repels, and their absence in one of the dimensions inhibits their collision with electromagnetic fields occupying all the dimensions. Nucleons and electrons that have changing spins exist in all four dimensions and thus interact electromagnetically with each other, as with electrons attracted to protons in atomic nuclei in their orbits. However, electrons can normally pass through protons in nuclei without uniting with them because the proton's component three fermions are frozen in 2 spatial dimensions, despite the composite electromagnetic field of the nucleon with the rotating spin for its aggregate formation that causes it to occupy all four dimensions. The individual 2-dimensional component fermions of nucleons therefore can't merge with free electrons that exist in all 3 dimensions of space.

Only when they happen to collide with another object also trapped in two dimensions would they react with it, usually only bouncing off with no effect unless the conditions for nucleon decay are met, such as when there is application of sufficient force or the simultaneous passing of an electron. The characteristics of neutrinos that have been observed [23] are consistent with this theory of their composition and origin. (Note that the movement of neutrinos through other objects is caused by different circumstances than for fermions existing at very low temperatures [2]. In particular, a dearth of heat means fermions have few absorbed photons and little spatial movement, thus resulting in them travelling only through time. Without the energy to switch to spatial movement, there is little rotation of spin direction for cold

particles to warp space-time in all 4 dimensions much if at all. In addition, there is great uncertainty of even their location in space. At sufficiently low temperature and spatial speeds, they can move through other things because they occupy little or none of one dimension. They therefore conduct electricity well as superconductors as electrons can move through these objects with less interaction because such virtually spineless objects don't occupy all 4 dimensions, or at least not much in at least one dimension, and are scarcely present in any particular point in space with much probability. Even photons pass through without being absorbed because of the negligible occupancy in one dimension as well as the uncertainty of a position at all in space that gives them a small chance of being in any particular place. The superconductivity of cold fermions as well as the difficulty in heating them, and their uncertainty of position have been documented scientifically [24].

Neutrinos are known to emanate not only from the nuclear reactions on the sun [25] but also from cosmic events such as "convulsions of supermassive black holes" in the center of far-away galaxies that produce high-energy gamma rays [26]. As with the trapping of the component fermions of nucleons, the freezing of the particles' component four fermions may require the singularity of extremely high energy or of a black hole to produce them. (It is also conceivable for neutrinos as well as quarks to form in the massive cold vacuums that comprise much of space in the universe. In particular, particles with partial charges have been found at very low temperatures [12] where the lack of heat energy results in little movement [27], which in turn results in a blurring of their location [13]. As a result, pairs of positrons and electrons could appear in the vacuum of space so close to each other that they are trapped into electromagnetic pulls on more than one of their opposite identicals. Pairs of quarks and anti-quarks do arise spontaneously in a vacuum [28], as is consistent with this theory. However, since neutrinos would need to absorb a virtually infinite number of photons to have their particular characteristics, it would be necessary for an infinite number of immediately reuniting pairs of particles and antiparticles to appear at the same time as the trapped square formation of the neutrino's four fermions, and such an event may have a likelihood of 1/infinity that effectively implies a probability of zero).

While neutrinos might mutually annihilate completely (partially) upon any improbable contact with antineutrinos in their path if all (some of) their component fermions lined up exactly to merge with their identical opposites, many reach the earth where they pass through most "solids" without detection because they are uncharged partial particles trapped into 2-dimensional space.

The decay of a neutron into a proton, an electron, and an antineutrino seems to be related to neutrinos which have been emitted by the sun in its nuclear fusion reactions. Subsequent to their explosive creation, these neutrinos often travel to collide with atomic nuclei on earth in amounts that vary seasonally because the effect is diffused when the earth's slightly elliptical orbit causes it to be further away from the solar source of those neutrinos [25]. It therefore seems plausible that this form of nuclear decay on this planet involves a neutrino colliding with the internal force field of attraction of the four fermion components of a neutron. It thereby dislodges the nucleon's bonds temporarily and enables an electron to be forced out, perhaps through being repelled by an electron orbiting the atomic nucleus coming closer to the nucleon's component positrons at the same time. The collision then changes the spin of the neutrino and thereby slows its travel through space so that it is observable as an antineutrino byproduct of this form of decay.

Antineutrinos are identical to neutrinos except for having an

opposite fixed spin which may reflect differences in the locked positions of the positrons and electrons on the corners that result in their square shape rotating in a different direction. The changes in rotation between clockwise and counterclockwise [22] that reflect the effect of them switching from spatial to temporal travel and back again to start this rotating process over in the opposite direction for these particles/antiparticles virtually never happens because the virtually infinite number of photons incorporated into these ultra-fast neutrons/anti-neutrons called neutrinos/antineutrinos drives them through space without travelling in time unless they just happen to collide with another particle/antiparticle that also has its component electrons/positrons trapped in 2 dimensions of space (When neutrinos and antineutrinos collide with the internal bonds of atomic nuclei, they may switch momentarily to move in time instead of space as their spatial movement is temporarily impeded, thereby enabling them to be observed. The change in spin direction only rarely occurs for neutrinos and antineutrinos because the attraction of their four component fermions locks their spinning electromagnetic fields to move only in space while the virtually infinite photon energy they have absorbed causes them virtually never to switch to travel in time and thus alternate the rotational direction of their spin. Whereas other 4-dimensional electromagnetic fields can interact with any other object changing its spin direction, neutrinos and antineutrinos that don't normally switch the direction of their spin exist in a smaller number of dimensions and can therefore slip through 4-dimensional electromagnetic fields because they don't occupy a point in all four dimensions of space-time).

Neutrinos that are byproducts of the merging of an electron and proton into a neutron [9] may have an antineutrino catalyst. In particular, the form of the weak force that appears to replace a 2/3 quark with a -1/3 quark in the process of transforming a proton and an electron into a neutron and a neutrino by product [10] may actually result from an undetected antineutrino's interaction with the proton. Such an interaction may only be possible if an electron enters an atom's nucleus at the same time as the antineutrino's contact with the proton that temporarily unbinds its three fermions trapped in a triangular formation. The proton therefore combines with an additional electron to form into a neutron with its four-sided pull of two electrons and two positrons.

In particular, in proton decay, an antineutrino can momentarily dislodge the two positrons away from their attraction to the electron in their triangular position to become 3-dimensional entities without reverting back to their frozen position in the proton's triplet formation because of an attraction to an electron that appears simultaneously at a distance equal to that of the electron in the proton's trio of component fermions. This process may be most likely in stars such as the sun where extreme concentration of fermions and energy increase the likelihood of such interactions. The result would be a square of four fermions of offsetting charges that are trapped in a formation that has all the characteristics of a neutron with its net neutral charge, slightly higher mass than a proton, and appearance of partial external charges that sum to be electrically neutral. The spin of an antineutrino involved in this process of transforming a proton into a neutron may change upon its contact with the decaying proton, thereby transforming it into a neutrino that is identical to an antineutrino in all other respects.

Particles with full charges, such as muons which have a charge of -1 and anti-muons with a charge of +1 [10], may represent neutrinos and antineutrinos combined with electrons and positrons. For instance, muons with a full negative charge could be formed out of a combination of a neutrino and an antineutrino that have six of the full

charges for their component eight fermions trapped into a triangle of attractions to identical opposites, with the other two having only  $2/3$  of their charges thus frozen internally. The result is a particle with an external charge of  $+1/3$  and  $-1/3$ , respectively. When this formation attracts an electron into their trapped formation in a high energy collision like the impact upon hitting nuclei in the earth's atmosphere, the positive external  $1/3$  charge of the eight frozen fermions becomes internal because of its attraction to the attaching electron. Only the  $-1/3$  charge of the formation is left external, and when that partial charge is combined with the  $-2/3$  external charge of the joined electron, which has  $1/3$  of its charge directed toward one of the neutrino's positrons, the summed full external charge of  $-1$  is created that is observed for muons. The external charges of  $-2/3$  and  $-1/3$  might blur to appear as a single negative full charge, especially given the extreme speed of these particles. This hypothesis explains the observed byproducts of muon decay, which consist of a neutrino, an antineutrino, and an electron. The muon may not be observed to switch the rotational direction of the spin of its electromagnetic pointing in space because it has, like its neutrino and antineutrino components absorbed a virtually infinite number of photons. As previously explained, such entities are driven by the energy to mostly travel in space with little switching to travel in time and thus, like neutrinos and antineutrinos, generally don't alternate the direction of their spins.

Particles with full positive charges such as anti-muons may be similarly created. For instance, if a neutrino and an anti-neutrino bound in a 3-dimensional shape capture a "free" positron into a locked position, the resulting formation would have a full charge of  $+1$  instead of the  $-1$  for muons. It would then decay into the positron, a neutrino, and antineutrino that are indeed observed.

The original free positron portion of an anti-muon here might originate from the transformation of a proton into a neutron, a positron, and a neutrino that could result from an antineutrino colliding with the proton along with a rapidly moving electron and positron. This forceful process could freeze the latter two oppositely charged fermions into a trapped position with an electron-positron pair of the proton while the proton's other positron is freed. With the spin of the antineutrino switched by the collision, the freed positron might combine with it to form the pion with its externally observed electrical charge of  $+1$  in a manner similar to muons with the net external charge of  $-1$  except that the neutrino formation attracts a free positron instead of a free electron.

Such formations may develop under the force of intense energy of stellar explosions. In such circumstances, the trapping of the 4 fermions of neutrinos and antineutrinos in 2-dimensional space may be temporarily broken, thereby enabling them to attract electrons and positrons freed from atomic bonds under the same conditions. The result is a very rapidly moving particle with a full positive charge like the anti-muons observed shortly after cosmic rays interact with the earth's atmosphere.

When cosmic rays collide with atomic nuclei, such as occurs on earth, they are slowed down so that their component partial charges are observable. Many such rays appear momentarily as positively charged pions [9] which are similar to anti-muons but have observable partial charges [10]. The pions decay almost immediately after being observed to transform into anti-muons and neutrinos, as might be consistent with the original components of cosmic waves actually being composed of two neutrinos, one antineutrino, and one positron (or 13 fermions trapped in electromagnetic attractions to each other) that split off a neutrino after the high-energy collisions with the forces on earth.

(Pions are categorized as mesons, which are thought to be composed of a quark-antiquark pair in numerous different combinations of conjectured "color" and "flavor" characteristics [10]. Although some mesons may consist of 13 positrons and electrons trapped in a frozen equidistant attraction, others may be composed of a different number of fermions electromagnetically bound to their opposites such as 6 or 9. The characteristics of different mesons such as with respect to mass that are usually assumed to be related to the conjectured "color" and "flavor" of the hypothesized component quarks may actually result from the trapping of a different number of fermions in them as well as to different formations for the bound fermions. Some mesons even have a non-fractional spin of  $-1$ ,  $0$ , and  $1$  (and are categorized as bosons as a result), perhaps because they are composed of a pair of electromagnetically bound triplet or quadruplet fermions whose component spins are fully offsetting, such as may be the case with two neutrinos, one antineutrino, and one positron that may reflect the 13 fermions of the pions observed in cosmic waves).

Thus, although most of the particles that are observed after cosmic rays hit the earth have full charges of the muon type [10], they originally consist largely of pions [9] that only later become anti-muons which have only about  $2/3$  the mass and unobservable partial charges. (The rapid switching of muons between corkscrewing left and right [29] could stem from a switch in the spin of the entire formation).

The finding that the byproducts of collisions of protons with antiprotons may be electrons, positrons, and neutrinos as well as photon energy [9] provides further support for this overall theory that all particles are composed of different combinations of electrons and positrons. In particular, when protons and antiprotons collide in a particular way, not all of the component fermions may merge with one another into photons. Instead, some may be trapped into a new square formation that has the characteristics of a neutrino under the impact of the high energy that is released when matter and antimatter meet.

Associations between cosmic observations has led to the implications that most of the universe consists of dark matter and dark energy that have never actually been observed, with the universe being estimated to be composed of 22.7%, 72.8%, and 4.8% of dark matter, dark energy, and observable matter [30]. Dark energy, which is hypothesized to maintain the expansion of the universe despite the pull of gravity [22] has a simple explanation in the form of the simultaneous creation of matter and antimatter out of the vacuum of space [4], insofar as the "particles briefly bubbling into and out of existence imbue every cupful of space with the energy needed to accelerate the universe" [31], as is consistent with the theory of this research indicating that everything derives from the splitting of nothing. In particular, the creation of mutually annihilating particles and antiparticles in a vacuum [28] can create an enormous amount of energy [32] that may be sufficient to explain the effects of the still unobserved dark energy. Dark matter might be explained by the same divisions of nothing, except that those opposite pairs of divided nothing, instead of mutually annihilating to create dark energy in equal positive and negative amounts of photon energy lasting less than a quantum of time before mutual annihilation in continuous occurrences that aren't synchronized across all space and thus exhibit energy, form dark matter when they have had their virtual wave functions collapsed into existence through contact with actual photons and matter in the form of starlight and cosmic rays [4]. New evidence indicating more gas in space than previously thought is consistent with this hypothesis, since the collapsing of virtual particles into matter and antimatter even for a quantum of time might result in effects similar to gases (and even more energy which reflect some of the

dark energy in existence). The newest scientific findings on dark matter and its effects not be impacted by even large collisions of galaxies [33] is consistent with the hypothesis that dark matter and its gravitational effects stem largely from the mass created by photons and cosmic waves collapsing a huge number of the virtual particles in the vacuum of space to constantly create non-virtual particles, which exist momentarily to create gravitational effects before they mutually annihilate to create dark energy.

Magueijo [34] has hypothesized that hidden extra dimensions might result in the creation of matter and antimatter out of nothing, but there is no evidence of such unobservable dimensions that are incorporated into string theories [28]. String theories, which postulate that everything consists of oscillating energy or vibrating strings whose characteristics are hidden in unobservable dimensions fabricated mathematically through several alternative mathematical frameworks with myriads of different possible parameter values [35], have no scientific evidence supporting them [28]. Although the concocted functions and additional dimensions of such theories are not comprehended, defined, or perceived, string theories may provide a useful foundation for mathematically explaining scientific observations on the nature of reality. The infinities that exist whenever dividing by zero [15] and that are innate to quantum relationships [28] also supply tools for developing mathematical solutions to the complex relationships existing in the reality of quantum physics. The simple concept of all reality being formed by different combinations of fields of attractions between opposite halves of divided nothingness traveling in different temporal dimension may enable a greater intuitive understanding of the quantum relationships observed in reality [2], and the new theory developed in this paper on how divided nothingness transforms into the basic particles that comprise everything may provide a better intuitive framework for developing, drawing together, and more precisely defining the mathematics of all existence.

### Testing the Theory

While consistent with known scientific observations, the theory developed here leads to implications that may be tested. For instance, if a quark were ever discovered to exist even for a moment such as through the collision of nucleons, the theory developed here that the mathematical constructs called quarks merely reflect combinations of electrons and positrons trapped in formations of electromagnetic attractions that result in only partial charges being observed external to those formations would be proven false. However, no quark in isolation has ever been observed, and traditional scientific theory doesn't expect to be able to exist because of the unusual nature of a "strong force" created by fabricated but unobserved "gluons" holding quarks together [36] that the theory developed here doesn't need to fabricate because it explains scientific observations on nucleons and other particles via the trapping of electrons and positrons in mutual attractions.

The theory developed here has a testable implication that could be examined. In particular, it may be possible to utilize magnetic fields or artificially created small black holes to trap electrons and positrons into positions that create nucleons and the exotic particles explained in this paper to consist solely of electrons and positrons trapped into position. While the amount of energy required to do so may be large, colliders are already decomposing protons into various combinations of energy and fermions that are consistent with the theory developed in this paper, and so it may soon be feasible to conduct such a test that could also pave the road for many novel inventions based on the theory.

In addition, the imaginary and infinity mathematics of quantum

physics [28] may be used to develop other implications of the theory developed here and thus enable specifications of other hypotheses implied by the freezing of positrons and electrons in mutual attractions that create nucleons and exotic particles like muons in interactions in restricted dimensional spaces and black holes. Such quantum mathematical analysis, potentially with the aid of computerized simulations of particle interactions under extreme conditions difficult to solve with even the most powerful mathematics or reproduce even with the most powerful colliders, might also enable derivation of relationships implied by the theory that can be examined in light of past or future reactions/associations in actual physical observations conducted scientifically.

The freezing of time caused by the positrons and electrons trapped in offsetting attractions/repulsions that lead to quantum infinities may also be mathematically evaluated and scientifically. In the process, revolutionary new insights may be provided on gravity, mass, and the relationships between the strong and electromagnetic forces.

### The Evolution from the Basic Particles to Everything that Intrinsicly Includes Consciousness

The theory developed in this paper builds on deduced conclusion that many of the basic particles of the universe represent a transformation of fermions or divided halves of nothing with fully charged attractions to their opposites into particles with less than full integer charges when they are magnetically trapped in less than two dimensions. With the formation of quarks, neutrinos, and other basic particles from divisions of nothing, the evolution of atoms and everything follows in detail rather conclusively [4]. In particular, such basic building blocks enable an infinite variety of different combinations of divided pieces of nothing, and the forms of electromagnetic fields of attraction to their opposite identical halves that are best able to maintain themselves and reproduce are the ones that survive as time progresses into the future in this universe [4]. The latter law of evolution that naturally arises in the environment of forward-moving time encourages the combinations of divided pieces of nothing to adapt to the other forms that exist at any moment. The mixtures of electromagnetic fields of attraction that become increasingly aware of their environment are best able to adapt to the changing conditions of existence, survive, and propagate.

With electromagnetic field combinations that reproduce and maintain their self-perpetuating formations being naturally chosen over time by this evolutionary process, self-replicating enduring combinations called living organisms eventually develop. Life forms, which have learned to react to the environment and even appear to be aware of it, further evolve to develop centralized mechanisms of electromagnetic attraction to better adapt their relatively stable reproducing forms to the environment in a process that requires this "brain" to effectively be cognizant of external conditions in a process that involves electromagnetic chemical reactions in neurons and other cells that are learned via Bayesian analysis of the probabilities of past events of a similar nature having positive or negative effects on survival and reproduction [2]. Human beings represent a present culmination of this process on earth, as they are not only aware of external phenomena but also of themselves [4]. This consciousness developed from human ancestors becoming analytically cognizant of the future in order to better adapt to it, as opposed to just react to present stimuli, in a long process which motivated people to learn to be aware of themselves so that they could predict their own actions that were increasingly affecting the future environment [2]. (Although all animal learning could stem from mental simulations of events based

on the past [37], including during dreams [2], and although any entity with a form of empathy may be able to learn from others through empathetic simulation of others' actions [37], humans may be alone in being self-aware of these simulations, with this consciousness having evolved in order to enable them to predict different possible actions of themselves and others in the future in a process that allows them to logically determine the best choice among the various simulated results of those actions [2]).

Human consciousness, which originally evolved from subconscious learning to optimally react to the environment, consists of both basic categorizations of sensations and experiences and categorizations of such categorizations of stimuli that expand into ideas and concepts, including both a sense of self and a categorized spatializing of the forward passage of events in time [38]. Human brain processes naturally attempt to discover a relationship between concepts, actions, or entities that enable better adaptation to the environment [39] that is enabled through prediction and planning which are optimized via a recognition of the self because it allows forecasting the individual's own actions and effects on that future. The contemporary theory that both the sense of self and the ability to "decenter in time" to "narrate around a point other than the present [40] are acquired skills that children must acquire is consistent with the hypothesis that consciousness was a trait which evolved to enable individuals to anticipate and plan future actions.

The recent finding that stability in brainwaves is required for a minimum amount of time to enable conscious thoughts [41] implies that although stimuli, which individually cause groups of brain neurons to fire subconsciously at different slow frequencies which have to be synchronized at a higher beta frequency for conscious self-awareness [2], can be subconsciously categorized to draw connections between individual previous stimuli for unaware learning, but conscious categorizations of different types of stimuli and categorizations of categorizations in the form of total experiences or concepts are possible only with stable, synchronized brain cell activity. Once consciously categorized, subconscious brain activity can draw connections between not only stimuli but also total experiences or concepts, which have already been consciously categorized, to induce very creative insights and effective actions. Actions induced subconsciously are typically based on simple algorithms which focus on the most important of the possibly many criteria relevant to the determining an action as is consistent with subconscious algorithms and creative insights being determined by neural firings at slow frequencies that can draw connections between not only similar stimuli but also total experiences and concepts that prior conscious thought has categorized into comparable individual stimuli that cause slow neural firings.

While a synchronization of neural firings enables subconscious categorization into total experiences, self-awareness of those experiences requires a categorization of categorization of experiences called the self. The categorization of neural firings to create the self and self-awareness may only be enabled by a cortex having sufficient capacity to synchronize and stabilize neural firing across the brain and thus enable conscious thought and self-aware categorizations of neural firings. Such capacity evolved over time in human beings as their categorizations of categorizations of stimuli became complex enough to have neural firings which reflected an anticipation of stimuli in the future that required a prediction of their part/influence in that future environment. The categorization of the neural firings that create the concept of the self and self-awareness was learned in order to have categorizations of neural firings that predict self-experience in that

future and the individual's own likely actions in that future based on the knowledge of the self.

Once the concept of the self-awareness was created through a categorization of brain cell firings, that self could also be utilized in subconscious processing, including in dreaming. The subconscious is typically involved in drawing connections between the vast amounts of information and categorizations of information stored in the neural firings that can optimize actions and that can also lead to insights on complex issues in a manner once considered to have emanated from a hierarchical god or godlike figure (who often was considered to be the inner voice involved in thought) but eventually became recognized by a separate self as the power of gods/leaders was brought into question by earth-shaking events [38]. (Human will, whose potency is magnified by resonance with other people's wills as well as by judicious/conscious choice of future actions, which tend to become more powerful as time progresses, essentially reflects the collapsing of wave functions in the present/future, thereby excluding some past events that could never have occurred given the present/future occurrence. They are part of the process of human beings in the aggregate controlling the present and future as well as the past, with those individuals farther in the future having an even greater influence on the past through their likely greater will power selecting future events that make impossible many past occurrences (such as the extinction of humanity through war, environmental catastrophes, etc). Since there is some evidence that a primitive consciousness may exist in human babies as young as 5 months old [42], it is conceivable that their will to exist influences past events like the procreative acts that created them. The lust and love that drive humans toward procreation may very well stem at least partially from the will of those future offspring to exist, as well as from evolutionary pressures to perpetuate the species that themselves may derive from such reverse temporal causality. In any event, the desire to unify with a partner of the opposite sex remains a mere fractal representation of the basic tug of divided pieces of noting on their opposite halves that forms everything).

The categorizations of combinations of neural firings developed to expand humans' ability to survive and procreate into the future in a fashion that was aided by the stable, synchronized neural firings that create the categorized self and human self-experience. In particular, the human planning and actions were optimized via that categorization of the self (and internal or external stimuli experienced by the self) because such categorizations and categorizations of such categorizations enabled predictions of not only the actions of the categorized self but also of the categorized environment ever more influence by that self. For instance, the categorized self-awareness of that planning and other experiences allowed simulation of different possible human actions in the future to be compared subconsciously with other categorized neural firings based on past experiences and categorized concepts. The simulations of the future that involve the firing of a similar set of neurons involved in remembering similar past events [43] are especially useful for categorizing neural firings associated with plans optimized for the future environment that was increasingly controlled by such expanding planning as time advanced.

Language facilitates the human categorizations which are formed from similar combinations of neural firings in the brain that cause further firings to categorize similar experiences and concepts for optimal reactions to different situations perceived through further categorizations of stimuli. As with all neural firings, the firings of the brain cells inducing words are merely chemical reactions that create electromagnetic effects or waves which are measurable and

may be subconsciously experienced by others. All those chemical and electromagnetic reactions merely reflect the interactions of various combinations of the electromagnetic fields of electrons and positrons those themselves are caused by the attraction of a divided piece of nothing to its opposite half moving in the reverse direction in time [2].

Emotions, which are also just combinations of neural firings that induce neural firings elsewhere in the brain that can lead to neural activity inducing physical or other actions, are an important part of human thought. Human emotions evolved to motivate neural reward structures or firing combinations that prompted further neural activity leading to cooperation in groups of individual humans, as was necessary for the survival of the otherwise too weak and slow human species [2]. Once consciousness developed, emotions still functioned for the same purpose, but they were categorized and experienced as such consciously. Human emotions are actually essential in optimal decision-making as they permit weighing of information and connected experiences [44]. Emotions can also be important in subconsciously influencing others through electromagnetic waves and photon emissions [45]. However, human emotions themselves can be affected by conscious thought that can induce different combinations of neural firings that affect further combinations of neural firings associated with self-aware thoughts, categorizations, and decisions to take action.

The neural firings involved in categorizations that effectively facilitate planning can also collapse the wave functions of possibility for other divided halves of nothing in the environment in the past, present, and future. Consciousness may have thus enabled the very collapsing of the divided halves of nothing into separated positrons and electrons which evolved to form the very human beings who collapsed them into existence. In particular, the collapsing of the wave functions of potential for divisions of nothing in the future that is enabled by humans' conscious predictive abilities, which allowed them to actively plan for and increasingly control the future as well as the present [4], may have also have restricted the set of possible events that could have occurred in the past, because some past events are not consistent with the willed occurrence of future ones selected by humans. (Although new Experiments are already being planned that would further prove the direction of temporal causality to be joint or ambiguous [46] has previously explained how current events more generally collapse wave functions of possibility in the past).

In particular, the mere collapsing of waves of potential human action of any type in the future is inconsistent with nothing in the past remaining an uncollapsed wave of potential that sums and equals nothing, thus collapsing that past wave function of nothing into a division that led to the existence of human beings.

The theory that the essence of everything consists of opposite halves of nothing travelling in different directions in time implies that consciousness, which evolved for better adaptation to that reality in the temporal direction, may have special importance in determining both past and future events. For instance, the known laws of quantum physics that permit reversed temporal causality may allow future people, who may have a higher level of consciousness that enables them to plan better for their own future through processes that include collapsing the wave functions of their past, could affect the lives of those living today [2]. (The hypothesis that Boltzmann brains (developing spontaneously out of random vacuum vibrations) would dominate the universe if everything were truly random [47] is inconsistent with those very random vibrations. In particular, according to quantum physics, the wave functions of possible random vibrations would sum to nothing unless they are collapsed by observation or contact with an entity that

has a collapsed wave function such as a human being, and so conscious entities such as people are necessary for the existence of anything, including Boltzmann brains. Such conscious entities collapsing past wave functions to enable their evolved existence are much more likely than effectively inanimate Boltzmann brains, which are extremely unlikely to form, In fact, Boltzmann brains may be outright impossible because the existence of people (and their wills that create all) might not allow them, just as these human creators of all don't allow for an external deity or an independent omnipotent being that would collapse everything to nothing, as explained by Leuten [2] ).

An infinite number of multiverses of possibility continue to be thought by many scientists to exist and the collapsing of the quantum wave functions of possibility may enable each conscious individual to create their own selected multiverse of experience that is willed or consciously observed into existence in a fashion that resonates with the wave functions of possibility of all, including past, present, and future people, as [2] originally hypothesized. (Some of the descriptive reviews of Leuten's theories [2] provided as background in the footnotes to this article also supply improved reasoning behind the logic regarding some of the more vaguely justified hypotheses upon which they are grounded. For instance, footnotes 7 and 10-14 supply new deduced insights on issues relating to spin while footnotes 2-4, and 7 expand on why there are four dimensions. Additional insights on fermions absorbing photons are also provided in footnote 9).

It has even been hypothesized that humans could one day control the existing universe in which they live [48], possibly even destroying/replacing that universe [36]. This research's new theory explaining how the attractions of divided halves of nothing moving in opposite temporal directions developed into the basic particles of reality may not only help in understanding such multiverses of possibility but also in controlling or choosing them in different experiences of reality, including not only by collapsing the wave functions of particles and antiparticles (i.e., the divided fields of attracting halves of nothing) but also the temporal dimension upon which they travel in opposite directions (and which can be slowed down or stopped by divided halves of nothing trapped from moving in time via attractions to their opposite half travelling in the other temporal direction).

## Tests of Hypotheses of the Nature and Origin of Consciousness

The theory that consciousness evolved from the usefulness of planning for a future which the self could affect through choices of different future actions could be tested by examining the stability in synchronized brain waves that reflects consciousness occurs more often (if not exclusively) when a person is planning or simulating and deciding on courses of future actions. The hypothesis may also be tested by examining aboriginal peoples to see whether those such as hunter gatherers who may plan less for the future than agricultural civilizations show signs of less frequent stability in synchronized brain waves. People concentrating on the present, including those who are in very poor or desperate situations might exhibit less evidence of consciousness because they are driven to concentrate more on the present in order to survive. Cultures emphasizing the present, including contemporary hedonistic ones and those like some Buddhists who emphasize experiencing the moment, might cause an overall reduction in the frequency with which there is stability and synchronicity in people brainwaves.

The theory that the basic particles consisting of electromagnetic fields of attraction of opposites developed into the categorizations

of neural firings which create self-aware experiences that enable subconscious processing for optimal reactions may potentially be tested with measurements of brain firings and electromagnetic waves that lead to similar firings and waves measured while asleep and that lead to conscious learning and insights when awoken. While such an examination might be difficult, it is far from impossible. Some primitive predictive power has already been found in monkeys [49].

That such neural firings can collapse the wave functions in the past (and therefore theoretically collapse divisions of nothing earlier in time into non-virtual wave functions according to the reverse causality that exists in the reality of quantum physics, thereby enabling life and consciousness to evolve) may be even more challenging to test. However, scientific findings that human observation of light photons collapse the past wave functions of photons and thus have caused them to act as particles [50] provides an example of the direction such testing might take. An experiment for determining if human observation can change the past has already been proposed [51].

## Conclusion

This research has provided important deductions on some of the details involved in all being having evolved from nothing according to the laws of quantum physics. As such, it provides a unique contribution to metaphysics and all knowledge. (Some of the descriptive reviews of [2] theories provided as background in the footnotes to this article also supply improved reasoning behind the logic regarding some of the more vaguely justified hypotheses upon which they are grounded. For instance, footnotes 7 and 10-14 supply new deduced insights on issues relating to spin while footnotes 2-4, and 7 expand on why there are four dimensions. Additional insights on fermions absorbing photons are also provided in ref. [2]).

This logical analysis which indicates how simple divisions of nothing can develop into the slightly more complex forms that are observed to comprise all existence in this universe provides further support for a theory of how everything endogenously originated in a fashion that is consistent with scientific evidence.

Scientific tests are proposed for the hypothesized true nature of everything that is only divided nothingness at its core that could clarify all existence. New testable insights on consciousness itself are developed in this research that may revolutionize the understanding of the self-awareness of existence existing in human beings. Important implications may be drawn from these conclusions not only in disciplines such as psychology, philosophy, religion, and ethics but also in the physical sciences. Physics itself might become better integrated with ontology, and cosmology through testing of the various hypotheses developed here that relate to the most basic particles which are scientifically observed.

## References

- Omnes R (2008) Decoherence and Ontology. *Ontology Studies* 8: 55-63.
- Leuten K (2011) *The Meaning of Life, the Universe, and Nothing*. European Press Academic Publishing: Florence, Italy.
- Krauss L (2012) *A Universe from Nothing*. Free Press, New York.
- Murphy (2012) An Evolutionary Analysis of Being. *Islamic Perspective Journal* 7: 56-134.
- Aityan S (2012) The Notion of Quantum Time. *Ontology Studies* 12: 305-328.
- Skezak M (2012) Higgs Boson is too saintly and Super symmetry too Shy. *NewScientist* 12-13.
- Chown M (2011) Is the Universe Mocking Us. *NewScientist* 46-47.
- Aaron J (2013) Tick of Matter May Help Define the Kilogram. *New Scientist* 217: 14.
- Close F (2010) *Antimatter*. Oxford University Press: Oxford 51: 371-372.
- Smith T (2003) *Hidden Worlds*. Princeton University Press, United States.
- Ananthaswamy (2008) Did our Cosmos Exist Before the Big Bang. *New Scientist* 2686: 32-35.
- Brooks M (2009) 2D: Vistas of Flatland. *New Scientist* 203: 33.
- Brooks M (2010) Miracle Matter. *NewScientist* 1: 42.
- Courtland R (2010) A Quiet Vacuum Lets the Cosmos Expand. *NewScientist* 207: 10.
- Seife C (2000) *Zero: The Biography of a Dangerous Idea*. Penguin: New York.
- Zaanen J (2010) the Ads/CFT Correspondence. *NewScientist* 1: 35.
- Ananthaswamy A (2008) Did our Cosmos Exist Before the Big Bang. *NewScientist*.
- Ananthaswamy A (2013) Ring of Fire. *NewScientist* 1: 39-41.
- Moskvitch K (2013) Black Holes—Now Minus the Baffling Singularity. *New Scientist* 218: 9.
- Mullins J (2011) A Multiverse of Parallel Worlds. *NewScientist* 210: 8.
- Courtland R (2010) Big Bang Part II: the Second Inflation. *NewScientist* 1: 8-9.
- Krauss L (2012) *A Universe from Nothing*. Free Press: New York.
- Ananthaswamy A (2013) Ice Cube Sees Hint of Cosmic Neutrinos. *NewScientist* 1: 15.
- De Podesta M (2013) Absolutely Freezing. *NewScientist* 218: 42-45.
- Mullins J (2009) Decay for All Seasons. *NewScientist* 1: 42-46.
- Ananthaswamy A (2009) The Light that Came Late. *NewScientist* 1: 27-29.
- Segre G (2002) *A Matter of Degrees*. Penguin: New York.
- Penrose R, Knop F (2004) *the Road to Reality*. New York
- Chown M (2013) Is the Universe Mocking Us. *NewScientist* 1: 46-47
- Cho A (2010) Recipe for the Cosmos. *Science direct* 330: 1615.
- McKee M (2015) Dark Energy, the Harbinger of Doom. *NewScientist*.
- McTaggart L (2002) *the Field*. HarperCollins: New York.
- NewScientist* (2010) Exotic Atoms cloak their Antimatter 208: 15
- Magueijo J (2003) *Faster Than the Speed of Light*. Perseus Publishing: Cambridge, London.
- Barbour J (1999) *the End of Time*. Oxford University Press: Oxford.
- Brooks M (2015) Could We Destroy the Universe 1: 35.
- Biever C (2013) Machines Come to Life. *NewScientist* 219: 8-9.
- Jaynes J (1976) *The Origin of Consciousness in the Breakdown of the Bicameral Mind*. Houghton Mifflin Company, Boston.
- Lawton (2015) Beyond Belief. *NewScientist* 1: 28-33.
- Rowe B (2012) Retrospective: Julian Janes and the Origin of Consciousness in the Breakdown of the Bicameral Mind. *American Journal of Psychology* 125: 95-112.
- Ananthaswamy A (2015) A Stable Mind is a Conscious Mind. *New Scientist* 1: 10.
- Heaven D (2013) Babies Awareness Seen Blossoming. *NewScientist* 218: 16.
- Prescott T (2015) Me in the Time Machine. *NewScientist* 1: 36-39.
- Cheng P (2014) Decision Utility and Anticipated Discrete Emotions: An Investment Decision Model. *Journal of Behavioural Finance* 15: 99-108.
- Radin D (2006) *Entangled Minds*. Para view Pocket Books: New York.
- Hebden S (2013) Where Worlds Collide. *NewScientist* 218: 35-37.
- Becker A (2013) Death by Higgs Rids Us of Cosmic Brains. *New Scientist* 219: 13.

48. O'Neill S (2015) Could We Become Gods. New Scientist 1: 39.

50. Begley S (2007) Putting Time in a (Leaky) Bottle. Newsweek 1: 49.

49. Helen T (2015) Future Predicting Neurons Discovered in the Brain. New Scientist 1: 18.

51. Heaven (2015) Does Consciousness Create Reality. NewScientist 1: 33.