Chapter 4

The Universe of Universes

... the mortal mind can be taught much about the plan and arrangement of the universes; you can know something of their physical organization and marvelous administration; you may learn much about the various groups of intelligent beings who inhabit the seven superuniverses of time and the central universe of eternity. ^{12:0.1}

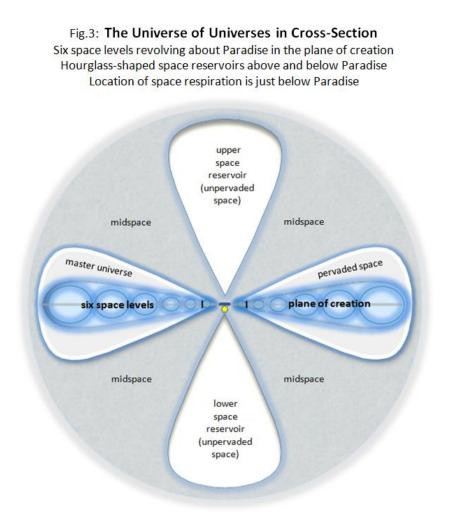
Revelation and current theory agree that the universe constitutes a finite whole. Current theory assumes that galaxies are distributed randomly throughout the universe on the largest scales. Revelation describes a universe in which galaxies tend to cluster about a single universal plane of creation, leaving two coneshaped cosmic voids above and below the center of this plane. The space regions around the plane of creation constitute the master universe.

Relativity conceives of space as a reality in which the unit of distance varies with relative velocity. Revealed cosmology goes beyond this to identify three fundamentally different types of space which are coextensive with three different regions of the universe of universes: the master universe, the voids above and below the plane of creation, and the regions separating them. Relativity conceives of the expansibility of space. Revelation describes the cyclical expansion and contraction of space and also considers the additional properties of movability and pervade-ability.

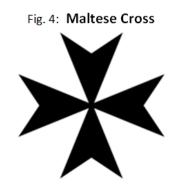
There are six distinct space levels within the master universe. Two of these levels constitute the grand universe, which is the evolutionary domain of the Supreme Being. The Supreme Being is a finite, experiential, time-space reflection of the infinite, existential, eternal and absolute Paradise Trinity.

1. Structure of the Universe

The universe of universes is not an infinite plane, a boundless cube, nor a limitless circle; it certainly has dimensions. The laws of physical organization and administration prove conclusively that the whole vast aggregation of forceenergy and matter-power functions ultimately as a space unit, as an organized and co-ordinated whole. ^{12:1.1}



The totality of space is finite and the grand universe is a relatively small structure at the center of the master universe. At the exact center of the grand universe is the Isle of Paradise, the eternal home of the Universal Father, the First Source and Center. A Perfector of Wisdom informs us that total space is separated into pervaded and unpervaded space: "In attempting to imagine the volume outlines of these space reservoirs, you might think of an hourglass." ^{11:6.1} "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." ^{11:7.3}



Pervaded space contains the material creation of the master universe. There are no stars or galaxies in the unpervaded space of the upper and lower space reservoirs. "We do not know whether there is a creative intent concerning unpervaded space; we really know very little about the space reservoirs, merely that they exist, and that they seem to counterbalance the space-expansion-contraction cycles of the universe of universes." ^{11:6.3} Universe and reservoir space are separated by the midspace zones, which "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." ^{11:7.3}

The cosmological principle underlying all current theories assumes that matter is evenly distributed throughout the universe on the largest scales. The Perfector of Wisdom describes material creation as being concentrated in a horizontal plane, which increases in height as the distance from Paradise increases. A cross section perpendicular to this material plane shows two coneshaped voids, comprising roughly one-tenth of the volume of total space, in which there are no material creations. Separating the space reservoirs from the plane of material creation are intermediate regions called midspace zones. From this description it is not clear how many, if any, galaxies may exist in midspace. Since we are told there are none in the space reservoirs, it seems reasonable to suppose that the number of galaxies progressively declines in some fashion between the material plane of creation and the borders of the space reservoirs. The Perfector of Wisdom compares the outline of pervaded space to a vertical V-shaped plane swinging around Paradise: "If you imagine a finite, but inconceivably large, V-shaped plane situated at right angles to both the upper and lower surfaces of Paradise, with its point nearly tangent to peripheral Paradise, and then visualize this plane in elliptical revolution about Paradise, its revolution would roughly outline the volume of pervaded space." ^{11:7.5} There are upper and lower limits to pervaded space. "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." ^{11:7.6}

Unpervaded space is defined in terms of pervaded space. "'Unpervaded' space means: unpervaded by those forces, energies, powers, and presences known to exist in pervaded space." ^{11:6.3} The Divine Counselor tells us that the space of the master universe is pervaded by "cosmic force", "emergent energy", and "universe power." The meanings of force, energy, and power differ somewhat from those of modern physics.

Total space is segmented into the pervaded space of the master universe and the unpervaded space of the reservoirs, with midspace separating these two. The conically shaped space reservoirs extend directly above and below the Isle of Paradise. Pervaded space is currently expanding, while unpervaded space is currently contracting. There is a single point of convergence between pervaded and unpervaded space just below the Paradise Isle.

As the universes of the horizontal extension of pervaded space expand, the reservoirs of the vertical extension of unpervaded space contract and vice versa. There is a confluence of pervaded and unpervaded space just underneath nether Paradise. Both types of space there flow through the transmuting regulation channels, where changes are wrought making pervadable space nonpervadable and vice versa in the contraction and expansion cycles of the cosmos. ^{11:6.2}

The sum of pervaded and unpervaded space appears to be relatively constant. Space is expanding in the master universe because reservoir space is flowing into the master universe, increasing its volume relative to absolute extension. "Space seemingly originates just below nether Paradise." ^{11:2.11} Space can flow through space because the infinitesimals of space can be qualified with varying degrees of movability. Pervaded and unpervaded spaces are movable and flow within the relatively immovable regions of midspace. This motion of space between the

reservoirs and the master universe is cyclical and called space respiration. The finite totality of space is subject to the absolute primary motion of space respiration. "Primary motion—space respiration, the motion of space itself." ^{12:4.8} The reality of space expands and contracts relative to the absolute inertial frame of reference established by Paradise and infinite absolute extension.

Midspace is relatively immovable. "The relatively motionless midspace zones impinging on Paradise and separating pervaded from unpervaded space are the transition zones from time to eternity." ^{12:5.4} Midspace encompasses pervaded and unpervaded space and also appears to form the transmuting channels beneath Paradise, which contain and direct the flow of space between the space reservoirs and the master universe.

Paradise is the actually motionless nucleus of the relatively quiescent zones existing between pervaded and unpervaded space. Geographically these zones appear to be a relative extension of Paradise, but there probably is some motion in them. We know very little about them, but we observe that these zones of lessened space motion separate pervaded and unpervaded space. ^{11:7.2}

As reservoir space flows through the transmuting channels beneath Paradise, space is changed from unpervaded-able to pervade-able. Cosmic force is a specific form of primordial energy which blankets the whole of the master universe. This force is not present in the unpervaded-able space of the upper and lower reservoirs. Ultimatons are classified as emergent energy, which means they are also not found in the space reservoirs. Photons, particles of light, are not cosmic force, emergent energy, or universe power. The motion of photons, electromagnetic energy, does not appear to be restricted to pervaded space.

The primary cyclical motion of space respiration is accompanied by the secondary absolute motion of universal revolution about the Isle of Paradise. The galaxies of the master universe move perpetually about absolutely stationary Paradise in response to absolute gravity.

The Unqualified Absolute upholds the physical universe, while the Deity Absolute motivates the exquisite overcontrol of all material reality; and both Absolutes are functionally unified by the Universal Absolute. This cohesive correlation of the material universe is best understood by all personalities — material, morontia, absonite, or spiritual — by the observation of the gravity response of all bona fide material reality to the gravity centering on nether Paradise. ^{56:1.2}

The Paradise Trinity creates the destiny of the universe of universes in the Deity Absolute, which exercises an "exquisite overcontrol of all material reality." The Unqualified Absolute is the infinite energy potential which "upholds the physical universe." The Universal Absolute's control of the physical universe is best understood in terms of the functional unification of all material reality by absolute gravity. God creates, upholds, and controls the universe of universes.

In principle, it should be possible to determine whether the cosmological principle or revealed structure more accurately describes the universe. Given a sufficiently large number of observed objects, the degree of homogeneity and isotropy of matter is potentially knowable. Up until about the 1980s, observation appeared to show a more or less even distribution of galaxies in every direction, supporting the cosmological principle. Around this time various systematic redshift surveys began to publish their results. In 1989 Margaret Geller discovered a Great Wall of galaxies over 500 million light-years in length. The discovery of such a large structure in a universe thought to be about 13.8 billion light-years in radius challenges the premise of the cosmological principle. Matter must be evenly distributed throughout the universe on the largest scales in order for the Big Bang theory to be credible.

In an article in Science News in 2000, the astrophysicist Robert P. Kirshner of Harvard used the term "end of greatness" to indicate his belief that with the completion of several major redshift surveys, the largest structures in the universe had been discovered. "It would be a big surprise and a great challenge to our understanding of the growth of structure through gravitation if there were a real feature in the galaxy distribution that corresponds to scales of a billion light-years." ^[3] Under current theory, the Geller's Great Wall could form as a result of gravitational forces acting within the age of the universe. Something a billion light-years in size would be a "great challenge" to the whole theory, since a structure this large could not form in the time available since the Big Bang. Identifying the "end of greatness" in cosmic structures has critical importance for the Big Bang theory.

Using data from the Sloan Digital Sky Survey, J. Richard Gott discovered the Sloan Great Wall in 2003. ^[4] This enormous structure of tens of thousands of galaxies lies in a plane, is a billion light years distant, and has a length of 1.4 billion light-years. It covers roughly 80 degrees of longitude on the celestial sphere. A structure this large and well-defined is the great challenge to the cosmological principle and the Big Bang hypothesis of which Kirshner spoke. A duration of 13.8 billion years is insufficient to account for its growth through gravitation. Additionally, this structure is too large to be held together by the force of (linear) gravity. In revealed cosmology, a structure with the size, shape, and orientation of the Sloan Great Wall is predictable.

2. Properties of Space

Revelation guides us toward the conception of something similar to Newton's idea of absolute space, but it is not, in fact, space at all. Absolute extension is a property of Paradise and is existential, infinite, and absolutely immovable. The reality of absolute extension is measured by perfect rational distances. The classical concept of space corresponds to Euclidean geometry and is quantified by real numbers, which include both rational and irrational quantities. The substantiality of space cannot be measured by rational quantities, since this would make it infinitely divisible and absolute. Space is a property of matter and consists of imperfectly quantified infinitesimals. Beyond space's extension and (irrational) distance, relativity recognizes a third property of curvature; a straight line in one local spacetime may be curvilinear in another. Relative velocity and acceleration change the geometry of space, which can cause light to follow a curvilinear path instead of a straight line.

The discovery of the expansion of space discloses a fourth property of movability. The distance between two bodies can increase, even when both bodies are relatively stationary in the local spaces of their respective neighborhoods. General relativity raised the possibility that the space within a body moves with it, which has been tentatively confirmed by the Gravity Probe B experiment. However, this fourth property of movability is not limited to a local spacetime contained by a material body. We are informed that space has varying degrees of movability apart from material association. We are also told about a fifth property: the pervade-ability of space by cosmic force, emergent energy, and universe power.

The expanding and contracting motions of space respiration occur within the relatively quiescent framework of midspace. "Even space itself is but an ultimate condition, a condition of qualification *within* the relative absoluteness of the quiet zones of midspace." ^{106:7.7} Midspace is not absolute extension. Paradise does not exist in space or in midspace. "On Paradise, time and space are nonexistent; the time-space status of Paradise is absolute." ^{0:1.13} Paradise has a location relative to (mid)space, and relatively immovable midspace actually comes into contact with it. "Space does not touch Paradise; only the quiescent *midspace zones* come in contact with the central Isle." ^{11:7.1} Where midspace comes into contact with Paradise, its infinitesimals must approach the immovability of absolute extension.

Pervaded space and unpervaded space are qualifications of the more fundamental reality of midspace. Midspace is not perfectly stationary, but it does not expand or contract as pervaded and unpervaded space do. There is a "relative absoluteness" to midspace which makes it more or less immovable. Midspace exists relative to absolute extension, which consists of perfectly discrete and absolutely immovable locations. Motion is only possible relative to something which does not move. There is an objective relationship between the perfectly immovable locations of absolute extension and the imperfect infinitesimals of midspace. For lack of a better idea, there is a "stickiness" between movable infinitesimals and immovable absolute locations which appears to anchor and immobilize midspace to varying degrees. Some qualification or change is made to the infinitesimals of midspace which gives rise to the movability of pervaded and unpervaded space. These infinitesimals have less "stickiness" and move in response to the force of space respiration.

The property of movability is different from that of pervade-ability. "Both types of space there flow through the transmuting regulation channels, where changes are wrought making pervadable space nonpervadable and vice versa …" ^{11:6.2} There are forces, energies, powers, and presences in pervaded space which do not exist in unpervaded (nonpervadable) space. "Space is not force, energy, or power," ^{11:5.9} even though "it is pervaded by the Unqualified Absolute." ^{12:5.2} After midspace is changed to make its infinitesimals movable, some additional change is made to movable space in the "transmuting regulation channels" beneath Paradise which adds or removes the property of pervade-ability.

Between the relative absoluteness of midspace and the relative movability of pervaded space, there are quiet space zones whose infinitesimals are movable to intermediate degrees. These quiet space zones intervene between the alternating concentric motions of universal revolution about Paradise. The first three concentric zones of semiquiet space are in the central universe.

1. The quiescent midspace zones impinging on Paradise.

2. The clockwise processional of the three Paradise and the seven Havona circuits.

3. The semiquiet space zone separating the Havona circuits from the dark gravity bodies of the central universe.

4. The inner, counterclockwise-moving belt of the dark gravity bodies.

5. The second unique space zone dividing the two space paths of the dark gravity bodies.

6. The outer belt of dark gravity bodies, revolving clockwise around Paradise.

7. A third space zone – a semiquiet zone – separating the outer belt of dark gravity bodies from the innermost circuits of the seven superuniverses. ^{14:1.2-8}

Separating the alternating revolutions of the superuniverse and four outer space levels from each other are four relatively quiet space zones.

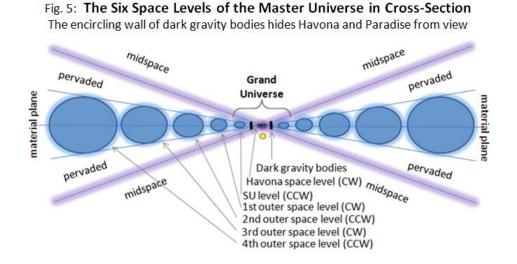
The relatively quiet zone between the space levels, such as the one separating the seven superuniverses from the first outer space level, are enormous elliptical regions of quiescent space activities. These zones separate the vast galaxies which race around Paradise in orderly procession. ^{11:7.7}

"Between the energy circuits of the seven superuniverses and this gigantic outer belt of force activity [note: the first outer space level], there is a space zone of comparative quiet." ^{12:1.14} This quiet space was once immovable like midspace. "Similar zones [i.e. to midspace] once existed between the levels of pervaded space, but these are now less quiescent." ^{11:7.2} This quiet space is more movable than midspace but less movable than the space within the six concentric space levels. The decreased movability of this quiet space appears to alter the space-forces which otherwise pervade the master universe. "Our students of these phenomena are in doubt as to the exact status of the space-forces existing in this zone of relative quiet which encircles the seven superuniverses." ^{12:1.14} Midspace separates pervade-able from nonpervadable space. Quiet space zones separate the pervade-able spaces in each concentric revolving space level. The property of pervade-able is novability.

The geometry of space does not necessarily correspond to Euclidean geometry; a straight line in one spacetime frame may be curved in other spacetime frames. Space can be treated as a physical property of matter. The space within a body rotates and moves with it due to the gravitational force associated with matter. Revelation confirms that space can be treated as a property of matter in a relative sense, but space is not derived from energy-mass, as current theory supposes. Space motions also occur independently of matter and gravity, such as in space respiration. The infinitesimals of space have variable movability relative to absolute extension. Space has variable degrees of pervade-ability by certain space-forces. The simple concept of space has become a complex and nuanced reality with several distinct physical properties.

3. Space Levels of the Master Universe

Within the pervaded space of the master universe is the narrower V-shaped plane of material creation. The vertical height of pervaded space increases more rapidly than the vertical height of material creation as the distance from Paradise increases. Within this V-shaped plane of materialization, there are six distinct space levels. "The master universe is existent in six concentric ellipses, the space levels encircling the central Isle." ^{12:1.3} The eternal universe of Havona is the first space level, and it is in clockwise revolution about Paradise. It is surrounded by the space level of the seven superuniverses, which is in counterclockwise revolution about Paradise.



Together the Havona and superuniverse space levels are referred to as the grand universe, the domain of the Supreme Being. Encircling the grand universe is the realm of the Ultimate, which consists of four outer space levels revolving about Paradise in alternating directions.

This alternate zoning of the master universe, in association with the alternate clockwise and counterclockwise flow of the galaxies, is a factor in the stabilization of physical gravity designed to prevent the accentuation of gravity pressure to the point of disruptive and dispersive activities. Such an arrangement exerts antigravity influence and acts as a brake upon otherwise dangerous velocities. ^{11:7.9}

The first outer space level begins about half a million light-years beyond the superuniverses. There is "an unbelievable energy action which increases in volume and intensity for over twenty-five million light-years." ^{12:1.14} Twenty-five million light-years is about 1,000 times the distance from Urantia to the center of the Milky Way galaxy. There is, however, no mention of the outer limit or extent of the first outer space level. These alternately revolving space levels are separated by quiet space zones.

...the master universe [is] a series of elliptical space levels of lessened resistance to motion, alternating with zones of relative quiescence... $^{12:1.2}$

A space level thus functions as an elliptical region of motion surrounded on all sides by relative motionlessness. Such relationships of motion and quiescence constitute a curved space path of lessened resistance to motion which is universally followed by cosmic force and emergent energy as they circle forever around the Isle of Paradise. ^{11:7.8}

These alternating concentric zones of movable and partially immovable space form elliptical paths in which the alternating revolution of energy-mass about Paradise encounters the least resistance to motion. Cosmic (primordial) force is the energy from which ultimatons are evolved. Ultimatons are the first form of emergent energy and are held in orbit about Paradise by absolute gravity. The revolution of cosmic force and emergent energy pervading the master universe encounters the least resistance to motion within the confines of a space level. Ultimatons evolve into baryons, the electronic matter of electrons, protons, and neutrons. Electronic matter is a form of universe power that is responsive to linear gravity. Space can be treated as a property of matter, so it moves with the revolution of energy-matter in each level. The pervaded space in each space level flows along a curved path surrounded on all sides by less movable space. The motion of space and matter within these concentric zones is described as secondary absolute motion relative to Paradise. "Secondary motion—the alternate directional swings of the successive space levels." ^{12:49}

The secondary absolute motions of space and energy-mass within the levels of the master universe form a hierarchical organization of different time-spaces. Time comes by virtue of motion. Relativity demonstrates that the motions of both velocity and acceleration change spacetime. The relative relationships between time, space, and motion lead to the conclusion that mass and energy are equivalent, as expressed in the famous equation: $E = mc^2$. A Mighty Messenger confirms the essential correctness of this relationship: "The increase of mass in matter is equal to the increase of energy divided by the square of the velocity of light." ^{42:4.11} The galaxies in the superuniverses are subject to both the linear velocity revolution and a centripetal acceleration toward Paradise. The rate at which time passes in a GPS satellite in orbit about earth is determined by both its orbital velocity and the acceleration of gravity. ^[1] The rate at which time passes in the superuniverse space level depends upon the linear orbital velocity and the centripetal acceleration.

The finite spacetime of the superuniverses differs from the spacetime in the other space levels. The time-space in the central universe of Havona is predominantly transcendental. "Much of Paradise-Havona appears to be on the transcendental order." ^{106:0.5} There is no time on eternal Paradise, but there is time in Havona. "Time is not reckoned on Paradise.... But time is germane to the Havona circuits and to numerous beings of both celestial and terrestrial origin sojourning thereon." ^{14:1.11} The energy in Havona has gravitationally responsive mass, but the reality of this mass is not otherwise detectable by us. "The physical realities of Havona represent an order of energy organization radically different from any prevailing in the evolutionary universes of space." ^{14:2.2} "If a Urantia mortal could be transported to Havona, he would there be deaf, blind, and utterly lacking in all other sense reactions..." ^{14:2.4} Havona energy is described as a further evolution of electronic (baryonic) matter. Energy evolves from cosmic force to emergent energy and then to the universe power of baryonic energymatter in the superuniverses. But then "energy-power ... seems to begin to swing" back towards force, but force of a nature very unlike that of space potency and primordial force. Havona energy systems are not dual; they are triune. This is the existential energy domain of the Conjoint Actor, functioning in behalf of the Paradise Trinity." 42:2.16

The volume of the universe is one whole extension from an absolute perspective, and the master universe is a transcendental whole consisting of six concentric time-space realities. "Among those realities which are associated with the transcendental level are the following The concept of the master universe." ^{105:7.4, 105:7.6} The universe of universes *is*; the master universe *eventuates*; the superuniverses are *created* in space and *evolve* in time. The galaxies in outer space exist in spacetimes where the measures of distance and duration are different from what they are in the finite spacetime of the superuniverses. These relativistic differences bear directly upon any effort to determine the distances to

and the motions of galaxies in outer space. From our location there are inescapable "time-space distortions" which significantly affect our observations of outer space galaxies. "Although your spectroscopic estimations of astronomic velocities are fairly reliable when applied to the starry realms belonging to your superuniverse and its associate superuniverses, such reckonings with reference to the realms of outer space are wholly unreliable." ^{12:4.14}

4. The Beginning

The mind of man must have a starting point for the visualization of universe history... 8:1.10

From our perspective, universe history must have a beginning. Simultaneous eternity events are presented to us as a sequence of temporal events initiated by a First Cause. In this context, universe history begins with the personalization of the Infinite Spirit by the Universal Father and the Eternal Son.

In the eternity of the past, upon the personalization of the Infinite Spirit the divine personality cycle becomes perfect and complete. The God of Action is existent, and the vast stage of space is set for the stupendous drama of creation—the universal adventure—the divine panorama of the eternal ages. **8:1.1**

In this particular sequential accounting, the six other Absolutes of Infinity conceptually exist prior to the Infinite Spirit, even though all seven are eternally co-existent. The apparent reason for this approach is to highlight the nature of the Infinite Spirit in his universal role as the God of Action. "As the God of Action, he is the apparent ancestor of motion, change, and relationship." ^{9:1.1} Universe history begins with the first motion, which marks the beginning of time and the cycles of eternity. Just before the hypothetical eternity moment of creation, the space-energy from which all material creation will arise and the absolute gravity which will dynamically unify creation are potentials inherent in Paradise. The infinite potential for energy in the Unqualified Absolute is cosmically focalized on nether Paradise. The infinite gravitational potential of the Universal Absolute is also focalized on nether Paradise. The God of Action becomes

personally existent and creates the central universe of Havona in the physical reality of space.

The Infinite Spirit eternalizes concurrently with the birth of the Havona worlds, this central universe being created by him and with him and in him in obedience to the combined concepts and united wills of the Father and the Son. The Third Person deitizes by this very act of conjoint creation, and he thus forever becomes the Conjoint Creator. 8:1.7

These are the grand and awful times of the creative expansion of the Father and the Son by, and in, the action of their conjoint associate and exclusive executive, the Third Source and Center. ^{8:1.8}

Upon attaining self-consciousness, "The first act of the Infinite Spirit is the inspection and recognition of his divine parents, the Father-Father and the Mother-Son."^{8:1.2} In this sequence, the absolute physical realities of Paradise and absolute extension hypothetically precede the birth of the Infinite Spirit and the creation of Havona and space. Paradise and absolute extension constitute an absolute inertial frame of reference, which exists prior to the emergence of actual energy-mass, time, space, and gravity in response to the first creative action of the Infinite Spirit.

The central universe of Havona *eventuates* in perfection, unlike the universes of time and space which evolve toward this goal. Havona is perfect from the moment of its creation: "...evolution is not the order of the central universe..." 24:7.1 Havona is encircled by the dark gravity bodies, which presumably appear at the same eternity moment as Havona. The revolution of the billion worlds of the central universe in a single plane is perfectly stabilized and balanced by the gravitational forces emanating from both Paradise and the dark gravity bodies: "Triata physical constitution, coupled with the balancing effect of the immense dark gravity bodies, makes it possible so perfectly to equalize the physical forces and so exquisitely to balance the various attractions of this tremendous creation." 14:3.6 There is currently a semiquiet space zone encircling the dark gravity bodies, separating them from the innermost circuits of the seven superuniverses. This semiguiet space zone was once similar to midspace, which mediates the transition from time to eternity, but is "now less quiescent." 11:7.2

Havona and the dark gravity bodies are all that exist in space at the beginning of the cycles of eternity. The superuniverse and outer space levels have not yet been created. It seems that beyond the midspace surrounding the dark gravity bodies lies only the eternal infinity of absolute extension.

The first Deity-creating act of the Infinite Spirit, functioning apart from the Trinity but in some unrevealed association with the Father and the Son,

personalized in the existence of the Seven Master Spirits of Paradise, the distributors of the Infinite Spirit to the universes. 9:8.2

Following the creation of the central universe by the Infinite Spirit and his recognition of the Father and the Son, his first creative act is the personalization of the Seven Master Spirits. "The Seven Master Spirits are the supreme and ultimate representatives of the Infinite Spirit." ^{13:4.2} The Master Spirits are the source of mind in the grand universe. "The mind endowment of the seven superuniverses is derived from the Seven Master Spirits, the primary personalities of the Conjoint Creator. These Master Spirits distribute mind to the grand universe as the cosmic mind..." ^{9:4.3} Also following the birth of the Infinite Spirit and before the creation of the superuniverse space level, the Paradise Trinity creates God the Supreme. "God the Supreme as a person existed in Havona before the creation of the seven superuniverses, but he functioned only on spiritual levels." 56:6.2 God the Supreme is the finite spirit personality expression of the Paradise Trinity. "God the Supreme in Havona is the personal spirit reflection of the triune Paradise Deity." 0:7.7 At this hypothetical eternity moment the Supreme Being does not function on either mindal or material levels of experience.

The Supreme Being is the evolutionary Deity of the grand universe.

The Supreme Being is the unification of three phases of Deity reality: God the Supreme, the spiritual unification of certain finite aspects of the Paradise Trinity; the Almighty Supreme, the power unification of the grand universe Creators; and the Supreme Mind, the individual contribution of the Third Source and Center and his co-ordinates to the reality of the Supreme Being. 22:7.11

The Supreme Being is personally experiencing the achievement of Deity unity as the evolving and experiential God of the evolutionary creatures of time and space. 0:2.15

The Almighty Supreme is the "the power unification of the grand universe Creators" ^{22:7.11} "evolving on the value-level of nonpersonal activities." ^{0:8.10} The grand universe Creators are the Seven Master Spirits, the Ancients of Days, and the Paradise Creator Sons, of whom Christ Michael is one. Their manifestations of creative power are unified in the Almighty Supreme. Apart from the presence of absolute and linear gravity, the grand universe Creators are responsible for creating, controlling, and upholding the physical domain of the Supreme. The personal spirit of God the Supreme and the material power of the Almighty Supreme are experientially unified by the Supreme Mind.

The evolution of the Almighty power of Supremacy by diverse divinity synthesis in the evolving universes eventuated in a new power presence of Deity which co-ordinated with the spiritual person of the Supreme in Havona by means of the Supreme Mind, which concomitantly translated from the potential resident in the infinite mind of the Infinite Spirit to the active functional mind of the Supreme Being. ^{56:6.2}

The mind bestowal of the Third Source and Center unifies the spirit person of God the Supreme with the experiential power of the evolutionary Almighty. 116:3.2

God the Supreme exists before the creation of the superuniverses. As the Paradise Trinity establishes the destiny of the universe of universes in the Deity Absolute, the Trinity also establishes the destiny of the grand universe in God the Supreme. The superuniverse space level is the first thing created after Havona is eventuated. "The first post-Havona creation was divided into seven stupendous segments, and the headquarters worlds of these superuniverse governments were designed and constructed." ^{15:0.2} It does not appear that the four outer space levels are present at the time these headquarters worlds are constructed. The Almighty Supreme becomes a time-space actuality with the creation of the headquarters worlds of the seven superuniverses. At the same time the Supreme Mind is bestowed by the Infinite Spirit.

The headquarters world of each superuniverse is the first materialization in each of these seven space segments. These headquarters worlds were created near the beginning of the cycles of eternity. "The present scheme of administration has existed from near eternity, and the rulers of these seven superuniverses are rightly called Ancients of Days." ^{15:0.2} "When you reach Paradise and search the written records of the beginning of things, you will find that the first entry appearing in the personality section is the recital of the trinitization of these twenty-one Ancients of Days." ^{18:3.4}

The capitals of the superuniverses are architectural spheres, which are real physical bodies which do not evolve naturally. They are specially created and "built according to plans and specifications." ^{15:5,13} "They have just double the number of elements of the evolved planets. Such made-to-order worlds not only abound in the heavy metals and crystals, having one hundred physical elements, but likewise have exactly one hundred forms of a unique energy organization called *morontia material.*" ^{48:1,3} Architectural spheres are directly organized by the power directors: "…very little of superuniverse mass is organized by the direct action of the power directors (as in the construction of architectural spheres)." ^{15:5,1} "With the exception of the architectural spheres, all space bodies have had an evolutionary origin." ^{15:6,7} With the creation of these material headquarters

worlds by the grand universe Creators, the power of the Almighty Supreme becomes active in time and space. In response (or anticipation) the Infinite Spirit bestows the Supreme Mind. The Supreme Mind is the evolving personal selfconsciousness of the Supreme Being.

The relationship between the finite cosmic mind and the divine absolute mind appears to be evolving in the experiential mind of the Supreme. We are taught that, in the dawn of time, this experiential mind was bestowed upon the Supreme by the Infinite Spirit...^{9:7.4}

The evolution of the seven superuniverses begins no less than one trillion years ago and certainly long before this. Our sun emerged from the Andronover nebulae, one of the great many nebulae from which the Milky Way has been built. About 987 billion years ago "The Primary Master Force Organizers of Paradise had long been in full control of the space-energies which were later organized as the Andronover nebula." 57:1.2 At this time an inspector from Uversa determined that the space-energies in our location had reached a favorable stage for the further development of a nebula. An Associate Master Force Organizer initiated the transformation of puissant energy into emergent energy about 875 billion years ago. ^{57:1.6} This was the 876,926th nebula initiated in Orvonton. About 800 billion years ago the force organizer withdrew from the Andronover nebula and the power directors and physical controllers of Orvonton took charge of its further development. Six billion years ago our sun was one of the last thrown off by Andronover during its terminal breakup. 57:4.8 This is not grossly different from the current estimate of 4.6 billion years which astrophysicists have estimated as the sun's age.

5. Space Respiration

There are two motions *of* space which are absolute in relation to Paradise. The alternate revolutions of space in the six levels of the master universe are described as secondary absolute motions of space. The primary motion of space is that of space respiration. The current flow of space out of the upper and lower reservoirs through the transmuting channels beneath Paradise and into the master universe is part of the two billion year cycle of space respiration. "The entire seven superuniverses participate in the two-billion-year cycles of space

respiration along with the outer regions of the master universe." ^{12:4.12} The Paradise-Havona day is the "the standard time measurement for the seven superuniverses, although each maintains its own internal time standards." ^{14:1.13} The superuniverses cannot use the Paradise-Havona day as a time standard, because "the totality of space respiration destroys its local value as a time source." ^{12:5.1} This implies that in the absence of space respiration there would be a constant relativistic relationship between Havona time and superuniverse time. The expansion and contraction of space respiration alters the relative relationship between time in central and superuniverses.

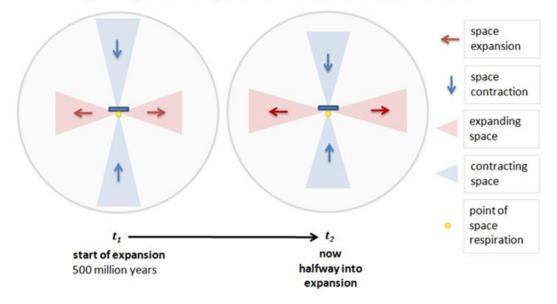


Fig. 6: Expansion of Space from Beneath the Isle of Paradise

Pervaded space is expanding horizontally, pushing the border of midspace outward from Paradise. Unpervaded space is contracting, and the far boundary between midspace and unpervaded space is moving vertically toward Paradise. This expansion-contraction occurs from just beneath Paradise. "Roughly: space seemingly originates just below nether Paradise..." ^{11:2.11} where unpervaded reservoir space emerges into pervaded space after being made pervade-able in the transmutation channels. Conceptually, the ultimate number of infinitesimals in pervaded space is increasing, while the number in the space reservoirs is decreasing. Since the infinitesimals of space have a real but indeterminate volume, the addition of infinitesimals to the master universe at a point just below Paradise causes space to expand outward. This expansion of physical space occurs relative to absolutely stationary Paradise.

The motion of space expansion does not alter the observed velocity of light. However, the whole spectrum of light from a distant source is redshifted toward lower frequencies by a receding motion. Hubble discovered the expansion of space by realizing there is a systematic increase in redshift as distance increases. The more distant a galaxy is, the greater its recessional velocity and thus the redshift in its spectrum. This systematic increase in redshift due to an inferred increase in recessional velocity is the primary evidence of space expansion. Under the constraints of the still preeminent theory of general relativity, this increase in velocity is due to the metric expansion of space. It is not due to the faster motion of a distant galaxy through space. Since increasing recessional velocity is assumed to be caused by the metric expansion of space, space is not expanding into something or even nothing, for that matter. The metric expansion of space causes an *internal* increase in the diameter of the finite universe, but there is no *external* increase in its diameter. There is no outside to the universe in general relativity, as well as no center or circumference. The universe is finite but unbounded.

In revelation, pervaded space is expanding into empty midspace. There is a continual increase in the number of infinitesimals, resulting in an increase in the total volume of pervaded space. Space is presently expanding from a single universe location "just below nether Paradise." There is currently an "outward and uniform expansion of the physical creations of all pervaded space." ^{12:4.12} The boundary between the increasing volume of pervaded space and midspace is being pushed outward to greater distances from Paradise. This currently increasing volume should result in a decreasing mass density within the master universe.

During this expansion phase, mass in the universe is being pushed outward from Paradise, moving against the pull of absolute gravity. "When the universes expand and contract, the material masses in pervaded space alternately move against and with the pull of Paradise gravity." ^{12:4.13} However, there is no mention of the degree to which material masses are carried along by space expansion. In the current understanding, universe space is expanding but space is not expanding within the confines of the Local Group, which is the group of galaxies in the neighborhood of the Milky Way. The attractive force of gravity holding the Local Group of galaxies together effectively nullifies the expansion of space within this volume. The superuniverses are held in revolution about Paradise by gravity, and it is unclear to what degree this gravitational force might nullify the primary motion of space expansion.

The cause of space respiration is not known, although it is the opinion of the Perfector of Wisdom that the Infinite Spirit may be responsible. "We think the Conjoint Actor initiates motion *in* space. If the Conjoint Actor produces the motions *of* space, we cannot prove it." ^{12:4.3-4} Space respiration is currently about 500 million years into its two billion year cycle. "Pervaded space is now approaching the mid-point of the expanding phase, while unpervaded space nears the mid-point of the contracting phase, and we are informed that the outermost limits of both space extensions are, theoretically, now approximately equidistant from Paradise." ^{11:6.4} Equidistance can only have meaning here if distance is measured in the reality frame of absolute extension.

6. Current Theory of Space Expansion

The rate of space expansion is measured by the Hubble constant and is found by dividing the velocity of recession by the distance to astronomic objects: $H_0 = v/d$. Space expansion has a generally accepted value of $H_0 = 74.3 \pm 2.1 \text{ kms}^{-1}/Mpc$, based on the work of the Hubble Space Telescope Key Project Team in 2011. ^[5] This value has not changed significantly over the last decade. With each additional megaparsec of distance (1 Mpc = 3.26 million light-years) the velocity of recession increases by 74 km/sec. Based upon general relativity, current theory conceives of space as expanding from every point in every direction in the same way. Revelation informs us that we are relatively near the universe location from which space is currently expanding as a result of the Deity-controlled cycle of space respiration. In both cases distant galaxies would appear to be expanding away from our region of space.

The Big Bang theory supposes that the universe emerges from a gravitational singularity in which time and space did not exist, but energy-mass and gravity did. (What it means to "exist" in the absence of time and space is not addressed.) This original gravitational singularity changes (in the absence of time and for some unknown reason) and an explosion of energy-mass results in the beginning of time and the expansion of space. The universe very rapidly fills with hot, dense, expanding plasma, which has momentum and continues to expand, cooling in the process. This plasma is opaque to electromagnetic energy, so photons cannot travel very far without being absorbed by it. About 380,000

years after the Big Bang, the temperature cools to about 3000° K (Kelvin temperature scale). At this temperature electrons and protons begin to combine, mostly as hydrogen atoms.

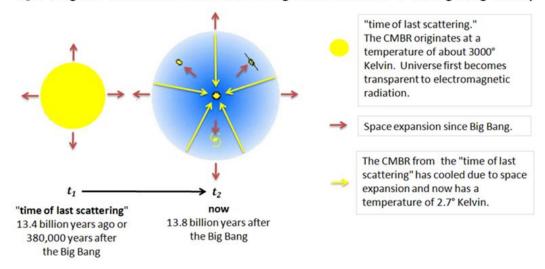


Fig 7: Origin of the Cosmic Microwave Background Radiation in the Big Bang Theory

This transition from a diffuse hot plasma state to discrete hydrogen atoms occurs at roughly the same time everywhere. Hydrogen atoms do not block light, and the universe becomes transparent. This transition from a plasma state to an atomic state is referred to as the "time of last scattering." The photons emitted during this period are believed to be the origin of the cosmic microwave background (CMB) radiation detected today. After more than 13 billion years of space expansion, the temperature of these photons drops from about 3000° to 2.728° K. ^[6] This drop in temperature is due to the expansion of space, which causes the frequency of a photon to be redshifted to a lower frequency (longer wavelength, lower temperature). Working backwards, the temperature at the time of emission, T_e , approximately equals the redshift (z) of the radiation multiplied by the observed temperature: $T_e \cong T_o(1 + z)$. The redshift of the CMB radiation is calculated to be $z \cong 1089$, which gives an emission temperature at the time of last scattering of about 2974° K.

The CMB radiation was first detected in 1964 by Penzias and Wilson of Bell Labs, who received the 1978 Nobel Prize for their discovery. They estimated its temperature at about 3° K. Extensive measurements have since established that the temperature of space is 2.728° K. Under current theory, the CMB radiation should have the same temperature in every direction of the sky, because it was

emitted from everywhere in space at the time of last scattering. However, a significant and systematic variation in this temperature of \pm 0.003372° K (3.372° mK) was found in the early 1990s. The variation in temperature depends entirely upon the direction of observation. ^[6]

This temperature variation can be explained by the peculiar motion of the sun. If the sun is moving relative to the universal field of the CMB radiation, then this motion produces a Doppler shift which causes the measured temperature to be slightly warmer at 2.731° K (2.728° K + 0.003372° K) in the direction of motion. The temperature increases because the radiation is blueshifted to a higher frequency (warmer temperature) by the sun's velocity. The sun's velocity in this direction is calculated to be 371 km/s. The direction of motion in which the temperature is highest is referred to as the CMB dipole. In exactly the opposite direction, the cool pole, the temperature reaches a low of 2.725° K (2.728° K - 0.003372° K). If the sun was stationary relative to the CMB, there would be no CMB dipole, and the temperature of space in every direction, once the sun's motion is accounted for, demonstrates that the CMB radiation is a universal phenomenon.

Revelation describes a different origin for this CMB radiation. Cosmic force pervades the master universe and has a theoretical temperature of absolute zero. "...cold merely signifies absence of heat—comparative energy rest—the status of the universal force-charge of space provided neither emergent energy nor organized matter were present and responding to gravity." 42:4.5 However, "Throughout all organized space there are gravity-responding energy currents, power circuits, and ultimatonic activities, as well as organizing electronic energies." ^{42:4.6} "Gravity presence and action is what prevents the appearance of the theoretical absolute zero, for interstellar space does not have the temperature of absolute zero." 42:4.6 Cosmic force has a theoretical temperature of absolute zero, but this temperature is not actually attainable because of gravity and other energy activities. These phenomena generate microwaves everywhere in space, resulting in an average temperature of 2.728° K. The CMB radiation can be interpreted as evidence of ongoing gravity and energy interactions, instead of as the product of a primordial event occurring billions of years ago.