

THE GREAT MYTHS OF MODERN SCIENCE

Forward

It is astonishing to me to see so much pseudo-science is taught and believed as science in our modern scientific academia. In reflection, I can not be too severe in my criticism since I also once whole-heartedly embraced and advocated with vigor many of these same pseudo-science doctrines myself. Our whole public education establishment with its virtual monopoly indoctrinates our students at the primary, secondary, and university levels with an incessant drone of pseudo-scientific dogma. This indoctrination with massive amounts of tax dollars has proven largely successful.

However, increasingly dissidents are objecting to this institutional masquerade. Sometimes, these dissenters come from the most unlikely quarters, often from the inner workings of the educational establishment. It has taken much courage for some academics and educators to say that the scientific king has no clothes. Even a whisper of doubt has cost more than one scholar his career. This has been particularly noticeable in the evolution-intelligent design controversies which are embroiled in legal and political actions. The threat of an increasing number of rebels to the party line has led the scientific establishment to ignore, marginalize, ridicule, and attack any dissidence.

Henry Kissinger was once asked why the battles in academia are so severe. He replied that it is because the stakes are so small. This might be true of philosophy but it can not be said of science where the stakes are great. Scientific differences about the past events, such as the origins of the Universe and life, might seem innocuous, even if false. However, even scientific premises about the past affect important modern world views and ideologies on education, politics, economics, and social structure, sometimes with either magnificent or horrifying consequences. The course of world history has been significantly impacted by the true and false scientific views which gave birth to powerful political ideologies. We will explore this subject at the end of this short book.

Whatever your biases in science, I hope that you will seriously consider the premises and assertions presented here. Even if you do not agree with my conclusions, I am sure that your understanding and appreciation for science will be enhanced by the synopses of science in the first part of this work. If you are a beginning student of science, a clear understanding of the fundamental laws of physics will accelerate your comprehension of physics, chemistry, and biology, along with their virtual, mathematics. My hope is that it will alter forever your thinking for good and for God.

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Introduction

The Universe is composed of two elements: matter and energy. The purpose of science is to discover the laws that define the principles that govern the interactions between matter and energy. Dr. Albert Einstein expressed it well, “In the whole history of science from Greek philosophy to modern physics there have been constant attempts to reduce the apparent complexity of natural phenomena to some simple fundamental ideas and relations.” Evolution of Physics, p. 52. Like master detectives, scientists through the ages have looked for clues of these fundamental laws that define the interactions of matter and energy.

Even the proper distinction and definition of matter and energy has been a formidable task in the last four hundred years. The principles that govern the matter-energy interactions have never changed, being seen and used by all of humanity for millennia, but the simplified understanding of these principles has taken centuries. For instance, a bird in flight uses very sophisticated aerodynamics without any understanding of the laws of aerodynamics. Men in past millennia have constructed sophisticated naval vessels without designing them according to the laws of naval architecture, such as buoyancy, yaw, and trim. Further, the term, science, itself is hard to define, although science has a process for developing the laws of science. This process of discovering our laws of science has several underlying assumptions.

First, science assumes the law of cause and effect, the law of causality. The Universe is not static and is constantly changing, albeit slowly at times or rapidly at other times. Any state of a fixed amount of matter and energy (the effect) is the successive result of a previous interaction of same matter and energy (the cause). As will be delineated later, the total amount of matter and energy does not change with time. Therefore, the Universe has a continuum of matter and energy interactions where previous states of the Universe’s matter and energy (causes) after interactions are followed by subsequent states of the Universe’s matter and energy (effects). The interactions of a specific amount matter and energy (cause) produce the subsequent resultant states (effect) of the same specific matter and energy. Since the total amount of matter and energy in the Universe is constant with time, then the law of causality is the continuous interactions of the Universe’s constant quantity of matter and energy over time.

Second, science assumes that the principles that govern these interactions of matter and energy never change with time. Given exactly the same conditions, the Universe will always produce the same results at all times. This is true even if science has not discovered the law or laws that govern the particular interaction. The sun produced sunlight using invariant principles long before science formulated any law of sunlight production. This invariant operation of the principles of the Universe is the experimental basis of the scientific method. One scientist can duplicate the results of another scientist by duplicating his pre-existent conditions

and his operational procedures. Some advocates of quantum physics would disagree with this invariance of the interactions of matter and energy. In protest to such assertions of quantum physics, Dr. Albert Einstein reacted that God does not throw dice with the Universe.

Third, science assumes that the principles that govern the interactions of matter and energy here on the Earth are true throughout the Universe. The laws of science that are true here on Earth are the same in all the space of the Universe and do not change with time. For instance, the law of gravity that we can test here on the Earth is the same law that governs the motions of celestial bodies of matter everywhere in the Universe. Also, using a spectrometer light spectrums from distant stars will determine the elements which exist in those stars because the physics of atomic structures does not vary throughout the Universe. The laws of gravity and of atomic structures which prove true on the Earth are true in the rest of the Universe.

Using these three assumptions, science has used several approaches to formulate theories that describe the operation of the principles that govern the interactions of matter and energy. First, a hypothesis is given a theoretical basis, usually by induction or deduction. Second, this theoretical basis is tested experimentally to see if it is true for all matter/energy interactions covered by this hypothesis.

First, an hypothesis must have a theoretical basis. Using induction, scientists will observe many particular interactions and then make a general conclusion that summarizes these numerous interactions as a general hypothesis for all similar interactions. Inversely, using deduction, a scientist will generate a general hypothesis and then look at all the particular interactions to see if these similar interactions conform to the hypothesis. The deductive scientist usually arrives at his general hypothesis by interpolating proven laws, often using mathematics or rules of logic. This gives the deductive scientist a theoretical basis to his hypothesis without induction from observing many specific particular interactions. Often, some hybrid combination of induction and deduction is used to develop a theoretical basis for a hypothesis.

Second, once an hypothesis is developed, experiments are formulated to test the validity of the hypothesis in all possible interactions covered by the hypothesis. This experimentation is based on the assumption that the principles of the Universe will always give the same results. Cold fusion, for instance the nuclear fusion of hydrogen atoms into helium at temperatures close to temperatures of chemical reactions, is theoretically possible with a huge release of energy. Some scientists have claimed to have produced cold fusion under specific conditions. However, numerous scientists have failed to obtain the same results under the identical conditions. Consequently, this hypothesis of cold fusion has generally been rejected as a theory until the present, although it has a theoretical basis, because it has failed consistent experimental validation.

As in this case of cold fusion, it is implicit that a hypothesis must be falsifiable, as well as verifiable, by experimentation. In fact, the experimental ability to prove a hypothesis false is more formidable than to prove that it is true. Ten thousand positive experiments for validation are negated by only one positive experiment for falsehood. It only takes one fly to ruin the ointment. A valid general hypothesis must cover all relevant interactions without exception.

The theoretical basis and experimental validation form the necessary two-fold confirmation of a hypothesis defining specific matter and energy interactions. Given an apparently irrefutable theoretical basis and repetitive experimental confirmations over a period of time without any exceptions, a hypothesis will eventually gain the status of a theory. This process of repetitive confirmation over a long period of time without exceptions will eventually elevate a theory to a law of science. Occasionally, new theoretical bases or experimental evidence can call into question an accepted theory or even a law. In some cases, the theory or law must be changed to deal with special cases of interactions within the theory or law. In serious cases, the theory or law may be proven to be seriously flawed and must be rejected altogether in favor of a theory which has much stronger theoretical and experimental bases.

Looking at the Universe composed of two elements-matter and energy, science seeks to discover the laws that describe the invariant principles that govern the matter-energy interactions of the Universe. Assuming cause and effect interactions of matter and energy governed by absolute principles (invariant with time and space in the Universe), science, using theoretical and experimental bases, seeks to develop theories and laws of these absolute principles.

Matter and Energy

Over the centuries, science has worked to discover the most general laws of matter-energy interactions. For example, biology, the science of living systems, is essentially a sub division of chemistry, organic chemistry. There is also inorganic chemistry under the more general class of matter-energy interactions of chemistry. Chemistry involves the exchange of electrons between atoms without any nuclear changes in atoms. Chemistry, in turn, is a sub division of physics. Physics includes nuclear changes of atoms as well as non-nuclear chemical (electron exchange) interactions. Physics might be called the mother of all science since it broadly covers all matter and energy interactions.

I came to Massachusetts Institute of Technology in the early 1960s on the crest of a scientific wave generated by the United States government. The launch of Sputnik, the first man-made satellite around Earth, spurred a frantic push by the American government to catch up with the Russians. The American government tested a large number of junior and senior high students and offered free science and math camps to those who had high marks on these tests. Being enthralled with

science and math, I pursued all the nooks and crannies of science that my high school and government science camps offered. Before arriving at the Institute, I had learned a matrix of scientific facts and formulas about mechanics, optics, electromagnetism, gravity, field theories, and fluids. My physics class at MIT was full of all these little Einsteins from all of the United States, each with a slide rule as his or hers prize possession. Many students at MIT at that time achieved the highest possible scores in the math and science sections of the aptitude entrance examinations.

I joined a scholarly fraternity which had extensive files of previous exams. I would go over these previous exams to prepare for my physics exams. I memorized formulas and worked all the types of problems that had been given in the previous exams. In spite of that, I still struggled to maintain an average grade. My pledge father, realizing my difficulties, took me aside. He was a first rate scholar and eventually he became one of only thirty Rhodes Scholars chosen each year. He began placing these previous exam problems before me to watch my methodology in solving the exam questions.

Firmly, he told me to stop trying to remember formulas. As he explained, there are only two laws of physics: (1) the conservation of matter and energy and (2) increasing entropy. I recognized those as the two laws of thermodynamics but not as general laws of physics. However, he emphatically explained that all of our laws of physics are derived from these two laws. The ideal laws of classical physics, such as conservation of energy (kinetic and potential), conservation of mass, conservation of momentum, conservation of angular momentum, ideal gas laws, field theories (electric, magnetic, and gravity), etc., are all conservation laws. These ideal laws are all derived from the first law. The non-ideal laws all involve increasing entropy or disorder such as friction, free expansion of gases, and free heat exchanges. These non-ideal laws are all derivations of the second law. Almost every problem on the exams, he explained, will be a conservation law (first law) with a few entropy ones (second law) sprinkled in. He said that these MIT professors are smart and are paid the big bucks to come up with new problems on the exams, using the same laws/principles. Learn the ideal, conservative first law and the application of non-ideal entropy of the second law, he said, and I would be able to work any problem I faced.

Putting down exam problem after exam problem, my mentor forced me to write down the conservation or entropy laws/principles which each problem entailed. With each problem, I got better and better at grasping the conservation and entropy principles to solve the problems. Needless to say, I moved into the upper portion of my classical physics class with this new found secret. My previous science education had taught me a labyrinth of physics formulas but no comprehension of the two underlying laws that are the bases of all physics.

In the last two hundred years, physics has developed these two general laws which encompass all matter and energy interactions since the whole physical

Universe has only these two components: matter and energy. All physical phenomena are either matter or energy and their interactions. In classical physics, matter can be distinguished from energy. Matter has a property of mass and, in contrast, energy is massless. Modern physics uses $E=mc^2$ to imply that energy can have mass and inversely that mass is energy. More broadly, it is taught that energy can convert into mass and mass can convert into energy. We will deal with that later. Nevertheless, both classical and modern physics affirm without equivocation the validity of these two laws.

The first law is the quantity law for matter and energy. It states that in all interactions matter and energy are conserved. In every matter-energy interaction there is the same quantity of matter and energy before and after the interaction. Classical physics says that matter and energy are conserved separately. Modern physics holds that energy and matter are conserved collectively, since matter and energy are interconvertible. Matter-energy interactions are a zero sum game; there is no net gain or loss of matter and energy in every interaction. The Universe never creates or destroys matter and energy. This law has been verified without exception for nearly 150 years and is the most universally accepted law in both classical and modern physics. Interestingly, because no matter or energy are created or destroyed in every matter-energy interaction, this conservation of quantity law is the scientific basis of the law of causality, the time-space continuum of cause and effect in all matter and energy interactions.

The second law is the quality law for matter and energy. It states that in all matter-energy interactions, entropy or disorder always increases. Entropy is just a fancy word for disorder. Again, its veracity is bedrock for both classical and modern science. Although this law has been verified experimentally for nearly 150 years, it is a statistical, mathematical law which for all practical purposes needs no experimental verification. Since the disordered states of any system of matter and energy are so much more numerous than ordered states above absolute zero degrees temperature, then every matter-energy interaction will statistically result in a more disordered state at any given temperature. Entropy makes events irreversible and was given the name, time's arrow, by the physicist Arthur Eddington.

Both of these laws were originally developed in thermodynamics but are known generally as the first and second laws of science. The first law has been expanded to develop all of our ideal laws, simply by applying energy, instead of forces to matter energy interactions. The second law has been expanded from thermodynamics with the development of statistical mechanics, kinetic theory, and information theory. Historically, these two laws are so thoroughly accepted that any patent application submitted to the patent office will not even be examined if the patent claims violate either the first or second law. These laws have become recognized as the king and queen of science. By a business analogy, the first law is the accountant, keeping the debits and credits of matter and energy accurate, and the second law is the manager, telling how the balanced credits and debits will be dispersed.

Often, people, including scientists, confuse the two laws. Aristotle in his work, *Mechanic*, says, "The moving body comes to a standstill when the force which pushes it along can no longer so act as to push it." Aristotle confused the two laws and concluded that a body would stop moving once a force stopped pushing on it. Aristotle mixed the first and second laws in which the ordered energy of the body is turned into disordered energy by friction according to the second law. Isaac Newton corrected Aristotle's law of motion with his first law of motion by stating that once in motion a body will remain in motion if no force acts upon it. Using forces and momentum, Newton indirectly states the first law, conservation of energy, for ideal conditions of frictionless motion in which kinetic energy is conserved. As an historical footnote, Gottfried Leibniz, a contemporary of Newton, more correctly sought to use energy (mass times velocity²) as the conservation quantity, rather than momentum (mass times velocity) as Newton did. In retrospect, since the conservation of momentum is derived from the first law, the conservation of momentum will be equally true since energy is always conserved according to the first law.

The difference between the first and second laws can be distinguished by a simple example. Suppose that a boy throws a rock into a mirror glass Walden Pond. For some reason boys have a hard time resisting the temptation of disturbing the tranquility of calm water. Just before the rock strikes the water, the rock has useful or ordered energy which can be used to run a refrigerator briefly or move an electric toy car quite a distance. However, the rock hits the water, sends out waves, and settles to the bottom. Gradually, the waves die down and the pond returns to its mirror glass surface with no waves or visible motion. What happened to the energy that the rock possessed before it struck the water? The first law says that it must be conserved, no energy can be lost. The rock imparted its energy to the water and created the waves. The ordered wave energy became more disordered in the water molecules in the lake. All of the energy of the rock became random energy in the water molecules and the lake became slightly warmer than before. Eventually, that lake energy will be given off to the atmosphere, and then that atmospheric energy will go into space to be spread throughout the Universe.

The first law accounts for all the energy. Before the lake lost its energy to atmosphere, the lake would have all the energy that the rock originally possessed. If the disordering or entropy of the second law were not true, the first law would allow the disordered energy in the lake to lift up the rock, to form waves and to throw the rock back at the boy in the revenge of the lake without violating the first law. However, the second law prohibits the revenge of the lake from taking place. It states that, yes, the first law must balance the books but I have the sole right to tell how the energy is disbursed. It must be an irreversible event. Energy must go from ordered states to disordered states. It can not go from disordered to ordered energy. The lake can not avenge itself with its disordered molecular energy.

Both of these laws deal with closed systems. It means they are idealized for a system in a closed surface like air inside an inflated balloon. However, in the real

Universe with its constant flux or flow of matter and energy, there is no such thing as a closed system. So for solving real problems with both laws, we subtract the matter and energy leaving the closed system from the matter and energy entering the closed system and this difference between the entering matter and energy and leaving matter and energy is equal to the change of matter and energy inside the closed system. Extending out this zero sum gain with a series of closed systems next to each other, one system will gain what its neighbor loses and vice versa. In this manner, both the law of the conservation of matter and energy and the law of increasing entropy or disorder are equally valid with one closed system or a series of adjacent closed systems. As an alternative, some scientists will expand the size of the closed system to include significant sources or losses of matter and energy outside of the original system. For example, the earth and sun can be combined into a single closed system to handle the large transfer of energy and entropy from the sun to the earth.

In accordance with the second law, order, a localized decrease in entropy/disorder, can be produced under three special conditions: (1) strong internal energy bonding and a small change of entropy, (2) statistical probabilities in accordance with Boltzmann's equation, and (3) an ordered agent and a degradable energy supply.

Firstly, sometimes in a closed system, the internal energy of the system increases significantly, through strong chemical or nuclear bonds. This internal energy, known as enthalpy, can be so significant, especially at lower temperatures, that they can overcome the effect of entropy (disorder), if the change in entropy is rather small. This relationship of internal energy, enthalpy, and entropy is expressed as Gibbs free energy in the equation, $\Delta g = \Delta h - T \Delta s \geq 0$, where g is Gibbs free energy, h is the internal energy (enthalpy), T is the temperature, and s is entropy. This equation states that, if the positive change in internal energy is greater than the temperature times the change in entropy in a reaction, then more order (the reverse of entropy/disorder) will result because there is a positive Gibbs free energy in the reaction. For instance, water will change to crystalline ice (a decrease of entropy) as the temperature is lowered because the $T \Delta s$ term becomes less than the large Δh , the strong bonding energy change of ice from water. The change in entropy (Δs) from water molecules (liquid H^2O) to ice crystal molecules (solid H^2O) is very small. The weak entropy term (Δs) at lower temperatures (T) can be overcome by the strong internal energy change (Δh). That is why the strong bonding energy of simpler compounds can form crystals at normal room temperatures around 300 degrees Kelvin above absolute zero.

But in the formation of crystals in accordance with Gibbs free energy, even very strong bonding energies can not overcome entropy in order to produce perfect, simple crystals of normal size. Even in small crystals, there will be numerous imperfections (disorder) which will greatly weaken the ideal perfect crystal structure which would ideally be tremendously strong. As an example, a perfect steel crystal structure should have a tensile strength of millions of pounds per

square inch. Because of the imperfections in the steel crystals caused by entropy, good steel only has tensile strengths of sixty thousand pounds per square inch! I remember a large block of steel weighing several tons in the rotunda of the main entrance to MIT, suspended by a nearly invisible thread. The thread was made of many long whiskers (only a few atoms in thickness) of perfect steel crystals. The number of atoms in the whiskers was very small so that they formed perfect crystals according to Gibbs free energy with a low value for entropy. As a consequence, these whiskers as perfect crystals had a tensile strength of over one million pounds per square inch! These perfect crystals are only possible in very strong bonding energies (high enthalpy change) and very simple and small systems (low entropy change) at temperatures of the Earth's biosphere (300° Kelvin).

Near absolute zero degrees Kelvin (K), almost all matter will become solids at ordinary atmospheric pressure except for hydrogen and helium. Some electrical systems can operate in nearly perpetual motion at temperatures near absolute zero. Electric currents will continuously run in a circuit with almost no resistance for long periods of time near absolute zero degrees temperature. Certain superconductors can act with very low entropy increase conditions even at temperatures well above absolute zero. This is known as superconductivity.

Although there are some organic compounds with strong bonding energies that allows the formation of crystals, it is impossible in the more complex biological chemical reactions necessary for life to have a positive Gibbs free energy. Such a biological reaction requires the internal energy change to be greater than the entropy change at temperatures where life takes place at about 300 degrees Kelvin which is virtually impossible. Only in very controlled laboratory procedures or living systems can complex organic molecules be formed. On the contrary, at 300 degrees K, all organic matter in life forms rapidly biodegraded (decays due to entropy) unless it is maintained with a continuous food energy supply in a living organism. Gibbs free energy does not allow uncontrolled chemical processes to produce complex living systems from elements because of entropy at temperatures necessary for biological chemical reactions. This is true even in very small systems such as individual molecular systems or reactions. Even in controlled laboratories or living systems, the manufacturing of complex organic molecules always produces more disorder/entropy than order in the matter and energy used in the manufacturing process.

Secondly, although complex biological systems can not be synthesized in nature by random chemical reactions, entropy will allow simple, ordered systems to form by time and chance in a very small part of large systems over long time periods. Ludwig Boltzmann, in the greatest triumph of kinetic theory, formulated entropy as a probability, $S = k \ln(w)$, where S is entropy, k is Boltzmann's constant, and $\ln(w)$ is the natural logarithm of the number of possible states of a given system of particles as measured from absolute zero degrees Kelvin. It was a stunning development linking entropy, a physical property, to pure mathematical probability. In fact, it is so significant that Boltzmann had this formula engraved on

his grave in Austria as his *magnus opus* (greatest work). The probability of events can be predicted based on the number of possible energy states that any closed system can have.

A brick on a table at room temperature (about 300 degrees K) has a tremendous amount of energy in its molecules. For instance, if all of the molecules in the brick should vibrate upward at exactly the same time (in unison), then the brick would go right through the ceiling. Using Boltzmann's equation, it can be calculated that it would take 10^{37} years for this event to happen. Even if the Universe is 10^{10} (10 billion) years old, the event of the brick's molecules vibrating together sending the brick through the roof would be impossible. However, I understand that a group in Europe during the 1960s had a brick on a white table under constant surveillance to record such an event. With the odds determined by Boltzmann's equation, the success of this surveillance would be comparable to one ticket winning a lottery in which everyone in the world (6 billion people) each bought 10 billion tickets each year and the winner waited 10 billion years to draw the lucky ticket. Entropy will never allow the brick on the table to beat the odds. Entropy is a bookmaker who always carries the winning odds.

Unfortunately, some scientific theories are violations of the second law of entropy as defined by Boltzmann's equation. For instance, biological evolution advocates use the Miller-Urey experiments in the 1950s of producing amino acids after a week in a spark chamber with an atmosphere without oxygen and without water as proof that evolution can produce complex life from simple atoms by time and chance over a long period of time. Oddly, the Miller experiment lacked water and oxygen—the prime, necessary ingredients for life. It is implied by biological evolutionists that if amino acids (10 atom molecules in size) can be formed by time and chance in one week, then humans with their stunning chemical complexity will evolve in millions of years by time and chance from random atoms. Theoretically, under ideal conditions the spark chamber in the Miller experiment should produce one million amino acids per second by time and chance. So it is not unusual to find some amino acids in the Miller experiment after a week. But, if we hypothetically place all the matter in the universe (10^{80} particles) in a spark chamber with the same ideal conditions (no oxygen and no water) that can produce one million amino acids per second, then not even one protein molecule would be formed by time and chance in 20 billion years! The probability odds increase exponentially with the complexity of the molecule to be formed by time and chance according to the second law of increasing disorder or entropy as defined by Boltzmann's equation.

Thirdly, order, the reverse of entropy (order from disorder), can also be produced by an ordered/complex agent and a degradable energy supply. For instance, a watch can be disassembled and placed in a bag. An attempt to get an assembled watch could be tried by shaking the bag with energy and hoping that time, chance, and shaking energy will allow the watch pieces to come together. Even if the watch pieces are made of indestructible materials, such an event would not happen in 20 billion years. On the other hand, if a watchmaker (ordered/complex

agent) with his tools and a degradable supply of energy in the form of sandwiches were placed into the bag, then an assembled watch could be produced in a relatively short time. In conformity with the second law of increasing entropy, the amount of ordered energy taken from the sandwiches must exceed the energy needed by the watchmaker to assemble the watch. In addition to the degradable energy supply from the sandwiches, the watchmaker (the ordered agent), of course, must be more complex or ordered than the watch, according to the second law of increasing entropy.

Philosophy and Physics

Philosophers in Western Civilization for more than two millennia assumed that the Universe is controlled by fundamental principles and sought to state them philosophically. Scientists historically used to be called natural philosophers. These attempts covered the whole range of ideas: mathematics, alchemy, metaphysics, science, logic, religion, and abstract concepts to name a few. After centuries of failure in these attempts, Georg Wilhelm Hegel in the early 1800s proposed his dialectical process, known as the Hegelian triad, of a thesis, followed by an antithesis, which combine to form a synthesis. This synthesis then becomes the new thesis for an unending repetition of the dialectic process. Some of Hegel's colleagues and students at the University of Berlin adopted this Hegelian triad without any absolutes, rejecting the premise of absolutes underlying the operation of the Universe which premise of absolutes was held by the philosophers and scientists of former centuries. This Hegelian dialectic with its rejection of absolutes became the basis of most modern thought. This Hegelian dialectic gave birth to many -isms in the 19th and 20th centuries which spread into nearly every area of human endeavor. This expansion of dialectic materialism has been profound, as well as extensive.

The social sciences and even some physical sciences, such as biology, were radically changed in this Hegelian revolution which overthrew of the idea that absolute principles rule the Universe. In sharp contrast to the Hegelian revolution at the same time during the middle 1800s, physics was becoming more firmly based on the concept of absolute principles controlling the Universe. In fact, the very heart of the scientific method assumes that, given the same conditions, the Universe will always give the same result. This invariant operation of the Universe is the basis of the experimental proof to verify a theory. Science assumes that the Universe is ruled by absolute principles and always gives the same results to the same conditions. No theory or law can be certified without absolutely consistent results. No bird could land on the branch of a tree if the principles of aerodynamics even changed a minuscule amount. The society of bees would perish if any number of principles of nature varied slightly.

Quite apart from the birds and the bees, the whole realm of nature would self-destruct if gravity, electromagnetism, or other physical phenomena should lose their invariant performance. The operations of the Universe and the scientific

study of them militate against this Hegelian dialectic materialism. In the middle 1800s, the formulation of the first and second laws of thermodynamics led science's antithetical march against this Hegelian tide. It was apparent that the Universe could not create or destroy one gram of matter or one joule of energy. Further, entropy clearly led to the singular conclusion of the irreversible heat death of the Universe. The absolute nature of Nature's laws, the inability of the Universe to create or destroy either of its two components-matter and energy, and the impotency of the Universe to save itself from certain death have serious anti-Hegelian implications. Hegelian dialectic materialism, the darling of modern human endeavors, needed something in the hard sciences, especially physics, to nullify or to disperse doubt about science's absolutism.

James Clerk Maxwell in the middle 1800s put forth his famous Maxwell's equations of electromagnetism. These calculus equations, consolidating the works of Michael Faraday, Hans Oersted, Carl Friedrich Gauss and Andre Ampere in electromagnetism, are one of the enduring accomplishments of classical physics. Earlier, Faraday had proposed light as an electromagnetic phenomenon because his experimentation showed that light reacted to a magnetic field but he lacked an experimental or mathematical means to confirm light's electromagnetic nature. Using his four equations of electromagnetism, Maxwell predicted the existence of light as a transverse electromagnetic wave and determined the speed of light waves,

as $c^2 = \frac{1}{\epsilon \times \mu}$, where c is the speed of light, ϵ is the electric parameter of light's transport medium, and μ is the magnetic parameter of light's transport medium. Using the electric parameters and the magnetic parameters of various transparent mediums, Maxwell's derivation theoretically predicted the speed of light accurately in these transparent mediums.

Two results of Maxwell's work are: (1) light and other electromagnetic waves are composed of an electric field and a magnetic field, oscillating perpendicular to each other as well as perpendicular to the direction of the wave travel, and (2) the speed of light is inversely proportional to the strength of light's electromagnetic medium of transport (product of electric and magnetic parameters of the electromagnetic medium). The electric and magnetic parameters are measures of the strength of the electromagnetic medium of transport-the higher the parameters, the stronger the electromagnetic medium. From Maxwell's derivation, the stronger light's electromagnetic transport is, the slower the speed of light is. Inversely, the weaker light's electromagnetic transport medium is, the faster the speed of light is.

These electric and magnetic parameters of light's transport medium which determine the speed of light in the transport medium are properties of electric and magnetic fields originating from subatomic electric charges in matter, external to the wave itself. These electric and magnetic fields coming from subatomic electric charges in matter serve as the transport medium for the light wave to vibrate in and

to travel through. Experimentally, Maxwell's derivation, based on his equations, proved successful.

In a multitude of transparent materials, the electric and magnetic parameters of each material were measured and the theoretical speed of light always corresponded to the experimental verification. A vacuum has electric and magnetic parameters from the subatomic electric charges in matter nearby or surrounding the vacuum. That is why a vacuum has almost the same electric and magnetic parameters of the air surround it. Further, because light changes speed as it travels from one transport medium to another transport medium according to

$c^2 = \frac{1}{\epsilon \times \mu}$, it changes direction in accordance with Snell's law as Maxwell's theory predicts and as the first law of conservation of matter and energy requires.

However, light travels through a vacuum where there is no matter, such as star light through the vacuum of outer space. Knowing that electromagnetic fields only come from matter, the conclusion in the middle and late 1800s was that there must be ethereal matter (aether/ether) in vacuums like outer space which serves as the electromagnetic medium to transport light. The ether is ethereal because celestial bodies can travel through the ether of outer space without friction, and yet the ether must be material to have electric charges with electric and magnetic fields and their respective electric and magnetic parameters. The aether/ether was assumed to permeate all space and to be motionless, i.e. a fixed ether in outer/deep space.

Michelson and Morley in the late 1800s performed experiments with an interferometer to determine wave shifts in light and therefore differences in the speed of light. If the ether is the transport medium of light and is fixed in space, then the speed of light on the earth as it travels through the fixed ether in space should be slower in the direction of earth's travel and faster in the opposite direction. Shockingly, the speed of light in the Michelson-Morley experiment was the same in all directions during all times of day and all seasons (i.e., all orbital positions with respect to the sun's position). Further, there was no experimental evidence of an ether with its unusual properties of no entropy effects in violation of the second law. The fixed ether theory was doomed.

Mathematical consideration was given to an entrained ether, an ether pulled along by bodies of matter through the vacuum of outer space. Mathematically, ethers entrained by celestial bodies satisfy the theoretical mathematical basis for the transport medium of light but the existence of a physical ether was still difficult to prove experimentally. In fact, Hendrik Lorentz, using ether theory, developed the Lorentz transforms which even predicted the contraction of bodies in the direction of travel as the bodies approach the speed of light. A short time later, Einstein used Lorentz's transforms for his special relativity. However, history took a dramatic turn since these entrained ether theories could not be verified experimentally.

Albert Einstein in 1905 proposed his theory of special relativity to solve the fixed ether problem. Special relativity is special because it only applies to inertial frames of reference; that is, non-accelerating and non-gravitational frames of reference. In these constant velocity or non-accelerating inertial frames of reference, Einstein's special relativity has two postulates: (1) the laws of physics are the same in every inertial frame of reference, and (2) the speed of light is constant regardless of the inertial frame of its origin or the inertial frame of any observer. The first postulate is simply the relativity of classical Galilean physics. However, the second postulate is revolutionary. The second postulate rejects the concept that light has an electromagnetic medium of transport, contrary to an explicit implication of Maxwell's equations. It also rejects the idea of any preferred frame of reference, fixed or not. Einstein reinterpreted Lorentz's transforms to reject a Euclidean space and Galilean relativity which have independent, linear time and space dimensions. In Einstein's relativity, space is transformed to the frame of the observer and the configuration of the space-time continuum of interdependent time and space dimensions will change each time the observer moves.

About ten years later, Einstein proposed his theory of general relativity. This theory applies more broadly to accelerating and gravitational frames of reference. General relativity only has one postulate: the equivalence of accelerating and gravitational frames of reference (the equivalence principle). If an observer feels a force outside of his frame of reference pulling on him, he is unable to determine if the force is due to the acceleration of his frame of reference or if the force is due to a gravitational force from a nearby body of matter. According to Einstein, there is no instrument that can distinguish between accelerating and gravitational forces. This theory led to warped space, co-spatial (occupying the same space) with gravity fields around bodies of matter, particularly celestial bodies.

Einstein's two theories with their corollaries, such as $E=mc^2$ and an interdependent space-time continuum of the Universe, erased the line between mass and energy and between time and space. Einstein's theories mark the beginning of modern physics. Absolute mass, absolute energy, absolute time, and absolute space of classical physics are eradicated in Einstein's theories of relativity. All of this is based on Einstein affirming the absolute speed of light and the equivalence of acceleration and gravity. Only absolute zero temperature (Kelvin), an absolute vacuum, and the two laws remained of classical Euclidean space, Galilean relativity, and classical physics except in special conditions. Oddly, those special conditions of classical physics are the normal conditions of our existence and experience in the Universe. In fact, the space programs which required accurate and precise calculations for predictions of space flight never used Einstein's theories of relativity, preferring classical Newtonian-Maxwellian physics. Further, the relativistic changes of mass at velocities approaching the speed of light, used in particle accelerators, can be developed mathematically from classical electromagnetism and Lorentz transforms without Einstein's relativity, using linear, independent time and space dimensions of classical physics. Even Newton's law of

gravity and his corpus view of light would predict the bending of light in the gravitational field of a celestial body. Maxwell's derivation of the speed of light predicts the same bending of light in the variable electromagnetic fields of the subatomic electric charges in celestial bodies. Einstein's theories, contrary to public perception and academia's assertions, lack solid experimental proofs and are unnecessary in the applied science of our Universe, even at velocities approaching the speed of light.

Einstein's theories of relativity deal with the macrocosm. Quantum physics, originating with Einstein's theory on quantum states of electrons and developed by the Copenhagen school of Neil Bohr, deals with the microcosm. Einstein used his thought experiments (*gedanken*) to explain the logic of his macrocosm. Quantum physics uses whimsical terms like color, flavor, strangeness, charm, quarks, bosons, and gluons to spice up their flights of fantasy into the microcosm. More recently string and super-string theories are hypothesized to combine the theories of the relativity macrocosm and the quantum physics microcosm. However, Bell's Theorem postulates that it is impossible to reconcile the modern theories of relativity and quantum physics.

Many of the public and even academicians have difficulty following the counter-intuitive explanations of both modern relativity and quantum physics. These modern physics outsiders struggle to fathom these concepts and assume that these concepts are the thoughts of great minds since they do not quite grasp the inner mysteries. The high priests of modern physics mesmerize the true believers and excommunicate or ridicule any skeptics. These later day alchemists and sorcerers of quantum physics conjure up the blind Fickle Finger of Fate as the Master Designer of the Universe with all of its incomprehensible complexity. More recently, some Grand Masters of modern physics with extreme counter intuitiveness and irrationalism weave together the widely acclaimed Einstein macrocosm and the quantum physics microcosm into super string theories; utterly spell binding both the initiated and the uninitiated.

However, Einstein's theories of relativity and its illegitimate, quantum offspring did not go unnoticed to the champions of Hegelian dialectic materialism. The destruction of absolutes of mass, energy, time, and space and the destruction of absolute frames of reference was music to the ears of the Hegelians. Einstein's universe is not confined to absolutes, such immutabilities imply a past creation *ex nihilo* of the Universe with its complex order. Ironically, this past complex order of the Universe is being degraded every day. The Universe is not gaining complex order as the atheistic Hegelians advocate. George Bernard Shaw, the prominent promoter of Darwin, adored and promoted Einstein for the conclusions of relativism fostered by his theories of relativity. Even the word "relativity" in the ears of the public seems to give relativism a scientific basis, although the two words, relativity and relativism, are about two different concepts. But perception is everything and as T.B. Barnum, the highly successful circus showman, said of the public, "There is a fool born every minute." Einstein with his catchy $E=mc^2$,

implying that matter converts to energy and vice versa, was a fascinating product easy to market. Did not the explosion of the atomic bomb over 50 years later just confirm the erasure of the line between matter and energy by converting matter into a huge amount of energy?

The Hegelian dialectic materialism found its much sought after absolution of absolutes controlling the Universe in the hard sciences with Einstein's two theories of relativity. What Darwin had done for the Hegelian dialectic in origin of biological life without divine origins, Einstein did for the origin of the universe without God.

The Origin of Life and Darwinism-Implications of the Two Laws of Science

Darwinian evolution is founded on the bedrock of the Primary Axiom of Life that all life, of which man is the apex, arose from (1) *beneficial random mutations* chosen by (2) *natural selection*. The time and chance random mutations produce beneficial mutations which have superior qualities for an organism to enhance its survivability over its progenitors who lacked these beneficial mutations. According to Darwinian evolution, these beneficial mutations increase over time in complexity and order from random atoms to man. The natural selection mechanism has a two-fold function, one positive and one negative. Positively, natural selection gives the organism with the beneficial mutations an ability to compete and survive in conditions that its progenitor could not. Negatively, it eliminates degenerative or non-beneficial mutations by making the organism that possesses the regressive mutation less able to compete and to survive than the comparable organisms with no mutation or a beneficial mutation. For Darwinian evolution, the tree of life is made up of species of increasing order brought about by random, beneficial mutations chosen by natural selection.

From a scientific prospective, all biological systems, both plant and animal, must be considered chemicals reacting in accordance with the laws of chemistry and more specifically the laws of physics. First, all living systems are matter, elements from the periodic table, interacting almost exclusively in chemical reactions (the exchange of electrons). Few, if any, of the reactions involve nuclear reactions (the change of the protons and neutrons in the nucleus). In all these biological reactions, matter and energy are always quantitatively conserved. There is always the same amount of matter and energy before and after the reactions. Secondly, all these biological reactions take place where the net change in disorder (entropy) always increases. Further, the information and agent to produce the order in biological systems must be more ordered than the system that is constructed, especially for the propagation of any living species. In living systems, the information resides in the genetic code, the genome, of every cell. The agent is the genome and the complex cellular structures/systems, such as mitochondria and ribosomes, in each cell which manufacture the biological systems for life from the information in the genetic code.

An example of the fertilized egg of a human being shows this biological development of complex structures from a less complex one. The fertilized human egg cell, if it contains a good set of genes and a continuous supply of food in a nurturing environment, will develop into a highly complex human being. Once fertilization has taken place, the genome of each individual human is determined with all of his or hers unique characteristics. On one hand, if the genetic material or cellular structures are sufficiently damaged or removed, then the human will not develop properly and will die. On the other hand, if the continuous food supply is stopped, then the human also will not develop and will die. Also, a very specific environment such as a mother's womb is required for the fertilized cells to reproduce. An ordered system can only be produced from a less ordered system if (1) there is an active agent with the ordered information and equipment necessary to construct the ordered system, and if (2) there is an ordered energy available to the agent to construct the ordered system resulting in a net gain of disorder. The watch and the sandwich-eating watchmaker example illustrates the necessity of an active ordered agent using a degradable, very specific energy supply. Energy alone will not produce order. A very specific form of energy which the agent can use is necessary. Also, an ordered agent alone, no matter how complex, will not produce order such as a non-living virus, replete with genetic information, outside of living cells shows.

In fact, some evolutionists advocate that the energy from the sun can drive an evolutionary system upward to higher ordered life forms. In reality, order and complexity are under the rule of the second law of increasing disorder, and not the first law of conservation of matter and energy. Adding the sun's energy to the earth without a pre-existing, ordered agent has exactly the opposite effect. The more energy that the sun gives to the earth, without the proper agents of order which can utilize the sun's energy, the faster any ordered systems will biodegrade. Anything organic left in the light energy of the sun will decompose faster as it receives more energy in radiation from the sun. Higher energy radiation will degrade organic matter faster than lower energy radiation.

In an analog, all the building materials needed to construct a nice office building can be gathered together in one place. All the energy needed to construct the building could be sprayed on these materials in the form of gasoline and ignited. All the energy needed for the construction is available in the gasoline. However, the burning gasoline will never produce a fine office building although the materials and energy are more than adequate. On the contrary, the energy in the burning gasoline will reduce the materials to uselessness, losing even the order that the building materials previously possessed. Energy is no substitute for order, decreased entropy. Likewise, an explosion in a print shop will not produce a Webster's dictionary. A powerful tornado churning through a junkyard in Seattle never produces a Boeing 747 airliner, although the tornado has the energy necessary and the junkyard belongs to the Boeing Aircraft company. Excessive energy from a

high energy source like the sun without a highly ordered, pre-existing agent will never produce complex biological life forms.

George Bernard Shaw, even in the 1800s was aware of this problem, and affirmed that given a million monkeys typing randomly on typewriters, the monkeys would type a play of Shakespeare. A friend from MIT and I worked out the probabilities of such an occasion. We took the Shakespearean play of Othello which begins with four letter words. For the sake of argument, we assumed that there are four four-letter words or sixteen letters in sequence. We assumed one million monkeys (10^6), typing randomly at 100 words per minute. How long would it take for the probability to be one that somewhere in their random typing that there is the first word of four letters in sequence? Well, it is only 2 seconds. Let us double that to two words or eight letters in sequence. That would only take about 5 minutes. Let us double it again to four words or sixteen letters in sequence. That would take the monkeys one hundred million years!! Shaw was a great playwright but a poor mathematician and scientist. I am sure that Shaw never produced any of his plays by randomly typing monkeys!

Nearly two hundred years ago, William Paley, trained as a churchman at Christ College, Cambridge University where Charles Darwin was also trained as a clergyman after him, noted that a watch lying on the ground implies the existence of a watchmaker. The watch can not be the product of the blind forces of nature. In essence, Paley reaches the same conclusion with logic that the two basic laws of science today affirm-life with its astonishing molecular complexity can not be a product of time and chance interactions of matter and energy.

From the geological fossil record, it is estimated by some evolutionary biologists that the Earth has lost 99 % of all the species that have lived on the earth. In fact, each year there probably are species of microorganisms disappearing forever. Even of the remaining 1% of species left on Earth, there is a continuous degradation of their genetic material. Degenerative mutations are accumulated in each successive generation since natural selection is incapable of distinguishing these incremental mutations. These accumulating degenerative mutations are called the genetic load of the genome. Consequently, each generation passes on an increasing degenerative mutated gene pool to the next generation. This genetic making of copies from degenerate copies is slow but irreversible in large populations and is rapid in small populations of a species. That is why close inbreeding can lead to the rapid demise of small group species. Some geneticists have surmised that the loss of 99% of Earth's fossil species may be due to this irreversible genetic meltdown rather than catastrophic geophysical events. The geological record of species in rock indicates that genetic entropy (increasing disorder) rather than genetic evolution (increasing order) is the rule of nature.

Previously all life forms have been classified by genus and species. More recent genetic research indicates that a broader term such as "kinds," probably at the family classification level, needs to be used to define interbreeding species. For

instance, dogs, coyotes, wolves, hyenas, and foxes are all different species but can interbreed. In contrast, the broad-termed “kind” can not, by definition, interbreed with another “kind” and have a fertile offspring. Because no “kind” of plants and animals can interbreed with any other “kind”, there can be no continuous reproduction of “kinds” from inorganic atoms to man. The chain of life only has missing links between all “kinds”, contrary to an essential doctrine of evolution whereby man must be a product of continuous reproduction from random atoms. In contradiction to the necessity of continuous reproduction of all “kinds” from inorganic atoms according to the theory of evolution, the whole spectrum of “kinds”, both animal and plant, is completely discontinuous as even the fossil record shows.

This wall of separation between “kinds” is absolutely necessary for the survival of life on the Earth. Each “kind” has very definite genetic characteristics to guarantee its survival such as eagle eyes, eagle talons, and eagle wings in eagles without which eagles could not survive. If there was not a genetic wall of separation between “kinds” to prevent cross breeding of “kinds,” then the offspring of crossbreeding “kinds” would acquire and lose characteristics that would doom the offspring’s survival. For example, the offspring of crossbreeding a human and a fish would not produce a mermaid but a grotesque creature incapable of surviving in either a terrestrial or aquatic environment. Crossing an elephant and mosquito or any other “kind” crossbreeding will result in catastrophic death of any offspring, probably even before its birth. This inability of “kinds” crossbreeding is an absolute necessity for all life to continue for more than one generation.

In addition, this discontinuity of life forms of “kinds” is formidable in the asexual reproduction of a new “kind” where only one organism is needed to make this quantum leap to form and to perpetuate a new “kind.” However, in higher animal “kinds” and some plant “kinds,” sexual reproduction is necessary to perpetuate a new “kind” according to Darwinian evolution. In sexual reproduction of these higher “kinds,” there must be a male and female with the same beneficial genetic mutation to form the new quantum Darwinian superior “kind.” Two males or two females, even with the genome of the new “kind,” will not procreate offspring by sexual reproduction. Further, this male and female with the new Darwinian “kind” mutation must exist at the same time, must be at the same geographical location on the Earth, must be at the same breeding age of life, and must breed together in order to perpetuate the new “kind.” The odds of sexual reproduction to develop a new “kind” are astronomically greater than asexual reproduction. The fight against entropy to get just one new “kind” by time and chance according to Darwinian evolution across this discontinuity of “kinds” using sexual reproduction is impossible, a mathematical absurdity.

Undaunted by the mathematical realities of entropy, Darwinian evolutionists somehow hope that long periods of time will supply evolution the time necessary for chance mutations to occur. Radioactive dating of fossils and other geological materials is used to get billions of years for this evolutionary process to happen.

Because of entropy, larger elements over time decay into simpler elements usually through the loss of nuclear matter such as neutrons and protons. It is assumed that the exponential rates of decay are constant over time. This decay sometimes takes millions of years for the radioactive material to lose one-half of its original matter. The slow rate of decay is true in uranium ultimately to produce lead, strontium to produce rubidium, and potassium to produce argon. By measuring the amount of parent material, for instance uranium, and the amount of the radioactive offspring, lead in the case of uranium, the age of an object which originally contained no offspring material can be determined based on the radioactive half-life. If the half-life decay is 5 million years and only one-fourth of the original radioactive material is left, then there have been two half-lives of decay or 10 million years.

Radioactivity dating assumes that the decay rates do not change. However, decay rates can be changed dramatically when external energy is applied to the radioactive elements. For instance, U^{235} has a half-life of 770 million years with only the background radiation (gamma and cosmic rays). In a nuclear reactor this 770 million years half-life for U^{235} can be reduced to a half-life of 2 years. In an atomic uranium bomb the half-life can be reduced from 770 million years to nanoseconds. Radioactivity decay rates are strongly a function of external energy and of internal energy depending on the concentration of radioactive matter, generally in the form of radiation, to the radioactive elements. For example, natural highly concentrated deposits of uranium have been found in Africa to be natural nuclear reactors with very short half-lives for the uranium. Non-radioactive elements which theoretically have no radioactive decay can be made radioactive with external radiation. It is possible that there would be no radioactive decay, even from elements that are considered radioactive, without background cosmic radiation such as cosmic rays, gamma rays, and X-rays. In any case, radioactive decay rates are not always constant with time.

There are generally considered three types of rock material on Earth: (1) sedimentary, (2) igneous or volcanic, and (3) metamorphic. Since fossils, mineralized remains of plants and animals, are found in sedimentary rock and some metamorphic rock formed from sediments, radiometric dating is used to date the age of the fossils. However, it is impossible to date fossils with this method because the fossils have been mineralized by inorganic materials from the sedimentary layer around them. For instance, the inorganic calcium in a bone fossil is not the organic calcium that was in the living animal. The material in any mineralized fossil is not the organic material in the living animal or plant so radioactive dating of the imported elements can not date the fossilized remains and its sedimentary layers!

Even in living animals, the non-mineralized portions of fossils, or sedimentary layers, the dating of radioactive elements is not valid because the living organism, sedimentary layer, or fossil do not generally contain only the radioactive parent element without any daughter element. As a rule, the radioactive daughter/offspring elements are found together with its parent element because the parent-offspring radioactive pair often has similar physical characteristics (an

exception is a solid/gas pair such as potassium/argon). As an example, uranium and lead are generally found together because they have similar physical properties and any chemical or physical actions will put them together in the same deposit. This is true of most of the parent-daughter radioactive pairs.

Radioactive dating, to be accurate, must assume that all the radioactive offspring (such as lead isotopes) is the product of radioactive decay of its parent (such as uranium). This false assumption explains why the use of two different radioactive pairs rarely gives the same radiometric date within the acceptable standard deviation of less than 5%, such as uranium-lead dating compared to strontium-rubidium dating. In any case, dating of fossils in sedimentary rocks is inadmissible because (1) the radioactive elements used for dating seldom existed naturally in the living organism, (2) the non-radioactive material to be dated in most cases never existed in the original living organism, and (3) the material surrounding the fossils invariably has contamination with elements, identical to daughters but of non-radioactive origins.

Carbon dating of organic materials such as wood using C^{14} to C^{12} decay with a half life of slightly over 5,700 years has a number of problems, besides sample contamination. Even dating 10-15 half-lives of C^{14} which is at the technical limit of measuring, this method can not exceed a theoretical time scale of 100,000 years. There should not be even any atoms of C^{14} left in any sample over 100,000 years. Recent research indicates that there are quantities of C^{14} in almost all specimens containing carbon, even ones which are thought to be more than 100,000 years old where C^{14} levels should be zero. Independently tested samples never seem to go below the levels of C^{14} expected for 10,000-80,000 years ago, even where no contamination of atmospheric C^{14} is possible into sedimentary samples. This would imply that none of the samples are more than 80,000 year old! Coal beds that have been assigned ages in the hundreds of millions of years by geologists show less than 100,000 years of age using C^{14} dating! Diamonds are supposed to be 1,000,000,000 to 3,000,000,000 years old but almost all diamonds have C^{14} in them and date less than 80,000 years old if C^{14} dating is accurate! Almost all materials that have carbon in them have C^{14} in them which according to carbon dating would make them less than 100,000 years old at the most.

Knowing the problem of mineralization of fossils in sedimentary rocks, some evolutionists have used igneous or volcanic layers between the sedimentary layers to date geophysical and biological processes. This method of dating has some of the same problems of getting a starting point for the radioactive decay as in sedimentary rock. For instance, Mount St. Helens exploded in 1980 and left significant ash deposits of igneous material. Using radioactive isotopes of argon to argon decay, as well as potassium to argon, the youngest dates of the igneous ash material are in the hundreds of thousands of years, although the eruption only took

place 35 years ago! Even some of the trees, such as those in Spirit Lake, are already mineralizing into fossils upside down in a time period of years, not hundreds of thousands of years! In another case from Australia of a basalt specimen coring taken from nearly 70 feet below the surface, the basalt, a volcanic igneous rock, was dated at 44 million years old using potassium-argon dating but the tree wood samples encased in the volcanic basalt only dated 44 thousand years old using carbon dating!

The dating of metamorphic and igneous rock in other cases is even more perplexing. The radioactive decay of some elements leaves a distinctive halo mark in the surrounding material. The metamorphic or igneous rock must be cooled to a solid state in order for the radioactive decay halo to be imprinted in the surrounding rock because of the extremely short half-lives of the elements. Granite, usually a very durable metamorphic rock formed with extreme heat and pressure, sometimes has halos of radioactive elements which have a very short half-life of hours or a few days, such as polonium. It is hard to conceive of geophysical conditions that would allow the granite to entrap polonium in its matrix and cool fast enough so that the polonium decay would leave a halo imprint in the solid rock. Based on recent research, there appears to be no rapid transmigration of the very large polonium atoms from the outside into the granite. Also, there is no other radioactive parent in the granite such as uranium, thorium, or radon that could produce polonium as an offspring which would then rapidly decay, producing the halo imprint. It is almost as if the polonium was created inside the solid granite and almost immediately decayed, leaving the halo in the surrounding granite. These halos also appear in hard gems such as diamonds, the hardest known natural material, which would be very hard for the large polonium atoms to penetrate and then rapidly decay, again leaving their halos.

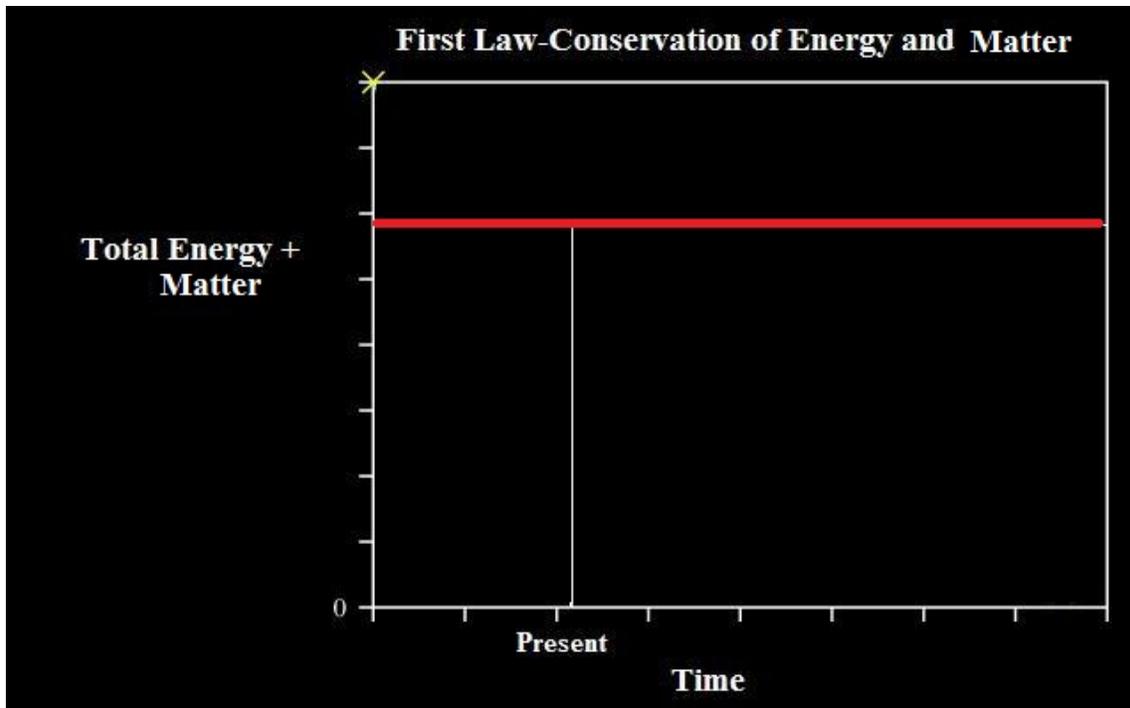
Metamorphic and igneous rocks are also an enigma as far as their origin, quite apart from the radioactive decay halos. Many metamorphic and igneous rocks appears to be preexisting units of minerals that are fused together under great pressure and probably intense heat, conditions necessary to liquefy and to fuse the preexisting minerals. Efforts to reproduce this matrix of fused crystalline structures from a molten blend of these minerals have failed experimentally. Experimentally, it appears to be nearly impossible to reproduce these metamorphic matrixes of quartz, feldspar, and mica in granites by cooling a uniform molten mass of these minerals. Once melted, these non-homogenous crystalline units do not resolidify from homogenous melts under almost any conditions. Entropy does not appear to allow these ordered crystals to reform from disordered molecules of the liquid mixture, although it would seem possible from Gibbs free energy (strong bonding energies and a small change of entropy from liquids to crystals). These units of minerals, such as quartz, feldspar, and mica, seem to have been loose granules on the surface of the Earth which were later fused together under pressure and heat. This would take some incredible and unknown geomorphic processes taking loose granules, fusing them deep underground (with heat, pressure, or

cementing agent), and then leaving the metamorphic matrix exposed on or near the Earth's surface.

Radioactive dating of sedimentary, igneous, and metamorphic rocks has major problems, each for different reasons, which can not and does not give any accuracy according to scientific testing standards. Even if the age of the Earth is in the billions of years, entropy would not allow the whole Universe to produce life forms anywhere in 20 or 30 billions years by time and chance. In spite of this impossibility on a cosmic level, some evolutionists, acknowledging the impossibility of time and chance evolution on the earth, embrace panspermia, the planting of life forms on the Earth. For instance, Sir Fredrick Hoyle, the preeminent Cambridge University cosmologist, believed, as an agnostic, that the genetic material for the different phyla came from other parts of the Universe embedded in meteorites. Others such as Dr. Crick, the Nobel laureate for the discovery of the helix molecular structure of DNA, believed that life was planted on the Earth by intelligent, ordered aliens, although the existence of such beings has never been established by SETI (Search for Extraterrestrial Intelligence) after decades of listening for an ordered signal from outer space. Ironically, the major premise of the SETI, most of whose collaborators are evolutionists like Carl Sagan, the founder, is that an ordered signal can only come from ordered, intelligent agents, as entropy would demand!

The Origin of the Universe-Implications of the Two Laws of Science

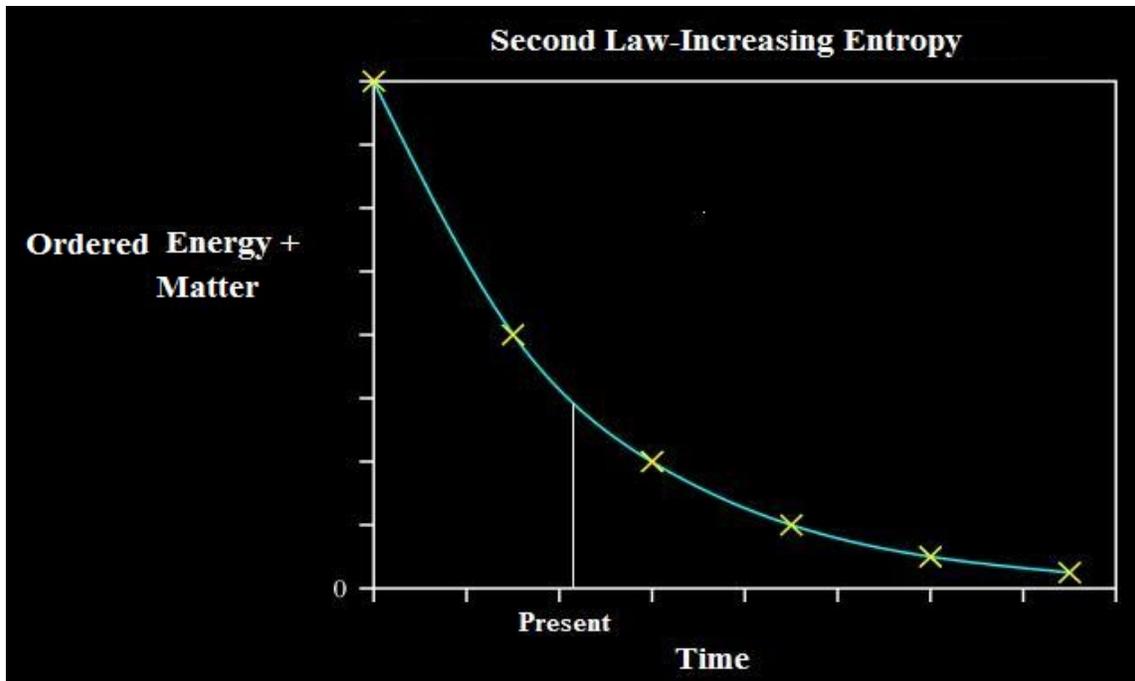
The first two laws have implications concerning the origin of the Universe, just as they do for the origin of life. The first law, the conservation of energy and matter can be plotted as the total quantity of matter and energy in the Universe as a function of time as shown below.



First Law-Total Energy and Matter versus Time

The total quantity of matter and energy is constant for all time. Matter, as mass, is considered in Einsteinian relativity as another form of energy according to the equation, $E = mc^2$. At the present time, the Universe has the same quantity of matter and energy as the Universe had a thousand years ago and will have a thousand years from now.

The second law, increasing entropy (disorder), can be expressed as the useful or ordered quantity of matter and energy. As the matter and energy in the Universe becomes disordered, the ordered/useful quantity of energy and matter in the Universe decreases. This decay, like most types of radioactive decay, is an exponential decay. The Universe's ordered/useful energy will approach, but never reach, a zero value in the future. In the past, the Universe had an exponentially larger and larger quantity of ordered/useful energy as we go back in time. The Universe's useful/ordered quantity of energy and matter is shown in the following graph as a function of time. Again matter, as mass, can be considered in this graph as a form of energy for Einstein relativists according to $E = mc^2$.



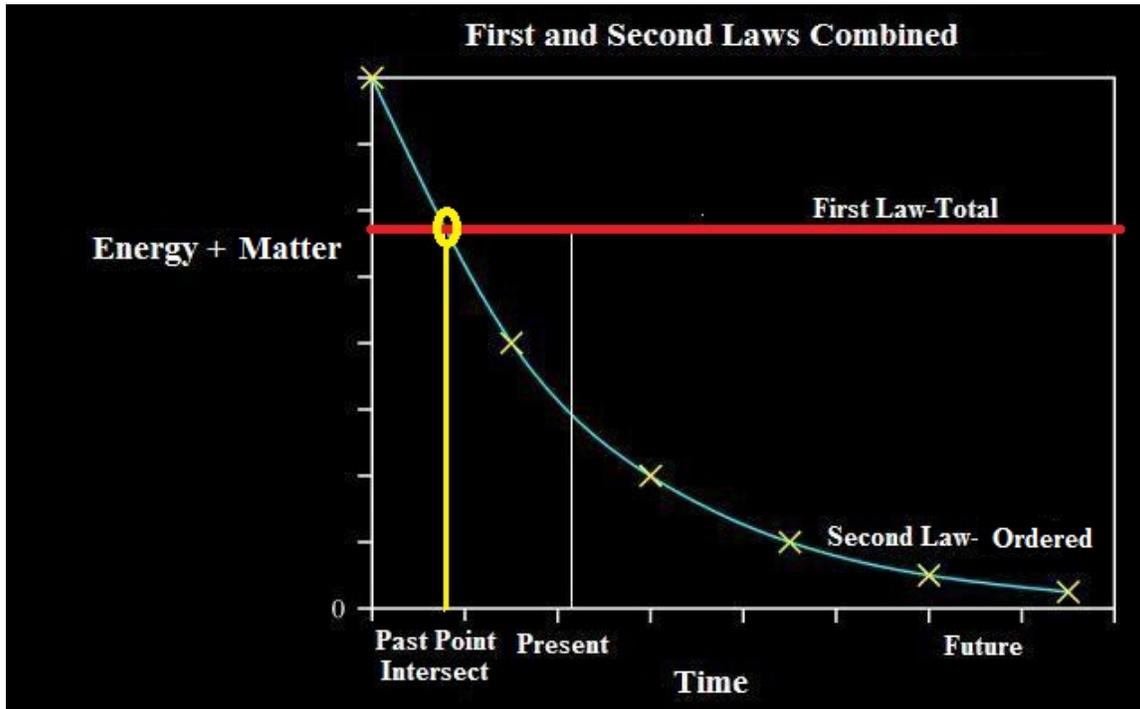
Second Law-Ordered/Useful Energy and Matter versus Time

Yesterday, the Universe had more ordered/useful energy and matter than it has today. And today the Universe has more ordered/useful energy than it will have tomorrow, although the loss of ordered energy and matter will decrease slightly each day, typical of exponential decay. It will never reach zero but will approach zero asymptotically.

These two graphs of the two laws can be viewed in two ways. For the first law, if the Universe is a closed system as Einstein and others affirm, then the quantities of total matter and energy are considered finite. On the other hand, if the Universe is infinite in space, the total energy and matter coordinate of the chart would be considered densities of matter and energy. Even a Universe with infinite space would have a finite total energy and matter density, since what one volume or closed surface would lose a neighboring closed surface would gain with a zero sum gain in energy and matter, giving the Universe a constant energy/matter density over time.

The same rationale would apply to the ordered/useful energy and matter coordinate of the second law graph for either the finite or infinite Universe, although the ordered/useful energy and matter decreases with time in both cases. For each graph of both laws, the coordinate for energy and matter (total-first law or ordered-second law) would be a large, but finite, quantity for a finite Universe or a finite/constant density for an infinite Universe. The total energy and matter for the first law will be fixed for all time for the first law. On the other hand, the ordered/useful energy and matter for the second law will be decreasing, probably exponentially, with time.

The following graph superimposes the two previous graphs, one for each of the two laws, together.



First and Second Laws Superimposed

The present time is indicated by a vertical line Present. Points of time in the future have to do with the destiny of the Universe which has already been discussed and will be mentioned again later. Concerning the origin of the Universe, there is a point in the past where the lines for the first law and for the second law intersect, Past Point Intersect. At that point in the past, the ordered quantity of matter and energy in the Universe is equal to the total quantity of matter and energy. All of the energy in the Universe would theoretically be in one particle, moving in one direction.

However, the two laws of physics make it impossible to go back further in time from this Past Point intersection of the graphs of the two laws. First, before this intersection time, the ordered/useful energy line can not continue its exponential increase into the past because there can not be more ordered/useful energy than total energy. Continuing the exponential curve of the graph of the useful energy before this intersection point in time, there would be more ordered/useful energy than total energy. Therefore, the Universe could not have existed before this past point in time without violating the second law.

Second, the theoretical particle containing all of the energy of the Universe at this past intersect point in time could not have retained all of the Universe's energy for even a moment of time earlier than the time when the two lines intersect, Past

Point Intersect. A particle possessing all of the Universe's energy would rapidly begin transferring this energy to other particles or emitting its energy in the form of electromagnetic radiation. The second law would not permit the particle to exist before this point in time nor after this point in time without losing its energy to the rest of the Universe.

Third, all the energy in the Universe could not have been at nearly zero ordered/useful energy (about 4 degrees Kelvin) at some point in the past and then jumped up to a high ordered/useful energy value. In this case, all the energy in the Universe, against the second law of increasing entropy (order), could not be transferred into one particle from all the other matter at that point in time. That energized particle then would begin the present entropy decay of the Universe. This is the brick on the table illustration taken to a cosmic level. From Boltzmann's equation of entropy, the probability of the whole Universe to have this reversal of entropy is probably more than a googolplex (10 to the 10^{100} power) of years. Such an event would be an extreme violation of the second law of increasing entropy to have all of the energy in the entire Universe go from totally disordered states to the singular ordered state at the intersect point or to multiple highly ordered states subsequent to the intersect point before it began its present exponential decay.

The first law clearly states that the Universe can not create or destroy one gram of matter or one joule of energy forever. The Universe can not procreate itself! Even using Einstein's $E = mc^2$, the total energy and mass equivalence of energy in the Universe will always be the same. According to the first law there are only two options as far as the origin of the Universe: (1) the Universe is eternal with an unchanging quantity of matter and energy, or (2) the Universe came into being by a supernatural (non-natural) creation of all the matter and energy by some agency external to the Universe. The second law eliminates the first option (an eternal Universe) at the point a finite time ago in the past (the Past Point Intersect-the intersection of ordered/useful and total energy and mass) where all of the energy in the Universe was theoretically possessed by one particle. The Universe could not have reversed entropy from total disorder to an extremely high order on a cosmic level and then began its present decay again to total disorder without violating the second law. Neither could the Universe have existed before this finite time in the past. The Universe can not have more ordered/useful energy and matter than total energy and matter. Neither can all the energy of Universe reside in one particle before this point of time without entropy disordering the particle's energy. Either the first law was broken on a cosmic level (the matter and energy of the Universe can into being *ex nihilo*, out of nothing) or the second law was broken on a cosmic level (the entropy of the matter and the energy in the Universe was reversed into great order on super galactic levels). In either case, at finite time in the past, the Universe, according to these fundamental laws of science, had (1) a supernatural creation of matter and energy at super galactic levels and (2) a supernatural ordering of the matter and energy in the Universe at super galactic levels.

The Creator of the Universe: The Implications of the Laws of Science

Forensics is not just an art plied by criminologists and pathologists to solve crimes. Every piece of art, music, machine, or crime bears very distinct marks of its maker. If a painting is brought to an art expert specializing in the Dutch Masters, that expert can tell if the painting is a genuine Rembrandt or not; although he has never met Rembrandt nor does he know anyone who has met Rembrandt. A specialist in Bach can with careful examination determine if a score of music is a lost work of Bach's or not. Again, this music expert can affirm personally the existence of Johann Sebastian Bach and identify his works of music. A skilled forensic pathologist can give the profile of an individual including its age, type of occupation, cause and circumstance of death, even from a skeleton taken, for instance, from the ruins of Pompeii which was destroyed nearly two millennia ago. A good forensic psychologist can write an accurate personality profile of a criminal whom he has never met simply from details of the criminal's modus operandi (method of operation). An inventor betrays his personality in his mechanical inventions to an observant analytical engineer. A mass-production gun will leave distinctive rifling marks on a bullet. A good ballistics expert can identify an individual gun from other guns produced by the same machines at the same arms factory by these distinctive marks on a bullet fired from the gun. The watch makers of old left their hallmarks in every watch they made. A violin is known as a Stradivarius by the workmanship of its maker's hand. So the Universe bears the marks of its Maker from its intricate structures and its imbedded laws of operation.

The Universe is incapable of creating or destroying any of its own essence, matter and energy. Further, the Universe is dying irreversibly in the death grip of entropy, the heartless statistical destroyer of the order in matter and energy. The Universe has no means to prevent its own demise. Each day, the stars, galaxies, and super galactic clusters irreversibly lose matter and energy which they will never get back. A Nobel Prize was awarded for the discovery of the background microwave radiation at 2.7 degrees absolute temperature (Kelvin) across the Universe as a proof of the lingering energy left from the Big Bang. In reality, rather this radiation is the effect of entropy as the stars irreversibly radiate their energy into the colder parts of the Universe, forming a cosmic ocean of microwave radiation at 2.7 degrees Kelvin. In the future according to some physicists, energy from stars and galaxies will radiate out and cascade downward until all of the energy and matter in the Universe will be uniformly 4 degrees above absolute zero, filling space with a vast ocean of electromagnetic microwaves.

Long before this happens, light will disappear from the Universe. Even before the disappearance of light, genetic entropy will degenerately mutate the vital genomes (genetic matter) of all species below vital functioning levels, driving all life into extinction. No intelligence will be alive to observe, much less prevent, this ultimate demise of the Universe. This scientific eschatology will be a whimper and not a bang, as T. S. Eliot penned. Science's prognosis of the Universe is similar to the Shakespearean view of life in Hamlet, "Life is a tale told by an idiot, full of sound and fury and signifying nothing." Or in the Mother Goose rhythms,

“Humpty Dumpty sat on a wall, Humpty Dumpty had a great fall, and all the King’s horses and all the King’s men couldn’t put Humpty together again.”

Each day, the Universe loses some of its former beauty and order. Yesterday, the Universe had more life and beauty than today. The records written in geological stone remind us that one hundred times more kinds of life existed on the Earth than we have today. No new kinds are arriving to replace them. Contrary to the public perceptions from movies like Jurassic Park, the genomes of the past creatures are probably gone forever. Kinds can not be resurrected from mitochondrial DNA. Even if some wizardry of genetic engineering could resurrect kinds or stabilize DNA entropy, the dying fires of the Universe will ultimately extinguish and exterminate all life in the Universe.

Looking back in time, however, the two laws of science can interpolate certain parameters about the Universe’s origin. With no means either to create matter or energy according to the first law, the Universe was incapable of creating itself. Being unable to reverse entropy on any level above simple molecules, the Universe is equally impotent of regaining its former order and beauty. As a matter of fact, with each day that passes, the Universe continuously loses its base of operations to try to get back to a more ordered state. Philosophically speaking, this is a morbid state of affairs. Time and chance with these two governing laws of science, and for that matter all the laws of science, will never create even a protein molecule, much less a star. But what do these two laws tell us about the Universe’s origin?

Like the watchmaker and the sandwiches, the Universe must have been given its ordered matter and energy from a highly ordered agent with an energy supply greater than the Universe’s total matter and energy. In the deep field Hubble telescope photos, galaxies are seen disappearing into infinity in every direction. Novas and supernovas, explosions of stars and possibly galaxies, are seen in every direction. Given that all the large celestial systems, such as galaxies and super clusters of galaxies, seem to be burning out at roughly the same rate in every direction and from a common starting time in the past, it appears that all parts of the Universe came into being or acquired their ordered structure at the same time. The ordered agent necessary to give the Universe its matter and energy and to give the Universe its order had several unique characteristics, forensically speaking.

First, the author of the Universe’s order had to have access to all parts of the Universe at approximately the same time. This is not naturally possible since an agent made of matter can not travel faster than the speed of light to access all parts of the Universe. No matter can travel faster than the speed of light. If this agent did its ordering of the Universe at a point when the Universe was all together, as proposed by the Big Bang advocates, then the agent would not have to have exceeded the speed of light. However, in this case at the beginning of the Big Bang, the ordering agent must operate at temperatures where no matter can exist because

of the incredibly high temperatures. So in either case of the Big Bang or of an immensely expansive Universe, the agent could not be made of matter.

Second, the agent had to have an energy source equal to or larger than the total energy in the Universe in order both (1) to bring into existence the total quantity of matter and energy of the Universe initially, and then (2) to order the Universe's matter and energy into the highly ordered states from which it is presently decaying. The agent would have to manipulate the stars, galaxies, and super clusters at energy levels unavailable in the natural realm or laws of the Universe.

To create the matter of the Universe requires inestimable amounts of energy. A single atom in the Universe has an incredible amount of energy, especially in its nuclear bonding energy. This is clearly seen in the small amount of uranium used to produce huge amounts of energy for electric power generation in nuclear power plant. The nuclear energy in the atoms of single person is probably sufficient to eliminate life on the earth if used in an atomic bomb. The agent that brought the Universe into existence had to have astronomical amounts of energy to create all of the atoms in the Universe.

To create a star with all of its beginning energy, the ordering agent must use more energy than the star will give off in its life time. To give the 100 billion galaxies with probably 100 billion stars each as seen by the Hubble Telescope, the ordering agent would need to use more energy than all 100 billion galaxies with their 100 billion stars each will give off in their lifetimes. In other words, the ordering agent must have more energy than all of the energy in the Universe in order to give the Universe its initial order.

This manipulation of order in matter and energy must have been done in every part of the Universe at the same time. This is beyond any mechanism or law found in our material Universe. In fact, these two fundamental laws of science militate against the natural Universe, made of matter and energy, ever self-producing the Universe with its ordered matter and energy at a cosmic level of stars, galaxies, and super clusters of galaxies.

Lastly, the second law would require that the ordering agent that gave the Universe its order must have more order than the most complex part of the Universe. Information theory, derived from the second law, requires an ordered system to be ordered by an agent with more information or order than the most complex part of the ordered system which the agent produces. Applied to the complex order of the Universe, the agent that ordered the Universe must be more complex than man, the most complex part of the Universe, including the personality of man (intellect, emotion, and will). The agent can not be an impersonal force. Hypothetically, the agent which ordered the Universe would have to be more complex than aliens if they exist.

In summation, the ordering agent that initially ordered the Universe, from which it is exponentially decaying, must have four characteristics according to the two laws of science. First, the agent must possess more energy and order than the whole Universe. Second, the agent must be able to access and manipulate the energy and matter in the Universe at approximately the same time. Third, the agent can not be made of matter since it would have to exceed the speed of light which no matter can do in order to give order to a disperse Universe or the agent would have to operate in temperature conditions in which no matter can exist at the beginning of the Big Bang. Lastly, this agent must be more complex than man, the most complex part of the Universe.

It might be appropriate to use the “G” word. If we are not talking about a personal supernatural God, rather than an impersonal, blind force of nature, as the creator of the ordered Universe, what are we talking about? The two laws of science, which govern all of the other laws of science, exclude any natural causes for the origin and order of matter and energy in the Universe. These same two laws limit the conclusions as to the characteristics of a supernatural, intelligent agent with all the personality and power exclusively belonging to God in order to bring the matter and energy of the Universe into being and give the Universe its complex order. This is not a philosophical or religious conclusion; rather it is the conclusion of the most basic laws of science, the first and second laws of physics.

The Great Myths of Modern Science: Contrary to the Laws of Science

As mentioned before, the two fundamental laws of science are the foundation for all of our laws of science. However, there are current sacrosanct teachings of modern science which are violations of these two primary laws, the bedrock of science. These widely held teachings of modern science, although violations of the two primary laws of science, are considered infallible and indisputable in modern science, like some holy decrees from on high.

First Myth: The Big Bang

Considering the origin of the Universe itself, the Big Bang theory is presently held as the mantra and touchstone of cosmology. Upon close analysis, the Big Bang theory appears to violate not only the two basic laws but also almost all of the other laws of physics, derived from these two primary laws.

First, all the matter in the Universe is in rotary motion, almost every smaller body is rotating around a larger celestial body (moons around planets, planets/asteroids and comets around stars, stars around galaxy centers, galaxies around the center of galactic superclusters). A satellite must have rotary motion around its host body in order to have a centripetal force from its angular acceleration to counter act the gravitational pull of its host. Otherwise every

satellite, such as our Moon, will be pulled by gravity into its host, the Earth in the case of our Moon.

In reflection, it is hard to conceive that a Big Bang could give matter rotary motion since the forces in an explosion are only radially outward with no rotary components. In contrast to an explosion in an atmosphere which can produce rotary eddy currents because of friction from the atmospheric gases, empty space has no friction forces to induce counter rotating angular momenta. Since gravity only acts from centers of matter, neither can gravity give matter any angular momentum in an explosion in space. Further, this rotary motion in celestial systems places almost all the matter in the Universe in nearly perfect stable orbits which is extraordinary in itself. It is nearly impossible to place a satellite in a long term stable orbit, yet nearly all the matter in the Universe is in long-term stable orbits! By contrast, of the thousands of objects placed in orbit by man around the Earth, all these objects either shoot off into space or fall back into the Earth in a relatively short time frame. Putting satellites in orbit around the earth is largely a simple two body gravitational problem. The mathematics of establishing a solar system such as our own with a hundred bodies (planets and moons) into stable orbits is beyond man's mental and mathematical capabilities, much less man's physical ability to accomplish such a feat with any means or energy sources.

In any case, this rotary motion of all the matter in the Universe, particularly concentrated in superclusters of galaxies, represents huge, net amounts of angular momenta. The large angular momenta of these superclusters are net amounts since the angular momenta do not appear to be counter-rotating, whether in solar systems, galaxies, or super clusters of galaxies. Equal counter-rotating angular momenta would give a zero net sum of angular momentum in the Universe, but this is simply not true. Going back to the time of the Big Bang when the initial body of matter contained all of the angular momentum of the Universe, the conservation of angular momentum would have this initial matter rotating at a speed much in excess of the speed of light, probably at googolplexes ($10^{10^{10}}$) times the speed of light. In fact, the initial matter of a single galaxy would possibly spin at speeds, predicted by the conservation of angular momentum, of over a googol (10^{100}) times the speed of light. Since the mass of any matter approaches infinity as the body of matter approaches the speed of light, no matter can travel or spin at speeds greater than the speed of light. This impossibility means that the Big Bang theory would violate the law of the conservation of angular momentum, given the huge angular momenta in the Universe.

Second, from Newton's third law (For every action, there is an equal and opposite reaction) in an explosion like the Big Bang there must be equal and opposite momenta of matter moving away from the center of the explosion. However, the Universe is lumpy. The matter in the Universe is not evenly distributed. The matter in the Universe forms clumps of matter configured in superclusters and concentrated in irregular parts of the Universe. There is no position in the Universe where there are equal amounts of momentum moving away

from each other in opposite directions which Newton's third law would require. In the case of Newton's third law, the Big Bang theory violates the law of conservation of momentum.

Third, since the explosion of the Big Bang would atomize all matter into gases or particles, it is difficult to conceive of gravity recollecting these gases and particles into celestial bodies and systems. The Big Bang is considered a reverse black hole event (white hole event)-the Universe having enough energy in the Big Bang explosion to escape its black hole. The energy levels of the gases and particles of the Universe coming out of its black hole in the Big Bang would make it impossible to overcome the second law of increasing entropy/disorder in order to recombine these scattered/energized atoms and particles into larger bodies. Gravity is certainly too weak. Gravity, like all the king's men and all the king's horses (gravity), can not put the Universe, like Humpty Dumpty, together again once matter is blown with super high energies into gases and particles by the Big Bang.

With an equal amount of positive and negative charges in the Universe, it is likewise impossible to attribute the formation of the elements in celestial bodies to electromagnetic forces. Even invoking the hypothetical weaker and greater nuclear forces, it is difficult to explain the formation of elements higher than helium after matter successfully exits from the "cooker" of the Big Bang, or even an exploding star. If higher elements can form in the high temperature conditions of a star, then they can equally disassociate in such conditions, especially in the energized explosion of a star. In the explosion of a star, a nova, the higher elements will easily disintegrate into lower elements, releasing helium or alpha particles, as it is blown out of the star's incubator conditions. Spectrometer analysis of the elements found in the nebula clouds left from the explosion of a star (a nova explosion) reveal almost no heavy elements coming out of the star explosion, largely only hydrogen and helium. The formation of heavier elements and celestial bodies in a Big Bang scenario likewise will be a violation of the second law of increasing entropy and/or a violation of the first law of conservation of matter and energy.

Fourth, recent observations of light from the fringes of the Universe can indicate that these fringe bodies are accelerating outward. Light has a Doppler effect of red or blue shift depending on whether the light is moving toward or away from the observer. In a similar way, the Doppler effect with sound waves is heard with a high pitched sound from the horn as an automobile approaches and the low pitched horn sound after the car passed and leaves. The current cosmological interpretation of the shift from light-emitting bodies on the fringe of the Universe assumes that the bodies are accelerating away from us. It is an affirmation that the Doppler red shift is greater the farther the star or galaxy is away. The Hubble Constant, although it does not have a fixed value, is used to determine the distance of a star/galaxy from the Earth using the strength of the red shift. However, some stars known to be close to us have a blue shift, the opposite of the red shift, indicating that the star is moving toward us, using the idea that the light shift is due to motion toward or away from us.

In an explosion like the Big Bang, bodies of matter would initially have great velocity from the center of mass of the explosion. According to Newton's law of gravity, gravity will act on all bodies from the center of the explosion of the Big Bang and the bodies of matter, although they may have great initial velocities, will continuously decelerate because of the gravitational pull back toward the center of the Big Bang. Since in the minds of the majority of Big Bang cosmologists the light shift indicates acceleration, instead of deceleration, then the celestial bodies are assumed to be under the influence of anti-gravity forces instead of gravity. Consequently, most cosmologists believe that there is dark matter and dark energy, comprising 95 % of the matter and energy of the Universe, which is anti-gravity. Only 5 % of the Universe, the visible matter and energy of which the earth and visible celestial bodies are part, operates on gravity as we see here on earth. The mainstream proponents of the Big Bang now advocate that the other 95 % of the Universe operates on antigravity. To date, in spite of the claims of some cosmologists, none of this invisible 95% antigravity matter and energy of the Universe has been scientifically detected. The Big Bang, contrary to Newton's Law of Gravity, embraces antigravity as a principal force in the Universe.

There is a more likely explanation of the Doppler shift of light from stars and galaxies. The energy in a light wave is proportional to its frequency and inversely proportional to its wave length. The light wave with a short wave length (higher frequency) has greater energy than a light wave with a longer wave length (lower frequency). The opposite is also true, the longer wave light (lower frequency) has less energy than the light wave with a short wave length. Light traveling from a strong gravitational field to a weaker one will lose energy and its wave length will increase and its frequency will decrease, resulting in a red shift. This is due to the first law of conservation of energy. Therefore, the Doppler shift in light from stars and galaxies is not necessarily due not to motion toward or away from us. Rather, it can be due to light traveling from a strong gravitational field to a weak gravitational field, resulting in a Doppler red shift. In other words, light coming from the strong gravitational fields of stars and galaxies to the earth's weaker gravitational field will result in a Doppler red shift without any Doppler shift due to motion.

Since science assumes that the laws of physics are universal throughout the whole Universe; all of the laws formulated and tested here on Earth would be equally true in the rest of the Universe. However, the Big Bang appears to violate most of the established laws of science, tested to be true on the Earth. The Big Bang theory violates the laws of the conservation of angular momentum, of the conservation of momentum, of increasing entropy, and of gravity. Although it is one of the holy grails of modern science, the Big Bang theory of the origin of the Universe is the first of the great myths of modern science since it violates most of our major laws of science.

Second Myth: Evolution

The theory of evolution, the increasing order of systems, is taught as the law of change not only for the origin of the Universe but also for the origin of life in the Universe. For instance, a science curriculum, generated by the National Academy of Science and adopted by the Kansas State Board of Education in much controversy, uses evolution as its principal law of change not only in biology but in the physical sciences as well. As has been alluded to earlier on several occasions, the evolution of random atoms into complex life forms such as man is impossible by a time and chance mechanism, although evolution is the doctrinal law of change by the National Academy of Science. This theory of evolution is a violation of the second law of increasing entropy or disorder, considered even by Albert Einstein the most absolute of the laws of science.

Evolution, although not even theoretically possible, is taught as a basic concept underlying most science. Because it lacks both a theoretical and an experimental basis, evolution should not even be called a theory. It is simply a hypothesis with neither theoretical nor experimental proofs. Evolution is the scientific basis of the Hegelian dialectic triad, sometimes called scientific materialism. Scientific materialism, a God-less philosophy, seeks to explain the high degree of order and complexity in the Universe from no order using naturalism without supernatural intervention. Naturalism is a strident form of atheism masquerading as science. Unfortunately, the two basic laws of science, the basis of all of the laws of science, militate against the ability of the Universe, acting in accordance with the laws of science, (1) to create matter and energy and then (2) to produce ordered systems of the magnitude of life forms or even non-living systems such as celestial bodies.

Life forms on Earth are experiencing genetic entropy, death, and biodegradation, just as the suns, galaxies, and the superclusters are suffering entropy and cosmic death in the physical Universe. The Earth's geological record shows an entropic catastrophe of biological life with the death, disease, and extinction of more than 90% of all species from the Earth. The Universe with its biological life is trapped in a death spiral of disorder. Entropy, not evolution, is the irreversible law of change in the Universe. Evolution is the second great myth of modern science.

Third Myth: General Relativity

Einstein's two theories of relativity are the basis of modern science's macrocosm view of the Universe. Relativity in physics relates the laws of physics measured in different frames of reference. For example, a man sitting on a park bench along the Michigan lake front is in a different frame of reference (stationary to the earth) from a man sitting in a city bus traveling north at 35 miles per hour along the same lake front (a frame of reference moving north at 35 miles per hour with respect to the earth). Both of these frames of reference are different from (1) the frame of reference of a man sitting on a boat going south on Lake Michigan at 25 miles per hour, (2) the frame of a man sitting on a train traveling north along the

same lakefront at 60 miles per hour, or (3) the frame of reference of a man sitting in airplane flying south over Chicago at 550 miles per hour. All men are sitting and stationary with respect to their respective frames of reference. However, each man would perceive that all of the other men are all moving with respect to his frame of reference.

Relativity is the science of relating the laws of physics from one frame of reference to another frame of reference. Special relativity relates two frames of reference which have no external forces, acceleration or gravitation, acting on bodies of matter in these constant velocity or inertial frames of reference. Special relativity relates inertial (non-accelerating and non-gravitational) frames of reference. That is why it is called special, since it only applies to relating inertial frames of reference. Special relativity is only theoretical because everywhere in the Universe there will be gravitational forces acting on every frame of reference since all the matter in the Universe creates infinite gravitational fields from each body of matter.

General relativity relates frames of reference which have gravitational and acceleration forces acting on bodies of matter in their frames of references. General relativity is called general because it is broad and comprehensive.

Special relativity was proposed by Einstein in 1905, as mentioned in a previous section. Special relativity has two postulates: (1) all of the laws of physics are the same in all inertial frames of reference, and (2) the speed of light is constant regardless of the frame of reference from which was emitted or the frame of reference of the observer of the light. The first postulate is really a summation or conclusion of classical, Galilean relativity which relates matter-energy interactions in every frame of reference. The second postulate, the constant speed of light, is the radical departure from classical physics.

General relativity was proposed by Einstein in 1916, as also mentioned in a previous section. General relativity has only one postulate: accelerating and gravitational frames of reference are equivalent. This is called the equivalence principle. Einstein said that no instrument inside of a closed frame of reference could tell if a external force acting on a body of matter in that frame of reference is due to gravity from an external gravitational body or due to the acceleration of the frame of reference itself.

Modern cosmology, theories of the Universe and its origin, is founded on both special relativity and general relativity. The second postulate of special relativity states that the speed of light is constant regardless of the inertial frame of reference of light's origin or of the frame of reference of the observer of light. The cosmological calculations of distances and of the size and dimensions of galaxies, superclusters, and the Universe itself are all based on this second postulate of special relativity, the constant speed of light. A modern cosmologist measure distances and sizes in terms of light-years, the distance that light would travel in one year at

186,000 miles (300,000 kilometers) per second according to Einstein's second postulate of special relativity.

More importantly, the only postulate of general relativity, the equivalence of accelerating and gravitational frames of reference, is the heart and core of almost all the presently accepted cosmologies. The Big Bang, black holes, worm holes, and other singularity points of the Universe are based on warped space from Einstein's general relativity. As previously mentioned, the Big Bang, the heart beat of modern cosmology, is a sort of reverse black hole event with the whole Universe coming out of a black hole and is sometimes called a white hole event. General relativity linked with Heisenberg's Uncertainty Principle forms the theoretical basis of cosmology, modern science's view of the whole Universe and points beyond in other dimensions. In fact, it is sacrilegious even to whisper a doubt about Einstein's theories of relativity. It is a fast way to gather a heap of scorn. It is a taboo which only madmen and intellectual primates violate according to the academic elite such as the National Academy of Science.

However, desecrate briefly this hallowed ground of Einsteinian relativity. Maybe, the Relativity Emperor really does not have any clothes. General relativity says that accelerating and gravitational frames of reference are equivalent. According to Einstein, a person in a closed room has no instrument to tell whether a force pulling on him is from a gravitational body or from the room accelerating. A high school student, after hearing an explanation of the inability to distinguish between gravitational and accelerating forces, stated that, on the contrary, the forces of gravity and acceleration can be distinguished with an instrument. His logic is immaculate.

The lines of force for gravity are non-parallel; they converge toward the center of mass of the gravitational body. However, the lines of force for acceleration are parallel, non-converging as every teenage knows with the pedal to the metal of his/her father's favorite car. When the high school student was asked about centripetal acceleration, like a car going around a curve on two wheels, he thought a moment and then stated that the lines of force in centripetal acceleration are non-parallel but diverging. He proposed a simple, but accurate instrument to measure the difference between a gravitational force, a straight acceleration force, and a centripetal force. Hang two long, accurately made pendulums with weighted ends in the force field due to gravity or acceleration and measure the distance between the pendulums with an accurate laser at the tops and bottoms of the adjacent pendulums. If pendulums are closer together at the bottom than the top, then the force is gravity. If the pendulums are equal distance apart at the top and bottom, then the force is straight acceleration. Lastly, if the pendulums are farther apart at the bottom than at the top, then the force is centripetal acceleration. Gravitational and accelerating reference frames are not equivalent because the lines of gravitational and accelerating forces are not equivalent, contrary to general relativity.

Not to be out done, another high school student proposed another way to differentiate between a force of gravity and a force of acceleration in a reference frame. The mass of a body of matter has a rest mass at zero velocity and increases non-linearly toward infinity as the velocity of the body approaches the speed of light. In an accelerating reference frame the velocity and mass value of a body of matter is constantly increasing with time. Conversely, in a decelerating reference frame the velocity and mass values of a body of matter will constantly be decreasing. In an exclusively gravitational reference frame the velocity and mass values of a body of matter never change with time.

This high school student simply proposed to weigh a body of matter in any reference frame acted on by an external force using a very sensitive set of scales. The weight of a large body of matter will give different mass values at different speeds much less than the speed of light. If the mass's weight is constantly changing, then the force is acceleration because the velocity of the frame is constantly changing. If the weight is increasing, then the reference frame is an accelerating frame. Inversely, if the weight is decreasing, then the reference frame is a decelerating frame. However, if the weight is constant (not changing with time), then the reference frame is a gravitational frame because the velocity of the frame is not changing. Not only would this sensitive weigh scale distinguish between an accelerating frame and a gravitational frame but it will also determine if the reference frame is decelerating or accelerating! Again, gravitational and accelerating frames of reference can be distinguished, not being equivalent, contrary to the prime postulate of general relativity.

Using two well-known facts, the converging lines of force of gravity and the relativistic change of mass with velocity, two instruments can prove that accelerating and gravitational frames of reference are not equivalent. In other words, the sole postulate of general relativity is false. The falsehood of general relativity would not only bring down the modern cosmology house of cards which has no basis in the two laws of matter and energy, but it also nullifies general relativity, one of the pillars of modern science. In fact, Einstein's general relativity in the macrocosm and quantum physics in the microcosm are the principal features that distinguish modern physics from classical physics. On the basis of the two instruments and the known facts that underline them, general relativity is the third great myth of modern science.

Fourth Myth: Special Relativity

Einstein's theory of special relativity, the constant speed of light along with one of its corollaries, the equation $E = mc^2$, forms another pillar of modern science. Every school child in the world knows by heart Einstein's famous equation even if they know nothing else about modern science. $E = mc^2$ implies that matter can convert into energy and energy can convert into matter with the speed of light squared as the conversion factor. Every one is sure that the atomic bomb is proof of this conversion of matter into energy. This equation is dependent on the speed of

light being a constant, the second postulate of special relativity. The conversion of matter to energy, if true, is dependent on the constant speed of light (the second postulate of special relativity). However, the equation would have different conversion values if the speed of light is not a constant throughout the Universe. If the speed of light is not constant, then this equation becomes a function of two variables (variable speed of light and variable mass value) and is of little value.

James Clerk Maxwell derived from his equations of electromagnetism that

$c^2 = \frac{1}{\epsilon \times \mu}$ where the speed of light (c) squared, used in Einstein's famous equation, is dependent on the electric parameter (permittivity) and the magnetic parameter (permeability). These electromagnetic parameters are measures of the strength of the electromagnetic field which light is traveling in. The stronger the electromagnetic field is, the higher the values of the electric and magnetic parameters. Conversely, the weaker the electromagnetic field is, the lower the values of the electric and magnetic parameters. We now know that these electromagnetic parameters come from subatomic electric charges in matter whose electromagnetic fields are the medium of transport for light in Maxwell's derivation. Electromagnetism and electromagnetic fields only come from the subatomic electric charges in matter.

Maxwell's derivation for the speed of light was the genesis of the fixed ether theory that there must be an ethereal matter (ether) in outer space which gave deep space its electromagnetic fields with corresponding electric and magnetic parameters as the luminiferous medium for light. In fact, everyone knows that the speed of light changes as it passes through different transparent mediums like air, water, and glass. That is why light refracts or bends as it goes from air to glass to water. Light has different speeds in different mediums of transport or transmission. This is the basis of Snell's law of light refraction. However, light also travels through the vacuum of outer space bringing light from distant stars and galaxies, as well as a vacuum which contains no matter here on earth.

To avoid the problems posed by (1) this property of light of changing speed according to the electric and magnetic parameters of the medium it travels through and (2) light traveling through a matter-less vacuum, Einstein proposed a novel solution. Einstein arbitrarily stated that (1) light has no medium of transport and (2) the speed of light for his famous equation is constant throughout the Universe in a vacuum or free space (outer space) where there is negligible matter. To satisfy Maxwell's equation, constant values are assigned to the electric and magnetic parameters of a vacuum, both on Earth and in outer/free space where light is not traveling inside of any matter. The electric and magnetic parameters of a vacuum are assumed to have the same constant values throughout the whole Universe according to Einstein's special relativity. These electromagnetic parameters mysteriously appear in vacuums where light is not traveling through any matter, either here on Earth or in deep space. Experiments and theoretical developments have shown that there is no fixed electromagnetic ether in the Universe. The fixed

ether theory was dead-there is no ethereal matter with electromagnetic properties in space through which light can travel.

Four problems are evident from Einstein's special relativity of the constant speed of light and his famous equation, $E = mc^2$.

The first problem was the affirmation that the speed of light is constant according to Einstein's second postulate of special relativity. Maxwell's derivation for the speed of light in the middle 1800s was one of the greatest mathematical developments of science for all time. No one disputes his results which predicted not only the speed of light accurately but also developed the nature of light as a transverse wave of electric and magnetic fields vibrating perpendicular to each other in phase and perpendicular to the direction of travel of the light wave. However, Maxwell's equations for the speed of light propagation depend on the electric and magnetic parameters of an electromagnetic medium external to the light wave. To agree with Maxwell's derivation, Einstein's special relativity must assume that the electric and magnetic parameters of vacuums and deep space never vary throughout the Universe in order for light to have a constant or invariant speed. In other words, the electromagnetic properties of deep space must be invariant throughout the Universe for Einstein's special relativity to be in accordance with Maxwell's derivation of the speed of light. This assumption of invariant electromagnetic parameters throughout the Universe is linked to the second problem with Einstein's second postulate of special relativity, the constant speed of light.

The second problem arises from the essential purpose of relativity-relating objectively the physics in one special frame of reference to another special frame of reference. In classical Galilean relativity, for instance, the velocity of a body of matter in one frame is related another frame simply by adding or subtracting the velocity difference between the frames of reference. As an example, the man sitting in a train station frame would subtract the velocity of a train (difference in velocity between the train and train station frames) from the velocity of a man sitting in a train car going past him at the train's speed to determine that the velocity of the man sitting in the train car frame is zero. Velocity, such as the velocity of light, is a space dimension divided by a time dimension (feet per second, miles per hour, or miles per second). With absolute time and space dimensions measured the same in all frames of reference it is easy to relate velocities in one special frame to velocities in another special frame simply by adding or subtracting the difference of velocity between the frames, as in the cases of the men in the train station and moving train frames.

Making the velocity of light the same for every observer in every special reference frame as Einstein's special relativity affirms poses a serious problem of relating the physics of events in two different frames of reference traveling at different speeds. If two special frames are traveling toward each other at nearly the speed of light, then in classical physics the difference in velocity between the two

frames would be nearly twice the speed of light. In classical physics light coming from one frame to the second frame would be measured at nearly twice the speed of light in the second frame. However, if Einstein's affirmation of a constant light speed in every frame of reference for every observer is true, then the speed of light in the second frame would only be the speed of light and not twice the speed of light as predicted by classical relativity. In order for the speed of light (300,000 meters per second) to be the same for every observer regardless of the reference frame from which the light came or light traveling in the frame of the observer, the time dimension (seconds) or space dimensions (meters) must be changed from one reference frame to another frame so that the speed/velocity of light (meters divided by second) is always the same.

This means that the time-space continuum of the Universe is no longer uniform or absolute so that time dimension and space dimensions must be changed from frame to frame in order that the observer always see light traveling the same velocity in every special frame of reference. In other words, the time and space of the Universe becomes a bubble gum time-space continuum depending on where the observer is in the Universe. Time and space are no longer objective, outside of the subjective reference frame of the observer, but rather the time and space of the Universe must change so that the speed of light is always constant in reference to the subjective observer. Scientifically, the line between time and space disappears as the objective reality of time and space becomes a subjective reality depending on the frame of the observer according to Einstein's second postulate of special relativity. Einsteinian relativity, the relating of the physics of events in different frames of reference, is complex mathematics of transformations from an objective Universe with an absolute time-space continuum to a subjective Universe of non-linear time-space continuums centered on subjective individual observers. Philosophically, this is the ultimate in relativism, relating everything to the subjective observer, not an objective relativity of relating the physics of different frames of reference in a Universe of absolute time and space. In essence, Einsteinian special relativity is an anti-relativity theory.

The third problem arises from Einstein's affirmation that light has no medium of transport. The energy of a light wave is measured at any given time by the amplitude of its oscillating electric and its magnetic fields at that given time. The vibrating, but perpendicular, electric and magnetic fields in a light wave are in phase which means that the fields reach maximum energies and zero energies together at the same time. From the first law of the conservation of energy, this means that the varying internal electromagnetic energies of the electric and magnetic fields of a light wave are exchanging electromagnetic energy with an external electromagnetic medium. The total electromagnetic energy of the light wave's internal electric and magnetic fields and of the external electromagnetic energy stored in the light wave's medium of transport must always be constant. As the energy of the vibrating electric and magnetic fields in the light wave increase, then the stored electromagnetic energy in the light wave's external medium of transport must decrease. The reverse is also true as the light wave loses internal

electromagnetic energy, then its external electromagnetic medium of transport must gain an equal amount of energy.

When the light wave has its maximum electric and magnetic field energies, then the external electromagnetic medium has minimum energy stored energy from the light wave. The inverse is also true. When the light waves has minimum internal electromagnetic energies (the electric and magnetic field amplitudes are zero) as these electromagnetic fields change polarity at the same time (in phase with each other), then the external electromagnetic medium is storing the energy that the light had at its maximum electric and magnetic field amplitudes. Light does not store its electromagnetic energy internally like an electronic oscillating circuit which stores its electromagnetic energy alternately between its electric capacitor and its magnetic inductor. In contrast, the electric field with its respective energy and magnetic field with its respective of a light wave are in phase, reaching maximum and minimum energies at the same time and not storing its electric and magnetic energies internally. Rather, the light wave is exchanging its electric and magnetic energies externally with an electromagnetic transport medium. Einstein's affirmation that light has no medium of transport is blatantly contrary to the first law of conservation of matter and energy.

The problems with Einstein's special relativity concerning the constant speed and transport medium of light converge with some interesting implications. As developed above, (1) light must have an electromagnetic medium of transport with electric and magnetic parameters and (2) the square of the speed of light in Einstein's famous equation ($E = mc^2$) will vary inversely with product (multiplication) of the electric and magnetic constants of the medium in accordance

with Maxwell's equation ($c^2 = \frac{1}{\epsilon \times \mu}$).

Since both gravity and electric fields extend into infinity, there is no space in the Universe, not matter how far from celestial bodies, where either gravity fields or electromagnetic fields are zero. Therefore, the electric and magnetic fields from the subatomic electric charges (electrons and protons) in the atoms of celestial systems will extend infinitely into deep space. Although very weak in deep space these electric and magnetic fields from subatomic electric charges in the matter of celestial systems supply the electric and magnetic parameters for determining the speed of light in deep space, according to Maxwell's equation. Therefore, the electromagnetic parameters of outer space vary depending on the relative distances from celestial systems. The electromagnetic parameters will be strong (high values) near the center of celestial systems and will be weak (low values) in deep space far from celestial systems. The electromagnetic medium of space with its electromagnetic parameters is highly variable, depending on its proximity to celestial systems.

Therefore, the speed of light can not be a constant even in a vacuum or free space, especially far from the gravitational/electromagnetic frames of reference of celestial bodies like our solar system, because the speed of light in space varies

inversely with the strength of the electromagnetic medium of space. The electromagnetic fields of the subatomic electric charges (the source of electric and magnetic parameters) in celestial matter are always finite everywhere in outer space but are nearly nonexistent in deep space. The electric and magnetic parameters for a vacuum or free space are not fixed but will decrease dramatically as light moves into deep space away from celestial bodies of matter composed of these subatomic electric charges. Since the speed of light is inversely proportional to the product of the electric parameter (permittivity) and the magnetic parameter (permeability), the speed of light in deep space will approach nearly infinite speeds in deep space and slow down again as it approaches celestial systems which are atomically composed of subatomic electric charges.

Also, since the electric and magnetic parameters will become stronger near celestial systems, light will not only slow down but it will refract (bend) toward the celestial body in these variable density electromagnetic fields as the light passes near the celestial system composed of subatomic electric charges. Light will both slow down in and bend in (refract) toward the denser electromagnetic fields around a celestial body. This is similar to mirages where light is bent in air of varying densities with varying electric and magnetic parameters. The light continuously bends toward the higher electromagnetic density when passing through a medium of varying electric and magnetic parameters. The light wave bends toward the celestial body as it slows and approaches a celestial system because of the increasing electric and magnetic parameters of the celestial system. If the light has sufficient kinetic energy, it will have a curved trajectory as it passes through the electromagnetic fields of a celestial system. A light wave does not have to be a particle or does not have to travel in warped space according to Einsteinian relativity in order for it to bend as it travels pass a celestial body of matter, composed of subatomic electric charges with a variable density electromagnetic medium!!

The fourth problem lies with the implication that matter converts into energy according to Einstein's famous equation, $E = mc^2$.

First of all, it is well known that a body of matter as it approaches the speed of light, its mass value approaches infinity. The whole concept of particle accelerators/atom smashers/supercolliders whether linear or circular (cyclotrons) is built on the fact that charged subatomic particles, when accelerated to speeds near the speed of light, have massive mass values. This is the basic principle behind the particle accelerators such as the large cyclotron accelerator in Cern, Switzerland. This increase toward infinite mass values at the speed of light means that no matter can travel faster than the speed of light, contrary to the warp drive speeds (traveling at multiples of the speed of light) of the Star Trek TV series. Also, it is known that electromagnetic waves such as light do not travel slower than the speed of light. Since matter can not reach the speed of light and light can not travel below the speed of light, there is an impenetrable barrier for matter to convert to light energy and inversely for light energy to convert to matter. This impenetrable barrier

between matter and energy makes it impossible for matter to convert to energy and vice versa, contrary to assertions made by Einsteinian relativists. This impenetrable barrier eliminates also the concept of the duality of light as a particle. Light travels as an electromagnetic wave at the speed of light and can not be a particle at the speed of light without having an infinite mass value.

Secondly, matter is composed of subatomic electric charges and their respective electric fields. This is quite clear from the periodic chart of elements that all the matter in the Universe is composed of subatomic electric charges. The periodic chart of elements also indicates that there are an equal number of electrons and protons in every element. There appears to be an equal quantity of electrons (negative electric charges) and protons (positive electric charges) in the Universe. Even the neutrons, when they lose an electron in the atom's nucleus, become a proton. Or, if a neutron leaves the nucleus of an atom, it degenerates into an electron and a proton. In a similar action, a proton in an atom's nucleus can capture an electron and it converts into a neutron. Subatomic electric charges are the intrinsic quantity of matter instead of mass (classical and modern physics have used mass as the intrinsic property of matter and the measure of the quantity of matter as in Einstein's famous equation).

The mass value of a body of matter changes as it changes velocity in conformity with Lorenz's transforms which Einstein reinterpreted. The mass value will increase as the velocity of a body of matter increases up to nearly the speed of light where the mass value will approach infinity. This is called a relativistic change of mass with velocity. Einstein states that the m (mass) of his famous equation is the rest mass of a body of matter. But when he says a rest mass, with respect to which frame of reference does Einstein mean that the body of matter is at rest, since Einstein affirmed that there is no absolute frame of reference? Is the body of matter with its respective mass value at rest with respect to the Earth, or to the Sun, or to the Milky Way galaxy, or to some supercluster of galaxies? There is no frame of reference in Einstein's relativity with which to measure a rest mass for his famous equation. Between Maxwell's equation for the variability of the speed of light (variable c) and no fixed rest frame of reference, Einstein's equation $E = mc^2$ leaves even E (energy) in question since the speed of light and rest mass are both variable and relative.

In sharp contrast to mass values of bodies of matter which varies in quantity with relative velocity (relative to what reference frame?), the subatomic electric charges in matter do not change in quantity of electric charge at any relative velocity in any frame of reference at any time. Subatomic electric charges do not change quantitatively even at relative velocities near the speed of light. Electric charge is the intrinsic property of matter which does not change with relative velocity or frame of reference. Subatomic electric charges, not mass nor the speed of light, are constant in every reference frame at any velocity.

As previously developed, the speed of light is not constant (light is transported by different electromagnetic mediums at different speeds). Otherwise, the energy in light's electric and magnetic fields would violate the first law of conservation of energy if there is no electromagnetic medium of transport with which to exchange electromagnetic energy. Matter is not converted to energy and vice versa as Einstein's special relativity implies without violating the first law of conservation of matter (composed of non-relativistic subatomic electric charges). Electric charge, the intrinsic property of matter, is constant with all relativistic velocities in all frames of reference. There is no increase or decrease in the quantity of matter, as measured by the quantity of electric charge, in any physical interaction at any relativistic velocity in any frame of reference. The kingpins of special relativity, a constant speed of light and the conversion of matter to energy and vice versa, are violations of the first law of conservation of matter and energy. Special relativity is the fourth great myth of modern science.

Fifth Myth: Quantum Physics

Jules Poincare, the French mathematician, postulated that no law of physics can be considered a fundamental law unless there is only one unique constant related to that law. That constant must solely and uniquely be related to that law. Modern science, particularly quantum physics, affirms that there are four fundamental forces: (1) gravity, (2) electromagnetism, (3) weaker nuclear and (4) stronger nuclear. Contrary to Poincare's postulate, all these forces have one unique constant in common, the speed of light (c). All of these forces are limited in their ability to operate by the speed of light, an electromagnetic phenomenon, according to Einsteinian relativity and quantum physics. Since according to Maxwell's derivation the speed of light is solely and fundamentally related to electromagnetism

($c^2 = \frac{1}{\epsilon \times \mu}$), the other three forces (gravity, the weaker nuclear force, and the greater nuclear force) must also logically be electromagnetic in nature and not fundamental forces according to Poincare's postulate. Poincare's postulate is a hypothesis with broad, but not universal confirmation which if true about all natural forces attacks one of the bedrocks of quantum physics and modern science. Modern Science claims that the four forces are fundamental forces and not merely different kinds of electromagnetic forces in nature.

Ernst Mach, a contemporary of Einstein, proposed a criterion that if a law has one premise which is false, then the law in its entirety will be false as well. Mach's Criteria poses a much more serious threat to quantum physics than Poincare's postulate. If quantum physics has any premises that are false, either being violations of well established laws of science or being contrary to verification by scientific experimentation, then quantum physics must be considered false in its entirety according to Mach's Criteria.

Quantum physics deals with the microcosm of science, the atomic and subatomic portion of the Universe. However, all interactions in the microcosm

control interactions in the macrocosm. Atomic and subatomic reactions of the microcosm often produce the largest interaction events in the macrocosm. Subatomic interactions appear to fire the stellar fires of the galaxies. Microcosm gravity controls the actions of supergalactic structures. Falsification of the microcosm of quantum physics would invalidate macrocosm implications based on quantum physics. One false premise of quantum physics according to Mach's Criteria would threaten the whole cosmological superstructure of physics. Unfortunately, quantum physics has not just one false premise, but a number of false premises.

The first false premise of quantum physics is the non-conservative nature of two of the four universal forces in the Universe. All fields from these four fundamental forces of quantum physics must be conservative as are all fields in the Universe; otherwise, fields could sustain perpetual motion or even create energy. Since all forces and their fields must be conservative according to the first law of conservation of matter and energy, the effects of these fields will decrease by the square of the distance from their source and will extend into infinity. Electromagnetism and gravity are conservative forces and their fields extend into infinity. However, the hypothetical weaker and stronger nuclear forces of quantum physics are non-conservative and their fields are very short range, not extending into infinity. In fact, the weaker and stronger nuclear forces, also associated with bosons and gluons respectively, are not detectable and in violation of the law of conservation of matter and energy.

This first false premise of quantum physics which according to Mach's Criteria is sufficient to undermine its entire validity is the non-conservative nature of two of its fundamental forces which are essential pillars of its theories. Several other false premises by quantum physics can be added to this erroneous assumption of non-conservative fundamental forces and fields.

According to a second false premise of quantum physics, the four fundamental forces are not transmitted at a distance between bodies of matter by energy fields acting at a distance but rather by virtual particles. As a consequence, for every primary force there is a corresponding primary particle that transmits energy between bodies of matter. Electromagnetism has photons, gravity has gravitons, the weaker nuclear force has W and Z gauge bosons, and the stronger nuclear force has gluons.

This concept of energy transmission between bodies of matter by virtual particles instead of force fields acting at distance is another basic premise of quantum physics. None of the four virtual particles including photons have ever been detected traveling between bodies of matter to transmit any of the four fundamental forces. Light waves as mentioned previously are not particles, although considered photon particles by quantum physics, because particles can not travel at the speed of light. The existence of the other three fundamental particles of quantum physics (gravitons, bosons, and gluons) which are supposed to transmit the

other three fundamental forces of nature have been elusive to scientific verification. Gravitons, being the transmitter of gravity, a long range force, should be detectable since gravity acts at a distance over vast ranges of the Universe. Oddly, even electromagnetic field interactions at a distance (such as iron filings moved at a distance by magnets) have never been shown experimentally to be transmitted by either electromagnetic particles or waves. Force fields, not virtual particles, transmit forces and energies at a distance, contrary to the particle physics concepts of quantum physics.

According to a third false premise of quantum physics, the fundamental particles associated with the four fundamental forces are considered to be identical to fundamental waves. Using Einstein's $E = mc^2$, quantum physics erases the line between particles and waves. For example, electromagnetic waves are called photons and treated as particles, as well as waves. They have a dualistic nature of having both wave (energy without mass) and particle (matter with mass) characteristics. However as mentioned previously, this leads to a paradox, light can have finite mass and momentum, yet light travels at the speed of light where its mass would be infinite as a particle of matter with mass. An electromagnetic wave travels at the speed of light and a particle can never travel at the speed of light because its mass would become infinite. The speed of light (electromagnetic waves) as mentioned earlier is the continental divide between waves and particles. Gravity is the other long range force along with electromagnetism. Gravity waves which have never been detected, although claimed by the LIGO experiment, are considered by quantum physics as equivalent to gravitons (gravity particles) which also have never been detected. The short range weaker and stronger nuclear waves are associated with W and Z boson and gluon particles respectfully which also have never been detected either as stable waves or particles.

Transverse electromagnetic waves, such as light, composed of an oscillating electric field and an oscillating magnetic field, are distinctly different from static electric fields and static magnetic fields between static bodies of matter. Whether in logic, in theory or in experiments, there is no scientific proof linking the matched oscillating electric and magnetic fields of a transverse electromagnetic wave to a photon particle presence or motion within the transverse electromagnetic wave's fields. Not only is the premise of quantum physics that classical electromagnetic force fields and transverse waves have particle presence or particle activity without scientific proof but also this premise (wave-particle duality) is counter-intuitive, being paradoxically by nature.

According to a fourth false premise of quantum physics, the two nuclear forces and their associated waves/particles can not reach beyond the limits of atomic structure and have never been detected. This is in spite of them being theoretically much stronger than gravity and nearly equivalent to electromagnetic strength. This false premise is similar to the first false premise of the non-conservative nature of quantum physics weak and strong nuclear forces. According to quantum physics these two nuclear forces are essentially virtual, undetected phenomena by not

extending beyond the radius of atom structures. In reality, there is a strong nuclear force which holds the atomic nuclei together. This strong nuclear force must have a stronger attractive force than the electromagnetic repulsive forces of the positive electric charged protons in a nucleus which want to blow the nucleus apart. This strong nucleus force is postulated by quantum physics to be virtual particles called gluons which somehow create an attractive nuclear force to prevent the nuclear destruction of all of the atoms in the Universe from the huge repulsive electromagnetic nuclear forces of protons in the nucleus of every atom. Neither the gluons nor the quantum physics strong nuclear force have ever been detected definitively.

As stated before, all energy fields in the Universe must be conservative energy fields according to the first law of conservation of matter and energy. A conservative energy field (1) must decrease inversely proportionally to square of the distance from the source of the field and (2) must extend infinitely into space. For instance, a gravity field has one-fourth of its strength at twice the distance from its gravitational body. The strength of Sun's gravity field on the Earth is one-fourth of its strength half way between the Sun and the Earth. The same is true of electric and magnetic fields as conservative fields. Also as mentioned before, both gravity and electromagnetic fields extend out into infinity in space, howbeit getting weaker and weaker according the square of the distance for their sources. Strange as it may seem, there is no place in the Universe where the gravitational effect of a person's body does not reach. Since all forces from energy fields in the Universe must be conservative according to the first law, then the strong nuclear force of quantum physics must extend into infinity. Likewise, the strong nuclear force field of a particular nucleus as a conservative force/field/wave/particle must be stronger than the electromagnetic repulsive force field from that given nucleus at every point in space extending out from that nucleus into infinity.

On the contrary, quantum physics' concept of the greater nuclear force is not a conservative field, being different from the conservative force/field requirements of an inverse distance square rule and extension into infinity. Quantum physics asserts that the strong nuclear force, although stronger than the electrostatic forces in the nucleus, does not extend beyond the atom's structure, certainly not into infinity. This is a clear violation of the first law of conservation of matter and energy whether these greater nuclear forces are consider fields, waves, or particles. The distinct line between fields, energy waves, and particles of matter in classical physics disappears in quantum physics where fields (gravity, electromagnetic, weaker nuclear, and greater nuclear) can be consider either as particles or waves. Quantum physics hypothesizes (1) the existence of non-conservative nuclear forces, (2) the transmission of force fields by virtual particles, and (3) asserts that waves and particles are equivalent. These false premises of quantum physics either violate either one or both of the two basic laws of science or are contrary to experimental proofs.

According to a fifth false premise, quantum physics incredibly believes a false hypothesis that the law of cause and effect can be broken or entirely eliminated. In quantum physics there can be a sharp disconnect in the laws of physics between one state of matter and energy (effect) in time and space and its immediately preceding state (cause). Particles, even larger than our atoms, can appear out of nothing and then disappear without any cause. The sudden appearances of these virtual (undetectable) particles are hypothetically to transmit field energy between two bodies of matter. Interestingly, they appear without cause at just the right moment, in the twinkling of an eye, with just the right energy and the correct direction of momentum to affect the exact matter-energy interaction, and then abruptly disappear. Without any previous cause, these particles mysteriously appear out of nowhere with just the right portions of mass, time, and energy at the exact moment to transmit the proper energy between bodies of matter before their abrupt disappearance. Because such particles have no experimental proof, these mysterious particles are called virtual particles, lacking any experimental verification. Some quantum physicists even postulate that whole universes, called multiverses or alternative universes, are constantly appearing and disappearing in the time and space of our Universe from other dimensions in very short moments of time without prior causes.

Using Heisenberg's Uncertainty Principle, the quantum physicists feel that nature will do this voodoo magic, even if it violates the most basic laws of science, the first law of conservation of matter and energy with its corollaries of conservation of momentum, conservation of energy, etc. and the second law of increasing entropy. It is unclear whether there has ever been one scientific proof for Heisenberg's Uncertainty Principle, yet quantum physics, using this principle, propounds the absurdity of violating the law of conservation of matter and energy even for a fraction of a moment of time without any physical mechanism or scientific evidence. In the quantum physics scenario, Nature suspends the law of cause and effect and Nature, like some omnipresent, omnipotent, all wise supernatural Being, controls the whole microcosm and incidentally the macrocosm of the Universe. The premise that Heisenberg's Uncertainty Principle allows Nature to violate the first law of conservation of matter and energy and the second law of increasing entropy for any moments of time is a blatant violation of the primary established laws of science.

According to a sixth false premise of quantum physics, virtual particle transmission of energy between bodies of matter can produce attractive forces between these two bodies of matter such as gravity being an attractive force created by graviton particles traveling between the two bodies. In reality, all physical interactions of particles or bodies of matter in which energy is exchanged are always repulsive like some kind of contact sports between particles. In other words, when two particles collide they always react away from each other (repel each other) in accordance with Newton's third law (for every action, there is an equal and opposite reaction). No reaction of two or more particles is ever attractive without chemical or nuclear physical bonding with energy fields acting at a distance. It is impossible

for quantum physics to get attractive forces out of the interaction or collision of particles which disappear after the interaction.

Some quantum physicists have proposed absurd, counter-intuitive thought-experiments to get attractive interactions of particles which have never been observed or even logically deduced. The premise of particle interactions producing attractive forces without field forces acting at a distance is a violation of known basic laws of mechanics in science. The very stability of atomic structures depends on enormously strong attractive fields acting at a distance between relatively small subatomic bodies of matter such as electrons being held in distant orbitals by electromagnetic fields originating from the nucleus. Even stronger attractive forces bond the subatomic repulsive electric charges of the atomic nuclei together, especially the nuclear protons. There is no experimental or solid theoretical evidence that particles such as the hypothetical gluons could interact with protons to bond them with phenomenal strength together in a nucleus as quantum physicists claim. The particle physics of quantum physics violates the basic laws of mechanical interactions of matter such as Newton's third law of mechanics.

Concerning a seventh false premise of quantum physics, Maxwell's derivation shows that an accelerating electric charge (both straight and centripetal acceleration) will produce a transverse electromagnetic wave such as light or radio waves. This is the very way in which television and radio stations generate their signals by accelerating electrons in their antennas. The standard model of the atom used in quantum physics has the electrons of an atom in orbitals, involving centripetal acceleration by both circular and rotational motion. This centripetal acceleration of the atomic electrons would radiate off all of the electron energy in millionths of a second according to Maxwell's electromagnetic equations. The spin of the protons to create magnetic moments would also radiate their energy in fractions of a second. This radiation of energy would destroy the atomic structure. Neil Bohr, confronted with this glaring problem with his quantum physics model of atomic structure, arbitrarily said that the electrons and protons simply do not radiate energy in atoms! Even quantum physics' basic atomic models of matter violate the basic laws of electromagnetism, such as Maxwell's equations for electromagnetism.

According to a eighth false premise, quantum physics, using Heisenberg's Uncertainty Principle and Schrödinger's Wave Equation, holds the premise that small bodies of matter like electrons do not have sharply defined body boundaries. In quantum physics, all bodies of matter are wave phenomena without sharp boundaries, particularly true in small bodies at high relativistic velocities. Rather these small bodies are treated as "cloud probabilities" rather than distinct, defined bodies of matter. At other times these small subatomic particles are treated as "point charges". This is contrary to the scatter patterns which these particles in crystals give when bombarded with other small particles or radiation waves. In the early part of the 1900s, many of the distinct properties of these small bodies of matter (particle diameter, magnetic and electric moments, bonding structures, etc.)

were determined in contrast to this probabilistic premise of the quantum physicists. Most of these physical and electromagnetic properties can not be produced by “cloud probabilities” or “point charge” particles.

All of these exact parameters for small subatomic particles are counter to the premise of quantum physics that small particles are mere probabilities with indistinct boundaries while the larger masses have the larger probabilities with the more distinct body boundaries. This premise, based on Heisenberg’s principle, that small bodies of matter are mere probability “clouds” and have no distinct boundary bodies is contrary to scientific experimental evidence and proven classical mechanics. Even the photographic traces of particle collisions from particle accelerators (super colliders and atom smashers) confirm the hard, distinct boundaries (as opposed to fuzzy probabilities) of very small particles. The actual diameters of atoms in the periodic table reveal a classical energy solution to atomic and subatomic structures rather than solutions from Schrodinger’s Wave Equation which are nonexistent except for some states of hydrogen and possibly of helium. Just because a mathematical wave equation can be made of a body of matter does not make the body of matter a wave. A Hamiltonian wave equation (Schrodinger’s Wave equation is a simple Hamiltonian) of an automobile does not make the automobile a wave! The use of conceptual mathematics such as the Schrodinger Wave Equation and the Heisenberg Uncertainty Principle does not make the virtual reality (mathematics) into physical reality (matter and energy).

According to a ninth false premise which is related to the previous false premise, quantum physics treats electric charges, such as electrons and protons, as point sources or probability clouds. In theory, it is correct that electric charges and electric fields only act from their center of electric charge outside of the surface of their charged bodies. However, this will not work with the probabilistic nature of small charges used in quantum physics. The properties of subatomic electric charges such as spins, electric moments and magnetic moments can never be generated from point sources or probability clouds. The geometric configuration, mechanical properties, and electrodynamic properties of a small subatomic electric charge will differ depending if one assumes the probabilistic “cloud” model or point charge model of quantum physics or if one assumes the well-defined electric charged body of classical physics.

It is nearly impossible to work out the known electrodynamic properties of subatomic electric particles using probabilistic electron “cloud” densities or point charge particles, especially for spins or magnetic and electric moments. Mathematically and experimentally, the probabilistic electric charges in matter and the resultant inability of point and cloud electric charges to produce intrinsic magnetism destroys the quantum physics’s model of electromagnetism in atomic and subatomic structures. Quantum physics has another false premise in point charges and probabilistic natures of electric subatomic charges which violates Maxwell’s equations of electromagnetism.

Quantum physics, the charming darling of modern science's microcosm, has multiple false premises. Mach's Criteria needs only one false premise to make a whole theory based on that premise to be false. It is difficult to find just one premise of quantum physics that is true and in agreement with the time-tested laws of science. Quantum physics with its multiple false premises is the fifth great myth of modern science.

False Cosmologies from the Great Myths

Combining the macrocosm of general relativity with the microcosm of quantum physics, cosmologists have created grand unified theories (GUTs) for the origin of the Universe and possibly multiverses or alternative universes. Bell's Theorem postulates that it is impossible to combine general relativity and quantum mechanics. In spite that, string and superstring theories have been mathematically developed to combine quantum physics and general relativity with many invisible dimensions beyond the three space and one time dimensions of experimental scientific proof. If these strings and superstrings did exist, the theoretical superstrings would be too small ever to detect. An elephant is to an electron what an electron is to a superstring. Even according to quantum physics using Heisenberg's Uncertainty Principle, it would be impossible experimentally to detect an actual superstring!

The widely acclaimed aspects of modern cosmologies (warped space, black holes, time worm holes, and the Big Bang) developed from general relativity are built on singularity theory. The anathema and curse of mathematics are singularity points where values go to infinity, giving obvious false results and sometimes multiple false results. Dividing by zero creates a singularity point and is an absolute taboo in mathematics when building mathematical models of matter-energy real world systems. Every equation or algorithm of a real world matter-energy system must be carefully evaluated to guarantee that there are no singularity points in them. Strange and seriously false things happen around singularity points. Using singularity points, like dividing by zero, it can be proven that $1 + 1 = 3$ or anything else a mathematician who is skilled in singularities wants to prove. However, both general relativity and quantum mechanics as mathematical models of reality not only fail to avoid the pitfalls of singularity points, but they build their major conclusions on singularity points, calling it Singularity Theory! This foolish plunge by Einsteinian relativists and quantum physicists into singularities, instead of freeing them to great discoveries, leads to a dearth of foibles and falsehoods.

General relativity with its equivalence of gravity and acceleration concludes that there is no force of gravity but rather gravity is a vortex of warped space into a singularity point. At this singularity point theoretically space goes to zero but mass density and gravity go to infinity. Adding a few fudge factors, the cosmologists tried to work themselves out of that mathematical black hole. However, according to general relativity given enough matter then we have a deep hole in warped space that becomes known as a theoretical black hole with a horizon event, a point of no

return if light or matter gets too close to this mathematical nightmare. Or maybe, the whole Universe came into being by coming out of a white hole, the reverse of going into a black hole as Stephen Hawkins proposed. One can see where this singularity math is leading. The absurdities have just begun.

At this singularity point of origin of the Universe, matter could not have existed because of the infinite mass and energy density. Well, with all of the energy in the Universe concentrated into this infinitely small volume, there must have been an explosion, the Big Bang, at some point in time. Unknowable questions are: What existed before the Big Bang singularity? What created the Big Bang singularity point? Why was the Big Bang singularity put where it was before it exploded? What kept the matter and the energy in the Big Bang Singularity until it exploded? What triggered the Big Bang explosion? When did the Big Bang happen? Of course, according to these modern day cosmologists and their Singularity Theory math, the Big Bang took place billions of years ago. In the first fractions of time after the Big Bang, quantum physics proposed to tell us exactly how the energy of the Big Bang changed, how the laws of nature began to happen arbitrarily, and of course how matter formed out of energy. Time itself would come into being at the instant of the Big Bang. The strong force began, then electromagnetism, followed by the weak force, and finally gravity. If this origin myth of the Universe did not come from the lips of a scientist who believed the great myths of science, a person would think that it was a children's fairytale which began with "Once upon a time..."

According to the Big Bang theory, matter would begin to appear as the temperature decreased so that matter could become stable as the Universe rapidly expanded. This early very rapid expansion of the Universe is called Inflation Theory (more properly called Hyperinflation Theory, of course), much faster than the speed of light, nearly infinite speeds. And then according to these theories, the Universe rapidly slowed down by some mysterious mechanical force, operating in violation of our known laws of science. Little eddies of time and space with a little gravity thrown in would magically recollect the dust and gases produced by the expansion from the Big Bang to form celestial bodies. Eventually, these celestial bodies would gather enough mass to re-ignite in hydrogen fusion as stars, galaxies, and clusters of galaxies. This Singularity story makes a great Standard Model for cosmology, using general relativity which opens the door for singularity points and quantum physics and which gives explanations for matter and energy development. The whole Universe came out of a reverse singularity point, a marvel of modern math which overcomes and ignores the ancient mathematical fear of Singularity points!

But of course, the story can not end here. What happened before the Big Bang, the escape from the Universe's singularity point in time and space? Surely, the Big Bang is not a unique event of one Singularity point. If singularity theory is good for one universe, then it is good for many universes, multiverses. In fact, with singularity points in space and time, through worm holes in time and space smaller in diameter than the smallest particle in the Universe, whole universes could pop in

and out of existence continuously in time and into the time and space of our Universe. Of course, to fit through such a small hole these rapidly appearing and disappearing universes would have to be made of strings, longer but smaller in diameter than the smallest particles in nature in order to fit through the worm holes. Well, to get a whole universe in through and then back through a small worm hole in such a short time in conformity with Heisenberg's Uncertainty Principle, then the universe must be superstrings in length. These ideas, all developed from the spontaneity of Singularity Theory, could be called Worm holes in time, black holes in space, and String Theory/Superstring Theory for matter. Multiverses can come into being spontaneously, maybe billions a second, all thanks to Singularity points in time and space created by general relativity and quantum physics. But remember that mathematical Singularity Theory does not make real black holes, worm holes, or alternative multiverses any more than the mathematical Schrodinger's Wave Equations makes matter into a wave. As a personal colleague once remarked, "I would not have seen it, if I had not believed it!"

This whole concept of these multiverses or parallel universes popping in and out of existence in our Universe's time and space is absurd for more than its violation of the first and second laws of science. Two bodies of matter can not occupy the same space. That is why we have car accidents. Also, this is what makes the high speed collision of two particles so effective in an atom smasher like a linear accelerator or cyclotron super colliders. If the matter from multiverses is continuously entering and exiting the time and space of our Universe, their matter would inevitably and invariably collide with our matter, resulting in catastrophic nuclear explosions. There would be continuous cataclysmic destruction of our Universe in a relatively short time. Also, the Electromagnetic Pulse (EMP) created by such a rapid entrance and exit (less than nanoseconds) of a theoretical multiverse into the time and space of our Universe would have destroyed almost all of our Universe, certainly all life on earth. If many such intrusions into our Universe were taking place in a second, our Universe would have been destroyed by celestial body collisions and EMPs long ago. Obviously, these are not happening and this ill-conceived cosmological idea of parallel universes or multiverse is absurd, even to a kindergartner who has seen bicycles or automobiles collide.

Alternatives to the Myths of Modern Science

If the basic tenets of modern science are myths, how do the facts of science and laws of science fit together in a comprehensive world view? Some of the questions that need answers are: (1) Where did matter and energy come from? (2) How did a complex, cosmic-sized Universe come from disorganized matter and energy? (3) How did complex life forms come about from disordered matter and energy? (4) What is mass? (5) Why does mass change with velocity? (6) What frame of reference is used to determine the velocity and the mass value of a body of matter? (7) What is the relationship of variable mass to the invariant subatomic electric charges that constitute matter? (8) What is the preferred frame of reference for Maxwell's electromagnetic equations? (9) What is the preferred frame of

reference for the laws of physics? These are some of the core questions that modern science (Einstein's theories of relativity, quantum physics, and biological evolution) does not answer.

The answers to the first three questions about the origin of matter and energy and their formation into a complex universe and into complex life forms can only be answered, given the two basic laws of science, by a supernatural creation by a supernatural agent with the characteristics of the biblical Genesis God. The two laws of science leave no natural explanation for the origin and complex ordering of the Universe and of life. Because of the supernatural nature of the creation it is impossible for the laws of nature to tell us the methodology and timing of this supernatural creation of matter and energy and their subsequent organization into the complex Universe and complex life forms on earth. Likewise, the laws of nature demand a supernatural ordering of the matter of the complex Universe and complex life forms on earth. There is no naturalistic possibility for this complex ordering of matter and energy according to these two basic laws of science. The real explanation for the creation and ordering of the matter and energy of the Universe and life can only come by special divine revelation such as the scriptural Genesis account of creation.

What is matter? First, matter is composed of subatomic electric charges which give matter all of its characteristics. The basic building blocks of matter are subatomic electric charges and their intrinsic electric fields. The two subatomic electric charges that are stable inside and outside of the atomic structure are electrons (negative charge) and protons (positive charge). The proton has a rest mass value of over 1800 times greater than the electron. Both the electron and proton have equal but opposite polarity electric charges which never change in quantity or polarity in any frame of reference at any relative velocity at any time. The electron and proton have intrinsic electric fields which are invariant in strength when electrons and protons have no relative velocity and are not interacting with other electric fields. When the electric fields of electrons and protons have no bonds (e.g. chemical, nuclear, etc.) with other subatomic electric fields, they are called "free" electrons and protons. These intrinsic electric fields of free electrons and protons are used by particle accelerators/supercolliders to accelerate electrons or protons very near to the speed of light. The electric fields of electrons and protons extend out into infinity according to the first law of conservation of matter and energy. As mentioned before, it appears from the periodic table of elements from which all of the matter in the Universe is composed that there are an equal number of electrons and protons in the Universe.

Neutrons, the other building block of atoms, are unstable outside of the atomic structure and break down into an electron, a proton, and a neutrino. However, a neutrino has no apparent charge or mass value. A neutron is an electrically bonded electron and proton, not three quarks as quantum physics advocates. Quantum physics affirms that quarks, antiprotons (negative protons), gluons, neutrinos, positrons (positive electrons), and photons as particles are stable

subatomic particles but the rarity or nonverifiability of these particles leaves both their stability and existence as stable subatomic particles in question.

The electrons and protons in the Universe with their intrinsic electric fields appear to be the foundation for all matter and energy interactions in accord with the two basic laws of science, from subatomic interactions to supergalactic interactions of matter and energy. The subatomic electric charges in matter determine the structure of matter and appear to supply the reference frames for matter-energy interactions in accordance with Maxwell's equations of electromagnetism. Initially, gravitational frames of reference coming for bodies of matter composed of subatomic electric particles will be developed as reference frames for all matter and energy interactions. The nature of gravitational fields, their gravitational frames, and their relationship to the electromagnetic nature of matter will be explored latter in the book.

The previous paragraphs explain matter as the composition of the prime subatomic electric charges, electrons and protons with their respective electric fields. But it is very important to understand that the quantity of matter as subatomic electric charges (electrons and protons) does not change with time in any frame of reference at any relative velocity. However, the total electric field energy of electrons and protons can vary because of electric bonds and induced electric field energies generated by moving in a frame of reference. Since the laws of physics are related to motion in a specific frame of reference, it is first necessary to understand what are: (1) the laws of electromagnetism, and (2) the relative frames of reference for matter-energy interactions.

James Clerk Maxwell's four famous equations of electromagnetism are generally accepted as valid by all physicists, classical and modern.

Maxwell's Equations

General case

Name	<u>Differential</u> form	<u>Integral</u> form
<u>Gauss's law</u> :	$\nabla \cdot \mathbf{D} = \rho$	$\oint_S \mathbf{D} \cdot d\mathbf{A} = \int_V \rho dV$
Gauss' law for magnetism (absence of <u>magnetic monopoles</u>):	$\nabla \cdot \mathbf{B} = 0$	$\oint_S \mathbf{B} \cdot d\mathbf{A} = 0$
<u>Faraday's law of induction</u> :	$\nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t}$	$\oint_C \mathbf{E} \cdot d\mathbf{l} - \oint_C \mathbf{B} \times \mathbf{v} \cdot d\mathbf{l} = -\frac{d}{dt} \int_S \mathbf{B} \cdot d\mathbf{A}$
<u>Ampère's law</u> (with Maxwell's extension):	$\nabla \times \mathbf{H} = \mathbf{J} + \frac{\partial \mathbf{D}}{\partial t}$	$\oint_C \mathbf{H} \cdot d\mathbf{l} = \int_S \mathbf{J} \cdot d\mathbf{A} + \int_S \frac{\partial \mathbf{D}}{\partial t} \cdot d\mathbf{A}$

However, these four equations must be related to a frame of reference with time and space dimensions. The first two equations are equations of state (i.e., conditions at a single point in time) which determine the source of electric and magnetic fields in space dimensions. The second two equations are equations of motion to determine the strength of one electromagnetic field as a function of the time rate change of the other field. All four equations require a preferred relative frame of reference composed of time and space dimensions.

Maxwell himself came to believe that these electromagnetic equations were related to a fixed ether throughout the Universe. This proved wrong both experimentally (Michelson-Morley interferometer experiments) and mathematically. Einstein held strongly to Maxwell's electromagnetism but hoped to rescue it with his special theory of relativity. As pointed out previously, Einstein's special relativity is also deeply flawed, largely because it fails to relate relative inertial frames to each other for the laws of physics. Exploring some of the flaws of Einstein's special relativity can give clues to a correct theory of relativity.

The question has already been ask: When Einstein talked about a rest mass for a body of matter, in what frame of reference is the mass at rest? There is no stake out in the Universe from which the rest mass of any body of matter can be determined. Instead, the rest mass value of every body of matter must have no velocity with respect to a specific reference frame in order to be at rest. Is the Einsteinian value of the rest mass in relation to the earth's surface which is rotating and translating (moving in an orbit) around the Sun? Or, is the Einsteinian mass at rest with respect to the Sun's frame, to Jupiter's or another planet's frame, to the Milky Way's frame, or to the frame of some super cluster of galaxies? It is meaningless to talk about the rest mass of any body of matter without having the

body at rest with respect to a specific reference frame. Calculating the relativistic mass of a proton in the supercollider at Cern, Switzerland, is determined by using a rest mass value of the proton with respect to the earth's surface, not the Sun or other celestial body. Both the rest mass and the relativistic mass of any body of matter must be related to its local, ambient gravitational frame of reference.

The classical mechanical laws of physics (conservation of momentum, conservation of angular momentum, kinetic energy values, etc.) all involve velocities with respect to the earth's surface (a gravitational frame of reference rotating and translating through space), not the gravitational frame of any other celestial body. However, in the Apollo moon project all the physics of activities on or near the moon were determined largely in reference to the translating and rotating gravitational reference frame of the moon. During the early Apollo missions around the moon there were distinct wobbles in the Apollo orbiter's orbit over distinct locations on the moon's surface. It is surmised that there are high density impact meteors buried below the surface at those locations that created stronger gravitational pull on the Apollo orbiter as it passed over these locations, causing the wobbles in its orbit regardless of the moon's position in time and space. The consistent correlation between the wobbles over these specific locations on the moon's surface shows that the gravitational field of a celestial body such as the moon and earth rotates and translates through time and space with the celestial body, creating a specific gravitational reference frame for the laws of physics on or near the celestial body.

All the laws of physics with parameters of time and space (states of rest, velocities, accelerations, etc.) are related to the local, ambient gravitational frame of reference. These gravitational frames are determined by the nearest celestial body or some combination of gravitational fields of nearby celestial bodies. For example, the rest mass value of a body of matter can be determined as long as the body of matter is stationary without motion and at rest with respect to its local, ambient gravitational field. The relativistic mass of a body of matter can be determined by its rest mass and its velocity with respect to its local, ambient gravitational frame of reference. The local, ambient gravitational field becomes the preferred reference frame for all of the laws of physics.

This question of determining the specific reference frame for the laws of physics becomes even more clear in electromagnetism. A free proton at rest with respect to the earth's gravitational field has an intrinsic electric field. It has no induced (generated) electric field as long as it remains motionless with respect to the earth's gravitational field. However, as the proton moves and has a velocity with respect to the earth's gravitational field, it begins to generate an endless series of induced magnetic and electric fields around itself according to Maxwell's last two electromagnetic equations of motion. Interestingly, a proton motionless with respect to the earth's gravitational field will not generate any induced electromagnetic around itself, even though its relative motion around the earth is 1,000 miles per hour and its relative motion around the sun is 1,000 miles per

minute. Maxwell's laws of electromagnetism are always related to the local, ambient gravitational frame of reference. Unnoticed or disregarded by Einstein in both of his theories of relativity, the local, ambient gravitational field is the preferred reference frame for Maxwell's laws of electromagnetism, as well as the other laws of physics.

The above sections dealt with three of the questions above (6, 8, & 9) concerning the preferred frame of reference for matter-energy interactions, the local, ambient gravitational field. Questions 4, 5, 6, and 7 which concern the nature of mass, its increased value with velocity, and its relationship to the electromagnetic nature of matter have been unanswered. Also unanswered is the possible relationship of matter's electromagnetism to gravitational fields, especially as the preferred reference for the laws of matter-energy interactions. An electromagnetic approach to gravity, gravitational reference frames, and relativity (relating the physics of two different reference frames) can establish matter-energy interactions seamlessly from the microcosm to the macrocosm of the Universe.

The mass values of a body of matter can vary with: (1) size of the body, (2) chemical bonding, (3) nuclear bonding, (4) the strength of its local, ambient frame of reference, and (5) its velocity in its local, ambient reference frame.

As previously noted, the mass value of a body of matter will increase exponentially as the body of matter approaches the speed of light in a preferred gravitational reference frame. A free proton at rest with respect to its local gravitational reference frame has an intrinsic electric field. If the proton begins to move with respect to its local, ambient gravitational field, its electric charge will not change but its induced electric fields will increase with velocity. The late Professor Thomas Barnes of the University of Texas-El Paso mathematically summed up (integrated) the induced electromagnetic field energies as a function of velocity and found out that the induced electromagnetic field energies were equal to the kinetic

$\frac{1}{2} m v^2$ energy of the proton at the velocity v . Also, from Newton's second law, $F = ma$ where F is the force to accelerate a body of matter, a is the acceleration, and m is the mass value of the body, then the resistance of the proton to accelerate the proton and to gain additional kinetic energy requires that the mass value increase. In other words, with a constant force (F), then the proton as it gains kinetic energy $\frac{1}{2} m v^2$ will increase in mass value and decrease in acceleration. Stunningly as Professor Barnes showed, the mechanical property of kinetic energy is really an electromagnetic energy property (increased induced electromagnetic field energies) of matter, again in gravitational reference frames.

Einsteinian relativity would interpret this increase of mass as an increase in the quantity of matter in accordance with Einstein's famous equation, $E = m c^2$. However, the proton never changed its quantity of electric charge. It only increased its kinetic energy as the square of its velocity, v^2 , in the ambient gravitational frame

of reference. The induced electromagnetic energies of the proton will increase non-linearly so the resistance to acceleration will increase non-linearly and give a larger mass value non-linearly (mass value increase). Interestingly, the mass value increase with velocity is the same, based on the intrinsic and induced electromagnetic energies of the proton, as the relativistic mass predicted by Einstein using the Lorentz transforms, developed for the ether theory.

In other words, the quantity of electric charge of the proton never changes with velocity in any reference frame but the proton's mass value will increase and its resistance to acceleration as the proton's induced electromagnetic field energies increase. This is similar to the electromagnetic braking in hybrid cars where mechanical resistance happens as induced electromagnetic energy is increased. Mass values of matter, composed of subatomic electric charges with unchanging electric charge values, will increase nonlinearly (relativistic mass increase identical to Einstein's special relativity) with increased velocity in a gravitational reference frame. Therefore, mass values increases of invariantly electric charges in matter are increases of the induced electromagnetic energies in matter and not an increase in the quantity of matter as Einstein affirmed.

Newton's third law is the basic law of mechanics: For every action there is an equal and opposite reaction. For every force there is an equal counter force in all physical force interactions. Newton had to have his first two laws of mechanics because there is no apparent reactive force to a force acting on a body of matter. The reaction force of a body of matter to changes of its motion and kinetic energy is the mass inertia of the body. The first two of Newton's three laws of mechanics concern the mass inertia of a body of matter: (1) a body in motion will remain in motion unless acted upon by a force and (2) $F = ma$ where F is a force acting on a body, m is the mass value of the body of matter and a is the acceleration (change of velocity) of the body of matter. In the first law the body of matter has a forward inertia so that the body maintains a constant velocity. In the second law a force applied to a body of matter will increase or decrease the velocity of the body. The inertia of the body is the counter force or resistance of the body to change the body's velocity. The inertia of a body of matter and its resistance to changes of velocity is directly proportional to its mass value. The larger the mass value of a body of matter the greater its resistance of changes of the velocity of the body as measured relative to its ambient gravitational reference frame.

A body of matter composed of subatomic electric charges as it moves with respect to its ambient reference frame will develop induced electromagnetic electric fields around its subatomic electric charges. These induced electromagnetic fields represent stored electromagnetic energy. The generation of these induced electromagnetic fields creates a back electromagnetic impedance which is a reactive force against the force pushing on the body to change its velocity. The back resistance of a body of matter, i.e. its mechanical inertia, is in reality an electromagnetic resistance of the subatomic electric charges in the body of matter. Because of the first law of conservation of energy, the force pushing on the body

must supply the energy to produce this induced electromagnetic energy acquired by the body as it changes velocity.

Just as Professor Barnes showed that mechanical kinetic energy is accumulated induced electromagnetic energy, so the inertia of a body of matter is a back resistance of the intrinsic electric fields and the induced electromagnetic fields of the subatomic electric charges in the body. Since the induced electromagnetic fields are accumulated electric and magnetic fields, then the energy in these fields increases as the square (mathematical product of multiplying the two equal electric and magnetic fields) of the velocity of the body. The accumulated field energy of the induced electromagnetic fields and intrinsic electric fields in the body due to changing the velocity (acceleration) will create a resistance to acceleration to deceleration which is the mass value of the body. This mass value, a resistance to acceleration/deceleration (change of velocity), is indeed an electromagnetic back impedance which will increase non-linearly as the body of matter approaches the speed of light in its gravitational reference frame. The mass value or electromagnetic resistance to acceleration/deceleration will approach infinite values as the body approaches the speed of light. The mechanical properties of kinetic energy and mass values are in reality caused by the electric fields of subatomic electric charges in bodies of matter moving in an ambient gravitational reference frame in accordance with Maxwell's four equations of electromagnetism.

The above explanations relate the mass values and the kinetic energy of a body of matter to the electromagnetic properties of the body's subatomic electric charges as the body moves in an ambient gravitational reference frame. The mass values discussed above are also called inertial mass values because they represent the inertial resistance to forces that change the velocity of (accelerate/decelerate) the body. In both classical and modern physics the inertia mass values (resistance force to velocity changes of bodies of matter-acceleration/deceleration) are considered equal to gravitational mass values (attraction force between bodies of matter). This identity of inertial mass values and gravitational mass values is one of the reasons that Einstein proposed his general relativity (equivalence of acceleration and gravitational reference frames).

Questions:

1. Are mass values vectors (different values in different directions) or scalars (the same value in every direction)? Are the mass values larger in the direction of relativistic speeds and smaller in the direction orthogonal (possibly at zero relative velocity) to the relativistic direction, giving schizophrenic mass values to a body of matter? For example, does a proton in a cyclotron supercollider have a large mass value in direction of travel and have a smaller mass in radial direction which must be pulled by electromagnetic field to keep in cyclotron.

2. If inertial mass values are determined by the intrinsic and induced electromagnetic fields in matter and if electromagnetic fields have direction (polarity directions), then are the mass values directional also.

3. Can inertial and gravitational mass values be different at relativistic velocities? Example of a proton in a cyclotron supercollider-Does the proton have a large gravitational mass at relativistic speeds?

The question of the relationship of gravity and the electromagnetic nature of matter is still unanswered. Matter composed of subatomic electric charges is the source of both gravity and electromagnetism. The geometry of gravity and electric fields in the matter of celestial bodies are identical. The center of gravity of a celestial body and the center of the electric fields coming from the subatomic electric charges in the matter of a celestial body are exactly the same. Even the mathematical force formulas for gravity fields and electric fields are the same (proportional to the multiplication of the gravitational masses-electrical charges and inversely proportional to the square of the distances between the masses-charges) except that the gravitational-electric constants are different. Of course that similarity in itself does not equate gravity fields and subatomic electric fields. But gravity fields and the fields from the subatomic electric charges in matter will have identical geometric configuration and will act at a distance on their respective bodies-charges with identical force field configurations.

More interesting is the logic in science and physics that like phenomena affect or interact with like phenomena. For instance, mechanical entities react with mechanical entities to produce mechanical phenomena. Electrical entities react with electric entities to produce electric phenomena. Logically, if entity A (mechanical phenomenon) interacts with entity B to produce entity C (mechanical phenomenon), then entity B must also be a mechanical phenomenon. Michael Faraday, considered the father of electricity, reportedly told Maxwell that he was sure that light was electromagnetic phenomena because Faraday could influence the direction of light with magnetic fields. As Maxwell later proved mathematically, Faraday was right. In accordance with Maxwell's electromagnetic laws, an electric field (entity A) moving in a gravitational field (entity B) produces a magnetic field (entity C). Of course both the electric field and the magnetic field are electromagnetic phenomena. Using the logic of like kinds, if entity A (an electric field, an electromagnetic phenomenon) interacts with entity B (a gravitational field) to produce entity C (a magnetic field, an electromagnetic phenomenon), then the entity B (a gravitational field) must logically be electromagnetic phenomena.

Although this logic concludes that gravity is electromagnetic, it has been difficult to prove. The forces of electromagnetism are 10^{36} times stronger than gravity which makes experimental measurements of gravitational effects on electromagnetism nearly impossible. Because of that great difference, gravity does not appear to affect electromagnetic forces, outside of large celestial bodies of subatomic electric charges creating gravitational frames of reference for electromagnetic interactions. Although this author has strong feelings that gravity is a very weak electromagnetic phenomenon because of the above reasons, it is only a conjecture at this point in time that gravity is electromagnetic in nature.

One possibility for gravity being a very weak electromagnetic phenomenon is the hysteresis that occurs in electric fields. Hysteresis is the non linear electric forces in electric fields where electric fields lose some of their potency at higher field energies. Since there apparently are equal amounts of electrons and protons in the Universe, it would appear that all these equal electric charges interact with each other with the net effect being that there is on the large scale no net electric field effect in the Universe. Like electric charges with their repulsive forces and unlike electric charges with their attractive forces would all interact equally, producing no net attractive or repulsive forces of electromagnetism which could cause gravity effects, the attraction of bodies of matter for each other. However, like electric charges have repulsive forces that collectively reach higher limits of field energy by adding their like repulsive field forces between the electric charges in contrast to unlike forces which subtract their unlike field forces. The higher additive field forces of like repulsive electric fields may suffer some hysteresis thereby weakening their net repulsive force in contrast to the lower subtractive, attractive electric fields of unlike electric fields. This would give bodies of matter composed of an equal amount of subatomic electric charges a slight attractive force due to hysteresis. This net attractive electric force of subatomic electric charges could be the weak force (10^{-36}) of gravity. However as already mentioned, this is only conjecture on the author's part.

The Spread of the Hegelian World View

During the communist days in Russia, all social groups whether factories, military, local governments, schools, or clubs had indoctrination sessions lead by professional propagandists of the Communist Party. The purpose of the meetings was to insure that everyone was brainwashed with the great Proletariat ideas. The writings of Marx and Lenin were constantly repeated in the social and economic issues. Karl Marx built his communist ideologies on the dialectic triad (thesis, antithesis and synthesis) of Georg Wilhelm Hegel (died, 1831). However, according to Russian friends of mine who lived in the Soviet Union and attended these sessions, more time was devoted to Darwinian evolution than Marxist ideology during the 1980s. Communism depends more on scientific materialism (a euphemism for atheistic Hegelianism), such as Darwin's theory of evolution, than on the philosophical and historical dialectic materialism of Marxism (another form of atheistic Hegelianism) in economics, politics, and social order. Logically even to the Marxist ideologues, the objectivity and invariance of science can stand the test of time much better than the subjectivity of philosophy, economics theories, and social ideologies which change with the winds of time.

Dialectic materialism is the strongest comprehensive philosophy of any atheistic world view and is built on Hegel's dialectic triad (thesis, antithesis, and synthesis) where truth is always a changing flux. In early history, Lucretius and other early Greek philosophers used their atomist model of eternal matter to develop their flawed atheism which had a small and temporal following. Later atheists, such as Hume and Locke, attempted to use rationalism and objectivism,

based on the Universe governed by absolutes, to define their atheistic world view. However, the very acceptance of the premise that the Universe is governed by absolutes implies that a supernatural agent/being imposed these very specific, imbedded laws of nature on the Universe. Philosophies prior to Hegel, with the exception of Romantics and their ilk with their flights of fancy, sought to find the fundamental principles that govern the Universe. Religions sought to find the cause of events in the Universe through the actions of their gods where nature and events are controlled by the will of the gods, often capricious and arbitrary. The Reformation and the Renaissance demythologized the actions of nature from the arbitrary actions of the gods. This gave rise to scientific development based on nature being controlled by absolute principles, independent of divine intervention except in the case of miracles.

Georg Wilhelm Hegel in the early 1800s developed his Hegelian Triad where everything in the Universe, real and theoretical, is in a continuous flux or dialectic. The Hegelian Triad is an endless loop of thesis-antithesis-synthesis. Although Hegel ambiguously held to some overriding Absolute (God?), probably because of his religious upbringing and theological education, a number of his atheistic students and colleagues at the University of Berlin dropped any absolutes, developing an atheistic world view built on Hegel's dialect. The search for absolute truth in philosophy ends in their adaptation of Hegel's dialect.

Truth by its definition means that some things are true and other things are false for all time. That absolute concept of right and wrong, truth and non-truth is based on time invariant absolutes, even if those truths are unknown to men. Atheistic Hegelianism is the ultimate anarchy of historical philosophy by its rejection of any absolute truth. "Truth" to Hegelianism is a constantly moving target in the dialectic which is ever changing with time. Hegel's dialectic Triad in the hands of atheists laid the basis of a world view without God-a Godless Universe either at its origin or in the establishment of its laws of operation. Hegelian dialectic materialism forms the basis of an absolute relativism and empirical naturalism, no absolutes and no God. Hegel's atheistic disciples of course offered no proofs for this arbitrary world view, but then again this dismissal of invariant truth required no proofs. This Godless arbitrary quicksand of Hegelian dialectic materialism historically proved to be a deadly subterfuge for millions.

Hegelian dialectic materialism found root in the rich soil of atheists, many at the edge of poverty, in the mid 1800s and early 1900s. From marginal beginnings, atheistic Hegelian thought grew and swept like an invasive plague over much of the earth. Marx, with the finances of Engels, formulated from Hegel's dialectic the basis of communism which Lenin, Stalin, and Mao Tse-tung implemented, enslaving hundreds of millions and killing tens of millions. Nietzsche formulated another form of Hegelianism which Adolph Hitler and Mussolini implemented, enslaving hundreds of millions and killing tens of millions. Some like Pol Pot imbibed the same potion, enslaving millions and killing millions. Lesser politicians and

revolutionaries, even to this day, embrace the god-children of atheistic Hegelianism, enslaving whole populations and killing those opposed to their Godless world view.

One might be repulsed by connecting the dots of Pol Pot, Hitler, Mao, Stalin, and Lenin back to Nietzsche and Marx, and then back to Hegel. It is no secret of history that Marx-Leninism and Marx-Maoism are the bases of communism and that they killed millions in their regimes while enforcing their world view. Nor is it unknown that Hilter was a devotee of Nietzsche and that Hilter killed millions, spreading his gospel both on and off the battlefield. Maybe less known in our times is the influence that Hegel's dialectic materialism had on these and other atheists in the early and middle 1800s, not just in political theory.

Hegelian dialectic materialism allows no absolutes and no absolute truth. Atheistic Hegelianism is a thoroughly God-less world view. It is the soul of atheism because its rejection of absolute truth implies the following: There is no absolute truth. There are no absolute laws that govern the Universe. There is no divine Lawgiver who established absolute laws which govern the operation of the Universe. There is no cause and effect if this leads to an ultimate supernatural Cause, God. There is no creation, a supernatural origin to the Universe by a divine being. There is no divine origin to life on Earth.

Hegel, although not necessarily an atheist himself, gave the believers of atheism philosophically the basis for a comprehensive world view. However as mentioned earlier, contemporaneously with Hegel, science was developing a scientific method built on the absolute, invariant operation of the Universe and the two basic laws of science, initially discovered in thermodynamics and known as the first and second laws of thermodynamics. The absolutism of the Universe's operations and the heat death of the Universe are diametrically opposed to the major premise of Hegelianism and its atheist adherents, no absolutes and no God. It was clear in the middle and late 1800s that the Universe is a highly ordered system which is dying by losing its order in energy and matter every moment of time. It was known then as the heat death of the Universe, the absolute final demise of the material world, a despairing eschatological end of everything, including life in the Universe.

But turning from the scientific destiny of the Universe and life in the future, science posed an even greater problem for the Hegelian dialect worldview concerning the past origins of the complex material Universe and the complex life on the Earth. How could an atheistic Hegelian dialectic explain the origin of the highly ordered Universe and highly ordered biological systems? Without God, a divine creator of the highly ordered Universe and biological life, the Hegelian triad of thesis/antithesis/synthesis must be an upward history from no matter, no energy, no order and no supernatural beginnings. For the Hegelian atheists, the Universe must come into being and must get to its highly ordered state from a non ordered state without divine intervention.

Charles Darwin, the father of modern biology and ultimately an agnostic or an atheist, originally trained as a Anglican clergyman, clearly developed his theory of evolution based on the Hegelian dialectic. He wanted to show that higher forms of life can evolve without divine intervention from inorganic material. His books, Origin of the Species and particularly The Descent of Man, have become the bedrock of evolutionary biology to show that the Hegelian model can explain the development of all life within natural laws without God. All life arose by random beneficial (upward) mutations chosen by natural selection. For Darwinists beneficial mutations from time and chance, chosen by the survival of the fittest (natural selection), explain all of life by natural causes without God.

Sigmund Freud, the father of modern psychology and an avowed atheist, although raised as a religious Jew, based his life and his psychoanalysis on a Hegelian dialectic view of man. For Freud man was not a created by God but originated as a product of time and chance evolution. Man is not a creation of God; rather he is a product of the Hegelian triad, molded by his environment from his birth. Psychoanalysis is the process to retrace the history (dialectic) of an individual's psyche in order to repair damages caused by his past. Although the different schools of psychology may disavow their roots in Freud, almost all have his Hegelian view of man as the foundation of their systems. Man to Freud is just a highly evolved animal. Freud gave Hegelianism its view of man, without God.

As seen earlier, Albert Einstein's theories of relativity, quantum physics, and modern cosmology using Einstienian relativity are modern physical science's effort to explain the origin and the operations of the Universe without God. Sir Fredrick Hoyle, an agnostic, and Stephen Hawking, an avowed atheist, have built models of the Universe, openly violating fundamental laws of science instead of accepting the obvious divine origin of the Universe. Other cosmologists, relativists, and quantum physicists have taken Hegelian dialectic materialism to the extreme, even postulating absurdities that are contrary to the most basic laws of science. The obvious caveat of the Hegelian rejection of absolute truths is: If man will not stand for truth, then he will fall for anything.

This discussion of the Hegelian intrusion into the sciences might seem like a tempest in a teapot. Why make so much of irrelevant philosophical matters? What difference does it make anyway? Who knows and who cares if the Universe was created by God or it just happened? What difference does it make if life evolved naturally or God did it? Will it make any difference in a person's salary or the Super Bowl outcome? Who cares about men who have been dead over a century? It is a waste of time to be concerned about what Hegel or his atheistic protégés thought since most people have never even heard about him before. Isn't this just a discussion for academia where the stakes are so small and meaningless?

The Impacts of Hegelian Scientific Materialism

The political ideas of the Reds during the Bolshevik Revolution sounded like dreams to the peasants in Russia. These peasants had been serfs on the land ruled by powerful lords consolidated under the Czars. Over generations, the peasants had developed animal husbandry and crops (like the Russian red wheat used in the United States) and were the real masters of making the Russian soil produce wealth. However, their lords were the real beneficiaries of the peasants' work and ingenuity. The communist Reds offered the peasants freedom and land in a workers' utopia, the reign of the proletariat. Deep down the communists were driven by Marxism, refined Hegelian dialectic materialism. Little did the peasants know that in the Marxist scheme that there is a dictatorship of the proletariat between the overthrow of the bourgeois and establishment of the rule of the proletariat?

In ignorance of this hybridized Hegelian triad, the peasants supported the communists as their saviors. The communist Reds under Lenin and Stalin suspended the thesis/antithesis/synthesis triad at the dictatorship of the proletariat stage. The Godless communists never felt that the proletariats (peasants and workers) were ever ready to rule. With the collectivization of farm land into cooperatives under communist party operatives, the peasants became disenchanted even with Papa Joe Stalin, the dictator. Using purges in the 1930s, Stalin ended the dissidence and the peasants' dreams turned to nightmares. It is estimated that 30 million peasants died in the purges and by the confiscation of their food crops. With them died their dreams, their inherited knowledge, and Russia's agriculture, possibly forever. Hegel's philosophy, practiced by Marx, Lenin, and Stalin, was not an intense academic dispute. This scientific materialism sowed and then reaped the bitter seeds of destruction of tens of millions of the homeland citizenry.

Friedrich Nietzsche developed his existential view of man and God ("God is dead") with its offspring, the breeding of a new aristocracy of supermen, also basing his philosophy on Hegelianism and Darwinism. Blending in the Godless dialectic materialism with an evolutionary survival of the fittest, he developed a potent predatory mixture for business barons like John Rockefeller and political ideologues like Adolph Hitler. Even today, authors like Ayn Rand of the so called Iron Man philosophy, the eugenics of Margaret Sanger of Planned Parenthood, and modern libertarianism politics remain vivid reminders of Nietzsche's ghost. Even a cursive reading of Mein Kampf (1923) by Adolph Hitler should have given the world of 1930 a vision of things to come. All racial groups outside of the mythical blond hair, blue-eyed Aryans, especially Jews, should have been fleeing Germany and surrounding countries during Hilter's rise to power. The Hegelian triad with its rejection of absolutes and of God which inspired Darwin and Nietzsche was to produce a Holocaust. Mentally and physically handicapped Germans, Gypsies, Jews, and other so-called genetic inferiors of human evolution (Slavs, blacks, etc.) would be victims of Hitler's accelerated survival of the fittest plan to produce the master human race. Hitler implemented Darwin's and Nietzsche's philosophies with harsh realities. To the millions that died in Hilter's concentration camps, Hegel's god-children (Darwin, Nietzsche, and Hitler) and their world views were

more than an academic tempest in a teapot. The Nazi vision for the world meant the death of over 50 million other humans in the Second World War including 30 million Russians alone.

Without God and absolute truth, Hegelianism as scientific materialism has spawned world views that mercilessly destroy tens of millions of people at a time like giant meat grinders. The great myths of science are more than academic errors; they supply the fare for frightening world views with deadly wakes. Departure from reality with its Divine order makes entropy an untimely scepter of terror on Earth. The full title of Darwin's first five editions was On the Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life. Who did the Darwinian Hitler think were the favored races? Scientifically, if the Universe and Man are cosmic accidents, the destruction of sectors of mankind (inferior products of evolution) and man's works creates little remorse for an atheistic Hegelian. Stalin, a former religious seminarian and another Darwinian, once observed that the death of a person is a tragedy, but the death of millions is only a statistic.

Appendix: The Natural and The Supernatural

We have been educated to think that the natural realm as studied by science and the supernatural realm created by God have no connection with each other. We are told that there is no proof of God in nature and therefore any mention of God is to be ban from our science and educational system. It is quite the contrary. The very nature of the Universe and the laws of science that govern it reveal even the invisible characteristics of the Maker of the universe. Every work of art, piece of music, mechanical machine, architectural building or civil work reveals the character of their makers. So nature with its exquisite beauty and symphonic orchestration reveals the divine power and Godhead in its biological and physical structures and operations from subatomic particles to super celestial bodies.

In the Scriptures, Psalm 19 states, "The heavens declare the glory of God. And the firmament shows His handiwork. Day unto day utters speech. And night unto night reveals knowledge. There is no speech nor language where their voice is not heard. Their line has gone out through all the earth and their words to the end of the world." Day and night, nature speaks knowledge in every part of the earth with a voice to men no matter what their language. This is general revelation to all men of every culture and language. This is paralleled later in the same psalm with special revelation which comes through the Holy Scriptures, "The law of the Lord is perfect, converting the soul; the testimony of the Lord is sure, making wise the simple." The general revelation from nature that reveals the glory of God is available to all men but the special revelation from the Scriptures is necessary to convert men's hearts to salvation.

The book of Romans develops the full good news of salvation and its resulting sanctification of mankind. The first three chapters of Romans establish the total

lostness and depravity of mankind before developing the basis and means of salvation. Romans 1 shows that all the gentile nations have willfully rejected God. Romans 2 shows that the Jews, although a covenant people with more knowledge, likewise have rejected God and are lost. Romans 3 concludes that all men, Jew and gentile, are depraved and incapable of loving and serving God.

Romans 1 in verse 18 and following shows that man has a full revelation of God's eternal power and deity from nature and yet has willfully rejected that knowledge and pursues the most unnatural and perverse deeds of evil. "For the wrath of God is revealed from heaven against all ungodliness and unrighteousness of men, who suppress the truth in unrighteousness, because what may be known of God is manifest in them, for God has shown it to them. For since the creation of the world His invisible attributes are clearly seen, being understood by the things that are made, even His eternal power and Godhead, so that they are without excuse." Clearly, men can see the eternal power and deity of God in the nature and are under God's divine wrath because they have rejected that revelation, "Although they knew God, they did not glorify Him as God, nor were thankful, but became futile in their thoughts, and their foolish hearts were darkened. Professing to be wise, they became fools, and changed the glory of the incorruptible God into an image made like corruptible man-and birds and four-footed animals and creeping things."

Present day science, instead of acknowledging God as God, has denied that nature even reveals his existence, much less glorifying Him as God. Most modern day scientists, even Christians, attribute the origins of matter, life, and the cosmic structures to random acts of the nature. Those same scientists would not attribute the origins of a house, car, factory, clock, pencil, or airplane to random acts of nature. However, they would foolishly attribute the origins of much more sophisticated structures of trees, suns, planets, birds, humans, whales, galaxies, mountains, or snakes to random acts of the laws of nature, rather than the handiwork of a glorious God. Romans 1 states that all men can clearly see the invisible attributes of God, even His eternal power and deity, in nature from the beginning of the creation.

All of our laws of science are derived from two laws, the law of the conservation of matter and energy and the law of increasing entropy (disorder). Most of the laws of science are ideal laws of conservation and are derived from the first law, the law of conservation of matter and energy. The whole Universe is composed of matter and energy and in any interaction matter and energy are conserved. In fact the total quantity of matter and energy in the Universe is constant for all time. Science has never had any experimental or theoretical evidence to the contrary. Our laws of mechanics (momentum, angular momentum, and kinetic and potential energy), gas laws, field laws (electrical, magnetic, or gravitational), wave phenomena, electric circuits and theories, or ideal fluid laws are all based on the first law of conservation of matter and energy.

These ideal laws apply to ideal, perpetual motion systems and must be modified by the second law of increasing entropy (disorder) in order to apply accurately to the real world in which matter and energy change from ordered states to disordered states. Friction, free expansion of gases, and irreversible energy exchanges all degrade ordered energy and matter irreversibly to less ordered states. The quality of matter and energy degrades in every interaction. The physicist Eddington called entropy time's arrow because it makes events go in an irreversible forward direction in time. Although the first law states that the quantity of matter and energy is constant in the Universe for all time, the second law states that the quality of matter and energy in the universe will become irreversibly disordered. Isolated order can be produced in simple crystals in accordance with Gibbs free energy or in living systems by ordered agents like DNA and degradable energy supplies like food. However, the second law never allows complex molecules or biological systems to arise from random atoms without a degradable energy supply and a preexisting agent more complex and ordered than the resultant ordered system. Entropy never allows nature to win the throw of the dice to produce highly ordered systems by time and chance. The second law of entropy plays with a stacked deck of enormous odds that the quality of matter and energy can never win.

The Holy Scriptures recounts two historical events which are the genesis of these two laws of nature from which our other laws of science are derived. The first law of conservation of matter and energy began with the creation described in Genesis 1 and 2. God called into existence ex nihilo (out of nothing) all of the matter and the energy in the Universe and made them into our Universe of physical and biological systems in six days. He declared it good and very good. In other words, it was evidently in an ideal state of perpetual motion. Since that final sixth day of creation, apart from miracles, the first law of conservation of matter and energy has determined the quantity of matter and energy in the Universe. The total quantity of matter and energy that is in the Universe today is the same as there was a thousand years ago or will be a thousand years from now according to this law of creation. Only God creates matter and energy and he ceased on the sixth day except for subsequent miracles, leaving us with the first law of conservation of matter and energy.

However, a second historical event, described in the scriptures, explains the origin of the second law of increasing entropy (disorder). Until Genesis 3, it appears that disorder was not allowed to attack matter and energy. God, by being in a perfect relation with His creation, maintained the creation of matter and energy in which increasing entropy (disorder) did not act. However, with the fall of man and the introduction of sin, the perfect relationship between God, His Creation, and man was broken. Genesis 3 describes the sin of man who failed to obey God's command and its terrible consequences by the breaking of this perfect relationship. The introduction of sin ended God's maintenance of the Creation against the disordering of matter and energy in man and the rest of the created Universe, including all the realm of nature. Romans 8 describes the future hope of the created Universe, animate and inanimate, to escape from this judgment of Genesis

3, “For the earnest expectation of the Creation eagerly waits for the revealing of the sons of God. For the Creation was subjected (past tense) to futility, not willingly, but because of Him who subjected it in hope; because the Creation itself also will be delivered (future tense) from the bondage of corruption into the glorious liberty of the children of God. For we know the whole Creation groans and labors (present tense) with birth pangs together until now.”

The law of increasing entropy (disorder) can be developed without empirical data. Any physical system of matter and energy can be arranged into a maximum number of combinations of matter-energy states. With a couple of pieces of matter and at temperatures near absolute zero, there are very few combinations of energy states so that nearly perpetual motion conditions are possible near absolute zero temperature. The more parts to the system and the higher the temperature the greater are the number of matter-energy state combinations. However, only a few of these combinations are ordered, the rest are disordered. So from sheer statistics almost every system will end up in a disordered state in any interaction.

For example, in a child’s room his teddy bear can be in 1,000 places in the room but only a couple of places are where his mother wants it, when she organizes the room. The same is true for his play truck and his play airplane. With 1,000 combinations for the teddy bear times 1,000 for the truck times 1,000 for the airplane there are 1,000,000,000 combinations of order with only three toys. Of those, maybe only 10 combinations are ordered combinations for the mother. With any play by the child, the entropy (disorder) of his room will increase by placing those toys in one of the nearly 1,000,000,000 unordered combinations. His mother will always have to expend energy to place his room in order. If his clothes, bed, and other toys are added to the possible combinations, entropy will make it an eternal certainty that the time and chance actions of a child will never produce an ordered room. Everything in the room will wear out (again due to entropy) before the mother will find an ordered room by time and chance.

On a slightly larger scale, the molecules in a brick at room temperature have a tremendous amount of energy. However, they are vibrating randomly. If they could all vibrate in the same direction upward together, the brick would go through the ceiling. Even if just one-half or one-fourth of them vibrated together, they would hurdle the brick through the ceiling. The possibility of this spectacular event is so small that it would take 10^{37} years for that event to take place, because the disordered states (random vibrations) are enormous compared to the ordered states (vibration in the same direction). In spite of the absurdity of this event, several decades ago a group in France had someone watching a brick on a white table to see if it would hop. No one should bank on the odds of beating entropy.

God evidently has the power to maintain matter and energy in a state of order with no entropy increase, such as before the introduction of sin into the Universe. He will again maintain the new heavens and new earth with the redeemed people in the future eternal state without corruption, decay, and other effects of entropy.

But, presently, the matter and energy of the physical Universe is controlled by the law of increasing entropy as a consequence of the historical Fall of Man and the entrance of sin, which broke the perfect relationship between God and His Universe.

Romans 1 is correct. Our very laws of science are derived from God creating the matter and energy in the Universe and from God, in judgment, withdrawing His maintenance of matter and energy from the ravages of increasing entropy. The intricacies of the Universe, which exceed both in complexity and in vastness anything which man can build, are clear testimonies to God's power and deity. We can not even dream of building a simple cell from scratch with our advanced technology or creating a sun with our most powerful machinery. Why should we not fall to our knees in worship and adoration before the One who did? Need not we, who are sure to die at the hands of entropy, be repentant toward the Judge who has brought the judgment of death to the whole Universe because of sin? The whole realm of natural creation from the dust beneath our feet, the life about us, and the celestial beauties above us tell us of God's power and deity! How can those who profess to be so wise about the Universe be so foolish about the Maker of this Universe?