

The Fundamental Laws of the Universe

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Abstract

This essay attempts to meaningfully correlate the operation of the three fundamental laws in the universe with the most recent findings from the field of quantum physics. Concepts outlined in the book *A Treatise on Cosmic Fire* by Alice A. Bailey are reviewed and contextualized, suggesting ways in which the fundamental forces of nature can be theoretically unified. Parallels are drawn between these forces and their psychological counterparts, such as telepathy and magic. Ten original aphorisms “On Quantum Light and Love and Power” round up the discussion of the subject matter.

Introduction

A law is “the imposition (upon both the lesser and the more important) of the will and purpose of that which is superlatively great.”¹ Laws “express the divine Will, and lead to the manifestation of divine Purpose.”²

Throughout this essay the author quotes extensively from the Tibetan Master Djwhal Khul’s teachings, as transcribed in the books of Alice A. Bailey, the source of these two initial quotes; not because these books should be considered as an authority on the matter at hand, but rather because they represent, in the author’s experience, the best approximation articulated to date of facts revealed and validated by fellow enquirers who have preceded us in the search for truth.

Accordingly, there are three fundamental laws or principles in the universe. These are: i) the Law of Synthesis, ii) the Law of Attraction, and iii) the Law of Economy.³ These three fundamental principles, subsidiary laws themselves of some higher cosmic will and purpose, operate on three major levels of vibration: the physical (matter), the psychic (consciousness) and the spiritual (life).

The Laws of Nature operate on the lowest level, the material physical plane. Perfected in the first solar system, these principles have been formulated by scientists, from Newton to Einstein, into laws of motion relating energy, forces and matter, complying with the Law of Conservation, in space and time. The word “scientific” is used for

that which is proven and known to occultists, and deals with *facts*. The modern fact of the modern scientist is his approximation of a part, and often an infinitesimal part, of some greater whole, and even then it concerns only the most objective part of manifestation, for that which is the essence is not regarded as a reality at all by them as it is by the real occult knower. That which we see and can touch is but an *effect* of inner underlying causes... Yet a great step will have been made for, under the Law of Analogy, he will then be in a position to comprehend some of the major secrets of solar manifestation.⁴

The Laws of the Soul operate on the intermediate level, the plane of consciousness. Developing in the present second solar system, these laws have been systematized by esoteric psychologists into laws of group conscious evolution.⁵ The subsidiary Laws of Healing belong to this category.⁶

The Laws of Life, to be fully developed in a future, third solar system, are being currently

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experimented, experienced and expressed on the pioneering Path of Initiation. The Fourteen Rules for Group Initiation,⁷ as well as the Formulas on Initiation,⁸ represent an advanced study and application of these laws.

Three archetypal motions are associated with the three fundamental principles. These are the rotary, the cyclic and the forward motions, corresponding to the laws of Economy, Attraction and Synthesis, respectively.⁹ The spiral cyclic motion combines the forward with rotary motion, producing the expansive and contracting cycle of a three-dimensional spiral in simple harmonic motion, such as the systolic and diastolic cycle of the physical heart.

This cyclic motion is “the activity of all forms, viewing them from the aspect of consciousness, and of time. It is ... the activity of Vishnu in process of being perfected in this the second solar system.”¹⁰

The use of words such as “electrical” (as in electric fire), “magnetic”(referring to the force of gravity) and “radiation” should be viewed in the light of the emerging scientific vocabulary used around the time when the *Treatise on Cosmic Fire* was written. The lack of a scientific vocabulary in Djwhal Khul’s amanuensis would also need to be considered.¹¹

Table 1

	Law of Synthesis (Power)	Law of Attraction/Repulsion (Love)	Law of Economy/Adaptation (Light)
Laws of Life	Electric Fire	Solar Fire	Fire by Friction
Laws of the Soul	Rules/Formulas on Group Initiation	Laws/Rules of Group Life/Healing/Magic	Laws of Alchemical Transmutation
Laws of Nature	Nuclear Forces/Radioactivity	Laws of Motion/ Gravitational Force/	Electricity/ Electromagnetic Radiation/ Thermodynamics

Objective

The objective of this essay is to meaningfully correlate the operation of the three fundamental laws in the universe with the most recent findings from the field of quantum physics, in order to approach a “developed appreciation of the oneness of life”¹² and to “express the hylozoistic conception in terms of an exact science.”¹³ In doing so, the author will introduce his original thinking, and some poetic expressions of deeper truths, meant to inspire and provoke deeper thought, rather than establishing definite truths. Furthermore, inaccuracies may be inevitable artifacts, as detected by the high magnification lens of the concrete mind. The general contour of the description remains correct though, as poetic expressions of reality usually are.

The fundamental concept of hylozoism

underlies all the esoteric teaching upon the theme of manifesting life. All forms are composed of many forms, and all forms—aggregated or single in nature—are the expression of an indwelling or ensouling life. The fusion of life with living substance produces another aspect of expression: that of consciousness. This consciousness varies according to the natural receptivity of the form, according to its point in evolution, and to its position also in the great chain of Hierarchy.¹⁴

In searching for meaningful correlations, this study will also attempt to extract the meaning of the following statement:

One of the primary things the occult student should remember when considering the nature of spiral-cyclic activity, is that it has two effects.

First, it is an attractive force, gathering the rotating atoms of matter into definite types and forms, and holding them there as long as necessity demands.

Secondly, it [the attractive force] is itself gradually dominated by another and higher vibration, and through its spiralling progress through matter it sweeps those forms systematically nearer and nearer to another and stronger point of energy.¹⁵

Specifically, is the “spiralling progress through matter” referring to a “repulsive” aspect of the force inherent in the Law of Attraction?

Meaningful Correlations

Mechanics is the study of motion. Newton’s laws describe motion in the macroscopic world. Quantum mechanics describes motion in the subatomic world.

Motion could be viewed as an act of the will of some consciousness in some plane, or dimension, of space. The fundamental motions of expansion and contraction, attraction and repulsion, would correspond to: i) the sensations of pleasure and pain on the physical plane, ii) the fundamental *e-motions* of love and hate on the emotional plane, and iii) the acceptance or rejection of truth on the mental plane. These correspondences would operate both on the physical universe and on the metaphysical cosmos.

A fundamental principle of quantum physics is that energy, such as the energy of motion, can only be absorbed and released in discrete, indivisible units called quanta.

Light-matter [$E=mc^2$] behaves both as a particle (classical or Newtonian mechanics) and as a wave (quantum mechanics). The wave behavior was formulated by Schrodinger as an interference pattern, or interactions of the probability waves of a particle’s *simultaneous* location in space. The Copenhagen interpretation of quantum mechanics states that all the properties of a quantum particle remain in an

undetermined state, evolving as a wave, until they are measured. Upon measurement, the part of the wave associated with the measurement collapses into a definite state, the height of the wave being a measure of how likely it is to be found in that state.¹⁶

According to modern physics,¹⁷ there are three fundamental forces in the universe. These are the (strong and weak) nuclear forces, the electromagnetic force and the gravitational force. So far, no unified theory has been empirically proven integrating the gravitational force with the other two quantum forces. A hypothetical quantum particle carrying the gravitational force, the graviton, has been proposed. However, it is undetectable given its unfathomably small magnitude relative to the strong nuclear forces.

According to Djwhal Khul (1925), “*the Law of Economy is the law of the negative electron; the Law of Synthesis is the Law of the positive central life; whilst the Law of Attraction governs that which is produced by the relation of these two.*”¹⁸

Therefore, the Law of Synthesis can be related to the quantum **strong forces** binding protons and neutrons in the nucleus of an atom. The nucleons (protons and neutrons) are the “positive central life” of the atom. The neutron was discovered in 1932.

Second, the Law of Attraction can be related to the Law of Gravitation. In fact, Djwhal Khul explicitly mentions gravitation as a “subsidiary” law of attraction.

This law [Law of Gravitation] is for the non-occult student the most puzzling and confusing of all the laws. It shows itself in one aspect as the power, and the stronger urge that a more vital life may have upon the lesser, such as the power of the spirit of the Earth (the planetary Entity, not the planetary Logos) to hold all physical forms to itself and prevent their “scattering.” This is due to the heavier vibration, the greater accumulative force, and the aggregated tamasic lives of the body of the planetary Entity. This force works upon the negative, or lowest, aspect of all physical forms. The

Law of Gravitation shows itself also in the response of the soul of all things to the greater Soul in which the lesser finds itself. This law, therefore, affects the two lowest forms of divine life, but not the highest. It emanates in the first instance from the physical sun and the heart of the Sun. The final synthesising forces which might be regarded as forms of spiritual gravitational activity are, nevertheless, not so, but are due to the working of another law, emanating from the central spiritual Sun. The one is purely systemic, the other a cosmic law.¹⁹

Third, the Law of Economy can be related to electricity and the electromagnetic forces pulling the negatively charged electron to the positive nucleus of the atom. We may also consider the four Laws of Thermodynamics under this Law of Economy. The Law of Friction, a subsidiary law under the Law of Economy, “governs the heat aspect of any atom, the [electromagnetic] radiation of an atom, and the effect of that radiation [light] on any other atom.”²⁰

Radioactivity, or radioactive decay, is the process by which an unstable atomic nucleus releases energy by emitting radiation (e.g., alpha/beta particles, gamma ray, or electrons). Radioactive decay, mediated by weak nuclear forces, could be considered among the forces operating under the Law of Synthesis, although the decay could also be associated with the repulsive effect of the rotary motion characteristic of the Law of Economy.

The Law of Repulsion is one of the four subsidiary laws of the Law of Economy.²¹ The Law of Repulsion could be associated with *Pauli’s Exclusion Principle*, the quantum mechanical principle that states that two or more identical electrons cannot occupy the same quantum state within an orbital simultaneously. Such repulsion results “in their non-attachment and in their complete freedom from each other; it also keeps [particles] rotating at fixed points from the globe or sphere of opposite polarity.”²² This latter property can be related to the spin, one of the three properties of matter subject to the Law of Conservation. We are told that “paralleling them [three laws:

Attraction or Repulsion, Economy, and Synthesis] during evolution are their opposites, showing as Dispersion [alpha and beta radioactivity], Repulsion [opposite spin], and Differentiation [gamma radiation].”²³ [Author’s brackets]

In practice, the three Laws work together, possibly explaining why Djwhal Khul also refers to the Law of Attraction as the Law of Attraction *and Repulsion*.²⁴ The repulsion (typical of electromagnetic, not gravitational, fields) may be due to the rotational motion *within* the spiral cyclic motion formulated by this Law of Attraction. Furthermore, when Djwhal Khul refers to “that aspect of electrical phenomena which we call *neutral*”²⁵ He may not be referring to the neutron (undiscovered by 1925 when the *Treatise on Cosmic Fire* was published) but to the fact that the particle theorized by quantum physics as the carrier of the gravitational force (the graviton) is electrically neutral (electrical charge = zero).

However, upon further review of the *Treatise on Cosmic Fire* and the current scientific understanding of the Law of Gravitation, it may be concluded that repulsion is an *inherent* aspect of the second fundamental cosmic of Law of Attraction *and Repulsion* (spiraling cyclic motion), as confirmed by this quote

Radiation comes about when the internal, self-sufficient life of any atom is offset by a stronger urge, or pull, emanating from the enveloping greater existence of whose body it may form a part. This is nevertheless only true when it is caused by the [gravitational] *pull upon the essential life by the essential life of the greater form*; it is not due to the attractive power of the form aspect of that greater life.²⁶ [Author’s brackets]

Gravitational Force

Accordingly, radiation mediates the pulling, attraction effect of the gravitational force. Furthermore, quantum physics speculates that this pulling force is carried by the graviton. Radioactive decay, on the other hand, is mediated by weak forces which, for the purpose of this essay, have been included as part

of the nuclear forces. Therefore, it may be concluded that,

no atom becomes radioactive until its own internal rhythm has been stimulated to a point where the positive central life is ready for the imposition of a higher vibratory activity, and when the negative lives within the atomic periphery are repulsed by the intensity of its vibration, and are no longer attracted by its drawing qualities. This is due to the coming in and consequent response to the magnetic vibration of a still stronger positive life which releases the imprisoned central spark and causes what might from some aspects be called the dissipation of the atom. This process, nevertheless, in the majority of cases covers such a vast period of time that the human mind is unable to follow the process.²⁷

The law of gravitation, which is an aspect of the Law of Attraction, is the basic law of this, the second solar system.²⁸ As of 1998, it has been confirmed that the universe is expanding. A repulsion aspect of the force of gravity is required to explain the accelerating expansion of the universe. Thus, “dark energy” has been proposed as the repulsive force that is pulling the universe apart.²⁹

According to Adam Riess and Mario Livio in *Scientific American* (March 2016),

three main hypotheses [attempt to] explain the nature of dark energy. The leading hypothesis is that dark energy is a property of empty space itself. A second hypothesis is that the universe is permeated by an energy field called quintessence that counteracts the attractive pull of gravity. The third hypothesis is that there is no such thing as dark energy and that the accelerating expansion of the universe is caused by currently unknown properties of gravity that only manifest themselves over vast scales such as over the entire observable universe.³⁰ [Author’s brackets]

Therefore, the question, “is the “spiralling progress through matter” referring to a “repulsive” aspect of the force inherent in the Law of At-

traction?,” can be answered affirmatively. The spiral-cyclic activity is not only the result of the rotary action of matter itself, but also of “an impulse emanating from without any particular atom, and therefore extraneous to it.”³¹

Is this repulsive force mediated by the “radiation” of gravitational waves? Possibly, yes. In fact, gravitational waves were detected for a third time in 2017.³² However, the “principle of mutation” should be kept in mind. Djwhal Khul reminds us that we need to

recognise the extreme danger of dogmatising about these matters, and the risk of laying down hard and fast rules. Much must remain unexplained and untouched, and much also will serve to raise only questions in our minds. Comprehension is as yet impossible. Until fourth-dimensional sight is ours, it will scarcely be possible for us to do more than hint at, and get a passing vision of, the complexity and the interweaving in the system. It is not easy for us to do more than grip as a mental concept the fact that the rays, schemes, planets, chains, rounds, races and laws form a unit; seen from the angle of human vision the confusion [apparent randomness] seems unimaginable, and the key of its solution to be so hidden as to be useless; yet, seen from the angle of logocic sight, the whole moves in unison, and is geometrically accurate.³³

String Theory and Magic

The Law of Vibration is another of the four subsidiary laws of the Law of Economy, “dealing with the key note or measure of the matter of each plane.”³⁴ A string, or strand, is a medium upon which vibratory frequencies operate to produce standing waves. Sound is the primary source of vibration.

We are that

the worlds are the effect of sound. First life, then matter; later the attraction of the matter to the life for purposes of its manifestation and expression, and the orderly arrangement of that matter into the necessary forms. Sound [waves] formed the allying

factor, the propelling impulse, and the attractive medium. Sound, in an occult and deeply metaphysical sense, stands for that which we term “the relation between,” and is the creating intermediary, the linking third factor in the process of manifestation. It is the akasha. On the higher planes it is the agent of the great Entity Who wields the cosmic law of gravitation in its relation to our solar system, whilst on the lower planes [3rd Logos immanent in the space-time grid] it demonstrates as the astral light [electromagnetic radiation], the great agent of reflection, that fixes and perpetuates on its vibratory bosom the past, the present and the future, or that which we call *Time*. In direct relation to the lower vehicle [3rd Logos] it [sound] manifests as electricity, prana and the magnetic fluid. A simplification of the idea may come to you perhaps in the recognition of sound as the agent of the law of attraction *and repulsion*.³⁵ [Emphasis added]

The powerful effect of sound on matter is known to a Master of the Wisdom Who, by virtue of work accomplished, has been entrusted with

certain Words of Power [waves of sound]. By means of these Words He wields the law over other evolutions than the human, and through them He co-operates with the activity aspect of the Logos. Thus He blends His consciousness [2nd Logos] with that of the third Logos [rotary repulsion]. Through these Words He assists with the building work, and the cohesive manipulating endeavor of the second Logos, and comprehends the inner working of the law of gravitation for attraction *and repulsion* that governs all the functions of the second aspect logocic. Through these Words He co-operates with the work of the first Logos,

and learns, as He takes the sixth and seventh Initiations (which is not always done) the meaning of Will as applied in the system.³⁶ [Emphasis added]

The unifying superstring theories attempt to portray the subatomic world as tiny vibrating strands of energy from which all the matter, and all the forces, emanate in the living, hylzoistic universe. According to superstring theories,³⁷ the dimensions of space are ten. These could be associated with the solid, liquid and gaseous states of matter, plus the seven vibrational frequencies of the fiery plasma

(etheric, astral, mental, buddhic, atmic, monadic and logocic). The 11th dimension of the synthesizing “magic-brane” superstring theory would correspond to the cosmic astral plane. Therefore, may we expect a 12th dimension, the cosmic mental, added to the theory of all fundamental forces of nature known in this universe?

The human voice can be tuned to these ultimate vibrating strands of energy from which all elementary particles seem to originate. The voice can sound, in ever more perfect resonance, the creative words which imprint holograms in mental, astral and etheric substance in order to conduct the alchemical work of magical materialization. Energy does follow thought and the sound is the propelling impulse.

We are informed that

the devas in their serried ranks, work ceaselessly. Let the disciple apply himself to the consideration of their methods; let him learn the rules whereby that Army [The Army of the Voice], works within the veils of Maya.

This rule [Rule 10] refers to the work of occult investigation, which must be pursued at some time or another by all who seek ini-

tiation. Though it is not safe for the uninitiated to tamper with the parallel evolution of the devas, yet it is necessary and safe to investigate the procedure pursued by the builders, the methods followed by them, in reproducing from the archetype, via the etheric that which we call physical manifestation; their sounds must be somewhat theoretically cognised, and the sounds whereby they are swept into activity considered. This involves, therefore, the organised study, by all applicants, of:—

1. The purpose of sound.
2. The esoteric meaning of words, of grammar, and of syntax.
3. The *laws of vibration and of electricity*, and many other subsidiary studies which concern themselves with the manifestation of divinity and consciousness through the medium of deva substance and the activity of the controlling devas. The laws of the macrocosm will be investigated, and the correspondence between the activities of the microcosm, and the active manifestation of the macrocosm will be recognised.³⁸ [Emphasis added]

The most intractable koan remaining unsolved in quantum physics is the “measurement problem.”³⁹ According to the Copenhagen interpretation of quantum mechanics, the act of observation (measuring) collapses wave functions into particle functions. Furthermore, in the holographic world of quantum mechanics, a particle behaving like a wave can be observed to behave as a particle by a future measurement.

In this context, the “*the force-directing faculty of the human eye*” gains new *scientific* significance. “Among the coming discoveries, and among the next revelations of materialistic science,” we are told, “will be one which will concern itself with the force-directing faculty of the human eye, alone or collectively, and this will indicate one of the first stages towards the rediscovery of the third eye, or the Eye of Shiva.”⁴⁰

The whole subject of the magical work opens up, as indicated in the fourth rule of white

magic, “*the devas of the lower four feel the force when the eye opens; they are driven forth and lose their master.*”⁴¹

Telepathy

Law of Chemical Affinity is a subsidiary law of the Law of Attraction.⁴² This Law of Chemical Affinity “concerns the marriage of the atoms, and the romance of the elements.”⁴³ Is there a more poetic prelude to introduce the concept of quantum entanglement? If two particles are entangled, no matter how far away they are separated, quantum mechanics predicts that measurement of one particle leads to instantaneous wave-function collapse of the other particle.⁴⁴ The resonance of vibratory frequencies seems to cross the dimensions of space and time.

In a *Treatise on Cosmic Fire*, the Master Djwhal Khul informs us that,

As the sound of matter or of Brahma peals forth in his ears on all the planes, he will see all forms as illusion and will be freed, knowing himself as *omnipresent*. As the sound of Vishnu reverberates within himself, he knows himself as perfected wisdom, and distinguishes the note of his being (or that of the Heavenly Man in whose Body he finds place) from the group notes, and knows himself as *omniscient*. As the note of the first or Mahadeva [Shiva] aspect, follows upon the other two, he realises himself as pure Spirit and on the consummation of the chord is merged in the Self, or the source from which he came. Mind is not, matter is not, and nought is left but the Self merged in the ocean of the Self [*omnipotent*]. At each stage of relative attainment, one of the laws comes into sway,— first the law of matter [Economy], then the law of groups [Attraction], to be succeeded by the law of Spirit [Synthesis] and of liberation [Repulsion].⁴⁵ [Emphasis and brackets added]

On Quantum Light and Love and Power

The “marriage of the atoms, and the romance of the elements” may be expressed

in ten seed thoughts or aphorisms, representing the author's original contribution to this subject.

1. A fundamental principle of quantum physics is that energy can only be absorbed and released in discrete, indivisible units called quanta. Expressed per unit of time, energy is power.
2. Motion is an act of the will of some consciousness in some plane, or dimension, of space. As above, so is below.
3. Matter is energy and energy is *enlightened* matter. The lightness of matter behaves both as particle and wave.
4. Love also behaves both as particle and wave. It can be absorbed and released in discrete, indivisible units called heartbeats. It can also be expressed and perceived along a smooth continuum as the much subtler force of gravity shaping the multidimensional geometry of right relations in space.
5. Energy follows thought. The act of observation collapses waves into particles.
6. The memory of time does not determine present or future events. A particle behaving like a wave can be observed to behave as a particle, again.
7. Anything that can happen does happen, somewhere. There are many worlds existing as virtual parallel universes in the holographic reality of quantum mechanics, the science of energy and motion.
8. Quantum teleportation is a particle's telepathic experience of entanglement in the space lattice. Quantum light conveys omnipresence, and gravitational love conveys omniscience, in the living, vibrating grid of space.
9. The unifying superstring theories attempt to portray Ariadne's weaving threads of love and light throughout the world as tiny vibrating strands of energy from which all the matter, and all the forces, emanate in a living, hylozoistic universe.
10. Spiritual initiations are radioactive expansions of consciousness, motions into *deeper* dimensions, or vibratory frequencies, *within* space. Initiations are attained and experienced

in quantum leaps of measurable observations, soul recognitions and spiritual revelations.

Concluding Remarks

[T]he revolutionising scientific discoveries which can be traced down the centuries, such as the formulation of the Law of Gravitation, the circulation of the blood, the ascertainment of the nature of steam, the discovery by man of that form of electrical phenomena which he has harnessed, and the more recent discovery of radium, are in their own department (that of the Mahachohan), analogous to the effort made during the last quarter of each century to stimulate the evolution of men through a further revelation of some part of the *Secret Doctrine*. Newton, Copernicus, Galileo, Harvey, and the Curies are, on their own line of force, lightbringers of equal rank with H. P. B. All revolutionised the thought of their time; all gave a great impulse to the ability of man to interpret the laws of nature, and to understand the cosmic process, and only those of circumscribed vision will fail to recognise the unity of the many force impulses emanating from the one Lodge.⁴⁶

The Quest for the Holy Grail of Quantum Physics is to unify the three major forces of the universe (strong/weak nuclear forces [electrical fire], electromagnetism [fire by friction] and gravitation [solar fire]). However, the “graviton” is almost certain to remain undetected given its unfathomably small magnitude relative to the strong nuclear forces. The vast gravitational force holding solar systems and galaxies together is 10^{40} (10 to the 40th) times smaller in magnitude than the nuclear forces. However, when we realize that such strong forces are so limited in scope (i.e., effective at very short subatomic distances) and that the gravitational Law of Attraction, —the Law of LOVE, the MAGNETIC power of CONSCIOUSNESS—is so vast in its expanse, then we may begin to understand the words of the Initiate Paul “And now these three remain: faith, hope and love. But the greatest of these is love.”⁴⁷ Like Paul, “I pray that you [and all of us], being rooted and grounded in love,

may have the power [4th dimensional consciousness], together with all the saints, to comprehend *the length and width and height and depth* of His love,”⁴⁸ in Whom “we live and move and have our being.”

¹ Alice A. Bailey, *A Treatise on the Seven Rays: Volume 4: Esoteric Healing* (New York: Lucis Publishing, 1953), 30.

² Alice A. Bailey, *A Treatise on the Seven Rays: Volume 2: Esoteric Psychology II* (New York: Lucis Publishing, 1942), 227.

³ Alice A. Bailey, *A Treatise on Cosmic Fire* (New York: Lucis Publishing, 1925), 569.

⁴ Ibid, 1028.

⁵ Bailey, *Esoteric Psychology II*, 85-200.

⁶ Bailey, *Esoteric Healing*, 523.

⁷ Alice A. Bailey, *A Treatise on the Seven Rays: Volume 5: The Rays and the Initiations* (New York: Lucis Publishing, 1960), 3-320.

⁸ Alice A. Bailey, *Discipleship in the New Age II* (New York: Lucis Publishing, 1955), 243-439.

⁹ Bailey, *A Treatise on Cosmic Fire*, 35-45.

¹⁰ Ibid, 1034.

¹¹ Alice A. Bailey, *The Externalisation of the Hierarchy* (New York: Lucis Publishing, 1957), 58.

¹² Alice A. Bailey, *Glamour: A World Problem* (New York: Lucis Publishing, 1950), 174.

¹³ Bailey, *A Treatise on Cosmic Fire*, 1070.

¹⁴ Alice A. Bailey, *Telepathy and the Etheric Vehicle* (New York: Lucis Publishing, 1950), 182.

¹⁵ Bailey, *A Treatise on Cosmic Fire*, 1034.

¹⁶ <https://plato.stanford.edu/entries/qm-copenhagen/> (accessed June12, 2018).

¹⁷ Cern: “The Standard Model,” <https://home.cern/about/physics/standard-model> (accessed June12, 2018).

¹⁸ Bailey, *A Treatise on Cosmic Fire*, 1167.

¹⁹ Ibid, 1171.

²⁰ Ibid, 219.

²¹ Ibid, 144.

²² Ibid, 144.

²² Ibid, 219.

²³ Ibid, 330.

²⁴ Ibid, 275.

²⁵ Ibid, 1166.

²⁶ Ibid, 1063-1064.

²⁷ Ibid, 1075.

²⁸ Alice A. Bailey, *Initiation, Human and Solar* (New York: Lucis Publishing, 1922), 66.

²⁹ NASA, Science Beta: “Dark Energy, Dark Matter,” <https://science.nasa.gov/astrophysics/focus-areas/what-is-dark-energy> (accessed June12, 2018).

³⁰ William Reville for *The Irish Times* <https://www.irishtimes.com/news/science/dark-energy-the-repulsive-force-that-is-pulling-the-universe-apart-1.2736328> (accessed June12, 2018).

³¹ Bailey, *A Treatise on Cosmic Fire*, 1031.

³² William Reville for *The Irish Times* <https://www.irishtimes.com/news/science/dark-energy-the-repulsive-force-that-is-pulling-the-universe-apart-1.2736328> (accessed June12, 2018).

³³ Bailey, *A Treatise on Cosmic Fire*, 597-598.

³⁴ Ibid, 219.

³⁵ Alice A. Bailey, *Letters on Occult Meditation* (New York: Lucis Publishing, 1922), 53-54.

³⁶ Ibid, 263.

³⁷ <http://www.superstringtheory.com/> (accessed June12, 2018).

³⁸ Bailey, *Initiation, Human and Solar*, 203.

³⁹ The Information Philosopher. "The Measurement Problem." <http://www.informationphilosopher.com/problems/measurement/> (accessed June12, 2018).

⁴⁰ Bailey, *A Treatise on Cosmic Fire*, 1008.

⁴¹ Ibid.

⁴² Ibid, 1166.

⁴³ Ibid, 1168.

⁴⁴ Hong Kong University of Science and Technology. "Quantum entanglement: Violation of Bell's inequality on frequency-bin entangled photon pairs." *Science Daily*. <https://sciencedaily.com/releases/2017/05/170508083227.htm>. (accessed June12, 2018).

⁴⁵ Bailey, *A Treatise on Cosmic Fire*, 218-219.

⁴⁶ Ibid, 1037.

⁴⁷ Corinthians 13:13, New King James Version (NKJV).

⁴⁸ Ephesians 13:17, (NKJV).