

**Urantia Foundation Scientific Symposium IV**  
The Evolution of Human Knowledge—100 Years Later

**Quantum Entanglement and the Idea of One**

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**0.0 Preface. The Authenticity of The Urantia Book.** This Scientific Symposium IV asks the following questions: "Have scientific discoveries conflicted with revealed concepts? Or do they confirm and reinforce them? We invite science enthusiasts who are longtime students of *The Urantia Book*<sup>1</sup> to provide an overview of the past 100 years within their discipline, and share their knowledge of how we have progressed during that span of time." Or to put it another way: Have new scientific discoveries converged to what is in the 1955 UB?

My scientific discipline (mathematics) has been focused on inventing an algebraic system<sup>2</sup> of conditional events, a 3-valued "logic of applicability" that subsumes both the Boolean logic of propositions and the conditional probability theory of events<sup>3</sup>. My career as a mathematician has not been threatened by my philosophical writings about the Urantia Book's cosmology and authenticity as a communication (revelation) from friendly higher order life.

In the 55 years since first I studied the UB, the answer to the "convergence question" has become increasingly clear. During the intervening years many "soon to be discovered" scientific facts and some 'about to be recognized minority scientific positions' that the 1955 UB predicted have now been corroborated by contemporary science (CS) writers.

**0.1 Skepticism.** However, due to qualifiers made by the revelatory author about the UB cosmology as being "not inspired", and subject to revision in a "very short time", some believers of the spiritual truths have lost confidence in the general cosmology offered by the UB claiming that it is already impossible given contemporary scientific understanding. They cite the following paragraph and gather only skepticism and seem to dismiss the scientific superiority of the Melchizedek of Nebadon who is expressing a desire to provide instruction in cosmology.

101:4.1 (1109.2) Because your world is generally ignorant of origins, even of physical origins, it has appeared to be wise from time to time to provide instruction in cosmology. And always has this made trouble for the future. The laws of revelation hamper us greatly by their proscription of the impartation of unearned or premature knowledge. Any cosmology presented as a part of revealed religion is destined to be outgrown in a very short time. Accordingly, future students of such a revelation are tempted to discard any element of genuine religious truth it may contain because they discover errors on the face of the associated cosmologies therein presented.

While recognizing the spiritual value of the UB, Quine Atal<sup>4</sup> has grave doubts about the cosmology and science in it as judged by the CS of 2021, which he takes as well enough established to expose serious errors and inconsistencies in the UB cosmology.

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<sup>1</sup> *The Urantia Book*, Urantia Foundation, Chicago, IL, 1955.

<sup>2</sup> Logic and Conditional Probability – a Synthesis, in: D. Gabbay (Ed.), *Studies in Logic* 69, College Publications, 2017.

<sup>3</sup> Deduction with Uncertain Conditionals (revised & simplified, with examples), Philip G. Calabrese, <https://doi.org/10.1016/j.heliyon.2021.e08328>

<sup>4</sup> For example, "Problems with the Cosmology and Astronomy of The Urantia Book", Quine Atal, May 26, 2021. <https://ruminations.blog/?s=problems+with+the+cosmology+and+astronomy+of+the+Urantia+Book>

However, the first sentence of this often-quoted qualifier of the science in the UB starts by telling us our world is generally *ignorant of origins, even physical origins*! So, as long as CS doesn't recognize even physical origins, we should expect CS to have serious disagreements with the UB cosmology. Furthermore, the following statements by the same UB author should limit any seriously skeptical interpretations.

101:4.5 ...While statements with reference to cosmology are never inspired, such revelations are of immense value in that they at least transiently clarify knowledge by:

1. The reduction of confusion by the authoritative elimination of error.
2. The co-ordination of known or about-to-be-known facts and observations.
3. The restoration of important bits of lost knowledge concerning epochal transactions in the distant past.
4. The supplying of information which will fill in vital missing gaps in otherwise earned knowledge.
5. Presenting cosmic data in such a manner as to illuminate the spiritual teachings contained in the accompanying revelation.

Therefore, the UB's cosmology is "not inspired" but "of immense value" as it authoritatively corrects errors, coordinates about-to-be-known facts, fills in "vital missing gaps", and resurrects lost human knowledge of long-ago events.

**Authenticity.** Concerning the UB's authenticity Appendix A<sup>5</sup> documents the fact that over the 70 years since publication, *soon-to-be made* scientific discoveries that *reversed* previous scientific beliefs (such as plate tectonics, the age of the Sierra mountains, and the surprise discovery in the 1990's of hundreds of millions of outer space galaxies) corroborate almost all of the minority positions taken by the 1955 Urantia Book about such subsequent scientific discoveries.

Appendix A utilizes the UB's corrections of errors (as admitted now by CS) and statements about *soon-to-be-discovered facts* now known by 1955 CS, to statistically show that the UB Authors must have had superhuman knowledge; the UB could not have been written by human authors with only the best human knowledge of the time.

As of 2025, among 47 scientific reversals (SR) of opinion, I count 40 that corroborate the UB's 1955 description and 7 that do not. As new CS knowledge is acquired these numbers will change.

Since the new facts (like the existence of hundreds of millions outer space galaxies) were all minority scientific positions (< 1/3) the probability of getting 40 out of 47 correct (judging by 2025 CS standards) is like rolling 47 dice and getting 40 or more 5's & 6's and only 7 or less 1's, 2's, 3's, or 4's. That probability is less than once in a trillion tosses of 47 dice.

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<sup>5</sup> A Statistical Test of the Hypothesis that *The Urantia Book* was Authored by Human Beings; 2025 Update. Philip Calabrese, August, 2025, 1-15, Appendix A.

Considering that a 1% or 0.1 % probability (of falsely rejecting the null hypothesis of a statistical test) is often used to accept the alternate hypothesis, therefore the “significance level” of this test is extremely high. There is little risk of randomly rejecting human authorship if it is true.

The probability of human authors at the time randomly taking such minority positions and turning out to be right so often is actually 0.00000000000033.

The Urantia Book is what it purports to be --- a revelation of some soon-to-be-discovered cosmological facts, and a correction of some errors, with the addition of some lost knowledge and vital missing gaps in otherwise earned knowledge (proving authenticity) along with a revelation of many associated spiritual truths that will still apply for thousands of years.

No matter how it was delivered to humanity, the UB constitutes divine revelation. It clearly makes statements that seek to correct important errors in CS cosmology. Has contemporary science accepted all of these corrections? Not yet. Therefore, it is not surprising that there still is a great divergence in cosmology. CS still has some very important scientific reversals to make!

## 0.2 Important Coming Cosmology Corrections.

**a) Reinterpreting the Cosmic Redshift.** By misinterpreting the cosmic redshift of electromagnetic wave patterns as recession velocity, CS still clings to a “Big Bang” origin of the cosmos, just 13.8 billion years ago. To make this model consistent with subsequent observations of mature galaxies almost that old, CS later invented a hypothetical early period of rapid “*space inflation*” at over 1000 times the speed of light that supposedly quickly carried matter that far away. Frankly, belief in the BB has been institutionalized.

**b) Finding the Cosmic Center.** CS still *assumes* a centerless cosmos of Absolute Relativity as envisioned by Albert Einstein, where every position in space can be considered fixed with respect to motions of other bodies. Therefore, the idea of “now” is relative to which cosmic position is considered fixed. (But this feature (which is in conflict with quantum mechanics) was Einstein’s choice --- a premise --- not something needed to satisfy his own 4-dimensional (x,y,z,t) field equations. We know this because K. Gödel found solutions with a fixed center around which everything orbits.)

Before Einstein’s early 20-century “dabbling” in “relativity theory”, the cosmos was thought to have a center --- first the earth, then the sun, and then the center of the Milky Way. But now, despite the ubiquity of rotations in the cosmos, the universe is assumed to be “isotropic” --- the same in every direction --- based mostly on the isotropic cosmic background radiation, which can also be explained as very evenly distributed, sparse intergalactic matter that over tremendous distances could also contribute to a redshift (energy drain) proportional to distance.

While affirming Einstein’s famous formula,  $E = mc^2$ , about the loss of mass by a body while emitting light energy, the UB says that CS is missing the unique cosmic Source and Center, the motionless surface that is Paradise.

**c) Defining Simultaneity and Universal Time-keeping.** The UB authoritatively affirms a non-temporal (eternal) *fixed origin and center* called Paradise, both a spiritual and non-spiritual place where the I AM Exists above a zone of Infinity below.

Since Paradise is fixed, it not only establishes absolute directions in the cosmos, but it also allows the simultaneity of two events in different places in space to be defined by the orbital, periodic motion of a specified inner circuit of bodies orbiting Paradise.

According to the UB, there are numerous beings (chronoldeks) throughout the cosmos dedicated to displaying this arbitrarily set Paradise Time. Local time-keeping can coordinate with the standard Paradise time and so define simultaneous events. This defines the eternal “now”.

**d) Finding the directions “Up” (above Paradise) and “Down” (below Paradise).** CS is further missing the directions “Up” (above Paradise) and “down” (below Paradise), where the UB says are the upper and lower “unpervaded space reservoirs”, which supply and receive space during the periodic expansion & contraction phases of peripheral space. Therefore, the directions “up” or “down” roughly mean toward upper Paradise or toward nether Paradise.

Besides the zones of motion-pervaded space, and the midspace zones within and totally enveloping the moving zones, the UB tells of a third kind of space called reservoir space:

11:7.3 (124.4) “The vertical cross section of total space would slightly resemble a Maltese cross, with the horizontal arms representing pervaded (universe) space and the vertical arms representing unpervaded (reservoir) space. The areas between the four arms would separate them somewhat as the midspace zones separate pervaded and unpervaded space. These quiescent midspace zones grow larger and larger at greater and greater distances from Paradise and eventually encompass the borders of all space and completely incapsulate both the space reservoirs and the entire horizontal extension of pervaded space.”

CS now affirms space expansion and even space acceleration, but not yet its periodicity.

11:7.6 (124.7) “There is an upper and a lower limit to horizontal space with reference to any given location in the universes. If one could move far enough at right angles to the plane of Orvonton, either up or down, eventually the upper or lower limit of pervaded space would be encountered. Within the known dimensions of the master universe these limits draw farther and farther apart at greater and greater distances from Paradise; space thickens, and it thickens somewhat faster than does the plane of creation, the universes.”

While not “in” space, Paradise has a direction from any place in space --- toward “the focus of space” --- the limiting surface of the relatively motionless regions of space that are between, around and completely encompass the rapidly rotating rings of matter. Topologically, these relatively “non-moving midspace zones”, that surround all moving material body orbits, in the limit toward motionlessness, make contact with Paradise at what is called its periphery.

Paradise is the largest organized (spiritual & material) body, existing roughly “just above” space<sup>6</sup>. The Unqualified Absolute is focused in Nether Paradise and is the source<sup>7</sup> of the potency of space.

According to the UB, the nucleus<sup>8</sup> of each ultimate individual material particle in space, 100 of which form an electron, is again, Paradise. Paradise transcends space inwardly and the Infinity of the Unqualified Absolute transcends space outwardly as “space potency”.

**1. The Diversity and the Unity of the Cosmos.** Consider the Cosmos. It is natural to distinguish between parts of the cosmos as we observe atoms, planets, stars, and galaxies. However, we also recognize the exquisite *connections* between all these objects. The science of physics demonstrates that fixed patterns of observed behavior of physical bodies exist and can be called “laws”. Think of Isaac Newton’s laws of mechanics about gravity and moving bodies. They not only apply here on Earth; they apply all over the observable universe. The “law” of Gravity connects bodies across the observable cosmos. Furthermore, this gravity attraction between far distant objects is somehow observed to be instantaneous. That is, Newton’s “instantaneous gravity” mathematical model works quite well in predicting the future position of the planets.

However, both Isaac Newton and Albert Einstein found it unreasonable to assume influence between spatially far distant objects without some agency that is connected to both. And since light speed through “empty” space is the fastest known material speed, how does gravity manage to be instantaneous?

The more recent phenomenon of quantum entanglement has brought this issue to a head: A sequence of particles, each one successively split into two sub-particles going in different directions, can be made to exhibit paired measurement correlations (of spin directions) that cannot be explained without assuming some kind of faster-than-light-speed *connection* exists between those simultaneous distant measurements!

It was physicist and mathematician John Bell<sup>9</sup> who first proved that only some kind of “non-local” (faster-than-light) connection between the particles can account for the spin-direction, paired-measurement correlations, of space-separated “entangled particles”. Measurement of one particle somehow influences the simultaneous measurement of the other particle and vice versa.

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<sup>6</sup> 11:2.11 (120.3) [https://truthbook.com/urantia-book/paper-11-the-eternal-isle-of-paradise/?criteria=%2211:2.11%20%22#U11\\_2\\_11](https://truthbook.com/urantia-book/paper-11-the-eternal-isle-of-paradise/?criteria=%2211:2.11%20%22#U11_2_11)

<sup>7</sup> 11:8.8 (126.4) ...Space potency is a term difficult to define. It does not mean that which is ancestral to space; its meaning should convey the idea of the potencies and potentials existent within space. It may be roughly conceived to include all those absolute influences and potentials which emanate from Paradise and constitute the space presence of the Unqualified Absolute.

<sup>8</sup> 42:1.2. (467.4) [https://truthbook.com/urantia-book/paper-42-energymind-and-matter/?criteria=%2242:1.2%20%22#U42\\_1\\_2](https://truthbook.com/urantia-book/paper-42-energymind-and-matter/?criteria=%2242:1.2%20%22#U42_1_2) ... The ultimat, the first measurable form of energy, has Paradise as its nucleus.

<sup>9</sup> Quantum Mechanics. J. S. Bell, "On the Einstein, Podolsky, Rosen Paradox", Physics 1 (1964) pp 195-200.

At first glance this cosmic connectivity in the behavior of physical objects across vast distances in space seems quite mysterious. Einstein called it “spooky action at a distance”.

**2. The Initial Unity (and Infinite Diversity) of the Cosmos.** However, the Cosmos is not merely an aggregation of space separated parts. Rather, the parts are qualifications of the One Original Whole. Mathematically, this can be algebraically expressed by what are called quotient spaces. An initial infinite Universe  $\Omega$  is divided (qualified) into parts.

Clock arithmetic is an example of such a quotient space of the infinite set of non-negative integers as they number the hours around and around and around ad infinitum. The non-negative integers  $I$  can be distinguished (qualified) by their remainders when divided by 12. This gives rise to 12 infinite “cosets” of the integers. One coset is  $[1] = \{1, 13, 25, 37, \dots\}$ . Another is  $[3] = \{3, 15, 27, 39, \dots\}$ . Notice that  $[12] = \{0, 12, 24, 36, \dots\}$ . In this quotient space called “ $I \bmod 12$ ” or  $[I/12]$ , the 12 cosets  $[0], [1], [2], \dots, [11]$  can be added, subtracted and multiplied just like ordinary numbers. 24-hour clock arithmetic is yet another quotient space of  $I$ , called  $I$  modulo 24. or  $[I/24]$ .

Some important non-spiritual qualifications of the Whole cosmos are space, matter, force, motion and gravity. What are their quotient spaces as defined by the qualifications they make on the Whole?

So like Einstein, we can go back to first principles. How did we come to regard objects at a large distance in space to be unable to immediately affect one another? Apparently by assuming radiation at light speed between those objects to be the fastest connection between them.

However, objects separated in space are still merely qualifications of the one self-aware Whole Cosmos. Two places in space are still connected to the one Whole and so to each other. And since the Whole reacts to local acts, that reaction can instantly be manifested non-locally.

“Locality” (speed-of-light delayed influences between space separated objects) assumes that the connectedness of the cosmos is limited by space as though it is basically an aggregation of absolute Parts instead of a division of one absolute Whole.

Without “locality” restrictions, waves of pre-mass energy within this Whole could be assumed responsible for faster-than-light interactions along the lines of the equivalent “guiding waves” model of quantum mechanics propounded by physicist David Bohm<sup>10</sup>. This could explain quantum wave mechanics at the cost of allowing faster-than-light interactions.

The Whole is reactive to individual local actions. By that explanation, quantum entanglement is just a demonstration of faster-than-light influences in the body of the Whole.

**3. Qualifications of The Whole.** Thus, the concept of relativity should be expanded to include both the Infinite Whole and the many Parts. There is an infinite Whole, a unified Whole that

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<sup>10</sup> Bohm, D.J. (1983) *Wholeness and the Implicate Order*. Ark Paperbacks, London.

includes everything. By making qualifications (differentiations) of this Whole, all cosmic parts can be defined, but they will still be parts of the one Whole. This is also more like a creative genesis.

Viewed in this light, “spooky action at a distance” becomes a manifestation of the oneness of Total Reality. Space is not an absolute separation from non-spatial reality; nor is space an absolute separation of objects within it. Objects and their distances in space are ultimately qualifications of the infinite Whole.

**4. The Idea of One.** If this seems rather esoteric, pause to consider that even a single part of the universe is esoteric. Has anyone ever seen a *single* thing? Not really. Every material object has extension in space and so it has parts; it is not a single thing. It is the *idea* of “one” that is applied to a part of the cosmos as though “it” is a single thing. A single thing is a mental concept more than “it” is a physical one.<sup>11</sup>

(It is in this sense that religious Deity is best grasped by mind as a unified Threesome, a Trinity.)

Again, how did we come to regard any two features of observed reality as being separated or distinguished? The answer appears to be “by defining *qualifications* (differentiations) of the One Whole, the One Total Cosmos, but regarding them as absolute Parts of an aggregate.

It is a property of mind to frame qualifications and also to unify qualifications of every individual thing. Every “thing” is not really a single thing. Mind unifies the multiplicity into a whole (a unit) and assigns a meaning to “it”.

**5. A Cosmology with a Center.** Spin is a fundamental phenomenon in the universe both as a macro phenomenon as well as a micro phenomenon<sup>12</sup> and something called gravity holds both galaxies and spinning particles together.

The alternative solutions of A. Einstein’s general field equations discovered by K. Gödel<sup>13</sup> are “rotating universe” solutions in which “Matter everywhere rotates *relative* to its compass of inertia with the angular velocity:  $2(\pi k r)^{1/2}$ , where  $r$  is the mean density of matter and  $k$  is Newton’s gravitational constant.”

This angular velocity  $\omega$ , for which  $\omega^2 = 4\pi k r$ , was chosen by Gödel to exactly balance the gravitation attraction toward the compass (center) of inertia of a rotating body<sup>14</sup> whose mass density is  $r$ .

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<sup>11</sup> Alfred Korzybski, *Science and Sanity*, 1933. (?)

<sup>12</sup> Sin-itiro Tomonaga, *The Story of Spin*, Translated by Takeshi Oka, The University of Chicago Press, 1997.

<sup>13</sup> Kurt Gödel, An Example of a New Type of Cosmological Solutions of Einstein’s Field Equations of Gravitation, *Reviews of Modern Physics*, Vol. 21, Number 3, July, 1949. <https://kurtgoedel.de/cms-83FO/wp-content/uploads/2016/10/Goedel.pdf>.

<sup>14</sup> See F. W. Sears & M. W. Zemansky, *University Physics*, Addison-Wesley, 1955, p.160, equation (9-7). for a derivation of the formula for the angular velocity resulting from an angular acceleration through a given angle, in this case  $2\pi$ .



Considering that the great logician Kurt Gödel imagined it, surely a macroscopically and microscopically rotating universe should not be summarily discarded merely because his friend Albert Einstein thought a universe with a center (and so a preferred coordinate system) would not be esthetically pleasing.

## 6. The Locus of Physical Unity --- Paradise.

0:4.11 (7.9) PARADISE is a term inclusive of the personal and the nonpersonal focal Absolutes of all phases of universe reality. Paradise, properly qualified, may connote any and all forms of reality, Deity, divinity, personality, and energy—spiritual, mindal, or material. All share Paradise as the place of origin, function, and destiny, as regards values, meanings, and factual existence.

1:6.1 (123.3) We do not know the actual mechanism of space respiration; we merely observe that all space alternately contracts and expands. This respiration affects both the horizontal extension of pervaded space and the vertical extensions of unpervaded space which exist in the vast space reservoirs above and below Paradise.

There is an essential Body to the cosmos, a fixed place (surface) that is located at the non-moving focus of the relatively non-moving zones surrounding the spinning and orbiting space bodies.

The fixed central location of Paradise is the logical origin of a special reference frame of the cosmos. But where is this fixed location? We are told that Paradise is the nucleus of each ultimate unit of matter, and that 100 of these ultimatons form one electron. Paradise is said to be the largest organized body in the cosmos.<sup>15</sup> And roughly speaking, space is just below Paradise; time just above.<sup>16</sup> Paradise is said to be located at the non-spatial “focus” of space.

Topologically, this means there is a fixed surface that is approachable from the so-called relatively non-moving midspace zones existing around, within and between the relatively rapidly spinning zones of material space.<sup>17</sup> Light is said to originate from this fixed place; it therefore does not carry the motion of the particles that seem to emit it.

In this topology of space, the direction toward the nucleus of an ultimaton is in the direction “up” since all space is just below Paradise. (The Unqualified Absolute --- one of the seven Absolutes of Infinity --- pervades all space, but this Absolute is said to be focused in the nether (underside) side of the ellipsoidal surface of Paradise. Space would seem to be between Paradise and The Unqualified Absolute. Paradise, properly qualified, is the essence of all reality.<sup>18</sup>

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<sup>15</sup> 11:0.1 (118.1) PARADISE is the eternal center of the universe of universes and the abiding place of the Universal Father, the Eternal Son, the Infinite Spirit, and their divine co-ordinates and associates. This central Isle is the most gigantic organized body of cosmic reality in all the master universe.

<sup>16</sup> 11:2.11 (120.3) Roughly: space seemingly originates just below nether Paradise; time just above upper Paradise.

<sup>17</sup> 11:7.2 (124.4) “Paradise is the actually motionless nucleus of the relatively quiescent zones existing between pervaded and unpervaded space.”

<sup>18</sup> 0:4.11 (7.9) PARADISE is a term inclusive of the personal and the nonpersonal focal Absolutes of all phases of universe reality. Paradise, properly qualified, may connote any and all forms of reality, Deity, divinity, personality,

**7. Recognition of Minds.** As minds, we can distinguish between “good and bad”; we can distinguish between events that we can choose versus those for which we have no control. But all of these distinctions are first made in the Whole. Whatever the distinction, the parts generated by the distinction are still parts of the unified Whole. Such parts can influence each other instantaneously via their relationship to the Whole.

From the point of view of finite mind, the absolute ONE is both an infinite Unit and also an infinite Multiplicity. ONE must be manifest both as *transcending* all macroscopic space and also as *indwelling* each individual particle of matter. How can One do that? Relative to the finite the One is absolute. Even the separation of space is not absolute.

With respect to physics, we can distinguish between space and all of that which is non-space --- realities like mass, motion, mind and spirit. We can distinguish living from non-living things.

**8. Points and Viewpoints of Space.** This is all better conceived when the reality of our observer-observed relationship (personal *viewpoints* of the Whole) is recognized and made fundamental to all science and philosophy. Reality must be defined in terms of someone’s personal experience or observation, such as the viewpoint of a scientist or philosopher. A personal viewpoint requires a personal mind with an outer (sensory) and an inward (self-conscious) view.

What is reality? For the individual human mind, it is the outside sensory world of space and the inward self-conscious world of meanings, spiritual values and moral ideals that characterize human selves. These observing Selves with mental viewpoints of the outer world and mental loyalties to an inner, spiritual world, are the joint experiential basis of human reality. These personal minds can choose to change space by utilizing inward spirit energy that is outside the material universe. In this way, persons have some degree of free will; they escape complete antecedent physical causality.

Perhaps because we are to such a large degree subject to material needs, we tend to imagine ourselves merely inside the outward social spaces that we inhabit. But the act of mentally “seeing” the outside world and also the inward One, suggests a “total reality” that combines these two views of the cosmic Whole with observing mind as a fundamental feature.

The Inner/Outer aspect of personal observation is the basic unit of the Knowing Cosmos! Like Plato’s image of men forced to look forward at a wall and interpret its shadowy reality, what is “out there” is just a shadow of the light “in here”, behind our individual consciousnesses.

If individual human minds are part of a central mind that shares self-consciousness, then mind is focal, even pointing to the viewpoint of an Infinite Mind. Is that not the topology of total reality? Minds Observing the Infinite One and the Infinite One observing us minds.

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and energy—spiritual, mindal, or material. All share Paradise as the place of origin, function, and destiny, as regards values, meanings, and factual existence.

This requires us to imagine a new cosmic topology, one with a focal Center of not just all matter, but also of all mind reality, and all spirit reality, and all personhood reality. The cosmos is a Personal View of personal viewpoints of Matter-Space, Mind, and Spirit.

0:5.5 (8.5) The Universal Father is the secret of the reality of personality, the bestowal of personality, and the destiny of personality. The Eternal Son is the absolute personality, the secret of spiritual energy, morontia spirits, and perfected spirits. The Conjoint Actor is the spirit-mind personality, the source of intelligence, reason, and the universal mind. But the Isle of Paradise is nonpersonal and extraspiritual, being the essence of the universal body, the source and center of physical matter, and the absolute master pattern of universal material reality.

**9. Paradise.** The Whole has distinguished Parts that are coordinated and correlated with each other by virtue of the Unity (Divinity) of the Whole. That which is common to every individual material thing at all times and even without time *The Urantia Book* calls **Paradise**. Paradise is the nucleus of every ultimate material unit. The first *measurable* particles, the ultimatons, make up electrons and other subatomic particles. Spiritually & personally, we can say “Here on Paradise....”

Every ultimate material particle spins about an absolute surface of Paradise. Paradise is *dense* in space without being *in* space (just as the irrational numbers (non-fractions) are dense<sup>19</sup> in the number line of fractions without being a fraction.)

**10. Space and Time.** Space is part of the Whole, which includes it along with non-space such as matter-energy, motion, mind and spirit values, which are also part of the non-space Whole. Space is the absolutely ultimate qualification of the Absolute.

[The Urantia Book tells of two kinds of Paradise *Transcendental* Force Organizers: Starting with the primordial space forces released by the Unqualified Absolute the primary kind is responsible for imparting the initial force orbits around the macroscopic focus of space. Their Associates then transcendently condense these gravity responsive force energies into the galactic and axial rotations of the ultimate material units of matter about their Paradise nucleus.]

**11. The Topology of Space.** How, you may ask, can Paradise be the nucleus of each ultimate unit of spinning matter and also be the center of the macroscopic cosmos?

Well, it does require a space topology that includes one macro (non-spatial, non-temporal) Paradise Focus plus a pattern of micro-foci pervading space around which spin the space energies of the cosmos. It is mathematically possible. Kurt Gödel showed that.

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<sup>19</sup> By definition, a set X of points is said to be *dense* in another set Y of points if for every point in Y, there is no minimum distance from points of X.

Paradise is the Center of each thing as well as the center of All. Material motion in space exists between Paradise and Nether (under) Paradise.

[118:3.1 \(1297.2\)](#) Only by ubiquity could Deity unify time-space manifestations to the finite conception, for time is a succession of instants while space is a system of associated points. You do, after all, perceive time by analysis and space by synthesis.

We are told that it will require a 7-dimensional space topology to combine absolute, relative and finite realities into one unified cosmology.

**12. Paradise Area.** The surfaces of Paradise transcend space and time, but what is called its periphery can be located from space as the static focal limiting surface approachable from the relatively *non-moving* zones existing within and between and encompassing the relatively rapidly spinning energy zones.

The surfaces of Paradise form a *dense* pattern in space although they are not actually *in* space. Again, Paradise surfaces can pervade space like irrational numbers can pervade the number line of fractions without being one. [The irrational points also carry all of the measure (length) of the line because the *countably infinite* set of all fractions on the number line, each have a zero length, and therefore have a total length of zero.]

Absolute Gravity attraction is the “presence circuit” of Paradise that operates to cohere the parts of matter while being balanced by circular motion in space. By one concept<sup>20</sup>, Absolute gravity is like the total gravity attraction toward the center on any part *interior* to a sphere of constant mass density - directly proportional to the distance from the center of the sphere. Then Linear Gravity is the attraction between any two space bodies approximately according to the inverse square law of distance.

Paradise being everywhere present at the focus of space and its bodies, there is apparently no time lag of gravity attraction between space-separated bodies, just an attenuation of the magnitude of attractive force.

The now accepted phenomenon of space expansion *at every place in space* demonstrates the way additional space emerges from below nether Paradise and above upper Paradise into pervade-able space. Space is not merely empty distance. It can contain motion, and space itself can move (relative to Paradise). The motion (expansion) of space suggests an unrecognized, upper-lower dimension with respect to space from which expansion (and contraction) occur.<sup>21</sup>

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<sup>20</sup> George L. Park, The Law of Absolute Gravity, p. 21.

<sup>21</sup> The Urantia Book describes these as “un-pervaded space reservoirs” balancing space expansion and contraction in 2-billion-year “space respiration” cycles.

The constant speed of light in a vacuum is the speed of radiation from one place *in space* to another, the time being wholly determined by the distance between the places, not by the motions of particle emitters.

(This suggests a modification of Einstein's theory of special relativity, which he invented partly to explain the experimental results of the famous Michelson-Morley experiment: The nuclear Isle of Light is spread out (as it were) roughly *above* all the space through which a moving object travels, emitting or absorbing photons of light at the nuclear Paradise area as though from the objects.)

All actual "places" are in "the center" - *absolute places* of Absolute Paradise Area, which pervades all space and transcends all space. Paradise is the fulcrum of Infinity, the Infinity outside and also the Infinity within matter, even within our minds... especially within our minds.

How does this concept help to explain the Michelson-Morley experiment and avoid the special relativity implications discovered by A. Einstein? Einstein based his theory on two principles:

- 1) The speed of propagation of light is a constant depending only on the distance traveled between emission and reception not on the motion of emitting bodies.
- 2) There is no unique preferred coordinate system with respect to which cosmic events are best measured.

This paper instead follows the K. Gödel solution of Einstein's field equations of General Relativity which has a unique fixed cosmic center of gravitational attraction and rotation which generates the preferred coordinate system to chart the cosmos.

Since light can be emitted from the Paradise presence within or above the space bodies, the speed of light is not increased or diminished when the objects emitting the light move. A new position on Paradise, "the nuclear isle of light", emits the light. The space body acts like a moving window letting light into space. The motion of a light-emitting body is the moving time-space image of a Paradise eternity event. Or as the Midwayers put it:

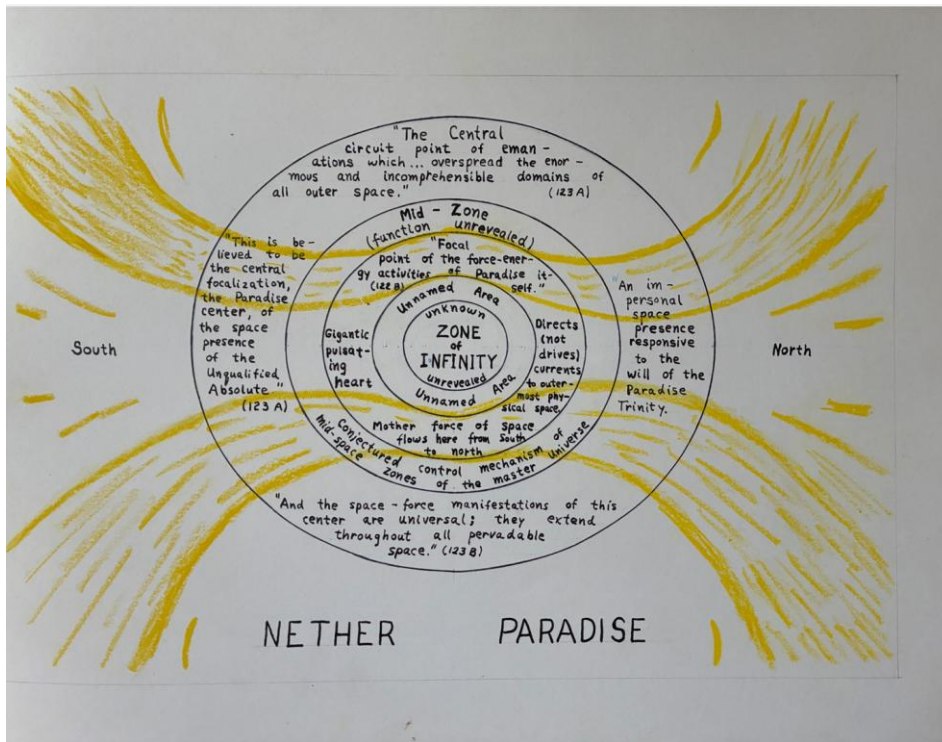
<sup>189:1.3</sup> Mankind is slow to perceive that, in all that is personal, matter is the skeleton of morontia, and that both are the reflected shadow of enduring spirit reality. How long before you will regard time as the moving image of eternity and space as the fleeting shadow of Paradise realities?"

The existence of a fixed location (Paradise) with respect to all space offers an absolute frame of reference. And we already know from K. Gödel's work, that such models of Einstein's field equations exist. The "Great Attractor" may be the evidence for a macroscopic Paradise focus.

**13. The Center of Observed Reality.** The Cosmic View of personal viewpoints is the Center of Observed Reality. There must be a cosmic Mind no less sophisticated than human mind. There must be a Central Mind of the Cosmos observing Space – the Idea of God. There is a cosmic Center of matter, mind and personal spirit reality.

Paradise, one of the 7 Absolutes, has an upper (spiritual) plane and a nether (material) plane and is the focus of the four gravity attractive forces of: matter, mind, spirit and personality.

In an observed circular cosmos, the center can represent the omnipresent and infinite Whole ONE, which we can know as our Universal Father, the First Source and Center.



## Appendix A.

### A Statistical Test of the Hypothesis that *The Urantia Book* was authored by human beings 2025 Update

Philip G Calabrese, PhD

(With some additional scientific information this is an update of the test conducted and published in 2013.)

#### A1. The Hypothesis of Human Authorship.

Null Hypothesis: *The Urantia Book* was authored by humans.

Alternate Hypothesis: *The Urantia Book* was not authored by humans.

Authorship here is defined as choice of text and editorial control of the 1955 first edition. (While never “word for word” the UB Authors acknowledge, without specific attribution, the use of the writings of 1000’s of human authors to express the facts and truths mandated by their superiors for revelation to our world, Urantia.

**A2. Definition of the Population for The Test.** The test population consists of all well-established, present day (as of December 3, 2025) scientific statements for which the following are true:

- a) The statement contains well-established present-day information that only a minority of 1/3 or less of scientists espoused prior to 1955; a majority of 2/3 or more of scientists were mistaken or offered no opinion. Call these “reversal statements” of contemporary science (CS). Basically, examples of science changing its mind or unexpectedly learning something new.
- b) *The Urantia Book* (1955) expresses a definite opinion concerning the now scientifically established information.
- c) The reversal statements are (probabilistically) independent of one another.

**A3. Qualifications on the Test Procedure.** For a valid test, it is essential that the reversal statement selection process not bias the sample of the population. Ideally, *all* present day, well-established “scientific reversals” would be covered by the reversal statement list thereby eliminating one form of selection bias. Otherwise, a sufficiently large, unbiased (random) sample of this population must be used. Skeptics of the superhuman authorship are encouraged to offer examples of reversal statements that *The Urantia Book* did not get right by today’s contemporary science (CS) standards. This is an ongoing process that can be regularly updated as new scientific discoveries and reversal statements are made.

Since the reversal statements must be independent of each other, there is some judgment in covering a topic that contains two or more loosely related statements. For example, in covering new information

about the outer space galaxies, besides the numbers of galaxies, there are the related facts of large-scale structures among them, the huge voids, and high percentage of dark matter holding the spinning galaxies together, all predicted by *The Urantia Book*. How many independent statements should cover the outer space galaxies?

Another area requiring some judgment involves deciding whether there is enough convergence toward (or divergence away from) the position expressed in *The Urantia Book* to count it as a “success” (or failure), Convergence (C) or Divergence (D).

Judgment is also needed deciding whether a present-day scientific position is really well established or based more on scientific dogma. For example, although in 2015 a majority of all scientists are supposedly of the opinion that life emerged from non-living matter with no superhuman involvement, there is no scientific proof of that. It is not scientifically “well established”. Showing that electrical stimulation of simple atoms and compounds can produce more complex but non-living hydrocarbons that are essential to living things does not demonstrate or prove that life emerged randomly out of the primordial chemical soup.

Because CS is an ever-growing and reforming body of knowledge the contribution of individual statements to the statistical conclusion may shift back and forth over the years. Therefore, this test should be rerun periodically as more science is discovered. Nevertheless, the overall convergence of Contemporary Science toward the science of *The Urantia Book* is increasingly apparent over the decades between 1955 and 2025.

**A4. Estimation of Probabilities.** In theory, for each scientific reversal statement, there is a historical record of the percentage of scientific authors who espoused (published) the present-day, contemporary scientific understanding. This percentage, expressed as a fraction, can be interpreted as the probability that a human author at the time would espouse the present-day scientific account of the information. The number “1 minus this fraction” is the probability that a human author at the time would express doubt or something mostly incorrect compared to present day scientific understanding. This is the “probability of human doubt or error” for the associated reversal statement.

However, certain very helpful simplifications can be made for the test that are designed to only increase the probability of accepting human authorship and which therefore, maintain the significance level of the test. That is, the probability of falsely rejecting human authorship is not increased by the following simplifications.

**A5. Simplifications of the Test Data.** It will not bias the sample, but will greatly simplify historical data collection, to *restrict the population* to all (and only) those scientific reversal statements for which, according to present day (CS) scientific knowledge, 2/3 or more of the scientific opinions in 1955 were wrong or expressed ignorance, only 1/3 or less espoused the CS understanding. (That eliminates 50-50 questions.)

Secondly, to any statement whose fraction of incorrect human scientific opinions in 1955 was even greater than 2/3 it will suffice to assign the same 2/3 value as though 1/3 of human scientists at the time expressed the correct opinion. This will give to the null hypothesis (human authorship) any benefit in likelihood due to this simplification.

Thus, reversal statements will be restricted to those for which the probability of a correct human opinion prior to 1955 is less than 1/3, and all those will be assigned 1/3 no matter how less likely humans were to write correctly in 1955.

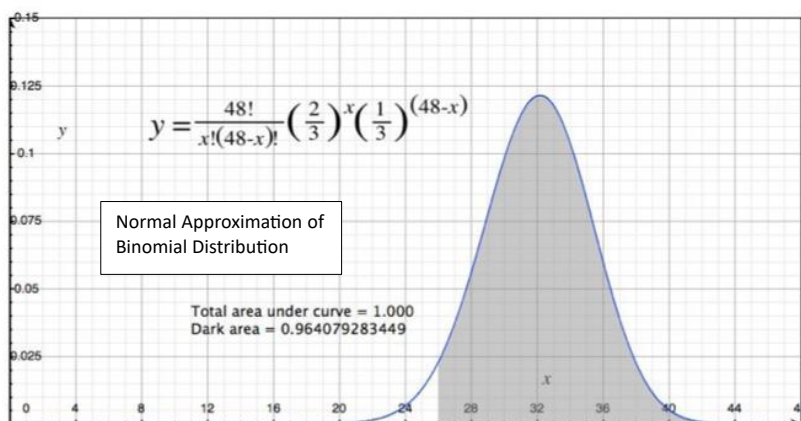


**A6. The Test.** With the above simplifications, the statistical test can be done using a binomial distribution with the probability of failure equal to 2/3 for each of the reversal statements.

We can think of this test as rolling an ordinary six-sided die having numbers 1 through 6 on its faces. The number of rolls  $N$  of the die will be the number of independent reversal statements. For any reversal statement, human error will be represented by the die faces with numbers 1, 2, 3 or 4. The faces with 5 or 6 will represent correct human statements. Thus, in this “ $N$  rolls of a die” model the probability of human error (failure) on any roll is  $p = 2/3$  and so  $1/3$  is the probability of a correct human statement (success).

The probability of getting  $X$  or fewer failures in  $N$  tosses of a die with  $2/3$  probability of failure on each toss is given by the well-known binomial distribution, which can be approximated with a bell curve.

There are online calculators<sup>0</sup> for the binomial distributions that will output the probability of rolling fewer than some number  $X$  of failures (represented by 1, 2, 3 or 4) in each of  $N$  rolls of a die. For example, for a run of 48 rolls, the probability of less than  $X=21$  failures is 0.000329, which is less than 1 chance in 3,000. [The Gaussian (normal) distribution can approximate the binomial distribution.]



**A7. Independent Statements for Testing.** The following reversal statements have been grouped into independent examples. For example, calculating the sizes of a proton and an electron and the electron orbit size are considered related (not independent) questions: Knowing the answer to one affects the probability of knowing the answer to the others. Therefore, they are not independent, and so they are lumped together in item 5. There is an endnote for each item that gives the relevant Paper:Section.paragraphs in *The Urantia Book* along with other references establishing the reversal statement.

The letter “C” (for convergence, success), or the letter “D” (for divergence, failure) has been placed after most items indicating a tentative assignment. A question mark “?” indicates that present day understanding is not well enough established, or that there is some, but not enough, convergence or

divergence, or that there is some other question about the reversal statement. This category will not be used for the test but will be used to identify potential future examples of reversal statements of CS.

**A8. Reversal Statements of Contemporary Science.** Here are some examples of past scientific reversal statements. We will count only those since 1955.

### “Errors Scientists Once Thought ...” (and who corrected them)

- Circulatory System Mistakes (by William Harvey in 1628 )
- Earth – The Center of the Universe (by Copernicus in 1543)
- Germs No Problem in Surgery (by Louis Pasteur in 1860's)
- DNA: Not So Important (by Watson and Crick in 1953)
- The Atom Is the Smallest Particle (by Rutherford in 1904)
- The Earth Is Only 6,000 Years Old (by Early 20<sup>th</sup> century)
- Rain Follows the Plow (by George Goyder in 1865)
- Phlogiston Theory of Heat (by Antoine Lavoisier 1774-1794 )
- Heavier Objects Fall Faster (by Galileo in 1589-92)
- Alchemy (by Robert Boyle in the late 1600's)

<http://science.discovery.com/strange-science/10-science-mistakes.htm>  
<http://www.columbia.edu/itc/chemistry/chem-c2507/navbar/chemhist.html>

### Some (new) Science since 1955

- 1956 Discovery of the neutrino / Cowan & Reines
- 1960 & after: Discoveries of fossils of early *Homo* in East Africa / Leakeys and others
- 1963 Discovery of quasars / Schmidt
- 1964 Existence of quarks proposed / Gell-Mann; Zweig
- 1965 Discovery of cosmic microwave background radiation / Penzias & Wilson
- 1967 Theory of plate tectonics / McKenzie & Parker; Morgan
- 1968 Pulsars discovered / Hewish *et al.*
- 1973 Gamma-ray bursts from outer space / Klebesadel, Strong, and Olsen
- 1974 Discovery of “Lucy,” *Australopithecus afarensis* / Johanson & Taieb
- 1978 Observation of astronomical dark matter / Rubin
- 1987 Formulation of the “Out of Africa” hypothesis of human evolution using molecular data / Cann, Stoneking, and Wilson
- 1995 First extrasolar planet identified / Mayor & Queloz

<http://www.press.uchicago.edu/Misc/Chicago/284158.html>

### A9. Physics

- 1) The existence but restricted role of the Hideki Yukawa mesotron<sup>i</sup> (now called a meson) in holding the nucleus together by rapidly shifting charge between protons and neutrons, and the existence of a then unknown “strong” force, other than Yukawa's meson, that holds proton to proton and neutron to neutron and whose existence was clarified between 1950 and 1970. (C)
- 2) The small, uncharged particles (neutrinos) of radioactive decay proposed in 1932 and identified in 1956. The mesotron of radioactive beta decay of a neutron into an electron, proton and a neutrino that became known as the W-boson (discovered 1981).<sup>ii</sup> (C)
- 3) Mesotrons are found abundantly in the space rays, which so incessantly impinge on Earth.<sup>iii</sup> (C)
- 4) Neutrinos come from supernovas<sup>iv</sup>, and have mass. (C)
- 5) Sizes of the electron<sup>v</sup> and of the proton (and quark). (C)
- 6) The ubiquity of relatively heavy calcium 19 in the outer portion of the sun and space.<sup>vi</sup> (C)
- 7) The existence of materials that neither absorb nor reflect light.<sup>vii</sup> (C)

### A10. Astronomy

- 8) Existence, influence and percentage of dark matter in the cosmos.<sup>viii</sup> (C)
- 9) Large scale structures in far outer space:  $\geq 375$  million island universes in far outer space separated by huge voids spanning millions of light years.<sup>ix</sup> (C)
- 10) Supernova explosions observed by Tycho Brahe in 1572 described as a double star explosion.<sup>x</sup> (C)
- 11) Crab Nebula was due to a nova observed 900 years ago with a remaining central star after collapse now known as pulsar (neutron star). Existence of Neutron Stars.<sup>xi</sup> (C)

- 12) Cosmic Rays (very high energy<sup>xii</sup>), from far outer space, escape from black holes, cascade in upper atmosphere. (C)
- 13) The fastest meteorites are extragalactic and travel at 200 mi/sec relative to earth.<sup>xiii</sup> (C)
- 14) Black Holes (dark bodies with no light or heat) can be highly charged.<sup>xiv</sup> (C)
- 15) Telescopes will see huge red shifts that will make it seem that the speed of recession of far outer space universes is  $\geq 30,000$  mi/sec<sup>xv</sup> (C)
- 16) Space expansion and acceleration exists<sup>xvi</sup> (C)
- 17) Big Bang (beginning of the universe of space, and matter in space) happened about 13.8 billion years ago<sup>xvii</sup>. Background radiation of 4 degrees above absolute zero is accepted as further evidence of the Big Bang. CS is still divergent with the UB. (D)
- 18) Space is not empty. Its temperature is above absolute zero.<sup>xviii</sup> (C)
- 19) The Distance to the Andromeda Galaxy according to CS is about 2.5 million light years (versus the light left those stars “almost one million years” as stated in the UB).<sup>xix</sup> (D)
- 20) The Slow Rotation of Mercury<sup>xx</sup> (C)
- 21) Birth of the Solar System (CS believes in a condensation type origin?); Origin of Retrograde Motion in the Solar System;<sup>xxi</sup> (D)
- 22) Explanation of the large percentage of the angular momentum of the solar system in the planets and moons – sun originally variable<sup>xxii</sup>; disgorgement; 11-yr sunspot cycle as remnant. (D)
- 23) Earth – moon origin including evolution to present sizes and masses and projected future; Breakup of the Fifth Planet from the Sun<sup>xxiii</sup>, and Saturn’s rings, due to smaller bodies getting closer than Roche’s limit to larger bodies. CS has a different story. (D)
- 24) Temperature on the surface, and at center of the sun<sup>xxiv</sup> Not well established. (?)
- 25) Planetary Atmospheres of Mars and Venus<sup>xxv</sup> (C)
- 26) Size of the star Antares.<sup>xxvi</sup> “Antares is 450 times the diameter of your sun.” (?)

#### **A11. Biology**

- 27) Initial Life on Earth (550 million yrs. ago)<sup>xxvii</sup> (D)
- 28) Mud-eating trilobites. Recent evidence that these trilobites were indeed able to do what sulfur-eating bacteria can do, not just eat the bacteria. <sup>xxviii</sup> (C)
- 29) End of Cretaceous Age and the dinosaurs due to volcanic activity, change of climate.<sup>xxix</sup> (?)
- 30) Placental mammals’ emergence (50 million years ago)<sup>xxx</sup> (C)
- 31) Forty-eight Trait Determiners in Human Chromosomes<sup>xxxi</sup> (C)
- 32) Punctuated equilibria (Evolution — gradual vs. episodic)<sup>xxxii</sup> (C)
- 33) A very Successful Genetic Mutation about 37,000 years ago due to 1 or 2 people<sup>xxxiii</sup> (C)
- 34) Magnetic Sensitivity of all Life<sup>xxxiv</sup> (C)
- 35) Injury Repair and Cell Proliferation<sup>xxxv</sup> (C)

## A12. Paleontology

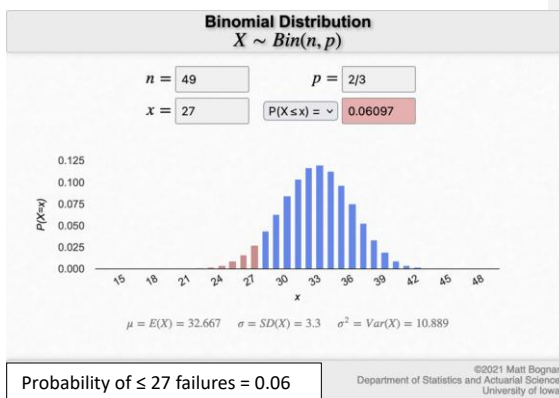
- 36) Lemurs are the closest living Human Evolutionary Ancestors.<sup>xxxvi</sup> (C)
- 37) The “Pitldown Man” double fossil fraud<sup>xxxvii</sup> (C)
- 38) Date of human use of flint to make fires much earlier than previously thought.<sup>xxxviii</sup> (C)
- 39) Date of Peking Man in China.<sup>xxxix</sup> (C)
- 40) Date of human migration to Britain.<sup>xl</sup> (C)
- 41) Humans mated with Neanderthals.<sup>xli</sup> (C)
- 42) Earliest date of Red Man migration to America.<sup>xlii</sup> In the 2013 update this was a D. Now (?)
- 43) Place and time of the domestication of horses.<sup>xliii</sup> (C)

## A13. Geology

- 44) The Age of the Earth.<sup>xliv</sup> (C)
- 45) Existence & Time of Pangaea, its Breakup and Subsequent Continental Drift.<sup>xlvi</sup> (C)
- 46) Geologic Plate Movements (tectonics) Collisions Cause Mountains and Earth Quakes.<sup>xlvi</sup> (C)
- 47) Great Eastern Kentucky volcanic eruption occurred 330 million years ago.<sup>xlvii</sup> Recent discovery has confirmed the volcanic ash from this period, changing D to C. (C)
- 48) Eastern Mediterranean underwater topography<sup>xlviii</sup> and Mediterranean basin history. (C)
- 49) Age of the Sierra Nevada Range Mountains.<sup>xlix</sup> (C)
- 50) Gibraltar Break and the Ensuing Flooding of the Mediterranean Basin by the Atlantic Waters<sup>l</sup> (D)
- 51) Inner Ionosphere Existence. Note the recent findings<sup>li</sup> that reverse a supposed UB “error” and changing a D to (C)
- 52) Previously Unknown (or little known) Roman Census in 8 B.C.<sup>lii</sup> (?)

**A14. The 2015 Test.** There were 41 C’s, 8 D’s and 3 question marks out of a total of 52 items.

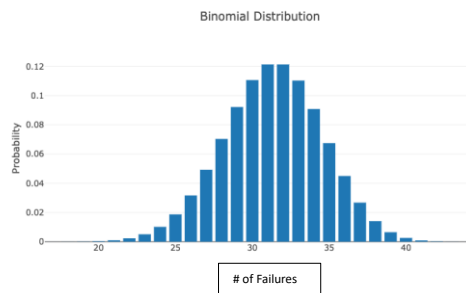
This is like rolling 8 or less failures (1, 2, 3, or 4) out of 49 rolls of a fair die with the probability of failure on each chance being at least  $\frac{2}{3}$ . The probability of doing this by pure chance is practically zero. Even getting fewer than 13 failures in a roll of 49 dice is 2 chances in 100 million, one chance in 50 million.



**A15. The 2025 Test.** Now there are a total of 52 items: 7 D's and 5 have question marks and do not qualify by the definition of the test population. So, as of 12/3/25 the test has  $n = 47$  independent trials in each of which the probability of failure is  $p = 2/3$ . The distribution of the number # of failures  $x$  and their probabilities for this binomial distribution is depicted in the figure.

So, the evidence is as strong as in 2013. One less trial and one less failure. Of the 47 trials, 40 are C's (success) and 7 are D's (failure). As shown, the probability of this occurring is virtually zero.

This is like rolling 40 or more 5's or 6's when rolling 47 dice.



Therefore, the null hypothesis of human authorship of *The Urantia Book* is easily rejected. In fact, the probability in this test of falsely rejecting the human authorship is still much less than the one chance in 50 million of the 2013 test. To high accuracy<sup>liii</sup>, the probability of 7 or fewer failures in 47 trials is 0.00000000000033, which is less than 1 chance in  $10^{12}$  - less than 1 chance in a trillion, one chance in a million, million attempts.

**A16. Conclusions.** The amount of superhuman scientific knowledge imparted in *The Urantia Book* was carefully designed to be “of immense value” but “not inspired”. Filling in some gaps in our knowledge, telling us about our own history, providing an authoritative elimination of some errors, providing some soon to be discovered science, and coordinating little known human knowledge – in this way *The Urantia Book* intends to provide a better cosmological context in which to understand the spiritual revelation of *The Urantia Book*, including a retelling and an expansion of the life and teachings of Jesus.

For some folks, this simple statistical test will not be enough of a reason to believe in *The Urantia Book* as an actual book of revelation from God. After all, many close-minded people who witnessed the superhuman feats of Jesus attributed them to the devil. Our religious brothers - the Jews, the Christians, and the Muslims - are free to imagine that Lucifer and Satan are trying to deceive them with this superhuman information. However, they could judge the Book in the way that Jesus recommended, by the quality of its fruits.

In that regard, they should know that *The Urantia Book* preaches the Gospel of Jesus (the spiritual Fatherhood of God and the spiritual equality of all people), and further, that loving service of one's fellows is the spiritual fruit of knowing God and living God's love.

#### A17. References.

<sup>0</sup> See for instance <https://homepage.divms.uiowa.edu/~mbogdnar/applets/bin.html>

<sup>i</sup> *The Urantia Book*, 42:8.3, 42:8.4, 42:8.6. Also see “‘Convergence’--The Science Content of *The Urantia Book*”, Ken Glasziou, Australia, *Interface International*, Vol. 4, No. 1, Jan-Feb 1997,

[www.ubhistory.org/Documents/PL19970101\\_InnerfaceIntrntl\\_16.pdf](http://www.ubhistory.org/Documents/PL19970101_InnerfaceIntrntl_16.pdf)

Also see “Science Content of *The Urantia Book*”, Editors: Richard Bain, Ken Glasziou, Matt Neibaur, & Frank Wright, 1991 <http://truthbook.com/science-content-of-the-urantia-book>

<sup>ii</sup> *The Urantia Book* 42:8.5. See "'Convergence"--The Science Content of *The Urantia Book*', Ken Glasziou, *Interface International*, Vol. 4, No. 1, Jan-Feb 1997 [www.ubhistory.org/Documents/PL19970101\\_InnerfaceIntrntl\\_16.pdf](http://www.ubhistory.org/Documents/PL19970101_InnerfaceIntrntl_16.pdf)

<sup>iii</sup> See 42:8.7. Also see Ken Glasziou: "The first report of a meson being discovered in cosmic rays occurred in 1936, two years after the [Urantia] Paper was received--but turned out not to be a meson." "Convergence", *Interface International*, Vol. 4, No. 1, Jan-Feb 1997 [www.ubhistory.org/Documents/PL19970101\\_InnerfaceIntrntl\\_16.pdf](http://www.ubhistory.org/Documents/PL19970101_InnerfaceIntrntl_16.pdf)

<sup>iv</sup> See 41:8.3. In an August 2010 email, "4 UB Nobel Prizes", Paul Herrick says getting "neutrinos from supernova" was discovered in 1987. "Raymond Davis Jr. and Masatoshi Koshiba were jointly awarded the 2002 Nobel Prize in Physics; Davis for his pioneer work on cosmic neutrinos and Koshiba for the first real time observation of supernova neutrinos."

<sup>v</sup> See 42:6.8. "Convergence"--The Science Content of *The Urantia Book*, Ken Glasziou [www.ubhistory.org/Documents/PL19970101\\_InnerfaceIntrntl\\_16.pdf](http://www.ubhistory.org/Documents/PL19970101_InnerfaceIntrntl_16.pdf)

<sup>vi</sup> See 41:6.1-6. See also "The universe contains one and a half times more calcium than previously assumed", Feb. 6, 2007. Astronomers at the SRON Netherlands Institute for Space Research drew this conclusion after observations with ESA's XMM-Newton X-ray observatory. <http://www.sciencedaily.com/releases/2007/02/070206100539.htm>

<sup>vii</sup> 14:1.14. "... These dark gravity bodies neither reflect nor absorb light; they are nonreactive to physical-energy light, and they so completely encircle and enshroud Havona as to hide it from the view of even near-by inhabited universes of time and space. See also "Scientists can make things invisible. Scientists in the USA say they are a step closer to developing materials that could make people invisible. Researchers at the University of California have found a way to cloak humans and objects using special materials that redirect light around things. The findings, led by Professor Xiang Zhang, were published in the journals 'Nature' and 'Science'. Zhang works at the Nanoscale Science and Engineering Centre at the university. His team developed a set of artificial "meta-materials" on a microscopic scale that is measured in billionths of a metre. The researchers said the special "fishnet structure" of the nano-sized objects do not absorb or reflect light, which makes them seem invisible. They compared the light to "water flowing around a rock", [http://www.breakingnewsenglish.com/0808/080813-invisible\\_science.html](http://www.breakingnewsenglish.com/0808/080813-invisible_science.html).

<sup>viii</sup> 15:6.11 "The Dark Islands of Space. ... The density of some of these large masses is well-nigh unbelievable. And this great concentration of mass enables these dark islands to function as powerful balance wheels, holding large neighboring systems in effective leash. They hold the gravity balance of power in many constellations; many physical systems which would otherwise speedily dive to destruction in near-by suns are held securely in the gravity grasp of these guardian dark islands." Also see "Vera Rubin and Dark Matter", [http://www.amnh.org/education/resources/rfi/web/essaybooks/cosmic/p\\_rubin.html](http://www.amnh.org/education/resources/rfi/web/essaybooks/cosmic/p_rubin.html)

<sup>ix</sup> 12:2.3 "In the not-distant future, new telescopes will reveal to the wondering gaze of Urantian astronomers no less than 375 million new galaxies in the remote stretches of outer space." "12:1.14 "The Outer Space Levels. Far out in space, at an enormous distance from the seven inhabited superuniverses, there are assembling vast and unbelievably stupendous circuits of force and materializing energies." 11:7.7 "The relatively quiet zones between the space levels, such as the one separating the seven superuniverses from the first outer space level, are enormous elliptical regions of quiescent space activities." Also see "The Coming Scientific Validation of *The Urantia Book*", Philip Calabrese, originally published in *The Urantia Book Fellowship Herald*, Vol. 7, Summer 2006, 28-48. [http://urantia-book.org/archive/newsletters/herald/herald\\_2006.pdf](http://urantia-book.org/archive/newsletters/herald/herald_2006.pdf). Recent measurements of red-shift gaps suggest a ring or shell arrangement. See Napier, W.M. and Guthrie, B.N.G., Quantized redshifts: a status report, *J. Astrophysics and Astronomy* 18(4): 455-463, 1997, <https://adsabs.harvard.edu/full/1997JApA...18..455N> 12:1.2

<sup>x</sup> [https://truthbook.com/urantia-book/paper-41-physical-aspects-of-the-local-universe/?criteria=%22major%20cosmic%20eruptions%22#U41\\_3\\_5](https://truthbook.com/urantia-book/paper-41-physical-aspects-of-the-local-universe/?criteria=%22major%20cosmic%20eruptions%22#U41_3_5) See also O. Krause et al., "Tycho Brahe's 1572 supernova as a standard type Ia as revealed by its light-echo spectrum," *Nature* 456, 617 (2008).

<sup>xi</sup> "The formation of a neutron star is clearly being described in *The Urantia Book* [41:8.3-4] where it is stated that the gravity collapse of massive stars is accompanied by release of vast numbers of tiny uncharged particles. Such particles

are not released in the formation of white dwarfs or black holes. The existence of these particles (the neutrinos) was not demonstrated until 1956.... The existence of a mother sphere for this nebula was demonstrated in 1967 with the detection of a pulsar now known to be a neutron star (W. Kaufman, *The Universe*, 1985)", "Science Content of *The Urantia Book*", Editors: Richard Bain, Ken Glasziou, Matt Neibaur, & Frank Wright, 1991  
<http://www.truthbook.com/index.cfm?linkID=101>

<sup>xii</sup> First seen in 1991 by Fly's Eye Observatory in Utah, ["Impossible Particles", Andrew Grant, *Discover*, April 2010, p47]  
[http://www.nasa.gov/mission\\_pages/swift/bursts/short\\_burst\\_oct5.html](http://www.nasa.gov/mission_pages/swift/bursts/short_burst_oct5.html); See 42:5.5.

<sup>xiii</sup> 49:3.3 "Millions upon millions of meteorites enter the atmosphere of Urantia daily, coming in at the rate of almost two hundred miles a second." From Paul Herrick: "Detection of an intergalactic meteor particle with the 6-m telescope", V.L. Afanasiev, V.V. Kalenichenko, I.D. Karachentsev, Abstract of paper submitted on 10 Dec 2007: "On July 28, 2006 the 6-m telescope of the Special Astrophysical Observatory of the Russian Academy of Sciences recorded the spectrum of a faint meteor. ... The entry velocity of the meteor body into the Earth's atmosphere estimated from radial velocity is equal to 300 km/s. ... We conclude that this meteor particle is likely to be of extragalactic origin."  
<http://arxiv.org/abs/0712.1571>

<sup>xiv</sup> "Quite recently, the idea that a black hole could not be highly charged has been reversed (Price and Thorne, 1988). Highly charged black holes with an immense potential difference at the poles of the order of  $1 \times 10^{20}$  volts, have now been invoked to account for the enormous power output of quasars. [Bain et al. 1991: 17] In describing the formation of our solar system, *The Urantia Book* (p. 655, 57:5.1) tells of the approach of the Angona system, describing its center as a "dark giant of space, solid, highly charged, and possessing enormous gravity pull". This description now aligns with most recent concepts regarding black holes."  
[Bain et al. 1991: 18] <http://truthbook.com/science-content-of-the-urantia-book>

<sup>xv</sup> 12:4.7 Also see "The Coming Scientific Validation of *The Urantia Book*", Philip Calabrese, in *The Urantia Book Fellowship Herald*, Summer 2006 [http://urantia-book.org/archive/newsletters/herald/herald\\_2006.pdf](http://urantia-book.org/archive/newsletters/herald/herald_2006.pdf)

<sup>xvi</sup> 11:5.8; 11:6.1, 11:6.4-5 Also see "The Coming Scientific Validation of *The Urantia Book*", Philip Calabrese, in *The Urantia Book Fellowship Herald*, Summer 2006 [http://urantia-book.org/archive/newsletters/herald/herald\\_2006.pdf](http://urantia-book.org/archive/newsletters/herald/herald_2006.pdf)

<sup>xvii</sup> 11:5.8; 11:6.1, 11:6.4-5 "... Michael of Nebadon ... began the organization of your local universe about four hundred billion years ago." [But "Big Bang has no shadows" [http://www.moondaily.com/reports/Big\\_Bang\\_Afterglow\\_Fails\\_An\\_Intergalactic\\_Shadow\\_Test\\_999.html](http://www.moondaily.com/reports/Big_Bang_Afterglow_Fails_An_Intergalactic_Shadow_Test_999.html)] Recent discoveries of well-formed galaxies and heavy metals in the supposed early stages of the Big Bang have made it increasingly more difficult to adapt the theory to fit the data. But since, the BB is still considered "well established" it results in a D for the test.

<sup>xviii</sup> There is about 1 electron per cubic inch in interstellar space 42:4.6; Paul Herrick, in "UB Nobel Prizes", personal emails 28 August 2013 and August 2010, says space temperature being above absolute zero was discovered in 1964 by Arno A. Penzias and Robert W. Wilson of Bell Laboratories and they were awarded a Nobel Prize in 1978.

<sup>xix</sup> 11:5.8; 11:6.1, 11:6.4-5 For CS references, see "The Coming Scientific Validation of *The Urantia Book*", Philip Calabrese, *The Urantia Book Fellowship Herald*, 2006.  
[http://urantia-book.org/archive/newsletters/herald/herald\\_2006.pdf](http://urantia-book.org/archive/newsletters/herald/herald_2006.pdf)

<sup>xx</sup> 57:6.2 [https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:6.2.%20%22#U57\\_6\\_2](https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:6.2.%20%22#U57_6_2)  
Also see <https://science.nasa.gov/mercury/facts/>

<sup>xxi</sup> 57:5.14 [https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:5.14%22#U57\\_5\\_14](https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:5.14%22#U57_5_14)  
"Retrograde motion in any astronomical system is always accidental and always appears as a result of the collisional impact of foreign space bodies";

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“Discovery of the retrograde trans-neptunian object 2008 KV42”, The CFEPS project team announces the detection and orbit determination of the first ever trans-neptunian object known to orbit backwards around the Sun. “‘Halley-type comets’ have retrograde and/or highly-inclined orbits, their origin is currently a puzzle. Models trying to produce these from either a Kuiper Belt source or an Oort cloud source have been largely unsuccessful.

[https://en.wikipedia.org/wiki/\(528219\)\\_2008\\_KV42](https://en.wikipedia.org/wiki/(528219)_2008_KV42)

xxii 57:5.0 [https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:5.0%22#U57\\_5\\_0](https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:5.0%22#U57_5_0)

Also see “Scientific Predictions of *The Urantia Book* by Irwin Ginsburgh, Ph.D., and Geoffrey L. Taylor”, UBRON email, 20 Jan. 2007, subject “[Science & the Ubook] Scientific Predictions Confirm Divinity of the FER”

xxiii 57:6.5 [https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:6.5%22#U57\\_6\\_5](https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:6.5%22#U57_6_5)

Shooting stars occur in swarms because they are the fragments of larger bodies of matter which have been disrupted by tidal gravity exerted by near-by and still larger space bodies. Saturn's rings are the fragments of a disrupted satellite. One of the moons of Jupiter is now approaching dangerously near the critical zone of tidal disruption and, within a few million years, will either be claimed by the planet or will undergo gravity- tidal disruption. The fifth planet of the solar system of long, long ago traversed an irregular orbit, periodically making closer and closer approach to Jupiter until it entered the critical zone of gravity- tidal disruption, was swiftly fragmentized, and became the present-day cluster of asteroids.

Also see <http://www.pbs.org/wgbh/nova/tothemoon/origins.html>

xxiv 41:7.2 “The surface temperature of your sun is almost 6,000 degrees, but it rapidly increases as the interior is penetrated until it attains the unbelievable height of about 35,000,000 degrees in the central regions. (All of these temperatures refer to your Fahrenheit scale.)” Now estimated at 29 million deg F, Microsoft Encarta '95. Redmond, WA: Microsoft, 1995. “The approximate temperature at the center of the sun is 16,000,000 K (29,000,000 °F)”

<http://hypertextbook.com/facts/1997/DedraForbes.shtml>

xxv 49:2.13 “Beings such as the Urantia races are classified as mid-breathers; you represent the average or typical breathing order of mortal existence. If intelligent creatures should exist on a planet with an atmosphere similar to that of your near neighbor, Venus, they would belong to the superbreather group, while those inhabiting a planet with an atmosphere as thin as that of your outer neighbor, Mars, would be denominated subbreathers.” See also [http://en.wikipedia.org/wiki/Atmosphere\\_of\\_Venus](http://en.wikipedia.org/wiki/Atmosphere_of_Venus).

xxvi 42:3.2 “The largest star in the universe, the stellar cloud Antares, is four hundred and fifty times the diameter of your sun and is sixty million times its volume.” 2013 estimate of Antares is 886 times the sun's radius  $\pm$  19%, which is a range from 717 to 1054. Previously it was much less. So, neither C nor D will be assigned until the contemporary science is “well established”. [https://en.wikipedia.org/wiki/Antares#cite\\_note-ohnaka2013-10](https://en.wikipedia.org/wiki/Antares#cite_note-ohnaka2013-10).

xxvii 58:4.2 [https://truthbook.com/urantia-book/paper-58-life-establishment-on-urantia/?criteria=%2258:4.2%22#U58\\_4\\_2](https://truthbook.com/urantia-book/paper-58-life-establishment-on-urantia/?criteria=%2258:4.2%22#U58_4_2)

“550,000,000 years ago the Life Carrier corps returned to Urantia. In co-operation with spiritual powers and superphysical forces we organized and initiated the original life patterns of this world and planted them in the hospitable waters of the realm.” CS says otherwise:

<http://paleobiology.si.edu/geotime/main/htmlversion/arc4ean3.html>

xxviii 59:1.19 “...They grew in length from two inches to one foot and developed into four distinct groups: carnivorous, herbivorous, omnivorous, and “mud eaters.” The ability of the latter group largely to subsist on inorganic matter — being the last multicelled animal that could — explains their great increase and long survival.” Compare with: “I show in this paper that even by the late Cambrian period (505 million years ago) certain extinct arthropods, trilobites belonging to the family Olenidae, evolved features best understood as evidence of sulfur chemoautotrophic mode of metabolism. If so, this finding takes the record of this type of bacterial symbiosis close to the initial radiation of large metazoans. The evidence derives from the morphological peculiarities of the trilobites themselves, including some species with reduced oral structures”, Richard Fortey, Department of



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Paleontology, Natural History Museum, Cromwell Road, London SW7 5BD, United Kingdom: "Olenid trilobites: The oldest known chemoautotrophic symbionts?" *Proceedings of The National Academy of Sciences - PNAS*, vol. 97, no. 12, pp. 6574-6578, 2000 DOI: [10.1073/pnas.97.12.6574](https://doi.org/10.1073/pnas.97.12.6574)

xxxix 60:2.14 "One hundred million years ago the reptilian age was drawing to a close. The dinosaurs, for all their enormous mass, were all but brainless animals, lacking the intelligence to provide sufficient food to nourish such enormous bodies. And so did these sluggish land reptiles perish in ever-increasing numbers."

xxx 61:0.1; 61:7.19 "Placental Mammals Originated On Earth 65 Million Years Ago, Researchers Assert", *Science Daily* (June 21, 2007) — An early mammal fossil discovered in Mongolia led to researchers asserting that the origins of placental mammals, which include humans, can be dated to approximately 65 million years ago in the Northern Hemisphere." See also <http://www.sciencedaily.com/releases/2007/06/070621135213.htm>

xxxii 36:2.11 "On Urantia there are forty-eight units of pattern control — trait determiners — in the sex cells of human reproduction." Also see "Chromosome 2 (human)" [http://en.wikipedia.org/wiki/Chromosome\\_2\\_%28human%29](http://en.wikipedia.org/wiki/Chromosome_2_%28human%29): "Humans have only 23 pairs of chromosomes. Human chromosome 2 is widely accepted to be a result of an end-to-end fusion of two ancestral chromosomes."

xxxiii 58:6.3 "From era to era radically new species of animal life arise. They do not evolve as the result of the gradual accumulation of small variations; they appear as full-fledged and new orders of life, and they appear *suddenly*." 58:6.4 *The sudden appearance of new species and diversified orders of living organisms is wholly biologic*, strictly natural. There is nothing supernatural connected with these genetic mutations." See also Eldridge, N., and Gould, S. J., Ed. Schopf, T. J. M. (1972) *Punctuated equilibria: an alternative to phyletic gradualism*. Models in Paleontology. San Francisco: Freeman, Cooper, and Co.

xxxiii 74:3.0 [https://truthbook.com/urantia-book/paper-74-adam-and-eve/?criteria=%22adam%20and%20eve%22#U74\\_3\\_0](https://truthbook.com/urantia-book/paper-74-adam-and-eve/?criteria=%22adam%20and%20eve%22#U74_3_0). "Adam and Eve arrived on Urantia, from the year A.D. 1934, 37,848 years ago." "During the dispensation of a Planetary Prince, primitive man reaches the limit of natural evolutionary development, and this biologic attainment signals the System Sovereign to dispatch to such a world the second order of sonship, the biologic uplifters. These Sons, for there are two of them — the Material Son and Daughter — are usually known on a planet as Adam and Eve."

See also "University of Chicago researchers find human brain still evolving": "For microcephalin, the new variant class emerged about 37,000 years ago and now shows up in about 70 percent of present-day humans." "The microcephalin variant appears along with the emergence of such traits as art and music, religious practices, and sophisticated tool-making techniques—which date back to about 50,000 years ago." <http://www.uchospitals.edu/news/2005/20050908-humanbrain.html> <https://www.uchicagomedicine.org/forefront/news/university-of-chicago-researchers-find-human-brain-still-evolving>

xxxiv 34:4.13 [https://truthbook.com/urantia-book/paper-34-the-local-universe-mother-spirit/?criteria=%22compass%22#U34\\_4\\_13](https://truthbook.com/urantia-book/paper-34-the-local-universe-mother-spirit/?criteria=%22compass%22#U34_4_13) <https://en.wikipedia.org/wiki/Magnetoreception>

xxxv See 65:4.3. [https://truthbook.com/urantia-book/paper-65-the-overcontrol-of-evolution/?criteria=%2265:4.3.%20%22#U65\\_4\\_3](https://truthbook.com/urantia-book/paper-65-the-overcontrol-of-evolution/?criteria=%2265:4.3.%20%22#U65_4_3) Also see "Review of Pathology of the Liver", Edited by Dr. Emilio Orfei, Department of Pathology, Loyola University of Chicago, Stritch School of Medicine, Apr 10, 2001. <http://www.meddean.luc.edu/lumen/MedEd/orfpath/repair.htm>. See also [http://en.wikipedia.org/wiki/Wound\\_healing](http://en.wikipedia.org/wiki/Wound_healing)

xxxvi 62:4.7 [https://truthbook.com/urantia-book/paper-62-the-dawn-races-of-early-man/?criteria=%2262:4.7%22#U62\\_4\\_7](https://truthbook.com/urantia-book/paper-62-the-dawn-races-of-early-man/?criteria=%2262:4.7%22#U62_4_7)

"Thus it was that the dawn mammals, springing from the North American lemur type, gave origin to the mid-mammals, and these mid-mammals in turn produced the superior Primates, who became the immediate ancestors of the primitive human race. The Primates tribes were the last vital link in the evolution of man, but in less than five thousand years not a single individual of these extraordinary tribes was left."

' "MISSING LINK" FOUND: New Fossil Links Humans, Lemurs?'

<https://www.theguardian.com/science/2009/may/19/ida-fossil-missing-link>

<https://scitechdaily.com/meet-your-62-million-year-old-cousin-stunning-fossil-links-mysterious-ancient-mammal-to-humans/>

<sup>xxxvii</sup> See 58:6.2. Also see "Frauds in Science", Wayne Jackson, Christian Courier: Archives, October 3, 2001.  
<https://christiancourier.com/articles/frauds-in-science>

<sup>xxxviii</sup> See 63:2.1-5 [https://truthbook.com/urantia-book/paper-63-the-first-human-family/?criteria=%2263:2.1%22#U63\\_2\\_1](https://truthbook.com/urantia-book/paper-63-the-first-human-family/?criteria=%2263:2.1%22#U63_2_1);  
Also <https://www.smithsonianmag.com/smart-news/evidence-of-fire-artificial-intelligence-180980319/>

<sup>xxxix</sup> See Paper 64 (The Evolutionary Races of Color) for a complete description of early man.  
<https://www.purdue.edu/uns/x/2009a/090312GrangerPekingman.html>

<sup>xl</sup> See 64:1.6 [https://truthbook.com/urantia-book/paper-64-the-evolutionary-races-of-color/?criteria=%2264:1.6%22#U64\\_1\\_6](https://truthbook.com/urantia-book/paper-64-the-evolutionary-races-of-color/?criteria=%2264:1.6%22#U64_1_6);  
<https://www.nhm.ac.uk/discover/the-oldest-human-footprints-in-europe.html>

<sup>xli</sup> 78:1.8 [https://truthbook.com/urantia-book/paper-78-the-violet-race-after-the-days-of-adam/?criteria=%22The%20blue%20race%22#U78\\_1\\_8](https://truthbook.com/urantia-book/paper-78-the-violet-race-after-the-days-of-adam/?criteria=%22The%20blue%20race%22#U78_1_8)  
"... Neanderthal absorption had greatly retarded the culture of the blue man, but he was otherwise the most aggressive, adventurous, and exploratory of all the evolutionary peoples of Eurasia." See also "Did Your Ancestor Date a Neanderthal?" Wall Street Journal, August 17, 2012,  
<http://online.wsj.com/article/SB10000872396390444772404577587483438679926.html>

<sup>xlii</sup> 64:6.5 [https://truthbook.com/urantia-book/paper-64-the-evolutionary-races-of-color/?criteria=%2264:6.5%22#U64\\_6\\_5](https://truthbook.com/urantia-book/paper-64-the-evolutionary-races-of-color/?criteria=%2264:6.5%22#U64_6_5)  
According to the UB, "About eighty-five thousand years ago the comparatively pure remnants of the red race went en masse across to North America, and shortly thereafter the Bering land isthmus sank, thus isolating them." But until recently pretty much all archaeologists believed that the first Americans reached America about 14,000 years ago from northern Asia. <https://www.scientificamerican.com/article/the-first-americans/>  
Then, in 2017 a paper published about mastodon bones and stone tools discovered in 1992 at The Cerutti Mastodon Archaeological Site showed that the first humans were living in North America much earlier than previously thought.... 116,000 years earlier. <https://www.sci.news/archaeology/cerutti-mastodon-site-humans-north-america-04815.html>

Previously, this divergence of the UB from "well-established" Contemporary Science concerning the first Americans' arrival was counted as a D (divergent). Because the new estimates are still controversial, the UB's 'prior to 85,000 years ago' date deserves to go from D (divergent) to a question mark (?). There is still no well-established earliest date of initial arrival.

<sup>xliii</sup> A 2011 Reuters story reported "The Maqar Civilization is a very advanced civilization of the Neolithic period. This site shows us clearly, the roots of the domestication of horses 9,000 years ago."  
<https://www.reuters.com/article/business/saudi-arabia-discovers-9000-year-old-civilization-idUSLNE77001R/>  
See also <https://www.science.org/doi/10.1126/sciadv.abb0030> and  
<https://www.britannica.com/animal/horse/Origin-of-horse-domestication>

xliv 57:5.4 “4,500,000,000 years ago the enormous Angona system began its approach to the neighborhood of this solitary sun. The center of this great system was a dark giant of space, solid, highly charged, and possessing tremendous gravity pull.” [https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:5.4%22#U57\\_5\\_4](https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:5.4%22#U57_5_4)  
57:5.9 “The five inner and five outer planets soon formed in miniature....” [https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:5.9%20%22#U57\\_5\\_9](https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:5.9%20%22#U57_5_9)  
Also see “The age of the Earth is  $4.54 \pm 0.05$  billion years....” [http://en.wikipedia.org/wiki/Age\\_of\\_the\\_Earth](http://en.wikipedia.org/wiki/Age_of_the_Earth)

xlv 57:8.23. [https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:8.23%22#U57\\_8\\_23](https://truthbook.com/urantia-book/paper-57-the-origin-of-urantia/?criteria=%2257:8.23%22#U57_8_23)  
The University of California Museum of Paleontology writes: “Alfred Wegener (1880-1930). In 1929, about the time Wegener’s ideas began to be dismissed, Arthur Holmes elaborated on one of Wegener’s many hypotheses; the idea that the mantle undergoes thermal convection.” “Not until the 1960’s did Holmes’ idea receive any attention.” See also “Plate Tectonics: The Rocky History of an Idea”, Anne Weil, the University of California Berkeley Museum of Paleontology, <http://www.ucmp.berkeley.edu/geology/techist.html> ]

xlvi 57:8.23 “750,000,000 years ago the first breaks in the continental land mass began ...”, See also 58:5.3-4.

xlvii 59:2.5 “330,000,000 years ago marks the beginning of a time sector of comparative quiet all over the world, with much land again above water. The only exception to this reign of terrestrial quiet was the eruption of the great North American volcano of eastern Kentucky, one of the greatest single volcanic activities the world has ever known. The ashes of this volcano covered five hundred square miles to a depth of from fifteen to twenty feet.”  
[https://truthbook.com/urantia-book/paper-59-the-marine-life-era-on-urantia/?criteria=%2259:2.5%22#U59\\_2\\_5](https://truthbook.com/urantia-book/paper-59-the-marine-life-era-on-urantia/?criteria=%2259:2.5%22#U59_2_5)  
<https://www.usgs.gov/publications/pennsylvanian-fire-clay-tonstein-appalachian-basin-its-distribution-biostratigraphy-0A>

xlviii See 73:3.4 [https://truthbook.com/urantia-book/paper-73-the-garden-of-eden/?criteria=%2273:3.4%22#U73\\_3\\_4](https://truthbook.com/urantia-book/paper-73-the-garden-of-eden/?criteria=%2273:3.4%22#U73_3_4);  
and see 73:7.1 [https://truthbook.com/urantia-book/paper-73-the-garden-of-eden/?criteria=%2273:7.1%22#U73\\_7\\_1](https://truthbook.com/urantia-book/paper-73-the-garden-of-eden/?criteria=%2273:7.1%22#U73_7_1);  
Robert Sarmast, <https://www.amazon.com/Discovery-Atlantis-Startling-Island-Cyprus/dp/0977932605> and recently (2025): <https://aka.ms/AAb9yvg>

xl ix See 60:3.3; 61:3.3, Stanford scientists crack mystery of the Sierra Nevada’s age  
<https://share.google/HYaFdPhprQ2KIUav3>

<sup>i</sup> See 80:2.4. Also see [http://en.wikipedia.org/wiki/Zanclean\\_flood](http://en.wikipedia.org/wiki/Zanclean_flood)

<sup>ii</sup> See 58:2.6. [https://truthbook.com/urantia-book/paper-58-life-establishment-on-urantia/?criteria=%2258:2.6%22#U58\\_2\\_6](https://truthbook.com/urantia-book/paper-58-life-establishment-on-urantia/?criteria=%2258:2.6%22#U58_2_6)  
Also see Blue Jets, <http://news.stanford.edu/news/2002/march20/bluejet-320.html>.

<sup>iii</sup> Whether there was a census in 8 B.C.E. as recorded in the Bible or not is still a controversial topic not yet well established, although, “Augustus himself notes in his Res Gestae (The Deeds of Augustus) that he ordered three wide-spread censuses of Roman citizens, one in 28 B.C., one in 8 B.C. and one in 14 A.D. Res Gestae Divi Avgvsti Chapter 22 (The Deeds of Divine Augustus) translated by Thomas Bushnell, BSG  
<http://classics.mit.edu/Augustus/deeds.html#71>.

122:7.1 In the month of March, 8 B.C. (the month Joseph and Mary were married), Caesar Augustus decreed that all inhabitants of the [Roman Empire](#) should be numbered, that a census should be made which could be used for effecting better taxation. The Jews had always been greatly prejudiced against any attempt to “number the people,” and this, in connection with the serious domestic difficulties of Herod, King of Judea, had conspired to cause the postponement of the taking of this census in the Jewish kingdom for one year. Throughout all the Roman Empire this census was registered in the year 8 B.C., except in the Palestinian kingdom of Herod, where it was taken in 7 B.C., one year later.”

See also The Star of Bethlehem; David Hughes, Review article, Nature, Vol. 264; Dec. 9, 1976

<sup>iiii</sup> <https://www.gigacalculator.com/calculators/binomial-probability-calculator.php>