

WRITTEN BY
DR. FRED BELL



THE INSIDE TRACK

THE COMPLETE HISTORY OF SCIENCE, HOW IT BECAME
DEADLY ON THE WATCH OF THE ONE WORLD ORDER, AND
HOW TO SIDESTEP THEIR ACTIVITIES

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Foreword 1st Ed.

First, I would like to address other authors who have written highly detailed books. Most of you likely had to suffer to fulfill your passion and expression to write the correct written word as you saw it. Secondly, family life is often altered as you reach out for enough creativity so that someone will read what you are writing about. For me, when the time comes to assemble an idea, that's all I can think about—that is, until all the facts are in. Thus, causing a disconnection from the rest of the world.

This work was particularly frustrating; as soon as I predicted an event based on the facts of the moment, it began to happen. Because of the facts herein dealt with and all the lives that were to be affected, my passion for exactness—in every detail—became an over-driving force.

This book deals with both sides of the fence. Those who are an administrative part of the New World Order—and have as part of their objectives, depopulation of a majority of the world, regardless of the pain and suffering, and to enslave the survivors under martial law—now are beginning to find their methodology and techniques turning on themselves and their families.

As rising awareness, and increasing consciousness, begins to affect all of the denizens of this world, everyone realizes that we are on spaceship Earth. On spaceships such as this, there can be no fences, no atmospheric and environmental spreading of poisons, no imprisonment of the righteous, nor disinformation about anyone or anything. Anyone who looks back at history can see that the time for arrogance, misuse of power, and foolishness is no longer here.

There are solutions to the problems presented here. First, there is a tremendous background on the lives of great men and women who brought forth a great science to humanity for the fulfillment of a better quality of life, longevity, and spiritual purpose.

Manifesting itself through societal paranoia. This will quickly begin to shift, exposing these dark force characters, with their medieval ideas, onto center stage, and soon "they" will be the ones in the fishbowl for all the world to see.

No false leadership, manipulation of the true facts, secret doctrines, cover-ups, disinformation campaigns, or false holographic projections are going to stop our true material, and spiritual evolution into the golden age of perfect harmony and natural bonding with nature in all that lies within the

realm of life as we know it. Now it is time to realize and understand our limitless abilities and to excel in unison with all life forms.

Consciousness is becoming a commodity. Everywhere you look, in everything that you read, the word "consciousness," or conscious of, or even unconscious, is printed or mentioned. Did you ever ask yourself what the true meaning of consciousness is or what it means? If I were to say to you, I'm going to raise my consciousness, would that have a connotation, say, of placing something on a lift and moving it towards the sky? Possibly, it might have a metaphysical ring, leaving you to believe that raising consciousness gave you some secret inner meaning of a word, an object, an action, or a place. Or, again, the whole idea of consciousness is just a big turnoff because no one seems aware enough to go beyond what you already know and have experienced!

Foreword 2nd Ed.

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There are solutions for the problems presented here. First, there is a tremendous background on the lives of great men and women who brought forth a great science to humanity for the fulfillment of a better quality of life, longevity, and spiritual purpose.

Also shown here is the flip side of scientific progress. The morons that experimented with the lives of others, programming their minds, bodies, and spirits into the doom and gloom worlds from whence they came!

However, there are always bad apples in the barrel. Now it is time not to vaccinate the good apples but to integrate into the consciousness, and immune systems of all the apples, a better understanding, a value of equality for all, that life offers a beautiful immortality for those who surrender to its existence.

In all my books that I've written, there has been a common theme, and that is to share my growing and learning process of the facts that affect us in our environment in everyday life.

My special thanks to Mikelle for her endless support. Two of my co-writers, Bella and Buddy Boo (my two Eclectus male and female parrots), who on a daily basis, worked in my office with me, often on my shoulder, provided special support to overcome my writer's block and often co-host my radio show at BBS Radio. My thanks are further extended to my immediate family in my worldwide combined system of friends and clients who waited patiently for the last four years for me to complete this work.

I also want to thank 360 for their tireless effort to edit and finalize this book for production and for the cover design, and Jim Zar for his fabulous painting for the cover.

Foreword 3rd Ed.

The foreword to the third edition was written by the daughter of Dr. Fred Bell, who has taken over PYRADYNE® LLC.

In 2011 my world was turned upside down. I received the devastating news of my father's sudden passing after he finished filming Jesse Ventura's Conspiracy Theories. His death was treated as suspicious, and still, it is unclear what happened to him to this day.

But I was left with a tough decision; what would happen to his company Pyradyne? After much internal struggle, I gave up my life in the UK, where I had lived since I was two years old, to move back to America to continue his legacy.

With the support of my mother and sisters, I raised Pyradyne to life again. I wanted to make my father proud and honor who he was and all of his accomplishments.

Dr. Fred Bell was an accomplished writer, international speaker, scientist, and teacher. He spoke regularly on Coast To Coast Radio and weekly on BBS Radio. He created and patented some life-changing products and powerful nutritional supplements, which are still available at Pyradyne today. But more than that, my father was a good man. Everyone that knew him loved him. He was a lovable, fun character who enjoyed his parrots and tinkering with cars and motorcycles.

As a young girl who only visited him in the summers, I was yearning for his heart and affection, to which I am not sure he knew and understood how to demonstrate himself. Being a part-time dad, having an unhealthy upbringing beaten by his stepdad when he was a young child, and having a poor relationship with his mother are just things he never learned. He showed his affection in other ways, but I knew he loved me, and I always saw him trying. I saw his heart through his tears as we drove away to the airport at the end of every summer. He would stand in the garage doorway and watch us leave, knowing it would be a whole year before he saw us again.

Dad, you were a wonderful man, beloved and kind. It is an honor to continue spreading your knowledge, holding the torch, and lighting the way for you.

I love you eternally, Megan. xo

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Chapter 1: Introduction

We are always upon a new time in evolution. Until the last century, the changes were subtle techniques of quarry, limited in comparison to today's time passage express!

Now we are approaching the realization that our reality really is a holographic projection with quantum values. The only way I could ever begin to understand the secrets of the evolution of the universe was to understand the secrets of the human body and its related functions. Not just the physical structure in all its attributes, but the physical and emotional energy, perceptive powers of consciousness, and hopefully the spiritual intent. It's definitely an experimental process, wherein the intuition becomes the guidepost through both the holographic chaos, and the corresponding balancing harmony. For some, it's a quiet meditative process, but for me it's rolling up my shirt sleeves and getting involved with life.

In the hologram everything is the same, no matter how small you divide it, even down to the smallest perceptive size, called the Planck length, which we will study later in the text. Starting with the "Big Bang," postulated by Monsignor Georges Henri Joseph Edouard Lemaitre, (July 17, 1894-June 20, 1966) who was a Roman Catholic priest, professor of physics and astronomer at the Catholic University of Leuven, we will examine what is meant by some in the statement of "In God's image". As you will see, it is quite interesting to see how many of our greatest scientific minds started out in some sort of an Episcopalian or other religious heritage.

When we begin to look at and understand "human behavior" and why there are elite forces that have, for millennia, tried to control the world, a weakness in true spirituality begins to become apparent. Because of the changes of the ages, we are now moving into the age of Aquarius, where during our procession of the equinox around the central star Alcyone in the Pleiades, consciousness located within the hydrogen atom is shifting into our present awareness.

Manifesting itself through societal paranoia, this will quickly begin to shift, exposing these dark force characters, with their medieval ideas, onto center stage, and soon "they" will be the ones in the fishbowl for all the world to see.

No false leadership, manipulation of the true facts, secret doctrines, coverups, disinformation campaigns, or false holographic projections are going to stop our true material and spiritual evolution into the golden age of perfect harmony, and natural bonding with nature in all that lies within the

realm of life as we know it. Now it is time to realize and understand our limitless abilities, and to excel in unison with all life forms.

Consciousness is becoming a commodity. Everywhere you look, in everything that you read, the word “consciousness,” or conscious of, or even unconscious, is printed or mentioned. Did you ever ask yourself what the true meaning of consciousness is, or what it means? If I were to say to you, I’m going to raise my consciousness, would that have a connotation, say, of placing something on a lift and moving it towards the sky? Possibly, it might have a metaphysical ring, leaving you to believe that raising consciousness gave you some secret inner meaning, of a word, an object, an action, or a place. Or again, the whole idea of consciousness is just a big turnoff, because no one seems aware enough to go beyond what you already know and have experienced!

Consciousness affects events.

In experiencing consciousness, in its definitions and applications, I have noticed from my own viewpoint consciousness is explained somewhat as a series of bookshelves placed one upon the other. The lower consciousness corresponds to the lowest shelf, and higher consciousness is the highest shelf. So when listening to others explain how conscious a person is, it's like hearing which shelf they are perched upon. The Western world, especially, is highly guilty of this scenario. Eastern religions tend to look at this a little differently. What I would like to do is present a compromising picture of consciousness in such a way that you can relate to it in everything that you do, every thought that crosses your mind, and to be able to find a meaning in every event, every person, or relationship you come across in your sojourn in this, your present life. This method of observation and result of action therein is called *Kria*.

The next thing, what I would call a prerequisite to consciousness, is attitude. A positive or an ascending attitude is usually the best scenario to approach anything. In this case, the definition of an ascending attitude is a rising feeling of wellness when confronting a person or situation. If the situation is potentially a negative one, then one needs to discipline one's attitude in order to process the lesson of the confrontation. If it's there and you're involved, denial of your presence is not an option. It's not always easy to maintain a positive attitude. For example, during the time of the full moon, the surface tension of the body contracts. This causes normal body functions necessary for a happy, balanced behavior to malfunction. If there is a situation of malnutrition in the body, and emotional trauma is in the offing, or you have just, in general, received some bad news that you really did not feel you needed

to hear at that moment, having an ascending attitude would probably not be a readily available option.

In countries such as Turkey, crimes of passion committed during a full moon have a greater leniency in their punishment than those crimes committed with the moon in a lesser phase. These laws are, in some cases, over a thousand years old! Many other nations are aware of lunar and planetary effects on the personality and its actions. The field of astrology delves into one of 12 different approaches to any given situation. These approaches are called "signs." They are broken down further into four categories of earth, air, fire, and water. The varied approaches to a given situation by the astrological world are not set in stone but merely suggestions, which could be ignored as we learn our own inner nature and face the facts without bias towards any situation that we are placed within.

A good place to start to understand consciousness and attitude would be with vibration. We've all heard of vibration. We've heard of a good vibration; it's a great song by the Beach boys. Bad vibration could be a wheel on your car as you go down the highway and the lug nuts holding the wheels to the car are falling off because someone forgot to tighten them the last time new tires were installed. Vibration is usually sensed by one of the five senses. Sound is usually sensed by the ears. The sound of waves at the seashore, or birds at sunrise, a beautiful evening Sonata, or just the gentle voice of the wind moving through the trees would be a good vibration which, if experienced over time, would lead to an ascending attitude or a rising feeling in our emotions. The sound of a siren, fingernails moving across a blackboard, or someone shouting probably would lead to a descending attitude or a fall in our emotions. In the case of a loose wheel in our car, we might not sense the problem with our ears but instead "feel it"; as it's transmitted into our bodies as we sit inside the car.

Polarity of emotions.

Now at this point, we are interjecting emotions into attitude. So, therefore, we begin to see an interaction between ascending and descending attitudes and our feelings experienced via emotion. Then, we introduce the next factor, and that is polarity. **Polarity has two poles. One is positive, the other is negative. Positive attracts negative, and like poles repel.** In the field of electricity, electrons move from the negative pole to the positive pole. Energy works much in the same way. People are usually attracted to positive energy. Likewise, they are repelled—are pushed away—by negative energy. **Energy**

cannot be created or destroyed. It is the fabric of consciousness. Energy follows thought, so, therefore, would it not be better to think positively than to think negatively? If you approach a situation involving another person, for example, would it not be logical to remove all forms of bias (*most of the time, this ain't easy*) and approach that situation in a positive way? If it is indeed a negative person or a bad situation, and you cannot be clear without a neutral bias, then maybe you need to recharge your spiritual batteries until you can rise above the conflict.

Looking now at polarity in a different level, for example, sound, sound is usually harmonious or disharmonious. Our emotions follow in accord or discord. Sound is broken down into, for example, music. Music consists of seven notes, A through G. If you look at each note as a vibratory correlation to seven levels of consciousness, you begin to see and feel that there is a great possibility of music having a profound effect on your attitude and emotions. This effect may begin to have a greater or lesser impact upon you, depending on your clarity, which could also be affected by the levels of toxicity in your body. Within the topic of music, you can see the whole progression of a rise in consciousness upon the world since its beginning in time. **Great composers, such as Mozart, Bach, Hyden, and others, influenced great inventors such as Tesla, Edison, and Ford.** Great poets, philosophers, politicians, orators, and religious leaders all were highly inspired by music. In modern times, because of a general trend of negative emotion in this world brought on by souls who don't accept responsibility and live in a life of denial, negative music has come into play. In classifications such as punk rock, heavy metal, and downbeat, the music, when experienced by the listeners, creates negative emotions. *And energy being non-biased, as it follows the listeners' thoughts, creates heavy drama, drug addiction, violent actions, and death.*

Chi affects consciousness.

In the following chapters, we are not only going to be dealing with music, but also all forms of energy that affect our spiritual, emotional, and physical bodies. We are going to introduce another form of energy called the "**chi force**" Proper management of the chi force in the body allows us to have greater control of the immune system, which affects consciousness, physical strength, and DNA. In a healthy body, the DNA replicates itself in a harmonious way so that the body reproduces cells at the rate of 50 million per second or greater. When the body is experiencing some form of internal or external disharmony, the cellular repetition rate drops, and therefore, we begin to experience a

gradual loss of consciousness. If this process is severely interrupted, as in some form of accidental injury, consciousness will cause our body to go into shock, or even death.

Looking at harnessing the chi force in a very powerful and positive way, we can look at a martial artist who is able to break bricks with his bare hands or perform some other feat that appears as though to demonstrate superhuman strength. Then there is the Yogi, who practices meditation and is able to stop his heart for an extended period of time or exists in a sealed container for a period of many hours with no need for any sort of air supply.

These types of feats are usually not of great concern to the average person, but understanding the underlying principles upon which they are practiced can make the average person have a much better-than-average life. I have been fortunate enough to work with many of these highly disciplined individuals and have learned the process by which chi force demonstrates itself within their feats. From this knowledge, I have developed a whole series of external devices that, when coupled with properly administered attitudes, not only greatly enhance the immune system and the consciousness that goes hand-in-hand with it but also allow the average person to have a transcendental or fourth-dimensional experience that they may find useful in their quest for spiritual freedom and understanding and a better life.

I often ask people when I speak to them, "What is better than a good feeling?" So far, I have not received an answer that contradicts the question. When we move into dimensions slightly beyond the boundaries of daily life, and these motions are harmonious with natural law, enlightenment, in concert with a good feeling, is sure to be experienced.

We have all heard of acupuncture or acupressure. Depending on the application, both methods achieve the same purpose, to unblock the chi force that has become trapped in the body due to some force of trauma or stress. Immediately upon unblocking these trapped energies, pains, aches, tensions, and poor attitudes disappear as a gently blowing wind on our faces. We suddenly feel good again and, in some cases, laugh at ourselves as we realize where we are now. This sudden relief has yielded a good feeling. Now we can refocus and conquer the dilemma that brought us off the higher course.

Energy follows thought.

However, we still may not be aware of how we fell off of the higher path. In life, in the daily grind, the path is quite easily lost and replaced with a busy

boulevard full of souls that are traveling, basically nowhere, thinking to themselves that this boulevard has a purpose and a direction. If we were to take a higher view, we would see many boulevards going in all directions and forming a maze that some might call a city, a nation, or the world. **Because energy follows thought, and the people on the boulevard have a commonality of many thoughts, the thought-form thus is quite rigid and challenging to remove from our individual thinking process.** But in order to progress in consciousness, the thought-form has got to go. In its place, instill a harmonious truth that will take us to the proper destination, where no boulevards ever go. Part of getting there is enjoying the trip. Every happy ending has to have a start. The process of beginning and ending something is the foundation upon which life is based. These comings and goings of ourselves progressing into different places, begin to form a pattern which then weaves itself into a garment that, in the future, we will clothe our spirits with. With the uncloaking of spirit, we begin to see the dimensionality, wherein spirit is practicing its lessons in life.

Each step is a process that reveals, with a wider scope and breadth, another process. It is the beginning of our vision into the vastness of the true nature of the universe, both physical and spiritual. This revelation is not to be feared but only experienced. Each of us, as we understand it, will contribute to its greater depth and greater vastness of expression. Eventually, we begin to see the true holographic nature and structure of life itself. This can create amazingly good feelings.

As we move into future chapters, we will study the origin of science as we know it today. **For science to have reached this point in its journey towards infinity, the human sacrifice has had a great toll, as you will see.**

Then we will explore how, when science was presented for growth, harmony, and human longevity, **dark Masters, often under the guise of large corporations, led by greedy executives and entrepreneurs, have taken science and removed from it the true beauty and opportunities that would benefit all of humankind.**

Lies spread by worldwide media coverage, drug companies, creating false maladies and drugging the life out of beautiful souls, poisons in the water and food supply, government implantation of tracking and controlling devices, electronic harassment, and useless, senseless wars over natural resources, are just the tip of the iceberg.

Once we understand the problem, the solution will present itself, and the rest will result in history. Each one of you out there will make a huge difference in the world outcome, as you shall soon see.

Chapter 2: A Little Science of Life Background

Basics of Energy, Form, Life

In order to further understand consciousness within all, it helps to have a basic understanding of the foundation of our physical universe and the nature of our own forms. Before we have our bodies, we have energy. Energy has an important characteristic in that it seeks its own balance. To give you an idea about pure energy, if we were to take one kilogram of any kind of matter, i.e. a bag of sugar or this book, and convert it into pure energy, the amount of energy that would be released would be enough to power a 1000 watt electric heater for 3 million years!

Energy in the hologram.

As the energy comes from within the hologram of life, it is known by science as subatomic particles. These particles determine the core nature of our future, behavioral characteristics, our physical appearance, memories from the past, and will, in general, exert a subtle influence on our future life in this world. In metaphysics, these particles are called "seed atoms," of which there are five that we carry with our being throughout all existence and all incarnations. In the physical sciences, these particles are of many types and varieties.

In physics, the characteristics of the atomic world are divided into four categories which you will be soon familiar with very quickly. They are **the strong nuclear force**, (the force that binds the atoms together), **the weak nuclear force** (present in nuclear decay and radioactivity), **electromagnetism**, and the weakest force, **gravity**.

The most commonly known particles today, from the largest to the smallest, are protons, neutrons, and electrons. The electrons, and their counterparts, positrons, are one thousand six hundred and forty-five (1,645) times smaller than the big daddy protons and neutrons. Remember our earlier mentioning about polarity? Well, it's quite true here, too. The protons are a positive, uplifting force, as they are the nuclear building force of all cells, along with their smaller counterparts, the electron, which has a negative electrical force. However, the electron applied in a positive manner, although negatively charged, makes for a positive, uplifting feeling.

If you strip the electron away from the proton during a **chemical reaction**, you create a free radical, which is a negative force, i.e. free radicals cause cancer. If you strip an electron away from a proton during an **electrical**

reaction, using a negative ionizing machine, you create a positive force such as these electrons—when inhaled through the nose or mouth—create a natural cellular reproduction process that increases the natural life force-enhancing process.

The reason the electron behaves in such a strange way in physicality and consciousness processes is as follows. The electron is a fast-moving lightweight particle in comparison to the heavier, slower proton. The only reason the electron does not stick to the proton, as unlike charges attract, is that it is moving in an orbit around the proton at a speed close to the speed of light and within its own quantum time field. This was thought to create a centrifugal force that held it away, much as the moon (electron) moves around the earth (proton). However, as you will see in the new physics, **space, gravity, and time are positively curved around the larger heavenly objects**, and this curvature occurs on a micro level, which is allowing **the electron** to not only be a particle but also a wave *simultaneously*, that **when stimulated releases photons of light**.

In addition, as the electron moves around the proton in cellular reproduction, it does so in a dance. In ancient Eastern Vedic science, this is called the dance of Shiva, wherein the female, Shakti, does the DANCE OF LIFE and procreation for Shiva, the male energy. In modern science, this dance is called "orbital patterns," and designated by terms such as "P" orbital, "S" or "W" orbital patterns in which the electron sometimes goes into a bow tie orbit, rather than a circular-elliptical orbit, as seen with the moon. These orbital patterns breathe life into the cells, the organs and finally the body, as we shall see.

Consciousness = energy!

The next peculiarity is that **the electron actually pauses** during its trajectory around the proton. This pause, in reference, allows other smaller particles, which we will look at momentarily, to move into action. In physics, this is called "transmutation," wherein an element can become something similar, but heavier (Isotope), or causes an energy release (nuclear reaction). In the body, this is called "consciousness" and "energy." Along with these smaller particles, much smaller even than the electron, is **another effect, a matrix, called time**.

A matrix is defined as "something within which something else originates or develops." I am sure many of you readers out there have noticed changes in time, or in many cases, time is appearing to speed up, which from a relative point of view, (HEY!! REMEMBER EINSTEIN!!) is true. Much

more on this later, when we are a little informed on the basics. These newer particles are called, in order of their relative size, protons, electrons, then within protons, and much smaller than electrons come the subatomic, hadrons, quarks, omegons, leptons, bosons and many smaller particles beyond these, which are most common. One of these smaller particles is called a **hadron** (Greek meaning hadros, stout, thick). Hadrons are held together by what is called the strong nuclear force, or color force, similar as to how molecules are held together by electromagnetic force. There are two divisions of hadrons: **baryons and mesons**. The most popular known baryons are protons and neutrons. Within protons and neutrons are smaller particles, with less than a charge of 1 called "**quarks**." We shall study these later on.

Therefore, hadrons act as a binding force for protons and neutrons, which compose the cells that become our physical bodies. Leptons are another particle that helps determine the density of our bodies, as well as contribute to another force that we know as gravity. Leptons are also little force carriers and are subject to the electromagnetic force, the gravitational force, and the weak nuclear force, sometimes called the weak interaction. Eventually as science progresses, the lepton will be a force that will be considered on the subject of antigravity.

As a matter of fact over the last 40 years, over 250 particles have been discovered by science. Scientifically, this progressive discovery has created what science now calls the **particle zoo!** And as more are found and make the evening news, you will after this, be able to explain some of this phenomenon to your friends! You may become the resident genius!

There are particles and anti-particles. There is a physical universe as we know it and there are parallel universes. When particles are "here" they are called "matter." When they are "there," they are called "antimatter." Science fiction, becoming science fact, calls these "transferences, psychic energy, teleportation, time travel, transmutation," and a whole host of new terms.

Consciousness plays a big role in physics.

Normally we associate atoms with electrical charges and characteristics. However, this is not true when we start to deal with the smaller particles. At this point let us make a relative size to a relative energy comparison. If we were to make the nucleus of an atom the size of a baseball, the whole atom itself would have a diameter of 2.5 miles!! That makes the nucleus 1/100,000th the total volume of the atom. This leaves a lot of room for the dancing of the electrons and still much smaller subatomic particles. This enormous dance floor is called the "Higgs field." Modern science has been looking for a long

time as to what goes on in this enormous dance floor. I'm sure most of you will as you scan the evening news, discover the scientific search for the mysterious Higgs Boson, a missing element, predicted but not discovered—to be discussed in the upcoming topics.

To pursue this quest, laboratories housing giant nuclear particle accelerators, are being constructed all over the world. More on this later.

What science is starting to find out now is that ***consciousness is going to play in great effect, upon the world of atomic physics.*** Our bodies are made up of four basic atoms. If you want the heart of this chapter, here it is!

These atoms are oxygen, nitrogen, hydrogen, carbon. The oxygen atom provides animation into our forms. Eastern science calls this action "prana." Without prana, consciousness cannot maintain itself in our forms. This is easy to understand, as without air we would not be in our bodies very long. Within oxygen, there are other particles. These particles are in all atoms. Oxygen comes in two forms. One is a charged form, the charge being called a **"vitality globule," or ANU** (more on this later), and the other form is simply uncharged and basically lifeless, used in rocket propulsion and chemical reactions. The charged form is usually experienced in the early to mid-morning sun. The lowest amount of life force oxygen occurs in the wee hours of the morning, usually between 2:00 and 4:00 a.m. It's a known fact that more natural deaths, permanent out-of-body experiences, occur during these hours, and usually in the darkest part of the winter months.

Nitrogen is the physical building block of our cells. Basic amino acids contain nitrogen. Nitrogen is a high-energy element and is used in the manufacture of explosives such as nitroglycerin, which most of us are familiar with, as we've all seen action movies. **Carbon is the first physical element of our bodies, with which oxygen, nitrogen, and hydrogen combine.** Carbon is an octahedral-shaped atom. Imagine a four-sided pyramid, with a base, making it a five-sided pyramid, facing right side up. Positioned below the right-side-up pyramid, is another pyramid facing down, with its point or apex pointing towards the ground. The two are connected at their respective bases. This shape represents not only the carbon atom in the body, but also the red blood cell. As a matter of fact, the red blood cell, hemoglobin, is stacked with four of these octahedral shapes that deliver oxygen, prana, into the bodies, and removes the trapped carbon dioxide. These four octahedral pyramid groups are divided into two groups, called alpha and beta chains.

Our hydrogen atoms enable us to see, hear, feel and think.
























Hydrogen is the element that delivers consciousness into the body. The hydrogen atom is the atom we are going to look at now in more detail. Just remember, a basic fact throughout this book, that the four building atomic blocks of the body are oxygen, nitrogen, hydrogen and carbon. ***The hydrogen atom allows us to perceive color. It allows us to hear different sounds. The hydrogen atom allows us to feel. It allows us to smell. The hydrogen atom is the essence of our thoughts. The hydrogen atom allows us to communicate with each other,*** hopefully with the element of intelligence. Sometimes, this appears to be doubtful. Pun intended. The hydrogen atom makes water, of which is the composition of 70% of our bodies. The hydrogen atom, when its energy is unleashed, creates a hydrogen bomb, the most powerful weapon of any arsenal. In physics, the hydrogen atom, is the most researched. The hydrogen atom, because it houses pure intellect, fuels our suns and stars. Although matter as we know it is carbon-based, it becomes alive with the addition of hydrogen, and the permeation of oxygen. Add spirit to the mix, and suddenly we are in God's laboratory. Maybe this is the beginning of divine alchemy!

The electron dances at the speed of light and pauses.

Let's examine the physical properties of hydrogen a little closer. The hydrogen atom itself is composed of a proton, and a small dancing electron. The electron does not orbit its nucleus, the proton, in a circle. But rather, it moves in different orbital patterns. As the electron moves through these orbital patterns, it moves **up to a maximum speed, computed to be 186,273 miles per second, that of the speed of light, and at a slower, more variable speed.** This variation in speed was first pointed out in modern science in 1930 by a physicist named Erwin Schrödinger, who named this phenomenon "Zitterbewegung." Working with Erwin was another scientist named Paul Adriaane Maurice Dirac. British-born Dirac has been given credit for the theory of antimatter. Antimatter is basically the existence of an opposite and parallel universe. What Paul Dirac predicted was that during this dance, especially during the moment when the electron stopped in its orbit, it attracted a positive electron (antimatter) called a positron from a parallel universe. This moment of union is called in science, a "magnetic moment." In 1933, Paul Dirac, and Erwin Schrödinger won a Nobel Peace Prize for this work. Dirac became the Lucasian Professor at Cambridge College, a position now held by the famous Stephen Hawking.

Welcome to the Particle Zoo! Standard Model of Matter & Force Carriers

The Standard Model arranges matter particles (fermions) into 3 families—each family is made up of 2 quarks, 2 leptons (plus their anti-particles), and 4 force-carrying particles (bosons).

		MATTER			FORCE CARRIERS			
		fermions			bosons		baryons	hadrons
quarks								
								
leptons								
								
		I	II	III				

Members of what physicists call the "particle zoo"

NEW ADDITION TO THIS BOOK – 9/1/2018 – which Fred Bell would have loved knowing: **Note!** In 2012 the Higgs boson particle was confirmed to exist! Now in September, 2018 scientists at the Large Hadron Collider at CERN in Europe (the world’s largest single machine!) discovered after 1000s of experiments, that the Higgs boson particle decays into Bottom Quarks. Per theory, that occurs 60% of the time. This new discovery is a big step forward in the quest to understand how the Higgs enables fundamental particles to acquire mass. “We now have seen all of the primary decay modes of the Higgs predicted by the current theory of particle physics, the Standard Model. This marks a very important moment in particle physics!” said Young-Kee Kim, chair of Department of Physics at University of Chicago. He says the main question now is, “Is the Higgs responsible for giving mass to dark matter particles, the dominant form of matter in the universe?”

Another interesting personality that put something important into the mix is Austrian born physicist Wolfgang Pauli. He won a Nobel peace prize in 1945 for his work on atomic fission. Fission is the principle of releasing energy

used in the atomic bomb, and a miniature atomic bomb produces heat to trigger a more powerful hydrogen bomb. I'm not trying to emphasize the negative energy here, but there is tremendous energy in consciousness within the hydrogen atom. In 1925 Pauli coined the famous Pauli exclusion principle that stated, "only two electrons can occupy the same energy level simultaneously in an atom."

Not trying to be too difficult or too technical, I want to go a little bit deeper into physics. I'm trying to keep this book simple, but nuclear science is rapidly approaching the domain of the general public. Just look at how many science fiction dramas are out there, and these little explanations, if given a little bit of time for thought, will help you greatly understand what's coming into, or rapidly approaching the daily news. I know this may be brand new to some of you out there, but new is fun, and it's a good test on patience! Remember when you were back in grade school, or high school? Some of that knowledge from the past surely helps you understand and attune to the ever-present progression of science.

Electrons have 4 quantum numbers:

- 1)-1st Shell's # of electrons
 - 2) the electron's Angular momentum
 - 3) Magnetic orientation of electron's orbit
 - 4) the electron's spin direction.
-

When we look at an atom, we see protons and neutrons in the center core and electrons orbiting in the strange manner that we have been studying so far. The general rule is the first ring of orbiting electrons contains 2. The second ring contains 8. The third ring, 64. These are sometimes referred to as shells. If you look at Pauli's statement that only 2 of all of these electrons can have the same rate of energy, and that all of these electrons are dancing simultaneously, then we can realize that this is a very interesting characteristic. These types of observations are called "quantum mechanics.

Gold is a heavier element as it has many electrons (79) and a greater cellular union.

If we were further going to examine the inside of an atom, we would find that electrons have four basic values. These values are called quantum numbers and describe the atom mathematically. ***The principal, first, quantum number***

defines the principal shell, (energy state), or electron group as we previously discussed. Remember, the shell is the circular dance floor for electrons, as they dance around the nucleus of the atom. The first shell is complete with two electrons. If it only has one, it is a hydrogen atom. Because it wants to have two electrons, partners for the dance, it can be called a hydrogen ion, until it finds one more electron to complete its first shell. The second shell of an atom wants to have eight orbital electrons to complete its dance. Oxygen has two electrons in its first shell, but its second shell has six electrons. A complete second shell needs eight electrons. So what happens? Two Hydrogen atoms (atoms), meet one Oxygen atom, while out on the town and get married. The result, water, H_2O , is now a very stable molecule, and one of the fundamentals of life. In order for an atom to be stable in the third shell it wants to have 18 electrons, the fourth is 32 and the fifth shell, 64. *Anything less on any shell makes that atom active.* The more electrons the atom has, the heavier an element becomes due to cellular union. Gold, for example, is very heavy. Gold has 79 electrons. That would be 2 in the first shell, 8 in the second shell, 18 in the third shell, 32 in the fourth shell, and only 19 in the fifth shell, which is obviously incomplete, but that last 19 sure attract us to it!

The angular momentum quantum number, second, describes a magnitude of an electron's angular momentum. This could be understood as the dance within the dance. **The magnetic quantum number, third**, describes the magnetic orientation of the orbital plane of an electron. This could be understood as the mood of the dance. This could also be the flavor, or emotion of the dance. **The spin magnetic quantum number, fourth**, designates the electrons' spin as clockwise or counterclockwise. This could be observed as a male and female, yin or yang energy influencing the overall consciousness of the atom.

Similar thoughts can be linked or synced between people, no matter how far apart they are.

Physicists use these quantum numbers to establish the maximum number of electrons permitted in each electron shell of an atom. Now, before I go on I want to make an interesting point. Physicist Wolfgang Pauli, discoverer of the aforementioned Pauli exclusion principle, later on would co-write with psychoanalyst Carl J. Jung an essay entitled "Synchronicity: An Acausal Connecting Principle" (available at Amazon.com). Pauli claimed that new discoveries vindicated **synchronicity**, which as one commentator has noted, "the old belief in a system of magical correspondences in a new guise, "because

it ***suggests events may be linked by similarity, just as much as proximity.*** Pauli also felt that it might explain some of the mysteries of psi (psychic phenomena). We will explore the quantum side later.

Looking back now, again at the hydrogen atom let's examine it one more time. Why, you might ask are we spending so much time here? Because science is moving into the public domain and you want to be informed, and further into this book it will help, and still further out yet, after you read this book you will one day be thankful for your newfound wisdom. Within its proton or nucleus are three (two up and one down) smaller and very special particles called quarks. This is where we can begin to understand the link of our consciousness to other dimensions, and our source of creation. In the future, science will spend a lot of time here. For here is where the true nature of our genetic heritage begins. Everything we do from this point determines what kind of health we will have, how our emotions will function individually, our perceptions, and in general our overall behavior.

More on Quarks!

Quarks were first postulated in 1963 by Murray Gell-Mann, a physicist, from the California Institute of Technology. Consequently, his work secured him a Nobel Peace Prize in 1969. He described quarks as coming in flavors and colors. ***Each flavor of quark comes in three colors—red, green and blue.*** A grouping of three quarks is called, as previously mentioned, a hadron. The ***flavors are called up, down, top, bottom, strange and charm.*** As we mentioned earlier, there is also a parallel universe. Now that we are looking into the inside of the atom, we are at the doorway of the parallel universes. So therefore, we also have anti-quarks. Whereas quarks come in red, blue, and green, antiquarks can be viewed as yellow, cyan, or magenta. ***When we have a combination of three of these quarks and three anti-quarks, we have a particle called a Baryon.***

Huge amounts of energy can be projected out into the hologram by amassing a continuous thought!

All of these particles also have another strange characteristic—they can increase in mass or density. Ordinary matter such as protons and neutrons are composed of up-and-down quarks. A proton contains two up quarks, and one down quark. This trinity is also called hadrons. Therefore, a proton or neutron is also known as hadrons. As the quarks move around inside the proton, their

energy is called a gluon, because they act as glue holding the proton into form. A neutron is made up of two down quarks and one up quark. The other quarks are not present on the physical plane during ordinary conditions. Strange, charm, bottom, and top quarks are invoked by energy. This usually happens when we accelerate them toward the speed of light.

This can happen in one of two ways. The first is through acceleration by high-energy particle accelerators, such as the type used in high-energy physics laboratories. The second way is through ***rising and focusing our conscious minds into an absolute value.***

As ***energy follows thought***, and as previously mentioned about the amount of energy in one kilogram, amassing a continuous thought can create tremendous energy, which will project out into the hologram, quantizing upon itself an infinite mass of energy that will affect all atomic structures within the thought forms themselves! Now realizing ***when we think, we are actually transferring hydrogen atoms, complete with their inner workings, into energy.*** If we give them concentration, we are increasing their energy. If we are increasing their energy, then we are increasing their mass, in these kinds of situations.

Therefore, there are two forms of energy release affecting quarks, ***chemical release***, which is a low form of energy release, and ***nuclear energy release***. Our bodies are capable of the first form, and our minds, both forms. With our minds engaged, then the body becomes capable of both forms. Because our consciousness comes from within our immune systems, when we begin to take control of our consciousness on an atomic level, we begin to accept responsibility for how our body's immune systems perform. Did you ever notice that some people are always sick, and some never? This is just the beginning of tapping into our natural resources and utilizing them for life more eternal. There is a big difference between living and existing.

Using the study of physics as we are here now, is just one way to approach superhuman consciousness and superhuman living. There are many ways. But as our human experience moves forward, society at this point in time seems to be more attuned to the scientific approach. Great advances in super nutrition are taking place. And with a physics background, this will give us the best of all worlds and all approaches. Don't try to comprehend all of this in one reading. Go study other chapters, and then you will know when to come back here for further grounding and understanding.

Sometimes people ask, "Why is so much energy produced when an atom is split or fused?" A good example would be atomic bomb fission, or a

hydrogen bomb fusion. When you say "so much energy"—relative to what? might be the true question.

Let's look at an automobile engine or a coal-burning plant. Here energy is being released, but not like a nuclear bomb. The difference is atoms are not being created in a chemical process, such as burning gasoline or coal. Within atoms, the force that holds them together is called the "binding energy." When we're burning gasoline or coal, we are looking at the energy present before burning and after burning. What we are seeing is basically the conversion of an element into heat. The mass itself of the atom involved here is very small.

Now let's look at the nuclear process. Here the role of the atom is replaced by the protons and neutrons within the nucleus. These are considered to be nuclear binding forces (strong nuclear force), whereas the other reaction was chemical binding forces (electromagnetic). There is a big difference obviously, between changing molecules around within a substance, and changing the structure of the atom within the molecules of the substance. As a matter of fact, I'm sure everyone reading this book has heard of the formula $E=mc^2$, or E equals MC squared. This means, in nuclear energy, the mass is multiplied by the speed of light times itself and the result is energy. To put this in a practical sense, a chemically propelled bullet moving at 1,500 feet per second does a lot of damage. Imagine the same bullet moving 186,000 times faster, the damage that would cause. That's a nuclear answer!

In the body there is a chi force.

Going back to our thinking process again, our concentration can become very intense. Deep within our body there is a force called the **Chi force**. It has two energies, called yin and yang. When these forces are drawn upon by a disciplined individual, such as a martial artist, that person can appear to have superpowers. This is merely an example of the human being able to harness nuclear-like energy from within. In the Far East these powers are taught to individuals seeking them. Sometimes we focus on comic characters with superpowers. If you look at how far athletes are surpassing old records, and take into account that science fiction today is becoming science fact tomorrow, superpowers are not that far away. I know for those of you not in good health yet, any improvement you attain from where you are now, may appear to be a super improvement tomorrow! When you search for the hidden mysteries of the mind, in a logical and sequential way, you may find what you are looking for.

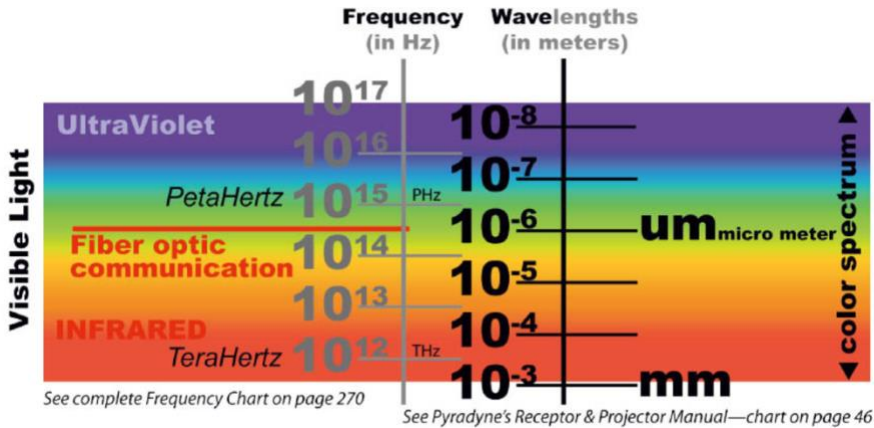
Omegons are elements of color that come from the astral plane.

Looking again into quarks with our magnifying glass, we find that each quark is composed of three smaller particles called "omegons." These omegons are the elements of color itself. They originate from a place called the astral plane. The astral plane is an energy field that is accessible to human beings in the dream state. It is self-illuminating and it is the origin of color. These omegons are bound together by a particle called a "gluon." Omegons have nine color shades—dark, medium, and light shades of the colors red, green, and blue. A tenth color is thought to exist, and it is called a "lepton."

Now that we are beginning to understand where color comes from, let's look at how we perceive it. We all know that we see within what is called the visual spectrum. As to where the continuous spectra come from—any hot body such as the sun radiates light in a continuous spectrum. **The shape and frequency range of electromagnetic radiation emitted depends only on the temperature of the object.** This is called a "black body" or "thermal spectrum." You see this when you look at the "red-hot" wires of a toaster, or the "white-hot" filament of a light bulb. The evolutionary advantage of being able to see, using the spectrum of light coming from the hot sun, determines the fact that our vision is well matched to the range of frequencies in the peak of thermal spectrum from the sun. Any single atom is a discrete set of frequencies that emits or absorbs, due to electrons making a transition from one shell level to another.

If you use a device called a "spectrometer" to look at the sun or any other star, what you see is a continuous spectrum, with certain discrete frequencies missing from it, because light from that star or sun is absorbed by the gases in our atmosphere. The visual spectrum for humans is between 380 and 700 nanometers. Ultraviolet rays occur below 380 nm and infrared occurs above 700 nm.

The properties that determine what colors they look like to us have less to do with the atomic transitions and more to do with the relative absorption and reflection of light given by their surface structure, at the molecular level. A leaf looks green, because it absorbs most of the red and orange part of the spectrum and reflects in the yellow to blue parts. A rose looks red because it does the opposite—absorbs the blue and green and reflects the red and orange. Each type of leaf or rose arrives at its own particular color by differing degrees of absorption and reflection, as you move across the visible frequency spectrum.



We can increase our visual color spectrum!

When we begin to develop ourselves into a higher frequency individual, as we will soon learn to do, we can increase our visual spectrum. Snakes, for example, see things above 700 nm, and butterflies see below 380 nm, into other dimensional doorways. Today many people undergoing disciplines in diet and exercise and meditation are beginning to see far beyond this spectrum. So in effect, what we're saying here is that in one direction we can see into energy, and the other direction, consciousness. Remember a step towards pure consciousness is the astral plane. When we sleep deeply, as our body relaxes, we approach REM, rapid eye movement sleep. Then our body frequencies drop further, lower on the spectrum, like the butterfly!

Now, more about the Higgs field and that mysterious Higgs boson. One of the big concerns of science is about the relationship between mass and energy. It is believed that a mysterious particle called a Higgs boson exists, and to document its existence, huge linear accelerators are being built around the world. Literally, billions of dollars are being spent by many nations to verify the existence of the boson and therefore confirm the existence of the Higgs field. The Higgs boson is much like the elusive butterfly. It has its own time, space, and world of self-existence.

Supposedly, the Higgs boson multiplies its energies and the result creates a mass within any given atomic particle that has a mass. Therefore, because ***mass in motion possesses energy***, the discovery of the boson would be a huge find for science. Herein lies the mystery.

How about a few clues? Consider the universe to be constantly expanding. The accelerating effect of the expansion creates gravity. When we look at each other, we appear to be the same size. But if we are expanding equally, our observation will be just as it is. Imagine if you were on top of a building and drop two objects. One is very large, the other very small. They will fall a total of 64 feet. The question is, which one gets to the ground first? The answer is simple. They both arrive at the ground at the same time. According to Newton's law of universal gravitation, which appeared in 1687, gravity accelerates at the rate of 32 feet per second (fps). This acceleration of gravity is indifferent to the mass of the object. The mass is a factor in that the greater the mass or density of an object, the stronger will be the attraction (gravity), but the rate of closure to each other is one of a constant rate, unaffected by mass, and therefore becomes an acceleration.

A moving object is energy being expressed—and that energy is consciousness!

Another way to look at this would be to assume that when we drop the objects from the top of the building, the objects remain stationary, and the ground came up, due to expansion to meet them. Meanwhile, we also were expanding, so therefore, relative to the ground we moved away from it at the rate it came at us. Now when you begin to think about the construction of the universe, you might try a few different approaches. And one more thing, another clue, remember this—***energy follows thought, an object in motion is another expression of energy, and this expression is consciousness, therefore consciousness is expanding.*** The question here is, ***where does the energy come from that gave us the thought?*** What is the relationship between the multiplicity of many thoughts, the expenditure of energy therein, in the expansion of consciousness? Now, assign a mysterious particle as a source of energy, which you somehow control, and for the sake of fun call it a Higgs boson.

With that, we will end this chapter and go on to the next. Maybe as you finish reading this book, you will have solved a great mystery of science, and will have presented a new understanding of the Higgs field and saved the scientific establishments a lot of time and money!

Chapter 3: The Originators of Today's

"The Wild and Crazy Science"

It is interesting and I find it fun not only to look at the origins of science that have now led us into understanding the great mysteries of the hologram, energy medicine, and quantum entanglement, but also the personalities and lifestyles of the people who brought us to this point of awareness in time. Many were born into absolute poverty and had to overcome tremendous obstacles, many were born into very strong religious families, and still others were part of royalty and high clerical circles. Many won Nobel Peace prizes, and received knighthood from various countries. But one thing they had in common was a tremendous love for the inner workings of the universe, and an overwhelming desire to share their experiences with humanity.

Science on Earth may have begun 250,000 years ago.

There are traces of a civilization being very advanced almost 250,000 years ago, called Lemuria, and another called Atlantis, which disappeared around 12,000 years ago. It is quite possible that some of the science created then filtered into the Mayan civilization. **The Sumerians, which had the use of the name "Sumer" and the "land of Shinar," probably date from about the beginning of the third millennium BC.** Their history has been reconstructed mainly from fragments on clay tablets and other evidence uncovered and interpreted by modern archaeology. After the fall of the last dynasty around 1900 BC, Sumerian scribes wrote Chronicles on their long past. These claim that their kings go back to 240,000 years before and 30,000 years after the flood. Such figures suggest that Sumer could be as old as the fabled Atlantis and Lemuria. But for the sake of this story and the lack of detailed evidence, we begin in a well-documented period of time.

Our story begins around 8000 BC, where the people in Mesopotamia, which included parts of Israel, southern Turkey, in the Tigris Euphrates valley of Iraq, began farming their lands for profit. Previous to that, man had mostly lived a nomadic life, traveling from place to place, hunting and fishing with the general thought of survival.

The first agriculture consisted mostly of flax plants and raising sheep. Because of this the first seminarian clothing was made of flax and wool. Then the advent of weaving and dyeing appeared in the ancient Sumerian clothing, paving the way to colorful and more flagrant fashions. Who knows, maybe the

first fashion show occurred during these times! However, I know for a fact there was no Victoria's Secret!

Sumerian men were either clean-shaven or wore their hair long and sported a beard. Women braided their hair and wore dresses while entertaining guests. Jewelry was worn by both sexes, mainly necklaces and earrings. The wealthy folks at the time, also wore gold and silver bracelets and earrings, soon to be followed by amulets. In addition, perfumes were invented, probably from the practice of aromatherapy.

They also made the world's first boats, using their own canal systems for the transportation of people, goods and cattle. They also built larger ships that traveled the world, searching for metals, rare woods and other materials. They also used carts and chariots, and had musical instruments such as harps and flutes.

Civilization forced calculating for payment and the beginnings of science.

This early settlement area was known as the Fertile Crescent (in the present day this includes Iraq, Syria, Lebanon, Israel, Kuwait, Jordan, southeastern Turkey and southwestern Iran). They quickly established basic governments for protection, and put in place an early monetary system consisting of clay tokens that represented basic assets such as animals, grain and beverage. The Sumerians, then, stamped images on small clay tablets. The coinage denominations were depicted by different symbols and multiple quantities represented by repetition. Three units of grain were denoted by three grain marks, five jars of oil were denoted by five oil marks, etc—thus, the birth of numbers. In their symbology, wedge-shaped and cone-shaped objects were used, thus creating geometry. Their number system began to use combinations of 10 and 60. Today, we use these measurements as 60 minutes, 60 seconds. By 2000 BC the Samaritans had developed a calendar with a year divided into 12 months, with 30 days in each month. Their circle was also divided in 360°.

Their civilization ended in 1763 BC when the sixth king of Babylon, Hammurabi, defeated the Sumerian king Rem-Sin of Larisa (Iraq). This defeat gave birth to a civilization of Babylonia. It was here that algebra cubic root equations had their beginnings. It was here that the early "Iron Age" began under king Nebuchadnezzar (his reign was from 1125 BC to about 1103 BC).

Simultaneously, the powerful and enterprising Egyptian civilization began along the Nile River in northern Africa. By 4000 BC,

people began establishing permanent farming communities. This was also the beginning of the Copper Age. Originally there was an upper and lower Egypt, but they were unified by King Menes of upper Egypt in 3100 BC. A few hundred years later the pyramids were built and the Egyptian empire lasted approximately 2,600 years. It ended in 525 BC when a son of Cyrus, then the king of Persia, defeated the last Pharaoh.

And here is Thales!

Long before the Greek civilization—even before the sixth century BC—the Sumerian, Babylonian and Egyptian civilizations had already developed a **practical geometry** that was important for their societies. But with the start of the sixth century BC the center of civilization shifted towards Greece. Here began the life of whom some people call *the father of science, Thales of Miletus*. It is my personal belief that although basic items such as the wheel had been discovered earlier, the incarnation of Thales was a true starting point for science as we know it today. Thales started out a local boy, and made it big after his prediction of a solar eclipse in May of **585 BC**. He also introduced basic mathematics, including geometry, and through his craft and works, was the first person to get others actually thinking about solutions of basic science.

Thales

Thales was born in May, 625 BC, in the city of Miletus, which was located in the country now known as Turkey. Being on the cusp of Taurus and Gemini, this would motivate him to be both business-minded and scientific, which he was. Thales was also interested in magnets. He believed that the magnet had a soul because it moved iron. He studied the weather characteristics in Greece, and for several years the weather was bad and therefore, there were no olives or olive oil. He determined, by looking at past records and weather patterns, that soon there would be a good olive crop and proceeded to buy all of the olive presses. When the big crop came, he made a fortune by being the sole owner of the oil presses. He probably was not only the first great thinking man of science, but also the first entrepreneur!

Another story was that Thales used donkeys to transport salt from a mine that he owned. One of his donkeys figured out that when crossing the river with a load of salt and remaining in the water, the load got much lighter as the salt dissolved. Therefore, the donkey had a tendency to stop in the middle of the river while the salt dissolved. So Thales substituted sponges for the salt and the donkey dropped his funny habit!

Thales correctly predicted a total eclipse of the Sun in 585 BC!

On May 28, 585 BC, two armies, one led by Cyaxares, King of Media, (Iran) and Alayattes of Lydia (Turkey) had been fighting for 15 years. Called the Battle of Hayle, it was their last confrontation as on this day a total eclipse of the Sun occurred, previously predicted by Thales. When the eclipse started, both armies interpreted the eclipse as a divine sign and went home. Previously, Thales had predicted this solar eclipse. After that, peace finally came over the land. Thales then became quite famous. It is interesting to note that the Lydians (Turks) were the first to establish retail shops and permanent locations and began minting coinages. The first coin was called a "stater," made of electrum, a natural occurring alloy of gold and silver. A stater was further broken down into smaller coins in fractions of one-third. One stater was about a month's wages for a soldier at the time. The stater was also delineated in smaller coins. The image on the first coin was a lion head, the King's symbol. Simultaneously, the Greeks in nearby Athens also began minting the stater. Their version was called the "drachma." The drachma surprisingly survived in various forms until 1982!

Thales, the 1st scientist to contribute to our present science—5 geometry theorems—back in 650 BC!

So *it appears Thales was the forerunner of our new and present science.* Thales was now known as a successful businessman and scientist. Besides his studies in astronomy, Thales also began the study of triangles in Egypt. He predicted the height of the great pyramid as 160 paces. At this time, the guides of the great pyramid knew one dimension of the square base of the pyramid was 252 paces, one pace equalling 3 feet. Thales used the Egyptian science of proportion, and predicted the height by the shadows of the sun, along with the prediction of the eclipse and the prediction of the height of the great pyramid. ***Thales gave geometry five theorems:*** 1) that a circle is bisected by its diameter; 2) the angles in a triangle opposite two sides of equal length are equal; 3) that opposite angles formed by intersecting straight lines are equal; 4) that the angle inscribed in a semicircle is a right angle; and 5) that a triangle is determined by its base if the two angles at the base are given. Thales also was the first to suggest the single material substratum of the universe—namely water or moisture. Thales became quite famous. But, most importantly, ***he demonstrated that prediction was possible.***

After Thales returned home, he redesigned mathematics from concrete objects in the physical world to abstract mathematics, by accepting ideal mental objects, thus giving the world theoretical geometry. **This method became very popular by the time of Albert Einstein.** After returning to Miletus, Thales summarized what he had done in Babylon and Egypt and started the Ionian school. He then became known as one of the seven wisest men in Greece. He was the world's first in presenting theoretical geometry.

Anaximander

They say that when he sang, the children laughed; and that he, hearing of this, said, "We must then sing better for the sake of the children."

—Diogenes Laertius, Life of Anaximander

Anaximander, **610 BC to 546 BC**, was a fellow citizen and a student of Thales. He belonged to the Milesian school in the city of Ionia. Anaximander was one of the early great Greek thinkers at the start of The Axial age, 700 BC to 200 BC, when similarly revolutionary thinking appeared in China, India, Iran, the near East, and ancient Greece. It was during this time that the first wave of incarnates came to begin to enlighten mankind to the deeper and inner mysteries of science and consciousness.

Buddha's 8-fold path—right view, intention, speech, action, livelihood, effort, mindfulness and concentration—influenced many scientific minds.

Along the lines of consciousness in **563 BC**, saw the birth of **Siddhartha Guantama, known as the Buddha**. Born into aristocratic life, he was trained as an aristocrat including military training, and was asked to join the Army with the rank of general. At 29 years old he gave up aristocracy and started a life of the common people. Here he came to the understanding that the cause of human suffering was ignorance. He expressed this through his doctrine of the Four Noble Truths. His doctrine of Four Noble Truths gave birth to the Buddhist religion. His Four Noble Truths were as follows—**One:** The nature of suffering. Birth of suffering, illness and suffering, death and suffering, sorrow, lamentation, pain, grief and a despair are suffering, separation from what is pleasing is suffering. **Two:** suffering's origin, this is the Noble truth of the origin of suffering; it is his craving which leads to renewed existence, accompanied by delight and lust, seeking delight here and there, that is, craving for sensual pleasures, craving for existence, craving for extermination. **Three:**

suffering cessation. This is the Noble truth of cessation of suffering; it is a reminder less fading away and the cessation of the same craving, the giving up and relinquishing of it, freedom from it, and non-reliance on it. **Four:** the way leading to the cessation of suffering. This is the Noble truth of the way leading to the cessation of suffering; it is the eight-fold path; that is, right view, right intention, right speech, right action, right livelihood, right effort, right mindfulness, and right concentration. Needless to say, Buddhist teachings influenced many scientific minds of the future.

The "music of the spheres"

Anaximander brought on the consciousness of **the music of the spheres**. These celestial spheres included the moon and Venus, Mercury, the Sun, Mars, Jupiter and Saturn. He believed that these celestial bodies emitted sound frequencies similar to the seven strings of a lyre. Anaximander could probably be considered the father of cosmology. In addition, he began mapping of the stars, mapping of the general area where he lived (which eventually became a major contribution to geography), was the inventor of the Gnomon sundial, which we still use today, and was a major player in the political arena.

Pythagoras of Samos

"There is geometry in the humming of the strings."

—Pythagoras of Samos (c.580-572 BC - c.500-490 BC)

Next came Pythagoras of Samos. Pythagoras was born around **580-572 BC** on the Greek island of Samos. Pythagoras was a student of Thales and Anaximander. Pythagoras settled in Babylon, where for 20 years he taught and studied astronomy, mathematics, and astrology. During this time two other great men also lived, Confucius in China, and Sid Arthur (Buddha), in India. In order to understand the man a little better here are a few of his well-known quotations. "Number is the ruler of forms and ideas, and the cause of gods and demons. Every man has been made by God in order to acquire knowledge and contemplate. Geometry is the knowledge of the eternally existent. Number is within all things. There is geometry in the humming of the strings. Time is the soul of the world."

In 530 BC Pythagoras went to Croton where ***he founded a religious and philosophical secret society devoted to exploring the mysteries of numbers.*** This was not a brotherhood as many believe but a community of families, both men and women.

Pythagoras accepted the Indian idea of reincarnation that the souls of boat people and animals passed into other bodies after death. He considered himself a reincarnated soul of Euphorbus, a Trojan hero.

Pythagoras and his group were strict vegetarians and wore no garments made of wool. Pythagoras divided his disciples into two groups: listeners, and scientists and mathematicians. The scientists and mathematicians were entitled to ask questions and express their own opinions, but they had to participate in a program of daily meditation and physical exercise before they became listeners.

The Pythagoras music theory was based upon observations of a monochord, one of the most commonly used instruments of those times. The monochord was a box with a string on it placed under tension. One could change the notes the monochord played by moving a sliding bridge up and down. When Pythagoras played the monochord, the purpose of his exercise was not to become a musician, but to find the relationship between the length of the string in the pitch of the note. In this manner he thus discovered octaves or the frequency relationships of different notes. Today, of course, this has evolved into spacing on guitar frets and other neck-related instruments, sound healing and the relationship of sound and different organs in the body.

Pythagoras' theorem from 550 BC still is used to solve today's scientific problems!

Pythagoreans' cosmology probably got its roots from Anaximander. ***Pythagoras also wanted to calculate the structure of the universe*** and thus based his cosmology on numbers. He felt at the beginning of time there existed only One, a monad. Initially, the one existed alone and when he inhaled space, creation was thus formed. From there other monads were created which exist at various points of space and time, and their true arrangement created Harmony.

The Pythagorean principle of harmony examined the relations between the right sides of triangles and, therefore, **the Pythagorean theorem was created, (in any right triangle, the sum of the squares of the two sides A and B is equal to the square hypotenuse C), so: A squared + B squared = C squared**

Now, 2500 years later, this theorem has proved to be invaluable for solving various problems in all branches of science and also in engineering and art. Early experimentation with **triangular numbers, representing 3, 6, 10, etc. and square numbers representing 4, 9, 16,** led to the discovery of

irrational numbers, or numbers that cannot be expressed as a fraction; an example would be Pi, which equals 3.14159265. Obviously, numbers like Pi have no ending in their division and no rational pattern. Rational numbers on the other hand, can be divided into fractions or rounded out. These basic theorems are used today in algebra and other forms of math.

The Pythagorean society itself, located in the village of Croton, was disliked by the locals there, so the members were driven out. Pythagoras spent the remaining years of his life in Metapontum, where he died in 480 BC. The legends about his death are not clear, but they state that he died in some bizarre way.

Anaxagoras

"Men would live exceedingly quiet if these two words, mine and thine were taken away."

—Anaxagoras

The theory of vortexes was already being explored far back in 467 BC by Anaxagoras!

Anaxagoras was born into a wealthy family in Clazomenae, an Ionian Greek city in **500 BC**. He grew up during the turbulent wars of the Greek city states against the Persian Empire. Around 467 BC he wrote a book called *The Nature of Things*. **In this book he began to explore the theory of vortexes, which were observable in the form of many galaxies throughout the heavens. He also believed that water was a primal element of the universe.** After observing the fall of a large meteorite near Aegypotomi, he came up with the **correct explanation of the solar eclipse**. He also gave scientific accounts of meteors, rainbows and the sun. He was also known in history to be the first scientist tried for heresy. He was accused of denying the gods and sympathizing with the Persians. One of his admirers at that time was a student name Pericles.

Empedocles

The nature of God is a circle of which the center is everywhere and the circumference is nowhere."

—Empedocles

Empedocles, born in **490 BC**, **introduced the attraction repulsion of forces**, which he called strife and love, and classified the elements into the terms, Earth Air and Fire, as water had already been classified as a basic

element by Aegypotom. Empedocles was a student of Pythagoras. He also thought that mind created the universe.

Leucippus

"Nothing occurs at random, but everything for a reason and by necessity."—Leucippus

Leucippus founded a school called Abdera, of which he had a famous student known as Democritus.

Parmenides was thinking about the great illusion or hologram back in the 5th century BC!

Leucippus himself also lived in **the fifth century**. His great mentor was Zeno, who possessed a great interest in the paradoxes of space. In those days there was a fear of everything coming from a blank void. This was called the denial of Parmenides. ***Parmenides was probably the first person in recent times to really scientifically ponder the great illusion or hologram.*** In his opinion, truth lay in the perception that existence is, and error in the idea of nonexistence can also be. Nothing can have a real existence but what is conceivable; therefore, to be imagined and to be able to exist are the same thing, and there is no development. The essence of what is conceivable is incapable of development, is imperishable, immutable, and indivisible. What is obvious, mutable, all development, is a delusive phantom. Perception is thought directed to the pure essence of being; the phenomenal world is a delusion, and opinions concerning it can only be improbable.

There never was just nothing.

Parmenides continues to consider in the light of this principle the consequences of saying anything is. In the first place, it cannot have come into being. If it had, it must have arisen from nothing or from something. It cannot have risen from nothing; for there is no nothing. You cannot have arisen from something; for there is nothing else than what is. Nor can anything else besides itself come into being; for there can be no empty space in which it could do so. Is it or is it not? If it is, then it is now, all assemblance once. In this way Parmenides refutes all accounts of the origin of the world. These were very strong thoughts for these times. Remember, this was long before the Big Bang theory. Even today everything is still quite theoretical. It seems while Thales was the father of modern physics, Parmenides was the **father of modern day**

cosmology. As we glance into the 26,827.5-year rotation of our solar system around Alcyone, the vibratory frequencies approaching man's DNA definitely carried an urge for man to seek from where he came. **This was the beginning of the Piscean age.** Remember, the souls of that time had a stronger belief in God than themselves. Borderline thinking often created major problems with the bulk of society living in fear of the great Creator. This, of course, would be in the later days of the great Inquisition. But even in those times you could be tried for heresy. The penalty even then was execution.

Parmenides

"What is is; for it is to be, but nothing it is not. These things I bid you ponder."—Parmenides

Parmenides was born in **520 BC** in the Greek colony of Elea. He descended from a wealthy family. Parmenides was the founder of the school of Elea. Zeno was one of his greatest students. Also, Socrates in his youth was a good friend of Leucippus. It seems that with this powerful philosophy, Parmenides certainly would have been a great influence on all the up-and-coming philosophers and scientists of that time. To call him controversial would be an understatement.

Leucippus, therefore, deducted from his agreement with Parmenides, that the atom must be the smallest particle in the formation of all matter. The accumulation or the summation of matter must have some form of energy to direct its assemblance or construction. He believed that the accumulation was caused by a vortex principle, and was the first to state clearly the principle of causality, by stating that all events have preceding causes, and nothing happens at random; everything happens out of reason and necessity. ***As most of us know now, the law of causality went on to state that energy cannot be created or destroyed, as stated by Democritus.***

Democritus

"Nothing exists except atoms and empty space; everything else is opinion."—Democritus of Abdera (c.460 BC - c.370 BC)

Likely the 1st attempt at a unified field theory that included quantum entanglement—in 460 BC!

Leucippus' student Democritus was born in the city Abdera in **460 BC**. His father was very wealthy and he spent most of his inheritance traveling the

world to satisfy his thirst for knowledge. Obviously, an early trust funder. **Democritus extended Leucippus' theory of atoms to say that primordial soup was also made of a solid body of atoms in empty space.** These atoms varied in size and shape, arrangement and position and contained no void. Furthermore, his atoms contained few substances, as the world was continuously being created from atoms. **When a group of atoms became isolated, a vortex is produced from random collisions of atoms.** Consequently, the atoms of irregular shape become entangled and move toward the center. According to Democritus, everything in the universe including our planet is compounded of atoms and void. ***This was probably the first description of a unified field theory, coupled to quantum entanglement!***

Socrates

"An honest man is always a child."—Socrates

Another notable at this time, **460-399 BC**, was Socrates; although not scientific in nature, he was considered an irritating philosopher. He had a keen sense of humor and his teachings were that of the virtues of love and self-knowledge. He considered mankind not as evil or willingly bad, but that most of their misgivings were a result of ignorance. He spent most of his time in Athens. Socrates was convicted of leading young minds of Athens away from democracy and sentenced to death, to which he drank a mixture of poison hemlock.

Plato

"Courage is knowing what not to fear."—Plato

Plato, **428-347 BC**, was a student of Socrates. It was during Plato's time that the structure of matter entered scientific thinking. Plato came from a wealthy family and became a friend of Socrates at the age of 20. Because he was involved with Socrates, eight years later he had to leave Athens for fear of his life, as he was one of the young students.

The Five Platonic Solids.

After roaming the world for 12 years, Plato returned home near Athens and formed a school called the Academy, which lasted for 900 more years. Although previously discovered by others, ***it was at the Academy that Plato***

formally assigned the geometric shapes to what became known later as The Five Platonic Solids, which are the tetrahedron, the hexahedron, the octahedron, the dodecahedron, and the icosahedron.

Aristotle

"Change in all things is sweet."—Aristotle

One of Plato's students was Aristotle. Aristotle was born in Greece in **384 BC**. His father Nicomachus was the personal physician to king Amyntus of Macedon. Born into a trained aristocracy, at 18 years old he left home and went to Athens to study under Plato. Aristotle wrote many treatises which included physics, metaphysics, morality, politics, consciousness, biology and poetry. He established the world as he saw it into five basic elements: Fire, which is hot and dry; Earth, which is cold and dry; Air, which is hot and wet; Water, which is cold and wet; and Aether, which is the divine substance that makes up the heavenly spheres and heavenly bodies. He also wrote about causality and causes, chance and spontaneity, which today are looked at very carefully in quantum physics.

Aristotle's influence was greatly expanded after he was invited in 342 BC by King Philip of Macedonia to educate his son Alexander, who became known later as Alexander the Great!

Archimedes

"Give me a lever long enough and a fulcrum on which to place it, and I shall move the world."
—Archimedes

"There are things which seem incredible to most men who have not studied mathematics."
—Archimedes

Archimedes of Syracuse (**287 BC-212 BC**) was a great mathematician, engineer, inventor and astronomer. He was almost an earlier incarnation of Leonardo da Vinci. He developed many types of war machines, one of which was capable of focusing light at great distances, thereby setting ships on fire. Archimedes spent most of his life in Syracuse, where at an early age he was befriended by King Hiero II. Archimedes had gained the attention of the King by solving various problems plaguing the monarchy. One of them was to determine if the Crown that King Hiero had ordered as a gift to his favorite Temple was made of pure gold and not mixed with silver, a common practice in those days. Archimedes imagined that if you were to drop a piece of metal in water, it would displace the water depending upon its density. Since gold is

heavier than silver, it would displace more water. With this method he then found the Crown to contain some silver. The king then granted him permission to visit libraries of Alexandria.

Archimedes' fascination with spirals lead others to find that spiral shapes contain Chi, a focusing mechanism for life force energy.

The great library of Alexandria was founded in Egypt in 332 BC by Alexander the Great, student of Aristotle. This great library was the best collection of the best scientific and literary works from all over the world. It was here that he gained much knowledge of geometry, which he then applied to studies of nature and the shapes of nature. ***His most fascinating subject was that of spirals.*** His early achievements included the block and tackle, the windlass, and a spiral wind-driven water pump, called today "The Screw Pump" that consisted of a screw type mechanism inside of a long hollow tube. This allowed farmers to extract water from rivers, pipe it uphill and water their crops, without being subjected to the inconsistent natural rain of nature.

The Archimedes spiral brought into consideration in nature **the formula of Phi** which can be found in the natural order of petals on a rose or the shape of the shell of a snail. Today these spiral shapes are now recognized by various inventors and scientists as containing ***a focusing mechanism for life force energy often called Chi.*** In the human form this energy is highly contained at the base of the spine and when properly channeled, moves up and down the spine causing what is called the release of "kundalini energy."

Archimedes also studied the shape of the parabola, which he probably used in his burning glass weapons to focus the sun's intense heat against Marcellus' wooden ships, thereby setting his entire fleet on fire. The parabolic lens is used in all of today's modern telescopes and also to focus energies in many solar heating and power-generating devices.

Many companies today use these types of geometry to develop devices that balance the body's energy, offsetting the negative forces of ELF (extremely low frequency) and other toxic energies. The **Pyradyne Nuclear Receptor and Pyradyne Andromedan Projector** are just two examples of this now patented technology.

Archimedes created the powers of 10 numbering concept.

A myriad was the largest number used by the ancient Greeks, equivalent to our 10,000s. **Archimedes developed a new scheme using powers of 10 that**

described 10 to the 20th power. He used this to calculate the number of grains of sand in the space occupied by the entire universe. His numbering system held steadfast in our society until 1938 when an American mathematician, Milton Sirota, invented a number called googol. The googol itself is a relatively small number—it is just 1 followed by 100 zeros—so he his uncle Edward Kasner came up with another number called "googolplex" that is followed by a googol of zeros, or 10 to the googol power. These numbers may seem absurdly high, but in the world of subatomic physics they are quite necessary. In the documentary *Cosmos*, physicist and broadcast personality Carl Sagan estimated that writing a googolplex in base-10 numerals (i.e. "10,000,000,000..") would be physically impossible, since doing so would require more space than the known universe occupies.

Archimedes died in 212 BC during the second Punic war between the Greeks and the Romans. General Claudius Marcellus had attacked Syracuse from the sea several times. In each attack he was driven back by Archimedes' war weapons, including the catapult, the burning device, (which consisted of a large number of angled hexagonal mirrors), and many other weapons including a catapulted winch, which when fired upon a ship, literally turned it over. Because of these amazing weapons, Marcellus had great respect for Archimedes. So he laid siege to the city as that was the only way to defeat it. When he finally landed onshore, one of the soldiers accidentally killed Archimedes, not knowing who he was. General Marcellus was very dismayed over the death of his valiant foe.

Claudius Ptolemaeus (Ptolemy)

"I know that I am mortal and the creature of a day; but when I search out the massed wheeling circles of the stars, my feet no longer touch the earth, but, side by side with Zeus himself, I take my fill of ambrosia, the food of the gods."—Ptolemy

Another interesting scientist of the times was Claudius Ptolemaeus, better known as Ptolemy. Born in a town called Ptolemais Hermiou in 83 AD he contributed to mathematics, astronomy, geography and astrology. ***His ideas were accepted at the time as the earth being the center of the universe and all the planets and stars rotating around it. His ideas, although wrong on astronomy, remained intact for another 1,400 years!***

Called the Ptolemaic geocentric system, this was a good example of a wrong theory that worked. The great church at the time embraced his planetary system and persecuted those who found it incorrect, claiming heresy—as from a point of high ego it would be quite easy to accept the earth as the center of the universe. **This was a good example of when religion and science**

crossed paths in a negative way. Today, when looking at the controversies of stem cell research, we see another example of a religious and scientific stalemate. When dealing with the human ego, it seems that the passage of time still interferes with the results of science.

The Mayan Civilization

Mayan calendars as accurate as our atomic clocks!

The field of science remained somewhat undisturbed until the 16th century. From the time of Christ until science began to pick up momentum, found the establishment of the Catholic Church and the Protestant churches. Mankind appeared to be focusing on religion until once again science felt the stimulation of forward-moving minds. However, **another continent away, another civilization rose and fell. The Mayans were noted as practitioners of medicine and mathematics; the peak of their society ran between 200 AD and 900 AD. All across central and southern Mexico, Belize, Guatemala and Honduras, once great cities were found in varying degrees of degradation and ruin.** The cities of the Mayans are laid out with an engineer's perfect touch, oriented to the natural landmarks of the night sky. In this way Mayan astronomers were able to plot the skies and heavenly movements within it, and in so doing would become **master timekeepers developing not one, but two calendars nearly as accurate in measuring time as our own atomic clocks.** There's been much conjecture and speculation throughout academic circles that the Mayans possessed knowledge perhaps even present day science is still are not familiar with, considering their superior building and road development skills were far advanced for their time. ***They had skills that allowed them to lift and fit perfectly car-size blocks of stone, each weighing several tons, to great heights*** and placements. Yet they did this without the block and tackle, and pulleys of Archimedes, or a still greater invention, the wheel itself.

An interesting discovery was made with the discovery of Mayan King Pacal's tomb. The mummified remains of the great ruler were complete with a number of jewelry items, trinkets and with apparent meaning. **Around the skull was discovered a headpiece similar to armor made of metal, but only covering a portion of his skull, situated over the hypothalamus or brain center.** Subsequent evaluation of metals of this headpiece suggests some strange magnetic properties. Conjecture has been made on whether this was some form of amplifier or extrasensory perception,

telekinesis or clairvoyance. In other words, was this a device that allowed a form of quantum entanglement between King Pacal's brain mind, and his desires or aspirations?

The Mayans had many calendars, because they saw time as the meshing of sacred spiritual circles. So while our Gregorian calendar organizes space for social administrative and commercial purposes, the Mayan calendars had a religious element. For example, each day had a patron spirit, and so could be good for travel but bad for business. One of their several calendars was called the Long Count. It was set up around 355 BC and had its chosen starting date of 0.0.0.0.0, which corresponds to August 11, 3114 BCE. And on December 21, 2012, *the Mayan Long Count calendar* will read 13.0.0.0.0

Our numbering system is based on 10. But the Mayans was based on 20, also known as a vigesimal system, so most of the slots in their calendar had 20 potential numbers (0 to 19). In a vigesimal system the number in the second position is 20 times that of the numeral; the number in the third position is 20×2 that of the numeral; the number in the fourth position is 20×3 times that of the numeral, etc. The place values were 1's, 20's, 400's, 8000's, 160,000's and so on. In the Mayan language 20 was called kal, 400 was called bak, 8000 was called pic, 160,000 is called Calab.

The Mayan Long Count Calendar most likely won't end until year 3095.

The calendar reads a little like the odometer in your car's speedometer, which runs 0 to 9. The extreme right slot, up five slots, we counted the days, and when it got to 19 days, (0.0.0.0.19), it would reset to zero, and the next slot across the left would increase by one (to 0.0.0.10). So 0.0.0.0.1 was one day and 0.0.0.1.0 was 20 days. Therefore 0.0.1.0.0 was about one year, and 0.1.0.0.0 was about 20 years and 1.0.0.0.0 was 400 years. On December 21, 2012 the Mayan Long Count calendar will read 13.0.0.0.0.

The time between 0.0.0.0.0 and 13.0.0.0.0 is about 5,126 years. That was the starting point back to 3114 BC. If the resetting point is based on 20, then reaching 13 leaves another gap of 7 still to go before resetting. ***This period would then extend far beyond 2012. Theoretically, it extends out to the year 3095.***

In addition, the Mayans calculated that the solar year lasted 365.242 days and in actuality modern-day astronomers have found the solar year lasts 365.242198 days. The Mayans were able to measure the lunar cycle as well. The Mayans observed the moon for 2,329 days and found throughout this time

there were 81 new moons. Thus they calculated the lunar cycle lasted 29.53086 days.

Another interesting fact was that the Mayan written numbering system resembles our own Morse code. In their pictorial language, the letter "G" is quite prominent. It symbolized many things including the meaning of God and represented our galaxy, the Milky Way. It also represented zero or the beginning and could even have represented a version of the Big Bang theory. It also represented energy in its essence.

Even ancient Egyptians and Mayans knew of the Milky Way's 26,827.5-year cycle around the Pleiades' Alcyone sun!

There are some great similarities between the older Egyptian culture and the Mayans. Long before the 16th century both civilizations seem to have a detailed knowledge of the solar system's rotation around the central sun Alcyone in the Pleiades, which is today called "procession of the equinox." The Mayan calendar had depictions of 56-year cycles evolving into the 26,827.5 year-cycle and subsequent subcycles of the rotation period of our solar system around our central sun. The Egyptians depicted this in the circumference of the base of the great pyramid, expressed in pyramid inches, which are approximately the same as our inch.

Quetzalcoatl

Long ago some very intelligent visitors from other planets came to Earth to teach science and medicine.

The evidence here clearly points to ***a possible Pleiadean or extraterrestrial connection.*** Quetzalcoatl was, according to Mayan legend, a great scientific influence who visited them some time in the early founding of their civilization. ***Quetzalcoatl obviously was some extraordinary visitor who taught the Mayans medicine, science and various forms of mathematics and astronomy. If they had an understanding of levitation, for example, this would explain some of the amazing abilities of both Egyptians and the Mayans in their construction,*** whereby very heavy objects were very carefully placed in high and lofty positions. Civilizations having these types of visitations have often had a quantum leap in technology afterward. Even in

our own present day, reverse engineering of retrieved extraterrestrial craft is becoming commonplace knowledge.

Imhotep

The Egyptian counterpart of Quetzalcoatl—who served under the Egyptian Pharaoh Djoser who reigned in Egypt from 2632-2611 BC—was Imhotep. He designed the step pyramid at Saqqara in Egypt. He also was **the founder of Egyptian medicine, engineering, poetry, and astrology**, was the vizier and minister to the king, and founded a martial arts form of Jen Ki. Today he has been elevated to some form of god also in the Egyptian culture. He, too, may also have had some form of extraterrestrial contact.

Looking back at the two civilizations, only one survived—the Egyptians. The documentation of Imhotep is pretty accurate and quite accessible. However, Quetzalcoatl's presence goes further back in history. Possibly because the Mayans were an intelligent but simple race. After Quetzalcoatl's departure, the Mayans also may have elevated him to some possible godlike being. At some point after that, sacrifices to the gods became a part of the Mayan culture, and probably for this reason, eventually led to its destruction. There've been many cases whereby basic cultural races have been visited by extraterrestrials and then visitors, upon their departure, elevated to gods.

Nicolaus Copernicus

"Finally we shall place the Sun himself at the center of the Universe. All this is suggested by the systematic procession of events and the harmony of the whole Universe, if only we face the facts, as they say, 'with both eyes open.'"

—Nicolaus Copernicus

Now, going back to the European front, let's examine the life of Nicholas Copernicus who lived from **1473 to 1543**.

After 1400 years of false belief, someone finally says Earth rotates around the Sun!

Nicholas was born on February 19, 1473 in a house on St. Anne's Street, now known as Copernicus Street, in the city of Torun on the Vistula River in the

region of the Kingdom of Poland. His father was a wealthy copper trader who died 10 years after he was born. After that, his maternal uncle Lucasz Wazzenrode, a Catholic priest, would later become Prince Bishop of the archbishopric of Warmina, the young Nicholas under his protection and saw to his education and future career.

In 1491 Copernicus enrolled at the Krakow Academy where he probably first encountered astronomy with Prof. Albert Brudzewski. His main curriculum at the time, however, was civil and canon law. Canon law is internal ecclesiastical law governing the Roman Catholic Church, and is considered the oldest form of law, adopted by the apostles, at the Council of Jerusalem in the first century. Nicholas' family consisted of several bishops and, therefore, he was raised in the church, where there were great expectations of him becoming a bishop.

However, Nicholas, after receiving his law degree, decided to pursue astronomy. During this time **he wrote his first 20-page book simply known as the Commentariolus. In this handwritten book Copernicus categorically proclaimed that the 1,400-year-old Ptolemaic geocentric system was wrong! As an alternative solution he proposed a heliocentric system, in which the planets rotated around the sun** in near perfect circles.

In this he stated:

- A.** All celestial circles do not have just one common center.
- B.** The center of the earth is not the center of the universe, but only of gravity and the lunar orbit.
- C.** All spheres revolve around the sun, as if that were the middle of everything, so the center of the world is near the sun.

Had Copernicus, with his strong religious stature, gone public with this information, it would have flown about as far as a lead balloon. This would have been pure heresy. One of the religious leaders, Martin Luther himself, was convinced that everything in the Bible must literally be true.

By 1533 the manuscript of **Copernicus' great book, DeRevolutionibus, was completed.** It contains over 200 pages, **but was not released until the day he died on May 24, 1543.** This was a great testament to the paranoia that the edicts of the church sent to the scientists of the day. What's even more interesting is that the Spanish had already visited the Mayan civilization and could have brought back valuable scientific knowledge—instead of the gold they plundered from the Mayan, Aztec and Inca

civilizations. This is a good example of where greed held back the growth of consciousness.

Johannes Kepler

"Truth is the daughter of time, and I feel no shame in being her midwife."

—Johannes Kepler (1571 - 1630)

Johannes Kepler was born on December 27, 1571 near Stuttgart, Germany. His grandfather, Sebald Kepler, had been lord mayor of that town, but by the time Johannes was born, the Kepler family's fortune was on the decline. His father Heinrich Kepler, earned a precarious living as a mercenary, and he left the family when Johannes was five years old. His mother Katharina Guldenmann, was an innkeepers daughter, and a healer, and herbalist who was later was tried for witchcraft. Born prematurely, Johannes claimed to have been a weak and sickly child. He was, however, a brilliant child; **he often impressed travelers at his grandfather's inn with his phenomenal mathematical ability.** As you can plainly see here, with a father who was a hired killer, and a mother who was tried for witchcraft, Johannes had a few obstacles to overcome in the process of becoming a famous scientist. To further compound his growth, as a child he had smallpox, which left him with weak vision and crippled hands.

Kepler's thought: "Geometry is one and eternal, a reflection of the mind of God."

Kepler got married April 27, 1597 to Barbara Mueller, a 23-year-old widow with a young daughter. His marriage brought with it both the joy of birth and the tragic death of his first two children. Adding to his family problems, was a dramatic change for the worse in the political environment of his country of residence. Today known as the Counter Reformation, 18-year-old Archduke Ferdinand assumed rule of the country. During a meeting with the Pope, he reportedly was about to lead his country back to Catholicism. Upon his return from Italy, he published a series of edicts, in which he ordered the closing of all Protestant churches and schools and commanded all reformist teachers and preachers, to leave Graz, (Austria), under the threat of death. We think today things are bad in the world; how would you like to be living under these circumstances?

In the summer of 1599, **just after his little daughter died and the political clouds in the Graz's sky became threateningly dark, he started to contemplate the ground plan of one of his principal works, the idea of harmony. On the assumption that God would not have created anything without a plan, Kepler was convinced that the answers to those questions exist.** He was certain that the plan existed on, *"Geometry is one and eternal, a reflection of the mind of God."* Kepler assumed that geometrical forms could be presented to the terms of special musical relationships, that he believed were given to humankind as a gift from heaven.

Kepler soon met Danish astronomer, **Tycho Ottesen Brahe.** Tycho was said to possess one percent of the entire wealth of Denmark and held large social gatherings in his castle. He kept a dwarf named Jepp, who he believed to be clairvoyant, and as a court jester who sat under the table during dinner. He also had a tame elk, which later died, after drinking a lot of beer during one of the dinner parties and then falling down the castle stairs.

Tycho found a new star in 1572 and called it "nova" or new.

On November 11, 1572, Tycho observed a very bright star, now named SN 1572, which unexpectedly appeared in the constellation Cassiopeia. Because it had been maintained since antiquity that the world beyond the Moon's orbit was eternally unchangeable, other observers held that the phenomenon was something in the terrestrial sphere below the moon. However, in the first instance Tycho observed that the object showed no daily parallax. Parallax is an apparent displacement or difference of orientation of an object belonging to different lines of sight, as measured by the angle or semi-angle of inclination between these two lines. Nearby objects have a larger parallax than more distant objects when observed from different positions, so parallax can be used to determine distances, commonly used in astronomy. This implied it was at least further away than the moon and those planets that do not show such parallax. Moreover, he found the object did not even change position relative to the fixed stars over several months, as all planets did in their periodic orbital motions, even the outer planets for which no daily parallax was detectable. This suggested it was not even a planet but a fixed star in the stellar sphere beyond all planets. He published a small book, *DE Stella Nova* in 1573, thereby coining the term "nova" for a new star. Today we classify this star as a "supernova" and we know that it is 7,500 light years from Earth.

Upon Kepler's meeting with Tycho Brahe, he became his assistant until he died. Upon Tycho's death, Emperor Rudolf of Austria made Kepler the

Imperial mathematician. Kepler tried to finish Tycho's work, but because it was based on the Ptolemaic system, his heart wasn't in it. He turned back to his own work using Mars as his field of study. He determined that, after 40 failed attempts, Mars had an elliptical orbit and all planets had an elliptical orbit. He also determined that the Sun has a magnetic influence on the solar system. **In 1605 Kepler formulated his first and second laws: One:** A planet moves in an elliptical orbit, the Sun occupying the focus point. **Two:** The radius vector—that is to say, imaginary line joining the center of the planet to the center of the Sun—sweeps out equal areas in equal times. According to the second law, a planet would be at its quickest pace when it was nearest to the Sun.

Once again, Kepler's life was interrupted. Kepler's mother went on trial for witchcraft. Luckily, his prestige with the King and the court saved her life. The court limited her sentence to viewing the instruments of torture, and on October 1621, after being in custody for 14 months she was set free. In the midst of his mother's trial on May 15, 1618, **Kepler discovered a third local planetary system.**

Kepler thought planets emanate sounds—today this is called "Music of the Spheres."

Basing his observations on data collected by Tycho, working diligently as an astrologer, which gave him more time to observe the planets, and considering that planets emanated sounds, today called "music of the spheres," he concluded his third law. **Kepler's third law gives mathematical relationships between periods of revolutions of the planets (T) and their mean distances from the Sun (R),** stating, "the cubes of the mean distances of the planet from the Sun are proportional to the squares or other periods of revolution." The statement is presented by the equation:

$$R^3 = kT^2 \text{ where } k = \text{constant}$$

René Descartes

"When writing about transcendental issues, be transcendently clear."
—René Descartes (1596-1650)

"Every problem I solved became a rule, which served afterwards to solve other problems."
—René Descartes

René Descartes was born at La Haye, Touraine, now known as Descartes, France in **1596**. When he was just one year old, his mother Jeanne Brochard died of tuberculosis. His father Joachim was judge of the High Court of Justice in Rennes. At eight years old he was sent to the Jesuit College at La Fleche, where he met sixteen-year-old Marin Mersenne. They remained close friends until death.

At the Jesuit college, founded by Prince King Henry IV, especially for training of gentlemen commoners, he spent five years studying science, elementary philosophy and theology. His favorite subject was mathematics. While still in school, Descartes learned about Galileo's discoveries of the moon's spots in Jupiter's satellites. In 1612 he went to the University of Poitiers and graduated four years later with a law degree. Mersenne, meanwhile, went into the clergy and was ordained in Paris. Descartes was never married and his personal life was full of danger and adventure. He is known for his gambling, soldiering (having joined the army of the Duke of Bavaria), and luck with women—although he never married. He was the third son of Joachim Descartes, a Counselor Of the Parliament of Rennes in Brittany. In 1622, while living in France, he invested his property inheritances into bonds and had a very comfortable financial life.

In April 1629 he joined the University of Franeker, and the next year under the name of "Poitievain," he enrolled in Leiden University to study mathematics. During this time he had an affair with a servant girl named Héléne Jans, with whom he had a daughter Francine who was born in 1635 and died five years later in 1640 in Amersfoort, at which time he was teaching at Utrecht University.

Thought is "entangled" with the creature (quantum entanglement).

Descartes is often regarded as the first modern thinker to provide a philosophical framework for the natural sciences. Descartes believed in only a single principle: thought exists. Thought cannot be separated from me, therefore I exist. If I doubt something, then someone else is also doubting. With this stated principle of his beliefs, he is unconsciously arriving at the conclusion of the duality of thought and its relationship, and dualism, regarding another thinking creature—some form of unconscious connectivity. ***This, today, is known as "quantum entanglement," where by someone thinks something simultaneously with someone else, and the two relate this déjà vu instantaneously.***

The Pineal gland may be the seat of the soul; Tibetans believe mind sees the real (invisible hologram) and destroys what we visually see (the illusion).

Descartes also made **the wax argument**, in which he stated that if you take a piece of wax in a particular shape and melt it, it still is wax in another form. Looking back at the basic ideas that Descartes had at the time, it's an interesting comparison to what the Tibetans say today in that "energy follows thought, and the mind is a slayer of the real." Furthermore, Descartes suggests that the pineal gland is the "seat of the soul" for several reasons. First, soul is unitary, and unlike many areas of the brain the pineal gland appears to be unitary (microscope inspection reveals it to be for the two hemispheres). Second, Descartes observed that the pineal gland is located near the ventricles. He furthermore believed the cerebral spinal fluid acting through the nerves controls the body, and the pineal gland influences this process. Today in modern times we call this process, as the cerebral spinal fluid moves through the spinal cord, "the raising of the kundalini" and thus this process shifts consciousness and awareness into an inner and higher state.

The mathematical calculus used by Isaac Newton was fathered by René Descartes. He believed that physics could be reduced to geometry. Thus he spent the next 10 years of his life **developing a new branch of mathematics called "analytical geometry."** By definition, analytical geometry permitted expression of geometrical shapes in analytical form. A cornerstone of **his invention is the so-called "Cartesian system of coordinates:** The system is made of two mutually perpendicular reference lines with the horizontal and vertical lines called respectively **X axis and Y axis.** Each line is divided into equal intervals extending from zero to infinity, with zero, or the origin .0 .0 at the intersection of the reference lines. Originally, the lower lines were called false roots, but later this changed into negative numbers, which of course are used all through physics and mathematics today.

Next, **he envisioned all of the planetary and stellar motion to be influenced by vortices.** Although today we consider gravity, centripetal force and centrifugal force as astronomical force mainstays, we also consider black holes, dark matter and Einstein Rosen Bridges, all vortex-related, also.

Marin Mersenne

Many scientists and others died due to the Inquisition.

Meanwhile, Descartes' lifelong friend, Marin Mersenne, who was associating with many of the scientists of that time including René, was on a collision course with the Catholic Church. The "black list" of his sins included his close association with Descartes. Marin returned from Paris, where he had been ordained as a minister to Holland. Here he encouraged Descartes to work more on his vortex theories. However, **he realized this was the wrong time to work on this as the The Inquisition was taking the lives of many forward-thinking people.** As the months passed, Descartes became less interested in science. He established a royal relationship with Elizabeth of Bohemia to protect himself from his scientific and philosophical beliefs. Elizabeth, at the young age of 20, became his disciple and closest friend over the following years. He also became friends with young Swedish Queen Christina.

Meanwhile, Mersenne became the next victim of the Roman Inquisition. They censored his mail and put pressure on him not to communicate with the scientists at the time. On September 1, 1648, they found 60-year-old Mersenne dead, a victim of suicide. His lifelong friend, Descartes, died on February 11, 1650 with pneumonia, while serving as a Counselor to Queen Christina.

Isaac Newton

"If I have been able to see further, it was only because I stood on the shoulders of giants."
—Sir Isaac Newton (1643-1727)

Isaac Newton was born on January 4, 1643 at Woolsthorp Manner in Woolsthorp-by-Colsterworth, a hamlet (small settlement) in the county of Lincolnshire in the East of England. At the time of Newton's birth, England had not adopted the latest papal calendar and, therefore, his date of birth was reported as Christmas Day, December 25, 1642. Newton was born three months after the death of his father. Born prematurely, he was a small child, and his mother, Hanna Ayscough, reportedly said he could fit inside a quart mug. Isaac's mother remarried Rev. Barnabas Smith, when Isaac was three years old, leaving him in the care of his maternal grandmother Margery Ayscough. Young Isaac did not like his stepfather and threatened to burn down the house of his mother and father with them in it. He had a brief affair at 19 years old with Ann Storer while working in an apothecary, just before he went off to Trinity College, Cambridge. At that time the college teachings were based on those of Aristotle, but Newton preferred to read the more advanced ideas of modern philosophers such as Descartes, an astronomer such as

Copernicus, Galileo and Kepler. As a matter of fact, Newton was born on the year of Galileo's death. His main hobbies at the time were building mechanical devices, including the model of the mill powered by a mouse, clocks, and the fiery kites. In his very early school years, Newton did not like the company of boys, and was quite a fighter. He was also quite flirtatious with the girls at that time. However, he never married.

In the summer of 1662, at 19 years old, Isaac Newton went through a religious fervor and made a list of his private sins in order to purge himself. One of them was, "Threatening my father and mother to burn them and the house over them."

After a term of residence at Cambridge, Newton was elected a scholar on April 28, 1664 and received a bachelor of arts in January in 1665—although the University of Cambridge prepared undergraduates for only two professions, the church and medicine. However, at the time the University gave them freedom to search for whatever field they felt comfortable with. His early studies included the works of Kepler, Galileo and Descartes. He also read works of his contemporaries Henry Moore and Robert Hooke.

Law of Elasticity.

Robert Hooke later became a friend and adversary of Isaac Newton. **He is known principally for his law of elasticity, which defines how far a material can be stretched before it returns to its original size, and for his work as the father of microscopy.** It was **Hooke who coined the term "cell"** describing the basic unit of life. He was also an architect and worked with Christopher Wren, who was another architect and scientist who designed 53 London churches, including St. Paul's Cathedral. Hooke and Wren rebuilt London after the great fire of 1666 and both men were designers of the Royal Greenwich Observatory, by which all time measurements today are standardized on Greenwich Mean Time.

In 1666 with the outbreak of the Bubonic Plague, the University of Cambridge closed its doors temporarily and **Newton** went home. He began working on improving his favorite subject—mathematics—and **created two of his best inventions, the calculus of fluxions and the myth of fluents, or differential and integral calculus as we know these two branches of mathematics today.** The names "fluxion" and "fluent" were given by Newton, because at the time he understood the variation of quality between the two values as a motion of flow. Newton expressed these motions in respect to time, which itself flows uniformly and constantly. **Newton along with**

Gottfried Leibniz are given credit for the invention of calculus. There is still an ongoing debate today as to which man made the most in major contribution.

Objects only reflect color from already-colored light; they have no actual color themselves.

He then did experimentation with prisms, trying to duplicate some of the work of Descartes, observing that **color is the result of objects interacting with already-colored light, rather than the objects generating the color themselves.** *He also suggested that light itself was composed of both particles and waves, which was verified centuries later.* He began to study gravitation and is well known for his confirmation of Kepler's laws of the planetary system.

Newton returned to Cambridge in 1667 at the age of 24. He was elected a minor fellow at Trinity College, and for the next year he was admitted as a major fellow. He was granted an M.A. in October 1669 at the age of 26 and was appointed Lucasian professor. He succeeded Isaac Barrow, the first incumbent of the chair; it is generally believed that Barrow resigned his professorship so that Newton might have it. Today Stephen Hawking holds that chair at Princeton.

Newton's 3 Laws of Motion

Newton was very well known for his three laws of motion. The first law states that an object at rest tends to stay at rest, and that an object in uniform motion, unless acted upon by the net external force, tends to stay in motion. Newton's second law states that force on an object equals the rate of change of its momentum with time. Newton's third law states that for every action there is an equal and opposite reaction.

Newton also **invented the reflecting telescope**, which had a much better and clearer image than the excessively long refracting telescope. **This concept eventually evolved into the Casse-grain telescope, which is the principle of the Hubble telescope.**

Newton wrote a treatise on his inventions called *The Principia*. This book probably would've never been published had it not been financed by Edmund Halley, after which the famous Halley's comet is named.

In the 1690s Newton wrote a number of religious tracts dealing with the literal interpretation of the Bible. He was also from 1689 to 1690 a member

of the Parliament of England. In 1696 Isaac became director of the Royal mint, in charge of England's great re-coining. As Master of the mint in 1717 Newton unofficially moved the pound sterling from the silver standard to the gold standard.

In 1698 he was also made justice of the peace, a position known as the Kings attorney, and in the next year cross-examined over 200 witnesses, in various criminal trials. In February 1699 he had 10 prisoners waiting to be executed.

Newton was knighted by the Queen and became Sir Isaac in 1705.

Newton died in London on March 20, 1727 and was buried in Westminster Abbey, the first scientist to be accorded this honor.

Christiaan Huygens

"The world is my country, science is my religion."—Christiaan Huygens

Christiaan Huygens was born in the Hague April 14, 1629, the son of Constantijn Huygens. He belonged to a prominent Dutch family with the traditional diplomatic service to the House of Orange. His father was a man of many skills. He was talented in science, drawing, music composition, and a great poet. His father was a great friend of Mersenne and Descartes, so he was exposed to science at a very early age. Christiaan studied law and mathematics at the University of Leiden.

Wave-particle duality: the quantum side of light.

Huygens continued working on the theory of light and ***brought forth a better understanding of the wave-particle duality, or the quantum side of light.*** He also extended modern calculus and in 1655 ***discovered the first ring of Saturn and the first of Saturn's moons, Titan.*** He also invented the pendulum clock, which was a tremendous upgrade to clocks at the time, which often lost 15 minutes every 24 hours. In the year 1666 Huygens moved to Paris where he held a position at the French Academy of Sciences under the patronage of King Louis XIV. While there he also ***invented the tubeless telescope.*** In 1673 he carried out experiments with internal combustion and ***designed a very basic internal combustion engine*** fueled by gunpowder, although he never successfully built one in 1675, and Huygens patented a pocket watch. He also invented numerous other devices, including a 31-tone-

to-the-octave keyboard instrument which divided the octave into 31 equal steps, similar to Eastern music, which allows more movement in the tempo.

Spirituality and science.

Huygens also believed in extraterrestrial life and life in other worlds. In those days, the word contactee was unheard of, so when men and women at the time felt some higher influence, it was usually attributed to some form of angelic communication. Because of the religious anxiety at the time, these types of thoughts and feelings were mostly kept to oneself. It is only by looking back on the historic roots of science and the personalities of the science contributors themselves, and basing a judgment upon today's times, that we are able to see into the more intricate details of ***the web of spirituality and science.***

Science has since named after Christiaan the Huygens probe (the lander for the Saturnian moon Titan), a crater on Mars, a mountain on the moon, and **the Huygens-Fresnel principle, a simple model describing disturbances and wave propagation.**

Emanuel Swedenborg

"In the spiritual body moreover, man appears such as he is with respect to love and faith, for everyone in the spiritual world is the effigy of his own love, not only as to the face and the body, but also as to the speech and the actions."—Swedenborg

Emanuel Swedenborg was born February 8, **1688**. His father, Jesper, was a bishop in the Lutheran Church. However, he got in trouble by proclaiming that angels and spirits were present in everyday life.

Swedenborg graduated from the University in Uppsala, (the oldest university in Sweden located near Stockholm) in 1709. There he studied physics, mechanics, philosophy and wrote poetry. After traveling through the Netherlands, France and Germany, he returned to Sweden where ***he worked on his ideas, which included building a submarine and the design of a flying machine.*** In science ***he believed that matter was produced by some spiral motion of energy. Today, that is part of the principle of modern String Theory.***

On May 23, 1790 the newly crowned Queen Ulrika Eleonora ennobled the families of Sweden's bishops. Being the oldest male of the family, Emmanuel received a seat in the House of Nobles. Emanuel was well-versed

in mining and smelting, and received a permanent seat on the Board of Mines which left him financially free for the rest of his life.

He then **began to study how matter relates to spirit**. He continued studies of anatomy and physiology and began writing a series of books, called *Regum Animale*, (The Animal Kingdom, or the Kingdom of Life).

After Swedenborg walked away from physical science, the spiritual world opened up to him.

At 55 years old he completely changed his life. He resigned from The Board of Mines and **walked away from science completely**. He began to have **visions of Christ** and began to do works of the Lord. His first experience was in April of 1745, when Swedenborg was dining in a private room at a tavern in London. By the end of the meal, a darkness fell upon his eyes and the room shifted character. Suddenly he saw a person sitting at the corner of the room, telling Swedenborg, "do not eat too much!" Swedenborg, scared, hurried home. Later that night the same man appeared in his dreams. The man told Swedenborg that he was the Lord, and that he had appointed Swedenborg to reveal the meaning of the Bible, and that he would guide Swedenborg in what to write. The same night **the spiritual world was opened to Swedenborg**.

It is not uncommon for initiates of higher orders or brotherhoods, in this case possibly The Great White Brotherhood, to come to men and women of powerful character, often who are seen as overachievers. **Madame Blavatsky had a similar experience in 1875**, when she saw a master of her dreams, participating in a Royal Parade in London. He later befriended her, and became known as the master KH, (Koot Hoomi Lal Singh). She wrote *Secret Doctrine*, which brought the understanding of metaphysics to the West. One of her students, Alice Marie Bateman (Alice Baily), wrote a further series of books which clarified even further the deep metaphysical and scientific teachings of the older orders.

Swedenborg gained psychic abilities that were verified!

There were three **well-known incidents of the psychic ability** reported in literature about Swedenborg. The first was in July 29, 1759 when during a dinner in Gothenburg, he excitedly told the party, that at six o'clock there was a fire in Stockholm 300 miles away, and that it consumed his neighbor's home and was threatening his own. Two hours later, he exclaimed with relief that the fire stopped three doors from his home. Two days later, reports confirmed the

statement to the precise hour Swedenborg first expressed information, and everything was correct. The second was in 1758 when Swedenborg visited Queen Louisa Ulrika of Sweden, who asked him to tell her something about her deceased brother, Augustus William. The next day, Swedenborg whispered something in her ear that turned the Queen pale and she explained that this was something only her brother and she could know about. The third was a woman who had lost an important document, and came to Swedenborg asking for a recently deceased person to tell him where it was, which he was said to have done the following night.

Swedenborg was sharply opposed to the Christian doctrine of the Trinity as three persons, the concept of one God being three separate persons; the person of the Father the person of his Son, and the Person of the Holy Spirit **he believed that all three were one in Christ, and Christ was one within us all.**

Thus, we close this chapter with a beginning of science and the gradual infiltration of spirituality, that seemed to be somewhat of an influence on all those mentioned.

Chapter 4: The Coming of Electricity and Magnetism

The Cornerstones of The Quantum World

Every time I look at a \$100 bill, I am reminded of two things. The first being that Benjamin Franklin was not only a big shaker and mover, but he was the first scientist to be recognized in the new birth of America. Along with John Adams and Thomas Jefferson, Benjamin Franklin designed the great seal of the United States. His contributions to the field of electricity launched some great scientists worldwide on the quest of "what is electricity?" Even today, there are still many discoveries to be made about electricity.

Benjamin Franklin

"A learned blockhead is a greater blockhead than an ignorant one."—Benjamin Franklin

Benjamin Franklin was born on Milk St. in Boston, Massachusetts on January 17, **1706**. His father Josiah Franklin was a soap and candle maker. Abiah Folger was Benjamin's mother, and Josiah's second wife. Josiah's marriage produced 17 children, of which Benjamin was the 15th child—the youngest son. Benjamin's parents wanted him to be a member of the clergy, but because they were not financially strong, Franklin's schooling ended when he was 10 years old. He was forced to work for his family; therefore, he continued his education by reading intensely.

Benjamin Franklin created one of the first social networks called "Junto" to discuss ideas of the day.

In 1727 Benjamin Franklin, 21, **created the Junto, a group of "like-minded aspiring artisans and tradesmen who hoped to improve themselves while they improved their community."** The Junto (also known as the **Leather Apron Club**) was a discussion group for issues of the day; it subsequently gave rise to many organizations in Philadelphia. Reading was a great pastime of the Junto, and so they pooled their money to buy books, and created the Library Company of Philadelphia in 1731. Today the Library Company is a great research and scholarly library with 500,000 rare books, pamphlets, and more than 160,000 manuscripts.

Franklin established a common law marriage with Deborah Reed in 1730. Together they had two children, the first, Francis Folger Franklin, born October 1732, died of smallpox in 1736. Sarah Franklin, nicknamed Sally was born in 1743. She eventually married Richard Bache, had seven children and cared for her father in his old age.

In 1733, Franklin began to publish the famous *Poor Richard's Almanac*, under the pseudonym of Richard Saunders. Some of Poor Richard's Proverbs were "A penny saved is a penny earned," and "Fish and Visitors Stink in Three Days." "The last one reminds me of the unconscious tourists who visit Laguna Beach every summer, causing one of our own proverbs, "Tourists go home."

Benjamin Franklin, experimenting with kites, wet strings and keys, learned a lot about electricity. When flying kites in electrical storms, Franklin was smart enough to stand on an insulator so that he would not become electrocuted. However, scientists at the time, when duplicating Franklin's research, failed to properly insulate themselves, and were electrocuted. On October 19, 1752 Franklin wrote a set of directions to explain how this experiment was conducted:

"When rain has wet the kite twine so that it can conduct the electrical fire freely, you will find it streams out plentifully from the key at the approach of your knuckle, and at this key the Phial [or Leyden jar] may be charged—and from electric fire thus obtained spirits may be kindled, and all the other Electric Experiments may be performed which are usually done by the help of the rubbed glass globe or tube; and thereby the sameness of the electrical matter completely demonstrated."

Rubbing one body against another transfers energy between them.

Franklin was **the first to give polarity, coining the terms "positive" and "negative" to electricity.** Positive charges appear when one rubs a glass rod with silk, whereas negative charges arise after rubbing a rubber rod with fur. Conversely, two rods having electrical charges of the same sign will repulse each other. Therefore, it is possible to make a very important conclusion known today as **the basic Law of electrostatics. This concludes that like charges repel each other and unlike charges attract each other.** This, furthermore, was formulated by Franklin into **the principle of conservation of electric charge.** According to this principle, rubbing one body against another does not produce electric charges, but rather transfers them from one body to another.

Michael Faraday

"I am busy just now again on electromagnetism, and think I have got hold of a good thing, but can't say. It may be a weed instead of a fish that, after all my labor, I may at last pull up."—Michael Faraday

Michael Faraday was born in Newington Butts, Southeast London, England on September 22, 1791. **He was an English chemist and physicist (or natural philosopher, in the terminology of the time) who contributed to the fields of electrochemistry, electromagnetism and chemistry.** At 14 years old he became an apprentice to George Riebau as an errand boy to bookbinder and bookseller and during his apprenticeship he read many books, including one by Isaac Watts, "The Improvement of the Mind" and he enthusiastically embraced the principles of this tome. At age 20, in 1812 at the end of his apprenticeship, Faraday attended lectures by **the eminent chemist Humphrey Davy** of the Royal Institution and the Royal Society.

After Davy damaged his eyesight, Faraday became Davy's assistant. During this time during a special study of chlorine, he discovered two chlorides of carbon. He also succeeded in liquefying several gases, investigating alloys of steel and platinum, and produced several new kinds of glass intended for optical purposes. A specimen of one of these heavy glasses afterward became historically important as a substance in which Faraday detected the rotation of the plane of the polarization of light, when glass is placed in a magnetic field, and also as the substance which was first repelled by the poles of a magnet.

Faraday left Davy's employ after an incident with Davy's wife, Jane Apreece. In the class-based society in England at the time, and because Faraday came from a poor family, he was not considered a gentleman. When Davy went on a long tour of Europe, he asked Faraday to join him with the duties of a valet or servant. Jane refused to treat Michael as an equal, so he left the employ of Davy. However, because of the trip, he made several friends from the European scientific community at the time.

Michael Faraday invented the first electric motor far back in the 1st 20 years of the 1800s!

Faraday's greatest work was probably with electricity and magnetism. **By using the voltaic pile, he was able to construct experiments whereby he ran currents through straight wires and coils, and observed the deflection of**

a compass needle. This gave him ideas to produce motion from electricity and a subsequent magnetic field, and eventually he invented the first electric motor. Still later, he found that rotating externally the rotor of his motor, produced electricity, thereby giving birth to the modern DC generator. In 1845 Faraday also found that many materials exhibit a weak propulsion from a magnetic field—a phenomenon called "diamagnetism." This is commonly demonstrated today—when you go to a company similar to Edmund Scientific and via a small coil that when you plug it in, it causes a small aluminum disc to float in the air above it. In addition, Faraday worked with charge energy within a battery and contributed to another electrical phenomenon called "capacitance." Today any modern capacitor or condenser is measured in farads, microfarads, nanofarads, pico farads, etc.

He also found that magnetism would deflect light, and established a relationship between light and magnetism. He tried to push the field further by involving gravity, but with the instrumentation and tools available at the time it did not allow him much success. His ideas, though, were the beginning of the theories of relativity.

Faraday also found that the plane of polarization of linearly polarized light can be rotated by the application of an external magnetic field aligned in the direction that the light is moving. Today the term is called "The Faraday Effect." Today, this work is used in the detectors, or measuring the the activity of photons when demonstrating quantum entanglement. Faraday demonstrated that the charge only resided on the exterior of the charge conductor, and the exterior charge had no influence on anything enclosed within a conductor. Later on in the works of Nikola Tesla this was further defined as "the skin effect."

You can use the Pyradyne Starr Orb to cancel dangerous ELF waves.

Because it was later found out these energies were harmful, devices such as the **Pyradyne Starr Orb** were developed to negate these energy-robbing ELF frequencies (or extremely low frequencies which harm human cellular production), which were found to move along on the surface of the wire, radiating harmful energies. **The Starr Orb negates these frequencies by shielding them from the outside environment. This effect is called the "Faraday cage"** which today is used in screening rooms around strong electromagnetic and high-frequency generators.

Michael Faraday was married to Sarah Barnard on June 12, 1821. In July of the same year, Faraday formally joined the Sandemanian Church which

was a branch of the Protestant Church. He developed a strong spiritual unity with the church, and although he had reached a fairly high income bracket, he chose to donate his money to helping the poor. In 1832 the University of Oxford granted Faraday a Dr. of Civil Law Degree. During his lifetime, he twice rejected knighthood, although he was a friend of the Queen. Faraday died at his house in Hampton Court on August 25, 1867. He had previously turned down burial in Westminster Abbey, but he was given a memorial plaque near Isaac Newton's tomb. Faraday was interned at the Sandemanian plot in Highgate Cemetery.

Andre-Marie Ampere

"The future science of government should be called 'la cybernétique'." (1843)
—Andre-Marie Ampere

Andre-Marie Ampere was born in Lyon, France on January 22, **1775**. His father, Jean Jacques was a trader of various goods. At an early age, Andre learned to speak Latin and studied mathematics. He also **began to dabble in metaphysics**.

With the coming of the French Revolution of 1789, Ampere's father, a defender of the King, was executed by the Republican troops in 1793. Witnessing this left young Ampere emotionally scarred for life. During this emotional time he met and married Julie Carron on August 7, 1799. The following year they had a son, who they named after Ampere's late brother Jean-Jacque. The next four years of his life were happy until July 13, 1803, when his wife Julie died succumbing to an illness that tormented her since the birth of her son. He remarried again, but that marriage turned out to be a disaster.

Magnetism is only electricity and motion.

Ampere gave private tutoring in mathematics and chemistry in Lyon, where he continued to live. He then moved to Bourg in 1801, as professor of physics and chemistry. Ampere, like Faraday, **studied the relationship between electricity and magnetism**. Part of Ampere's discoveries were also initiated by **Christian Oersted**, a Danish scientist who first observed a compass needle moving near a voltaic pile. **Ampere used these studies to further develop the science of electromagnetism, calling it "electrodynamics."** His main conclusion was that magnetism is only electricity and motion. As

Ampere was able to measure the current going through a coil, the term "amp" or "Ampere" (today this term is used to determine how much electricity goes through your electric meter, therefore determining your electric bill) became a common term along with voltage, which is named after Volta. The current modern definition of Ampere describes the ability of a specified current to deposit a precise amount of a substance, usually silver, on the electrode during electrolysis.

In 1813 Davy visited France. Ampere brought back an example of a new substance that was isolated by Bernard Courtois. Bernard was a chemist that made gunpowder, studied opium and manufactured gunpowder for the French government. There was a shortage of wood ashes from which potassium nitrate was made in the production of gunpowder. As an alternative, the potassium nitrate from seaweed, which is quite abundant on the Normandy and Brittany shores, was being used. Bernard brought Davy an example of a new substance found in seaweed. **Ampere looked at it and found similarities to chlorine. However, Davy got the credit for naming it iodine.**

Ampere died in Marseille on June 10, 1836. He was only 61 years old. When in 1889 Gustav Eiffel built his famous Eiffel Tower, he placed 72 Memorial plaques around the first section of the base, and the name Andre-Marie Ampere was included in this distinguished Memorial. He is buried in the Cimetiere de Monmarte, Paris.

Augustine-Jean Fresnel

Augustine-Jean Fresnel was born in Broglie May 10, 1788 and was a good friend of Andre Ampere. Both men attended Ecole Polytechnique at a very early age. As a physicist he mostly worked in the field of optics, inventing ***the famous Fresnel lens, which allows the construction of lenses of large aperture and short focal length without the weight and volume of material which would be required for conventional lens design.*** Lighthouses typically use the Fresnel lens.

Light is both a particle and a wave.

Fresnel's early work was ***a topical phenomenon called "interference."*** Interference was first demonstrated by the **English scientist Thomas Young in 1801.** Consider two vertical walls inside a box. The first wall has a single small hole, and the second wall has two small holes. By shining a light

through the first hole, it splits into two separate beams and then reflects off the far wall of the box. The reflection is not only a single beam but also breaks up into many reflections or waves. This demonstrates that ***light is not only a particle, but also a wave***—which we will examine in much more detail later on. Fresnel also studied diffraction of light where light bends around small obstacles, creating a breakdown into its color spectrum, i.e., a water droplet on a window pane with the rainbow colors.

In 1817 Fresnel ***turned his attention to the influence of reflection on polarized light and very shortly discovered another optical phenomenon known as "circular polarization." Circular polarization of light occurs when light is directed to a cholesterol liquid crystal. The crystal divides an unpolarized light beam into two polarized beams, one reflected and the other transmitted.*** The reflected beam becomes left circularly-polarized light, while the transmitted beam becomes right circularly-polarized. The direction of polarization of circularly-polarized light continuously changes. It is clockwise in the right circularly-polarized light, and it is counterclockwise in the left circularly-polarized light. This feature differentiates the ***circularly-polarized light*** from ***linearly-polarized light***, in which the direction of polarization remains in the same plane. ***This discovery is very important, as it is used in the detection of polarized light in quantum measurements today.***

William Thompson (Lord Kelvin)

"There cannot be a greater mistake than that of looking superciliously upon practical applications of science. The life and soul of science is its practical application..."—William Thompson

William Thompson (Lord Kelvin) was born on June 26, **1824** in Belfast, Ireland. His father Dr. James Thomson, was professor of engineering at Glasgow University. His father wrote several books on differential and integral calculus. William also attended Glasgow University and around 1841 won the astronomy class prize and a University medal for his essay on the Figure of the Earth.

In 1845 Thompson graduated from Cambridge University as second Wrangler (a Wrangler was one who was head of the class, whereas a wooden spoon was someone who was at the bottom of the class). While at Cambridge, Thompson was active in sports, athletics, sculling, and in winning the Colquhoun sculls in 1843. He also took interest in classics, music and literature, but his real love was science.

Kelvin and Joule—two scientists with SI units named after them.

James Prescott Joule

"It is evident that an acquaintance with natural laws means no less than an acquaintance with the mind of God therein expressed."—James Prescott Joule

Early on he became a friend of James Prescott Joule. Joule studied the nature of heat, and discovered its relationship to mechanical work. This led to the conservation of energy, which led to the development of the first law of thermodynamics. The SI-derived unit of energy, the Joule, is named after him. In science today ***the Joule is largely replacing the BTU (British thermal unit) as a standard of measure of heat energy.***

Impressed by Joule's work, Thompson took the study of heat and its effect on matter (thermodynamics) to a new level. His first work was in describing that the melting point of ice must fall with pressure; otherwise, its expansion on freezing could be exploited in a perpetuum mobile (perpetual motion).

Perpetual motion violates either the first law of thermodynamics, the second law of thermodynamics or both. The first law of thermodynamics is essentially a statement of the conservation of energy. The second law can be phrased in several different ways, the most intuitive of which is that heat flows spontaneously from hotter to colder places; the most well-known statement is that entropy (a measure of disorder of a system) can still increase, or at least stay the same—or in simpler terms, any machine operating in a closed cycle cannot transform thermal energy to work in a region of constant temperature.

In today's times, because of the impending energy shortage or crisis, many inventors claim to have inventions that have a greater-than-unity gain. Science, in an effort to discredit these inventions, will fall back on the first two laws of thermodynamics.

Vibrations are the energy!

Temperature arises from ***the random submicroscopic vibrations of the particle*** constituents of matter. These motions ***comprise the kinetic energy in a substance.*** More specifically, the thermodynamic temperature of any bulk quantity of matter is the measure of the average kinetic energy of a certain kind of vibrational motion of its constituent particles called "**translational**

motions." Translational motions are ordinary, whole body movements in three-dimensional space, whereby particles move about and exchange energy in collisions. Thermodynamic temperature has a null point—**absolute zero**—the temperature at which the particle constituents of matter are so close as possible to complete rest; that is, they have minimal motion, retaining only quantum mechanical motion.

Throughout the scientific world where measurements are made in SI units, thermodynamic temperature is measured in kelvins (symbol K). The Kelvin scale is determined by two points: absolute zero, and the triple point of Vienna Standard Mean Ocean Water (water with a specified blend of hydrogen and oxygen isotopes). Absolute zero—the coldest possible temperature—is defined as being precisely 0 K. and -273.15 centigrade.

Thompson also contributed towards laying the first transatlantic cable in 1857 where he did stress analysis.

In 1884 Thompson delivered a series of lectures at John Hopkins University on electromagnetic waves and the media that was necessary for their transmission. In 1900, he gave a lecture on the Dynamic Area of Heat and Light. He also laid down the groundwork for the photoelectric effect, which describes the ability of the substance to emit photons when it is heated. This was the groundwork for Albert Einstein, who later won a Nobel Peace Prize on this topic.

Thompson was knighted in 1866. He was given the title Baron Kelvin in honor of his achievements and is, therefore, often described as Lord Kelvin. The title refers to River Kelvin, which flows past his University in Glasgow, Scotland.

Lord Kelvin died on December 17, 1907. He was given many honors—the Kelvin scale was named for him, and he made contributions in the field of light, heat, electromagnetic radiation, telegraphy, stress engineering, navel engineering, instrumentation and aeronautics.

Lord Kelvin lived during interesting times. Befriended by Nikola Tesla, Thomas Edison, and Albert Einstein. ***This era was the beginning of the atomic sciences and the great quantum leaps of today's sciences.***

James Clerk Maxwell

"No theory of evolution can be formed to account for the similarity of molecules, for evolution necessarily implies continuous change."—James Clerk Maxwell

A sinusoidal electromagnetic field moves through the ether at the speed of light between 2 perpendicular planes.

Maxwell began his academic career in 1856. His first position was as chairman of natural philosophy at Marischal college, Aberdeen. While there, Maxwell married Frances Mary Dewar, a daughter of the principal of the college. In 1860 he moved on to Kings College, London where he was appointed Chair of Natural Philosophy. He held this post until 1865, where he began to do **his famous work on electromagnetism. He expanded upon Faraday's work, illustrating electromagnetic induction.** In this work he described a sinusoidal electromagnetic field oscillating between two mutually perpendicular planes—today we would call this positive and negative—and he also described this propagation to move through the ether at the speed of light.

James Clerk Maxwell was born on June 13, 1831 in Edinburgh, Scotland. He came from a middle-class well-to-do family. His father John and mother Frances did not marry until they were well into their 30s, which was unusual for the times. James was an only child, having survived an earlier child, a sister Elizabeth who died in infancy.

His first scientific work began at the age of 14, when Maxwell wrote a paper describing a mechanical means of drawing mathematical curves with a piece of twine, and the properties of ellipses and curves with two or more focal points.

In 1847, at the age of 16, Maxwell enrolled in Edinburgh University. There he came under the influence of Prof. Forbes and the metaphysician Sir William Hamilton. In 1849 Maxwell became involved in experiments on color vision in Forbes laboratory. Using a top with adjustable sectors of tinted paper Forbes and Maxwell were able to derive quantitative color equations, establishing red, blue and green as primary colors. In the same year Maxwell established a good relationship with William Thompson, who at the time was seven years his senior.

In 1871 Maxwell was invited to be the first Cavendish Prof. of physics at Cambridge, after William Thompson had turned down the same offer.

Maxwell went on to write a book called "Treatise On Electricity and Magnetism" in which he put forth the famous "**Maxwell's Equations.**" Interestingly enough, in 1861 he created the first color photograph.

On October 2, 1879 48-year-old Maxwell was diagnosed with abdominal cancer and died a month later on November 5, 1879.

Johann Carl Friedrich Gauss

"God does arithmetic."—Johann Carl Friedrich Gauss

"Finally, two days ago, I succeeded - not on account of my hard efforts, but by the grace of the Lord. Like a sudden flash of lightning, the riddle was solved. I am unable to say what was the conducting thread that connected what I previously knew with what made my success possible."—Carl Friedrich Gauss (Quoted in H Eves *Mathematical Circles Squared*, Boston 1972).

Johann Carl Friedrich Gauss was born on April 30, 1777 in Brunswick, Germany. Born into a humble family, Gauss learned how to calculate before he could talk, apparently without any help and knowledge of others. At three years old he calculated and corrected an error in his father's wage calculations. He devised much of his mathematical theory between the ages of 14 and 17. In 1801 he mathematically predicted the orbit of the tiny planet Ceres that was soon discovered by astronomers. Before he was 25 years old he was already famous as a mathematician and astronomer.

Negatively, positively, and flat-curved space.

He developed the **Gaussian complex system of coordinates**, and made a major contribution to Euclidean geometry, first postulated by Euclid around 300 BC. Called postulates, **this system of coordinates made it possible for the establishment of the geometry of negatively, positively and flat-curved space.** Working with Georg Riemann, they developed a form of vector analysis which was the beginning of the mathematics of multi-dimensional space. ***Six decades later, Einstein used these equations for dimensions of his equations in his General Theory of Relativity. Six decades after that the 26 dimensions, that was later reduced to 10, became part of today's String Theory.***

Because of his work in magnetism, the unit of magnetism called the Gauss was named after him. He died on February 23, 1855.

Heinrich Rudolph Hertz

"I do not think that the wireless waves I have discovered will have any practical application."—Heinrich Rudolph Hertz

Continuing on with Maxwell's work was Heinrich Rudolf Hertz born February 22, 1857. He was the first to satisfactorily demonstrate the existence of electromagnetic waves, by building an apparatus to produce and detect very high frequency (VHF) and ultrahigh frequency (UHF) waves. He was born in Hamburg, Germany into a prosperous family and his father Gustav was a senator, and he had three younger brothers and one younger sister. Heinrich had a great gift for languages, both modern and ancient, including Arabic and Greek.

He started college at the University of Munich, and later graduated in 1880 with a Ph.D. from the University of Berlin.

Hertz showed that electromagnetic waves cross right through air from one coil to another.

Heinrich Hertz helped establish the photoelectric effect, in which electrons and photons are emitted from matter after the absorption of energy from electromagnetic radiation such as X-rays or visible light. Electrons, in this case, are sometimes referred to as "photoelectrons." In 1886, Hertz developed the Hertz antenna receiver which was a set of coils, separate from one another, in which one had a spark gap, and the other generated a spark. Once the spark-generating coil (which consisted of a high-voltage power supply, with a spark gap connected to a coil) generated a spark, a second spark was observed on the other coil's spark gap. The unique thing about this was that the second coil was placed away from the first one, therefore demonstrating that ***electromagnetic waves were crossing the medium of air.***

His discoveries would be later more fully understood by others and become part of the new "wireless age": Hertz' experiments explain reflection, refraction, polarization, interference and the velocity of electric waves. The measure of electrical frequency, earlier expressed in (CPS) cycles per second was changed a few years ago into Hertz.

In 1894, at the young age of 36, he died of Wegener's granulomatosis in Bonn, Germany and was buried in Ohlsdorf, Hamburg, Germany.

John Ambrose Fleming

"We completely reject the theory of evolution." John Ambrose Fleming

As you can see, now we are well into the inventions of radio transmissions, light-emitting devices, scientific devices, and were on the

threshold of atomic energy. When I was a young guy growing up in Ann Arbor, I had a television business on the side, along with my paper route. I remember fixing radios that were built just after the turn of the century. I also had repaired the most modern television sets then available. I actually started fixing radios before televisions were on the market. One of my first television sets, a Crosley, had a 1-inch picture tube that went by the part number 1BP1. I was so fascinated by television that I had to find out who invented the vacuum tube. It turned out to be one sort John Ambrose Fleming, born November 29, 1849 in Lancaster England, who lived to be 96 years old, passing on in 1945. The original vacuum tube was called the "thermionic valve," later to be called "Fleming's valves" and finally the vacuum tube.

He enrolled for a BSC degree at University College, London and graduated in 1970. He was also a student of chemistry at the Royal College of Science in South Kensington, London. He invented the two electrode vacuum tube rectifier which he called the "oscillation valve." In 1906 Lee DeForest, an American born on August 26, 1873 in Council Bluffs, Iowa invented the **three-element vacuum tube** called the "triode." This he called the Audion Tube.

The technology developed by these two men was used for 50 more than years, in radio, radar, weapons systems, early rockets, and was only superseded by the transistor. Fleming's diode valve immediately superseded what was called the "cat's whisker" diode in radios at the turn-of-the-century. Fleming was knighted in 1929 and his contributions to the electronic communications and radar were of vital importance in the winning of World War II. Fleming was awarded the IRE (Institute of Radio Engineers) Medal of Honor in 1933 for the "conspicuous part he played in introducing physical and engineering symbols into the radio art" His discoveries were absolutely vital to many of the successes of Thomas Alva Edison.

Joseph J. Thompson

"Could anything at first sight seem more impractical than a body which is so small that its mass is an insignificant fraction of the mass of an atom of hydrogen?"—J.J. Thompson

To me one of the greats of all time was J.J. Thompson. Joseph J. Thompson was born in Cheetham Hill, Manchester England on December 18, 1856. His father, a bookseller, died when he was 16 years old. Thomson first studied engineering at the University of Manchester, known as Owens college at the time. Later he went to Trinity College, Cambridge in 1876. In 1880, he obtained his BA in mathematics, second Wrangler, and MA in 1883. In 1884 he became Cavendish Prof. of Physics. One of his students was Ernest

Rutherford, who became known later on as the father of nuclear physics. Both men were later knighted.

In 1890 Thompson married Rose Elizabeth Padgett, daughter of Sir George Edward Padgett, a physician and then Regius Prof. of physics at Cambridge. He had one son, George Padgett Thompson, and one daughter Joan Padgett Thompson. His son won the Nobel Prize in 1937 for probing the wavelike properties of electrons, and he previously won the Nobel prize in 1906 in recognition of great merits of experimental investigation on the conduction of electricity by gases."

J.J. invented the CRT (used in TVs and monitors).

Thompson is best known for his invention of the cathode ray tube, which later on became a picture tube in the television sets we knew for so long, before the invention of flat-screen technology. His experiments basically consisted of a cathode, located in one end of a tube to which electrons were applied, and an anode placed at the other end of the tube which had a positive charge applied. Halfway in between was a magnetic coil to focus the beam that was created, and just past the anode was a phosphorescent screen. Thompson measured the mass-to-charge ratio of the cathode rays by measuring how much they were deflected by the magnetic field and how much energy they carried. He found that the mass-to-charge ratio was over 1,000 times lower than that of a hydrogen ion (H⁺), suggesting either that the particles are very light or very highly charged. He later formulated the deflection currents as a formula $V=E/B$, where the V equals velocity, the E equals the electron and B equals rate energy. When he removed the magnetic field, he was able to determine the charge-to-mass ratio e/m for the cathode rays. This is important to us today in our development of a device called the X1 healing machine. **He called the electron stream "corpuscles" which were later renamed "electrons" by George Johnstone Stony and Irish physicists.** Stony himself laid out the groundwork of what would later become called the "Planck scale" used in Einstein's Unified Field Theory.

In 1913 Thompson channeled a stream of ionized neon through magnetic and electric fields and measured its deflection by placing a photographic plate in its path. Thompson observed two patches of light on the photographic plate, which suggested two different parabolas of deflection. Thompson concluded that neon is composed of two atoms of different atomic masses (neon-20 and neon-22); that is to say, of two isotopes. This was the

first evidence for isotopes of a stable element. From this development came a device later known as a "mass spectrometer."

Human body is oxygen, nitrogen, carbon and hydrogen. Hydrogen possesses consciousness in the body.

In 1906 Thompson demonstrated that hydrogen has only a single electron per atom. Previous theories allowed various numbers of electrons. This was another important discovery of the fact that the human body is oxygen, nitrogen, carbon and hydrogen. Today we study the fact that hydrogen is the first unit of energy possessing consciousness in the human body; this is, in fact, a massive discovery. Just slightly after this discovery, ***the quantum energy of the valence bands were discovered.***

J.J. Thomson was knighted in 1908, and received The Order of Merit in 1912. He became president of the Royal Society in 1915. Among his students were: John Townsend, whose fame was demonstrated in the Townsend Brown experiments; J. Robert Oppenheimer, whose fame was demonstrated by being director of the Manhattan Project, which created the atomic bomb in World War II; Francis William Aston, William Henry Bragg, Daniel Frost Comstock, and Max Born—just to name a few. He died on August 30, 1940 and was a living legacy to science.

Marchese Guglielmo Marconi

"Every day sees humanity more victorious in the struggle with space and time."
—Marchese Guglielmo Marconi

Marchese Guglielmo Marconi was born on April 25, 1874. He was best known for his development of the radio telegraph system and in 1909 shared the Nobel Peace Prize in physics with Carl Ferdinand Braun in recognition for their contributions to the development of wireless telegraphy.

Marconi was a big fan of Heinrich Hertz who demonstrated, as previously stated, electromagnetic radiation. For a brief time he studied under Augusto Righi, a University of Bologna physicist. He began his work in his attic at his home in Villa Griffon, in Pontecchio, Italy.

His equipment in the beginning consisted of a simple spark-producing oscillator, connected to a long wire above the ground as a transmitter. And as a receiver he used a coherer, which was a small detector used in the late 19 and 20th century. A coherer is a small glass tube that had two electrodes—one at

each end with loose metal filings inside which vibrated under the influence of electromagnetic waves. When the electromagnetic waves resonated on the coil of the coherer receiver, the metal filings resonated at a lower frequency, and thus could form a conduction circuit whereby current could pass through a second coil attached to a battery. The secondary coil would attract a small piece of metal that would rattle a small gong, allowing a person to hear a code. Earlier in the 1840s Samuel Morse established a pattern for the sounds which became known as Morse Code. Not only did Marconi use this system, but also Nikola Tesla. Nikola Tesla often complained that Marconi was stepping on some of his patents.

Marconi sent the 1st transatlantic radio message from Roosevelt to King Edward VII in 1903 when he used a higher antenna.

Around the turn of the century, Marconi began to increase the height of his antennas by suspending them with a kite. On January 18, 1903 Marconi transmitted a greeting from Theodore Roosevelt, then president of the US, to King Edward VII of the United Kingdom, marking the first transatlantic radio transmission.

In 1914 Marconi was made a senator in the Italian Senate and appointed honorary Knight grand Cross of the Royal Victorian order in the United Kingdom. During World War I, Italy was on the Allied side and Marconi was placed in charge of Italy's military radio service.

Marconi died in Rome in 1937 at the age of 63 following a series of heart attacks, and Italy held a state funeral for him. As a tribute, all radio stations throughout the world observed two minutes of silence. His remains are housed in the Villa Griffone, his boyhood home, at Sasso Marconi, Emilia-Romana, which assumed the name in his honor in 1938.

Thomas Alva Edison

"I haven't failed, I've found 10,000 ways that don't work."—Thomas Alva Edison

Thomas Alva Edison was born on February 11, 1847 in Milan, Ohio. He was almost a homeboy to me as he was raised in Port Huron, Michigan. Although he attained 1,093 US patents in his name, as well as many patents in the United Kingdom, France and Germany, Edison was the inventor of the Electric Chair, and killed many animals to demonstrate it, thus leaving in my mind an impression of someone who had somewhat of a cruel streak. Some

of this was manifested in the electric wars (fighting over the commercial use of alternating current, AC, and direct current, DC) that occurred between him and Nikola Tesla.

Edison's company that lost the AC-DC war with Tesla was none other than General Electric!

His education was mostly homeschooling by his mother and in 1866, at the age of 19, he moved to Louisville, Kentucky and became an employee of Western Union. He moved to Menlo Park, California in 1876 and set up his first big laboratory, where he invented the lightbulb, Quadraplex telegraph (a telegraph that would send four separate messages at a time), and carbon microphone. In 1887 there were 121 power stations in the United States, delivering DC electricity to customers. But because DC has such high loss during transmission, Nikola Tesla's power plants began to replace Edison's. George Westinghouse, the entrepreneur who put the brakes on trains, became an adversary to Edison's company, General Electric.

Some of Edison's other inventions included the stock ticker, the photograph, the motion picture camera and the fluoroscope. Edison died of complications from diabetes on October 18, 1931, in his home, "Glenmont" in Llewellyn Park in West Orange, New Jersey which he had purchased in 1886 as a wedding gift for his wife Mina. He was buried behind his house.

Nikola Tesla

"I do not think there is any thrill that can go through the human heart like that felt by the inventor as he sees some creation of the brain unfolding to success.... Such emotions make a man forget food, sleep, friends, love, everything."—Nikola Tesla

Nikola Tesla was the greatest scientist who ever lived who "shed light over the face of the world."

Nikola Tesla was born July 10, 1856 in Smiljan, Croatian Krajina, Austrian Empire. He was an ethnic Serb subject of the Austrian Empire and later became an American citizen. Tesla is who is often described as the most important scientist and inventor of the modern age, a man who "shed light over the face of the earth." I am sure that almost anyone reading this book knows a lot more about Tesla than is written here.

It is well-known that Tesla died of heart failure between 5:00 in the morning of January 1943 in the New Yorker Hotel, New York City. Interestingly enough, early on in my life I did several trade shows in that very same hotel. I made the point to stay in room 3327, a two-room suite, facing the Statue of Liberty, with a huge walk-in shower, on the 33rd floor of the New Yorker Hotel. One of the shows that I did there in which I lectured and gave workshops, was the New Life Expo, hosted by Mark Becker. He would stay in the adjoining suite and we had many conversations about the energies of that floor. Recently, on a visit to New York, I found they had renovated the old Tesla rooms and the suite no longer existed. We have mentioned beforehand that several of the inventors had connections to various brotherhoods. I feel that Nikola Tesla had a very strong extraterrestrial connection. Having been a student of his work since I was a small child, I found several notations from him indicating such a connection.

Tesla's father, Milutin Tesla, was a priest in the Serbian Orthodox church. Genealogical evidence shows that Nikola was a Herzegovian noble, from what is today called Herzegovina in Montenegro. Nikola was the fourth of five children. Tesla studied electrical engineering at the Austrian Polytechnic in Graz around 1875. While there he studied the uses of alternating current. Tesla was said to have a photographic memory. He was also said to have flashbacks, two events that happened previously in his life, and this began to happen during his childhood. Some contactees I have known, including myself, have had similar experiences. In 1880 he moved to Budapest, Hungary to work under Tivadar Puskas, the inventor of the telephone exchange at a company called The National Telephone Company. While there as chief electrician, he invented the loudspeaker. In 1882 he moved to Paris, France as an engineer for the continental Edison Company and invented the induction motor, for which he received patents in 1888.

On June 6, 1884, Tesla arrived in New York City and went to work for Thomas Edison whom he obtained several patents for. Unfortunately, it didn't last long as the \$50,000 that he was promised by Edison for his work never appeared. Instead he was paid a mere \$18 a week, and offered a raise to \$25. He obviously quit!

In 1886 Tesla formed his own company, Tesla Electric Light and Manufacturing. The initial financial investors disagreed with Tesla on his plan for an alternating current motor and eventually fired him from his own company. For the next year he worked as a common laborer until he could save up a small amount of working capital to further his experiments.

In 1887 he developed his Tesla coil and began experimenting with the X-rays that he created using his single-node vacuum tubes, energized by his

high-voltage Tesla coil power supplies. He also used Geissler tubes, invented by Heinrich Geissler in 1857. The Geissler tube was an evacuated glass cylinder with an electrode at each end. This cylinder was then filled with neon, argon, or air ionizable minerals or metals such as sodium. When high-voltage is supplied to the terminals, the gases inside ionize into a spectral color characteristic of that element. These glowing wands demonstrated the location of the very high electrostatic fields created by the Tesla coils.

On July 30, 1891, he became a naturalized citizen of the United States at the age of 35. He established his Houston Street laboratory in New York at 46 East Houston Street. He built the first electronic shakers here, which allowed him to bring his building into its own resonance, thereby almost causing its destruction. Later on in my life, I worked with a company called Ling Temco Vought, which manufactured a similar device for destruction, testing on everything from small motors to large spacecraft.

When Tesla was 36 years old, the first patents concurring the polyphase power system were granted. Tesla served from 1892 to 1894 as the Vice President of the American Institute of Electrical Engineers, the forerunner to the modern day Institute of Electronics & Electrical Engineers (IEEE), which I also had the honor of working with, obviously at a much later time.

Tesla discovered Earth's resonant frequency is about 8 Hz.

When Tesla was 41 years old, he filed the first basic radio patent, which he demonstrated to the US military a year later on the radio-controlled boat, which later became part of the guidance system and torpedoes. A year later he invented the spark plug (called then, the "electric igniter") used today in your car. **He then went on to discover what is today called the "Schuman resonance," or the resonant frequency of the earth which is about 8 Hz.**

Tesla then set up a laboratory in Colorado to carry out various long-distance power transmission experiments. Here he observed unusual signals that he later thought may be evidence of extraterrestrial radio communications coming from deep space. In 1900, with \$150,000, half provided by J. Pierpont Morgan, he began planning the Wardencllyffe Tower facility. The tower was named after James S. Warden, a Western lawyer and banker who had purchased land in Shoreham, Long Island about 60 miles from Manhattan. The facility was never finished as Morgan realized that once the facility was brought into full operation it would be very hard to charge customers for the use of its energy. Instead, today, the nightmarish electrical grid system is in

place, as it is easy to monitor the energy usage and charge customers accordingly.

When Tesla was 81 years old, he completed a "dynamic theory of gravity." He never presented it fully, and often regretted and disagreed with Einstein's work, stating that the original theory of relativity had already been proposed by Rudar Boskovic, a physicist, astronomer, mathematician, philosopher, diplomat, and poet, who lived in Croatia between 1711 and 1787. He also invented a "tell force" weapon. This was a particle beam electromagnetic weapon, similar to a technology used later on in nuclear particle accelerators.

Tesla proposed many things that are currently seen in sci-fi films today—teleportation, being an example—which is now possible on the electron level in quantum physics. No one knows for sure how far he could have gone had he been properly financed and understood. Tesla was ahead of his time and the world was not ready for the full potential which he was willing to give. As a result, he passed on as probably a bitter man because he had a very hard life, financially.

Tesla's white pigeon and her unusual eyes.

One story that is not often told is about Tesla and his white pigeon. He fed pigeons for years and became very attached to a beautiful female white pigeon with light grey tips on its wings that seemed to follow him everywhere. They became very close and when the pigeon was sick, he nursed it back to health. One night when he was lying in bed, over she flew through the window and told him that she was going to be passing on. Tesla observed a very white bright light coming from her eyes, which he said was brighter than any laboratory light you ever created. After she passed, he commented that part of his life went with her. Raising birds myself, I can totally relate.

This covers what I feel is the basic understanding of how we got to the end of the 19th century. In the next section we will explore the atomic age and ***the transformation of the world, being prepared to enter the now present age of quantum holography.***

Chapter 5: The True Beginnings of the Quantum Age

From Classical Physics to the Illusion of Existence

Old physicists don't die; their wave functions go to zero as time goes to infinity.

Until now we have covered science from the time of **Thales**. We have seen mankind come to a realization of the motion in the universe, our position in the universe, and the gradual lifting of the veil of ignorance that threatened various religious views during the early periods of discovery. From here we began to discover the basic laws of classic physics, which dealt with motion and inertia, various forms of labor-saving and calculating devices. And, finally, we have discovered the early history of electricity and magnetism. In physics we look at four different approaches. First, we look at the weak nuclear force, the strong nuclear force, gravity, and finally electromagnetism. **In this chapter we will examine how science left the basic four principles of classic physics and moved into the illusion of existence itself.** Although quantum physics is steps away from the classical approach, there is a thin thread of reality stretched between the two. If we really begin to understand that it's all an illusion, then the holographic principle of the quantum world will give us some firm footing of understanding.

Open the door to the quantum world!

At the turn of the 20th century, the work of science had successfully explained the motion of planets and the behavior of light. What was not understood was why materials conduct electricity, with different levels of resistance, why metals melt at different temperatures, why gases emit light when needed, and why certain substances become superconductors at very low temperatures. ***The door was now open to step through from classical physics to the quantum world.***

And now we have reached the 21st century, the age of the particle zoo. Physics has cataloged dozens of subatomic particles, baryons, mesons, leptons, neutrinos, muons, solitons, gravitons, bosons—many of which challenge our perception of linear time and orderly space, by jumping into existence, then disappearing, and reappearing again, often in waves.

What you see is only a partial reality in a sea of infinite possible realities—you only see part of the entire hologram.

In a quantum universe, phenomena, space and time, are all affected by the Observer. All possibilities exist in the quantum field; and the act of observation collapses them into probability. This was highly illustrated in Schrödinger's cat experiment. Amit Goswami (theoretical nuclear physicist and member of the University of Oregon Institute for theoretical physics, since 1968) developed an idealist interpretation of quantum mechanics, inspired in part by the philosophical ideas drawn from the Advaita Vedanta (end of the Vedas) and Theosophy.

Scientifically, there is no distinction between a "past," "present" and "future." We created these concepts to describe specific "moments" within the hologram of eternity.

It is believed that **the electron is not separate from us, or consciousness.** When a scientist makes an observation, that act affects the flow of electrons, simultaneously in the object and the mind of the observer. Therefore **what he sees, the objective phenomena, is only a partial reality in a sea of infinite potential realities.** The quantum conscious **observation is sufficient to alter the "possibility wave"** which in itself can be the result of a focused "energy follows thought directive" This is called the "observer effect." Physicist Werner Heisenberg said "what we observe is not nature itself, but nature exposed or method of questioning." ***Einstein added to that, "the distinction between past, present, and future is only a stubbornly persistent illusion."***

Quantum mechanics itself is a set of principles and facts that described the physical systems of molecules, atoms, electrons, protons, and other subatomic particles. Among these principles are both a dual wave-like and particle-like behavior of matter and radiation, and the prediction of probabilities and situations, where classic physics fall short. **Quantum theory** provides accurate descriptions for many unexplained phenomena such as black body radiation, stable electron orbits, holographic observations, and particle twins behaving instantaneously, while separated by vast distances. Quantum mechanics has also given insight into the workings of many different biological systems, including brain receptors in protein structures. It also enters into the workings of remote viewing, instantaneous healing, telepathy, and other heretofore

unexplainable occult phenomena. Devices such as the Pyradyne Nuclear Receptor and Projector operate on these newly understood principles. Quantum mechanics also takes us into the world of the behavior of atoms regarding **nanotechnology**, which is an up-and-coming huge new field of science and innovation.

Aura-electromagnetic wave function!

In science in general, a theory is not supported until it is duplicated by others using the same means to achieve an outcome. Scientists being human, often have attitudes, and even though the mechanics of an experiment are the same, different observations are made in the final outcome, which causes disputes within the community about the accuracy of the first experiments. ***Because the human body has an electromagnetic wave function, or aura, and due to the high sensitivity of the measurement world, it is now known that thought energy can have a wave or particle effect, on any experiment regarding electron or photon transition.***

In this chapter we will examine the transition from classical physics to Albert Einstein referred to as "spooky action at a distance." It was just at the turn of the century when Einstein's theory of relativity was really being accepted throughout the scientific world, that a new breed of scientists began to bring forward the true meaning of Einstein's words.

My feelings are that ***Max Planck really kicked the quantum world, supported by his simple but straightforward equations, into high gear.*** He certainly paid the price, both as a human, and as a scientist to bring his work forward, as most of the discoveries were made in Adolph Hitler's backyard, and the two men knew each other well, and Max did not like Hitler at all.

Carl Ernst Ludwig Marx Plank

"A scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die and a new generation grows up that is familiar with it." —Max Planck

Carl Ernst Ludwig Marx Planck was born on April 23, **1858** in Kiel, Germany. His father was a professor of civil law. His paternal great-grandfather and grandfather were both theology professors in Gottingen, his father was a law professor in Kiel, and his paternal uncle was a judge. He was the sixth child in the family, though two of his siblings were from his father's first marriage.

In March of 1887, he married Marie Merck and both moved into her apartment in Kiel. They had four children—Karl, the Twins Emma and Grete, and Irwin. After having been appointed in 1885 by the University of Kiel as a theoretical professor of physics, Planck moved his family into a villa in Berlin-Grunewald, at Wangenheim Strauss 21. Several other professors of Berlin University lived nearby, among them theologian Adolph Van Harnack, who became a close friend of Planck. Soon the Planck home became a cultural center. Numerous well-known scientists, such as Albert Einstein, Otto Hahn and Lise Meitner were frequent visitors. The tradition, which was jointly performing music—had already been established in his home in Munich, when he became a close friend of Hermann von Helmholtz, an earlier pioneer in the healing qualities of music and physics. It was here that Planck, playing the piano, and Albert Einstein playing the violin, began their lifelong careers together, often performing small concerts.

After several happy years, the Planck family was struck by a series of disasters. In July 1909 Marie Planck died of tuberculosis. In March 1911 Planck married his second wife, Marga Von Hoesslin, and in December, Planck's third son Hermann was born.

Planck's son was killed by Hitler because Planck wouldn't agree to help Hitler build the bomb. Say a big thank you to this man!

During the First World War Planck's second son, Irwin was taken prisoner by the French in 1914, while his oldest son Karl was killed in action at Verdun. His daughter Grete died in 1917 while giving birth to her first child. Her sister Emma died the same way two years later after having married Grete's widower. Both grandmothers survived and were named after their mothers. In January 1945, Irwin was sentenced to death by the Nazi Volksgerechtshof for his participation in a failed attempt to assassinate Hitler in July 1944. The Volksgerechtshof (the Nazi People's Court), established by Adolf Hitler, was established to persecute people who went against his false flag operations, including the fake accusations of the persons involved in the Reichstag fire. In today's times, a similar court was set up by ex-President Bush, to persecute terrorists after the false flag operations of the destruction of the World Trade Center. Irwin was hanged on July 23, 1945.

After graduating from Gymnasium (high school) in July 1874, Max wanted to be a musician. One of his professional musician friends suggested that he try some other subject. This reminds me of an incident when I was

working with one of the former Moody Blues, Patrick Maraz, who after hearing me sing, commented "Fred, I suggest you keep your day job."

He then turned to mathematics, and finally in 1877 he went to Berlin for a year to study with physicists Hermann von Helmholtz and Gustav Kirchhoff, and mathematician Karl Weierstrass. During this time he became aware of the work of Rudolph Clausius (January 2, 1822-August 24, 1888) who is considered one of the central founders of the science of thermodynamics. Rudolph was the discoverer of Entropy, which claims that eventually, even though the energy in the universe increases, it eventually must run down, creating some sort of disorder or chaos. Entropy is the second law of thermodynamics, of which the first law states that matter and energy cannot be created or destroyed, but may turn into each other. The third law states, as a system approaches absolute zero, all processes cease and the entropy of the system approaches the minimum value.

In 1894 Planck turned his attention to the problem of **black body radiation**.

In physics, a black body is an object that absorbs all electromagnetic radiation that falls on it. No electromagnetic radiation passes through it and none is reflected—because no light (visible electromagnetic radiation) is reflected or transmitted. In the laboratory, black body radiation is approximated by the radiation from a small hole entrance to a large cavity, a hohlraum. (This technique leads to the alternative term "cavity radiation")—any light entering the hole would have to reflect off the walls of the cavity multiple times before it escaped, in which process it is nearly certain to be absorbed. This occurs regardless of the wavelength of the radiation entering (as long as it's small compared to the hole). The hole, then, is a close approximation of a theoretical black body and, if the cavity is heated, the spectrum of the hole radiation (i.e. the amount of light emitted from the hole at each wavelength) will be continuous, and will not depend on the material in the cavity (compare with emission spectrum).

Radiation is emitted or received in energy packets called "quanta."

As light enters the cavity (hohlraum) through the hole, part is reflected, and part is absorbed on each reflection of the interior walls. After many reflections, incident energy is absorbed. The intensity of black body radiation is greatly affected by temperature, in that the intensity increases with the increase in temperature. When the wavelength is short, the intensity of radiation is small. As the wavelength increases, the radiation intensity increases too, and after

reaching a maximum value, it then decreases (peaks out) and the wavelength decreases. This is also called monotonic behavior. Because there is a saturation value, wherein the intensity of light peaks out, and then falls off, this created a quarry in classical physics. This peaking effect fell under the problems of entropy in physics, but still the parameters were hard to define. To solve this problem, ***Planck assumed that radiation is emitted or received in energy packets called "quanta,"*** with the quanta energy E equal to the product of the Planck constant h at the wave frequency f : $E=hf$

Although this theory was not accepted immediately, it came into use in 1905 in Einstein's prediction of **the photoelectric effect** (why electrons are emitted from metals when you shine a light on them), and also in Bohr's successful model of the electronic structure of atoms in 1913. In the 1920s Planck's followers demonstrated how to express all the new concepts consistently with the use of **the idea of quanta, or packet of light. This laid the foundation for a complete quantum theory.** Unfortunately, Boltzmann, Planck's earlier teacher, could not comprehend this new discovery, and depressed by lack of acceptance of his work, committed suicide while on holiday on the Adriatic coast.

He had been commissioned by an electric company to create maximum light from light bulbs with minimum energy, a problem that still exists today. In November 1900, Planck, relying on Ludwig Eduard Boltzmann—another Austrian physicist known for his work in statistical mechanics and statistical thermodynamics—worked on conservation of energy and entropy, deriving the first version of **the famous Planck black body radiation law.** This didn't make light bulbs any more efficient, but I believe it laid the groundwork for what became known as and previously shown to be, **Planck's constant.**

One of Planck's great contributions to modern science was the establishment of **Planck length.** Although scientific and physical mathematical formulations are kept simple, in this book ***almost all of the mathematics presented by all the scientists from this point on, utilize Planck length or Planck energy formulations as a main staple, to come to an acceptable conclusion.***

Almost all math stated by today's scientists continues to use Planck's energy formulations or Planck length.

In the very beginning of the universe (Big Bang), gravity—now considered to be a weaker force in comparison to magnetism—was probably equal or as

strong as the other forces. At this scale, the universe is unformed and possibly consisting of "foamy" bubbles and wormholes appearing and disappearing into other dimensions. It is expressed as 10 to the -33 cm. This would be about 10 to the -20 times the diameter of a proton. In effect, a size that is only possible to be a *size*. Anything smaller would be non-existent.

In order to come to a conclusion, Max Planck considered some fundamental constants of nature:

General relativity is concerned with the two constants of nature: G (the gravitational constant, which determines the strength of gravity) and c (the speed of light).

Quantum field theory, on the other hand, is concerned with c (the speed of light) and h (Planck's constant, which determines the amount of uncertainty in our knowledge).

Physicists today are attempting to unite these theories into *one theory of quantum gravity*, which would be part of a unified field theory which Einstein never finished. If this happens, we can expect all three constants (G, c, and h) to play a role in the new theory.

- The units G are (distance*distance*distance*) / mass* time* time*).
- The units of c are distance / time.
- The Units of h are distance* mass* / time.

Planck observed that there was only one way to combine these consonants to obtain distance:

- Distance = square root (h^2G/c^3)
- The resulting distance is called *Planck length*.

When the Nazis seized power in 1933, Planck was 74. He witnessed many of his Jewish friends and colleagues expelled from their positions and humiliated, as hundreds of scientists emigrated from Germany. Planck tried to discuss these issues and losses with Hitler, but Hitler would not listen. Because Planck was considered the most knowledgeable German physicist, and had been awarded the Nobel Peace Prize in physics in 1918, for his work in quantum, the Third Reich left him alone. It was said that if he had joined the Nazi party, his son Irwin would not have been executed for his part in the plot to kill Hitler. But he declined and Irwin was hanged. In 1944, his house in

Berlin was completely destroyed by bombs from the Allied raids. After Irwin's death, Planck lost his love of life and died on October 4, 1947.

Looking back at the war years of these extremely talented scientists, and the hard lives they lead, regardless of their financial status, their accomplishments are truly amazing. In July 1949, the three Western powers approved replacement of the Kaiser Wilhelm Institute with the Max Planck Institute.

Looking back to the point where physics really came to the attention of the American public, was the turn of the 19th century. ***Albert Einstein was the first person to summate a large portion of the previous several hundred years of development discoveries. Albert put the P. in physics.*** We were physics itself, comes from the Greek word *physica*, meaning natural things.

Einstein's space-time is curved and planets ride on its tracks. Gravity does not pull Earth around the sun—Earth follows space-time's curve!

Before we go into the intimate details of Albert Einstein's personal life and his scientific accomplishments, let's examine the "big picture" of his major work. Until Einstein entered the picture, the Newtonian concept was generally accepted, regarding gravity as a force that acted directly across empty space between two individual massive bodies. Einstein changed the picture, by adding to the three dimensions of space: length, breadth, and height, a new variable, time. From Newton's point of view, time was completely separate. With Einstein adding time, this ultimately linked into a four-dimensional entity called "**space-time.**" Einstein's theory dictated that a massive body distorts space-time in its vicinity, and the paths of the material bodies and rays of light depend on the curvature of space-time within which they are moving. ***Thus a planet while traveling in its orbit around the sun, is not destined to do so by gravitational force of attraction acting directly between it and the sun, but because it is following its natural path in curved space-time.*** Doctor John Wheeler, who we will cover later, quoted the phenomenon as, "***Matter tells space how to curve and space tells matter how to move.***" To get a quick visual on this phenomenon, imagine a tightly stretched blanket, representing space, and then a baseball, representing the sun, is placed in the center. Obviously the area around the blanket closest to the baseball, will form a depression due to the weight and mass and gravity of the baseball. If you are drawing an imaginary line across the center of the blanket before the baseball was there, that line would represent the path of light and the frequency of time.

Now when you place the baseball onto the blanket, the path of light and the frequency of time deviate from a straight line to a curved line, and then continue on in a straight line again.

Now closing in on gravity itself, as a component to the above-mentioned Einstein relativistic change, a hypothetical elementary particle called the "**graviton**" was added as a mediator to the force of gravity in the framework of quantum field theory. **If it exists, the graviton must be massless** (because the gravitational force has unlimited range) and must have a spin (spin numbers are determined by the rotational rate of a particle, during a quantum interaction, often called spinors) of two.

Gravitons are postulated to coincide with *the quantum field theory*—in particular, the Standard Model, which models the forces of nature with similar particles—electromagnetism and the photon, the strong interaction (strong nuclear force) with gluons, and the weak interaction (weak nuclear force) with the W. and Z. bosons, which will be discussed later.

If this fact were 100% true, then it would be easier to close in on the "Unified Field Theory" which unites electromagnetism with gravity. However, when dealing with high-energy particle research—"renormalization" (first developed in quantum electrodynamics, or QED) which determines the relationship between parameters in quantum theory describing large distance scales, versus small distance scales, a scaling distance, between the two—is **not proportional and, therefore, not valid.**

A gravitational wave is a fluctuation in the curvature of space-time.

In more recent times, *physics has postulated that a gravitational wave is a fluctuation in the curvature of space-time, which propagates as a way of traveling outward from the source.* This was also predicted by Einstein in his theory of general relativity. Sources of gravitational waves include: binary star systems (two stars orbiting each other) composed of white dwarfs (a dying star that has lost its luminosity but retained its heat), neutron stars (a remnant of a star resulting from its gravitational collapse, composed mostly of neutrons), and black holes (a region of space in which the gravitational field is so powerful that nothing including light can escape its pull).

Gravitational waves carry energy away from their sources; in the case of orbiting bodies, this is associated with an inspiral or decrease in orbit over time. This being the case, eventually the orbit of the Earth would decrease until it fell into the Sun. Time here is negligible, as while the Sun and Earth are releasing gravity waves, the size of the decay of the orbit per year is about

1/300th the diameter of a hydrogen atom. With this in mind, gravitational waves are very hard to detect from these distant sources.

Other effects caused by passing gravity waves, could theoretically cause a change in the distance between heavenly bodies, such as the distance to the Moon or the Sun. Remember, ***when planets rotate around the Sun, the rotational path is caused by the curvature of space, which relates to time.*** As a gravity wave passes through an object in a perpendicular direction, the atomic structure will begin to oscillate in a cruciform (from an elliptical orbit to a cross-shaped orbit) manner. When this happens, the natural atomic oscillating frequency changes and as there is a distance and time factor associated with frequency, on a macro scale the space between objects, as well as the observed time relationship, changes.

It has been rumored that an element called **Ununpentium with an atomic number 115** was synthesized between July 14 and August 10, 2003 by a team of Russian scientists at the Joint Institute for Nuclear Research (JINR) in Dubna, Russia near Moscow. Although only a few atoms were detected during a nuclear reaction involving the bombardment of Americium-243 with calcium-48 it was in fact detected, and **falls within the magic number** (extreme isotopic stability due to the nucleon and electron shell alignment) **wherein the nucleus has 184 neutrons.** Once created by this high energy particle accelerator method, the element 115 rapidly decayed by giving off emissions of alpha particles into element 113. The results of this were reported in the February 1, 2004 issue of *Physical Review C*, the major Journal of nuclear physics.

The U.S. has element 115 in small discs. To keep it stable requires alien technology. It can be turned into element 116 that makes waves to allow a spacecraft to move between planets!

According to Bob Lazar, a former Area 51 employee, employed by the Naval Bureau of Ships, the US government possesses 500 pounds of element 115 in the form of several small discs. Because the government supposedly has this much, to keep it in a stable form requires a process, yet to be discovered here on Earth. When bombarded by slow neutrons or protons, element 115 supposedly produces gravity waves, and becomes element 116. Element 116 is unstable and gives up anti-protons. This reaction produces high energy and gravity waves, that allow a spacecraft to move between different planets and star systems. A US patent has been filed on these lines entitled "Method and Apparatus for

Generating a Dynamic Force Field," US patent number 3,626,606. This is indeed an exciting subject and deserves to have more time and energy spent on it. A well-known German physicist Walter Greiner, located at the Institute of Theoretical Physics, J.W. Goethe-Universitat, D-60054 Frankfurt, Germany would be a good place to start.

Russell Alan Hulse and Joseph Hooton Taylor

Gravity waves alter TIME. A dark star emits gravity waves. A dark star as big as Jupiter found in the 1980s—50 billion miles from Earth (quite close)—could alter Earth's space-time when interacting in 2012!

Russell Alan Hulse (born November 28, 1950) and Joseph Hooton Taylor, Jr. (born March 29, 1941) of Princeton University, jointly **won the Nobel Prize in Physics in 1993 for the discovery of the first binary pulsar (dual pulsating stars)**, as mentioned in the above paragraph. Along with emitting X-rays and gamma radiation, Einstein predicted a further admission of gravity waves. Because the observed periods of pulses range from 1.4 ms to 8.5 seconds, some peculiar phenomena may be known to occur. For some pulsars, the regularity of pulsation is as precise as the atomic clock that we use for world time.

Because of the Hulse-Taylor observations, gravity wave detectors have been built and placed here on Earth. They basically consist of a device to detect the expected wave motion called a "Weber bar." The Weber bar is a large solid bar of metal isolated from outside vibrations. Weighing several hundred pounds and up, they are supported by a rubber shock absorber or some other energy absorption device. The bars themselves are resident at frequencies between 2 to 4 kHz. A laser interferometer (interferometry is a technique of diagnosing the properties of two or more lasers or waves by studying that interference pattern created by their superposition), is mounted on the bar, and any deviation other than background noise would **indicate the presence of gravity waves coming from a binary star.** The most sensitive detector is called a Laser Interferometer Gravitational Wave Observatory (LIGO). The LIGO's system operates two gravitational wave observatories in unison: the LIGO Livingston Observatory in Livingston, Louisiana, and the LIGO Ilford Observatory located near Richland, Washington. A second program called LISA (Laser Interferometer Space Antenna), is a proposed joint venture of NASA and the

European space agency to build a laser interferometer gravitational wave detector consisting of three spacecraft in a solar orbit.

Dark Star

As you can see there, is great interest in gravity waves and the research continues. However, there probably might be a better way to measure gravity waves. As before mentioned, ***time is altered in the presence of gravity waves.*** I am sure that most of you out there have noticed that ***time has begun to, "appear to be speeding up."*** Also previously mentioned, gravity waves are emitted from large celestial objects. It has been noted that a planet given the name "Wormwood" by the Russians and "Nibiru" by everyone else, is considered to be a possible "Dark Star" (a star that never was ignited, therefore very cold and only detectable by infrared photography).

To make the theory of a Dark Star factual, **The Infrared Astronomical Satellite (IRAS)** was launched on January 25, 1983 to perform a survey of the entire sky in infrared wavelengths. Its mission lasted 10 months, due to the fact that its telescope cooling system requiring superfluid helium to keep the temperature at about -271 centigrade, was depleted.

While IRAS was still in commission, a heavenly body possibly as large as the giant planet Jupiter, and possibly so close to Earth that it would be part of the solar system, was found in the direction of the constellation Orion. Scientifically this large object is not known to be a planet, a giant comet, or a nearby "protostar" (an object that never got hot enough to become a star).

Dark Star or giant gaseous dark planet only 50 billion miles from Earth?

Dr. Gerry Neugebauer, IRAS chief scientist for California's Jet Propulsion Laboratory and director of the Palomar Observatory for the California Institute of Technology said in an interview, ***"The most fascinating explanation of this mystery body, which is so cold it casts no light and has never been seen by optical telescopes on Earth or in space, is that it is a giant gaseous planet as large as Jupiter and is as close to Earth as 50 billion miles.*** While that may seem like a great distance in earthbound terms, it is a stone's throw in cosmological terms, so close in fact, ***it would be the nearest heavenly body to Earth beyond the outermost planet Pluto."***

Now, according to Einstein, we have this very high-mass dark star/gaseous planet similar in size to Jupiter (*with a smaller planet named Nibiru*

*and possibly many other planets orbiting it)—on a 3,600-year rotational cycle and now starting to get very close to Earth—emitting gravity waves with great intensity, which obviously will factor time as it comes into contact with our timeframe; and considering our positional status, **as we orbit around the star system and the Pleiades, it is quite possible that our perception of reality will cause an increase in the observation of the passage of time.***

Dark Star and Planet Nibiru passing through our Solar System in 2012

Strong gravity waves from the Dark Star will likely affect time within our Solar System by speeding it up.

It will take NASA's New Horizons craft 8+ years to reach Pluto from Earth (in 2015)—it's going out to take a look at the far edges of our Solar System. It used Jupiter's gravity to fling it faster and save 3 years of the total trip to Pluto. New Horizons is now about halfway between the orbits of Jupiter and Saturn, more than 743 million miles (1.19 billion kilometers) from Earth. It will fly past Pluto and its moons in July 2015 before heading deeper into the Kuiper Belt of icy rocky objects on the planetary frontier. (It launched January 19, 2006) Hopefully it will discover details about the Dark Star and Nibiru, too.

*The IRAS satellite (Infrared Astronomical Satellite) was launched by NASA on January 26, 1983. The Dark Star has a wildly elliptic 3,600-year-orbit-cycle. The IRAS satellite photographed it twice with its infrared camera in 1983 (six months apart). **It may be a dark giant gaseous planet as big as Jupiter.** It was spotted 50 Billion Miles away from Earth in the direction of Orion Constellation. That would place it inside our own Solar System! Other optical cameras will attempt to find it using the coordinates provided by IRAS and will try to photograph if possible.*

Planet X was anticipated after the discovery of the Planet Neptune in 1846. The search began in the mid-19th century but culminated at the start of the 20th century with Percival Lowell's quest for Planet X. Lowell proposed the Planet X hypothesis to explain apparent discrepancies in the orbit of gas giants, particularly Uranus and Neptune, speculating that the gravity of a large unseen planet could have perturbed Uranus enough to account for the irregularity.

I inserted this postulation at this point in my dissertation so that as you follow the following chapters, you will see how physics, step-by-step is gradually verifying what is written here.

Albert Einstein

"A human being is part of the whole called by us universe, a part limited in time and space. We experience ourselves, our thoughts and feelings as something separate from the rest. A kind of optical delusion of consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from the prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty. The true value of a human being is determined by the measure and the sense in which they have obtained liberation from the self. We shall require a substantially new manner of thinking if humanity is to survive."—Albert Einstein, 1954

"Great spirits have always found violent opposition from mediocre minds. The latter cannot understand it when a man does not thoughtlessly submit to hereditary prejudices but honestly and courageously uses his intelligence and fulfills the duty to express the results of his thoughts in clear form."—Albert Einstein

Einstein was born on March 14, 1879 in the German town of Ulm. His father was Hermann Einstein, a salesman and engineer. His mother Pauline had only one other child, Maja, who was born two years later. His father, and his uncle Jacob founded a company in Munich in 1880, called Electrotechnische Fabrik J. Einstein & Cie, which then manufactured equipment based on direct current.

Einstein loved Mozart's sonatas. Certain sonatas increase focus.

Einstein, like Planck, was not a particularly bright child. He began to talk after he was three years. When he was four, he was given a compass by his father and was enchanted by the mystique of the fact that it pointed north without any visible means of force. Albert took violin lessons from age 6 to 14, but only at 13 did he really start falling in love with Mozart's sonatas, thereby gaining appreciation for the efforts spent on mastering the violin. I myself can relate to this as I started playing B-flat clarinet in the sixth grade. My teachers hated me because I would not practice. This was because I was too lazy to read notes, but finally I was forced to. After high school several years later, I again picked up the clarinet and began playing by ear. Now I began to understand where my teachers were coming from.

Although Einstein was Jewish, his parents decided to send him to a nearby Catholic school as they thought he could get a good education there. Being the only Jew in the class of 70 students, he felt uncomfortable, but his teachers liked him. Because he was quite honest, the students called him

"honest John." By the age of 12, Einstein had learned Euclidian geometry and entered into the Luitpold Gymnasium (high school).

As Nikola Tesla's AC science soon superseded Edison's DC science, Hermann's business failed, so he moved to Italy, and Einstein remained behind in Germany to finish his education. Einstein soon, however, found himself in Italy, where he tried to get into the famous Federal Institute of Technology, but failed the entrance examination. It was here at the age of 16 that Albert asked himself "what would it be like to travel alongside a beam of light?" This began what was later known as "**Einstein's thought experiments.**"

In the fall of 1896 Einstein entered Zurich Polytechnic. By that time he had already taught himself calculus and achieved a high level of scientific insight. He was mostly involved in physics, and because of his rebellious attitude, would only study subjects that interested him. Here he met Mileva Maric, a fellow student who he later married on January 6, 1903. By missing lectures, however, he was not going to be able to get a passing grade, but his classmate and close friend Marcel Grossman, let Einstein study all his notes; thereby, Einstein could pass his course requirements.

While Einstein was married to Mileva, they had two children, Hans Albert Einstein, born May 14, 1904, in Berne Switzerland, and Eduard, born in Munich on July 28, 1910.

Einstein got his first real job on June 23, 1902 as a 23-year-old probationary Technical Expert, Third Class at the Swiss patent office. During the seven years Einstein spent there, he not only finished his studies, but laid the groundwork for his famous theory of relativity.

Quanta applies both to light and to black body radiation!

Three years later in 1905, he wrote a paper on the photoelectric effect (the release of electrons from the substance of the influence of light or other electromagnetic radiation, first discovered by Heinrich Hertz in 1887). In his paper Einstein demonstrated Maxwell's theory of electromagnetism, and Max Planck's theory of quantum wave packets. He, therefore, concluded that these particles of light would have to have a ratio of energy E , to the frequency f , must be equal to the Planck constant h , thereby ***the concept of quanta is applicable not only to the blackbody thermal radiation, but also to the light.*** The formula would look like this: **$E=hf$**

During that year he wrote four papers that would later have a major impact on the physics world. They were in chronological order as:

1. On a Heuristic Viewpoint of the Generation and Conversion of Light
2. A New Measurement of Molecular Dimensions and the Motion of Small Particles
3. On the Electrodynamics of Moving Bodies
4. Does an Object's Inertia Depend on its Energy Content?

Although Max Planck and Albert Einstein were friends, Planck's view on this early work was that it was an extension of his own work. An American experimenter, Robert Millikan, known for his accurate measurement of electric charge of the electron, spent 10 years in an attempt to show that Einstein's theory cannot be confirmed by an experiment. To his surprise he found out the results of his experiments were in complete concordance with the theory. Einstein then received a Nobel prize for the theory of photoelectric effect in 1921. Millikan himself, because of his supporting work, received the Nobel prize seven years later. **The light quantum later became known as the photon**, so named by Gilbert Lewis, a chemist in 1926!

Gravity affects light—light can bend!

In 1911, Einstein became an associate professor at the University of Zurich. After remaining there for a short time he accepted a full professorship at the German Charles Ferdinand University in Prague. There **Einstein published a paper about the effects of gravity on light, specifically gravitational redshift and the gravitational deflection of light.**

"Doppler red shift" results from the relative motion of a light-emitting object and the observer. If the source of light is moving away from you, then the wavelength is stretched out and light shifted towards the red spectrum. If the light-emitting object is moving towards you, the wavelength is compressed, increases in energy, and moves towards blue. Einstein published the first theories and expanded even more by adding "gravitational red shift." Light moving out of a star, or an object that possesses gravity, is said to have climbed out of a gravity well and is moving uphill. If it has to climb uphill, it requires energy to do so, thereby the light will have a longer wavelength. If it is moving into a downhill mode, or approaching a gravitational object, it will shift towards blue. This to me is very evident when observing lights in the sky, often called UFOs. If you look at the tremendous g-forces that must be experienced by individuals within them, they must alternatively have their own internal gravitational fields. Therefore, during these observations, because of red and

blue shifts, it's quite possible that you can predict whether they are moving towards you or away from you.

The original **red shift or blue shift** work was performed in the mid-19th century by Gustav Kirchhoff, (1824-1887) who discovered that ***all substances absorb the same frequencies of light that they can admit.*** Another German physicist, Joseph Van Fraunhofer (1787-1826), when looking at a prism that was separating light into the seven basic spectral frequencies, noticed that the rainbow was intersected by several very thin black lines. These lines, called Fraunhofer lines, are caused by the absorption of very narrow wavelength bands of atoms in the path of light. Today these discoveries are invaluable to spectral analysis, because they not only show the composition of stars and other objects in the sky, but also allow astronomers to see to which degree wavelengths shift to either red or blue in the Doppler effect.

Light bends!

It was during this time that Einstein also predicted a phenomenon called **Gravitational Lensing**. A gravitational lens is formed ***when light*** from a very distant, bright source (such as a Quasar, a huge galaxy that is very bright and possibly contains a very large black hole at its center) ***is bent around a massive object***, such as a cluster of galaxies, between the source object and the Observer. This phenomenon produces a double image of an object that could not heretofore have been seen at all, as it, the object, was blocked by the galaxy between the Observer and the observed object. This theory only recently was proven in 1979, when the first gravitational lens was discovered by Dennis Walsh, Bob Carswell, and Ray Weyman using the Kitt Peak National Observatories 2.1 meter telescope. Their discovery became known as the twin Quasar, since it initially looked like two identical quasars; it is officially named Q0957+561.

Einstein then postulated that the speed of light was constant, and time must be relative to light; therefore, light is the only fixed frame of reference because it never changes. Einstein then went into one of his thought experiments. Suppose you measure the distance between two poles alongside a railroad track, and then find the midpoint between the two poles. You have a right angle mirror that allows you to see both poles when you stand at the midway point. Now imagine two bolts of lightning striking the two poles exactly at the same moment, in other words, simultaneously. You observe in your mirror that indeed, the two bolts have struck the two poles at the same time.

Coming down the track on a train is a friend of yours who also has a right-angle mirror. When your friend gets to the midway point, lightning strikes the two poles again, and in his mirror your friend observes that lightning bolts do not strike simultaneously. He sees the lightning hit the pole he is moving towards first, and then he sees the other bolt hit the pole behind him. Why? Because the light has a shorter distance to travel from the pole that the train is moving toward, than it does from the pole that the train is moving away from. Yet from your stationary position, you see them strike at the same time. You and your friend cannot agree as to when the lightning bolts hit. Therefore, time is relative.

The slowing of time.

Einstein now developed his relativity factor. The closer you approach the speed of light, the more time slows down and the greater the mass under acceleration becomes. **The slowing of time is called "time dilation."** If you're on board a spaceship traveling at half the speed of light, according to the relativity factor, your time interval between events will be 15% shorter than the time interval between events for someone at rest on Earth. As the object in motion approaches the speed of light, its length or size becomes smaller until at the speed of light it is no longer seen. ***This was called Einstein's special theory of relativity.*** This is where he coined the famous symbol and mathematics of $E=mc^2$, where energy is computed by the mass times the speed of light squared.

$$E = mc^2$$

If you are running at the speed of light, time slows down, and no one will see you anymore! You might even act like a black hole, or travel to another dimension.

Going beyond this is the observation that ***in the upcoming world of quantum physics, an object accelerating up to the speed of light acquires enough mass to theoretically behave like a black hole. This then would mean that it would transform into another dimension, and depending on that transformation, and upon deceleration, reappear somewhere else in this or another (parallel universe) dimension.*** Later on we explore the String Theory of physics and look at time as being relative to the velocity of the observer, and furthermore realize the Plank size of the

Strings, compared to the Plank size of the accelerated object; then the magic of the quantum world will become quite apparent.

Why did the chicken cross the road? Albert Einstein's answer: "Whether the chicken crossed the road or the road crossed the chicken depends on your frame of reference."

Ernest Rutherford—the father of nuclear physics

"In science, there is only physics; all the rest is stamp collecting."—Ernest Rutherford

Ernest Rutherford (August 30, 1871-October 1937) was a New Zealand born British physicist and chemist, who was known as **the father of nuclear physics**. Ernest was the son of James Rutherford, and his wife Martha Thompson originally from Hornchurch, Essex, England. He studied at Havelock School and then Nelson College and won a scholarship to study at Canterbury College, University of New Zealand. After gaining his BA, M.A., and BSc, Rutherford traveled to England in 1895 to get his Ph.D. degree at Cavendish laboratory, University of Cambridge.

While working at Cambridge he built a radio transmitter and receiver with a range of about half a mile. Following the discovery of X-rays by Wilhelm Conrad Röntgen, on December 28, 1895, J.J. Thomson asked Rutherford to join him in studying the effects of radiation on the discharge of electricity and gases. Their joint paper became famous for its outline on **the theory of ionization**. The dangers of ionizing radiation killed several of the famous contemporaries of the time since the dangers were yet to be discovered.

Antoine Henri Becquerel (December 15, 1852-August 25, 1908) accidentally discovered radioactivity, while investigating the phosphorescence and uranium salts. Becquerel wrapped a fluorescent substance, potassium uranyl sulfate, in photographic plates in preparation for an exposure in bright sunlight. However, he found the photographic plates were fully exposed before the sunlight experiment began.

Compressing crystals can create electric potential.

Marie Sklodowska Curie (November 7, 1867-July 4, 1934) was a physicist of Polish upbringing and a French citizen and the first person to win two Nobel peace prizes, while also being the first female professor at the University of

Paris. In July of 1895, a year after she met Pierre Curie (May 15, 1859-April 19, 1906), they were married. Pierre and his brother Jacques demonstrated earlier that ***an electric potential is generated when crystals were compressed.*** Today almost all digital electronic circuits rely on the phenomenon known as ***the crystal oscillator.*** In my own work, I made a further discovery in that just before an earthquake, quartz crystals will expand, and upon this developed an earthquake detector.

Using a crude volt-amp-meter that had been previously developed by her husband, called an electrometer, Marie discovered that the air around uranium causes the air to conduct electricity. Following Henri Becquerel's work, they found that the element thorium also behaved like uranium, and later discovered two new radioactive elements, Polonium and Radium.

Captivated with these new discoveries, **Rutherford** began investigating radioactivity. During this investigation, he **coined the particle terms Alpha** (a particle consisting of two protons and two neutrons bound together into a particle identical to a helium nucleus) **and Beta** (high-energy, high-speed electrons or positrons emitted by certain radioactive nuclei such as Thorium), **and gamma decay** (radiation of high-energy x-ray-like gamma rays) which are part of the decaying process of radioactive elements. At 50% of radioactive decay, the term Half-Life is used and was coined by Ernest Rutherford.

For his early work **Rutherford won the Nobel Peace Prize in chemistry in 1908** and was knighted in 1914. Around 1909, ***while working with Hans Geiger*** (September 30, 1882-September 24, 1945, inventor of the Geiger counter), they discovered that when a fast-moving beam of alpha particles, emitted from a radioactive sample, was first passed through a diaphragm and then shot at a piece of tinfoil, the alpha particles collided with constituent atoms and some of the particles were scattered in different directions. In other words, the alpha particles were hitting something inside the tinfoil and bouncing back. This occurred with one in 8,000 alpha particles. Reasoning that they were hitting a number of large positively-charged particles, ***the nucleus of the atom was now discovered.***

Henry Moseley

Moseley broke the boundary between chemistry and physics.

Following Rutherford, was Henry Moseley (November 23, 1887-August 10, 1915) an English physicist who **gave physics the atomic number** which is

the number of protons found in the nucleus of an atom and therefore identical to the charge number of the nucleus. In chemistry and physics the atomic number, also known as the proton number, is a number of protons found in the nucleus of an atom and therefore identical to the charge number of the nucleus. It is conveniently represented by the symbol Z . The atomic number uniquely identifies a chemical element. ***Many later physicists such as Richard Feynman, always believed that because of this, chemistry was just an extension of physics.***

The atomic number Z should not be confused with the mass number, A , which is the total number of protons and neutrons in the nucleus of the atom. The number of neutrons, N , is known as the neutron number, therefore $A = Z + N$.

Atoms having the same atomic number Z , but having a switch in the number of neutrons N , therefore adding different atomic masses, are known as isotopes. Most elements, before they are disturbed atomically, such as by bombardment in nuclear accelerators, have a natural occurring mixture of protons and neutrons, and this determines their atomic weight. In normal undisturbed elements, bombarding them with X-rays produces photon transitions (wavelength changes), on the inner electronic electron shells, and these transitions are called K. and L. lines. The current standard for the atomic mass unit was determined by **John Dalton** (September 6, 1766-July 27, 1844) and thereby given the name Dalton (Da) and is defined to be exactly 1/12th the mass of a free unbound carbon atom in its lowest-energy or "ground" state.

Using X-rays to bombard different substances, Moseley figured out the Table of Elements based on the atom's shells. He even "realized" (saw) some elements that were not yet on the table!

Bombarding elements with X-rays, Moseley measured the wavelengths (photon emissions) of the innermost photon transmissions (K. and L. lines) produced by the elements from aluminum ($Z = 13$) to gold ($Z = 79$) as they were used as targets in an X-ray tube. From this he **was able to determine the natural order of The Periodic Table of Elements, and predict undiscovered future elements.** In working with his atomic number sequences, Moseley discovered that there were gaps in the numbers 43, 61, 72 and 75. Today these spaces are now known, respectively, to be the places of the very radioactive elements—Technetium and Promethium—and the last two discovered naturally-occurring stable elements were Hafnium (discovered 1923) and Rhenium (discovered 1925).

Unfortunately Moseley did not live long enough to be rewarded for his discoveries. While working with Ernest Rutherford at Manchester University, World War I broke out. He enlisted in the Royal Engineers and while fighting the battle of Sulva Bay, in Gallipoli, Turkey, was killed in action by a Turkish sniper. Isaac Asimov once wrote that "in the view that all Moseley might still have accomplished.... his death might well have been the most costly single death of the war to mankind generally." Many speculated that Moseley should have won the Nobel Peace Prize, but it was not awarded posthumously. It was also speculated that because of Moseley's death in the war, the British and other world governments began a policy of no longer allowing their scientists to enlist for combat. Niels Bohr said in 1962, about Ernest Rutherford and Moseley's work, "you see actually the Rutherford work (the nuclear atom) was not taken seriously. We cannot understand today, but it was not taken seriously at all. There is no mention of it in any place. A great change came from Moseley."

Niels Henrik David Bohr

"A physicist is just an atom's way of looking at itself."—Niels Bohr

"If quantum mechanics hasn't profoundly shocked you, you haven't understood it yet."

—Niels Bohr

Niels Henrik David Bohr (October 7, 1885-November 18, 1962) was born in Copenhagen, Denmark, son of a devout Lutheran, Christian Bohr, then a professor of physiology at the University of Copenhagen. His mother Ellen Adler Bohr came from a wealthy Jewish family prominent in Danish banking and parliamentary circles. His brother was Harald Bohr, a mathematician and Olympic football player who played on the Danish national team. Niels was also a good-looking footballer and could have been on any NFL team. He probably would have been a quarterback!

In 1903 Niels Bohr enrolled as an undergraduate at Copenhagen University, and initially studied philosophy and mathematics. He received his doctorate in 1911. As a post-doctoral student, Niels first conducted experiments under J.J. Thompson at Trinity College, Cambridge. He then went on to study under Ernest Rutherford at the University of Manchester in England.

Bohr even looked into consciousness interactions—as many prior scientists had also done.

On the basis of Rutherford's theories, Bohr published his model of atomic structure in 1913, introducing the theory of electrons traveling in orbits around the atom's nucleus. He began his studies of the atom by studying hydrogen, wherein he established a proton as a nucleus with a positive charge, and an electron in the orbital position with a negative charge. He further determined that by adding one more electron to the hydrogen atom, it became helium, therefore a stable atom. He went on to discover the fact that the next orbital level that was stable would contain eight (8) electrons and each level thereafter would have a continuation of levels which was later reduced to the term "Shells." Next he determined that when an electron changed from a high-energy to a ground-energy state, it emitted a photon. He therefore assigned the first orbital, or shell level a quantum number of $n=1$, the second shell level, $n=2$, and the third shell level, which would contain up to 18 electrons and because some of the orbits were circular and others elliptical, the third level was assigned $m=1$ (M. corresponding to magnetic quantum number). In addition ***Bohr found that the wavelength of emitted photons doubled with each corresponding shell or layer. This dropping of energy, and emission of a photon in the process (light quantum), and the ability to calculate the chemical properties by determining the number of electrons in the outer orbits, became the basis for the quantum theory.***

In 1913, after his success with the new atomic model, based on a continuation of Ernest Rutherford's work, Bohr published his three papers, in which he outlined the basic concept of his atomic model. This was done at the Danish Academy of science, which allowed him to establish his own Institute for Atomic Studies. Financing for the Royal Danish Academy of Science came from the Carlsberg Brewery, so the next time you lift a brew, think of Carlsberg beer and Niels Bohr!

Bohr also looked into interaction with consciousness.

In 1922, Bohr was awarded the Nobel Prize in Physics "for his services in the investigation of the structure of atoms and of the radiation emitting from them." In the 1930s, Bohr's activities in his institute were focused on the research of the constitution of the atomic nuclei and the transmutations and disintegrations. ***While working on the quantum theory of light, he also began to investigate a possibility of an interaction with consciousness.*** Today, of course, this is a well-established fact.

Just prior to the war, the Nazi regime wanted him to work on their version of a nuclear weapon. Werner Heisenberg, a longtime associate, warned Bohr of the Nazis' intentions, so Niels escaped in October, 1943 to Sweden and then traveled to London. Werner stayed behind in Germany and led the Nazi nuclear war efforts. At the same time the British were working with the Americans to establish a nuclear program called "Tube Alloys," and Niels Bohr was asked to participate. Still fearing for capture by the Nazis, the British evacuated him from Sweden in an unarmed DeHavilland Mosquito, hiding him in an improvised cabin in the bomb bay.

From London, Niels went on to the top-secret Los Alamos Laboratory in New Mexico, USA and worked on the Manhattan Project, where according to Richard Feynman, he was known by the assumed name of Nicholas Baker, for security reasons.

In 1965, three years after Bohr's death, the Institute of Physics at the University of Copenhagen changed its name to the Niels Bohr Institute. In 1997 the Danish National Bank started circulating the Danish five-hundred-kroner bill with a portrait of Niels Bohr smoking the pipe.

Werner Heisenberg

"God does not play dice with the universe."—Albert Einstein
(of Heisenberg's Uncertainty Principle)

Werner Heisenberg (December 5, 1901-February 1, 1976) was born in Wurzburg, Germany to Kasper Ernst August Heisenberg, a secondary school teacher of classic languages, who went on to become Germany's professor of medieval and modern Greek studies in the University system. He studied mathematics from 1922 to 1923 at the Ludwig-Maximilians-Universitat Munchen and the Georg-August-Universitat Gottingen. At Gottingen he studied physics with Max Born and James Franck. From September 1924 to May 1925, under an International Education Board Rockefeller Foundation fellowship, Heisenberg went to do research with Niels Bohr, director of the Institute of Theoretical Physics at the University of Copenhagen.

In 1926 he was appointed lecturer in theoretical physics at the University of Copenhagen under Niels Bohr in 1927; when he was only 26, he was appointed Professor of theoretical physics at the University of Leipzig. In 1929 he went on a lecture tour in the United States, Japan and India.

Heisenberg was taken prisoner after WWII.

At the end of the Second World War, he and other German scientists were taken prisoner by American troops and sent to England. Called "Operation Epsilon," they were interned for six months at Farm Hall, in Godmanchester England, near Cambridge from July 3, 1945 to January 3, 1946.

At the beginning of World War II, Berlin had been the main site of the German research activities, but due to the heavy bombing of Berlin, most of the nuclear operations were moved to two towns, Hechingen and Haigerloch on the edge of the Black Forest.

In 1939, shortly after the discovery of nuclear fission, the German nuclear energy project, also known as the Uranium Club (Uranverein) was formed. Heisenberg was one of the principal scientists leading research and development in the project. On February 26, 1942 Heisenberg presented a lecture to the Reich officials on energy acquisition from nuclear fission. Following that, the Uranium Club was transferred to the Reich Council (RFR) in July 1942. On June 4, 1942 Heisenberg was summoned to report to Albert Speer, Germany's Minister of Armaments, on the prospects of converting Uranium Club's research towards developing a nuclear weapon. At this meeting Heisenberg told Speer that a bomb could not be built before 1945, and five days later on June 9, 1942, Adolf Hitler issued a decree for the reorganization of the RFR as a separate legal entity under the Reich Ministry for Armament and Ammunition; the decree appointed Reich Marshall Hermann Goering as president.

During the war Erich Schumann was one of the most powerful intellectual physicists in Germany, and had control over the German nuclear project which also included Walther Bothe, Klaus Clusius, Otto Hahn, Paul Harteck and Werner Heisenberg.

After the war "Operation Alsos" was formed by the Allies to investigate the nuclear energy project, seizing nuclear resources and personnel to further American research, and prevent their capture by the Soviets, and to discern how far the Germans had gone towards creating the atomic bomb. "Operation Epsilon" was the codename of a program for detaining the top 10 German scientists who were thought to work on Nazi Germany's nuclear weapons program. These included the above-mentioned scientists and Erich Bagge, Kurt Diebler, Walther Gerlach, Horst Korsching, Max von Laue, Carl Friedrich von Weizsacker and Karl Wirtz. It might be noted here that Dr. Erich Bagge (May 30, 1912-June 5, 1996) was the inventor of "yellowcake" which was produced by a gaseous uranium enrichment device for enriching U-235 isotope, using three methods: centrifugal force, electromagnetic and thermal diffusion. Furthermore, **Otto Hahn** (March 8, 1879-July 28, 1968) a

German chemist and Nobel laureate is regarded as **the "father of nuclear chemistry"** as he proliferated the very first nuclear fission reaction. Although Otto Hahn had discovered nuclear fission in December 1938, he had no real participation in the Nazi bomb effort. After hearing about Hiroshima, believing himself personally responsible, he contemplated committing suicide.

In 1946, Heisenberg returned to Germany and reorganized with his colleagues, the Institute for Physics at Gottingen. This institute was, in 1948, renamed The Max Planck Institute for Physics.

Heisenberg's name will always be associated with his theory of quantum mechanics, published in 1925, when he was only 23 years old. For this theory and the applications of it which resulted especially in the discovery of our probing forms of hydrogen, Heisenberg was awarded the Nobel Prize for Physics in 1932.

His new theory was based only on what can be observed, that is to say on the radiation emitted by the atom. "We cannot always assign an electronic position in this space at a given time, nor follow it in its orbit, so therefore we cannot assume that the planetary orbits postulated by Niels Bohr actually exist. **Mechanical quantities such as position, velocity, etc. should be represented, not by ordinary numbers, but abstract mathematical structures called matrices,**" and he formulated his new theory in terms of "matrix" (S-matrix or scattering matrix relates to the initial state and final state for the interaction of particles in high-energy physics) equations.

Now we can willingly manipulate single atoms.

Only 1 electron can be in 2 places at once!

Later Heisenberg stated his famous "principle of uncertainty," which states that you cannot know what is the location and the velocity of a particle with infinite precision. The uncertainty in the position of a particle multiplied by the uncertainty in its momentum, must be greater than or equal to Plank's constant divided by 2 π . The uncertainty principle is a very essential component in quantum mechanics. ***Within the field of nanotechnology, scientists can now manipulate individual atoms at will, and thereby observe the uncertainty principle in the laboratory.*** Having been in the measurement field myself, most of my life, I find that it applies to many other elements of energy as well. For example, when we are looking to split polarized

beams, of electrons or photons, especially during instantaneous teleportation experiments, Heisenberg states that, ***either we can know how fast*** a quantum transaction takes place, ***or where a quantum transaction takes place, but not both***. When working with "thought principles," we have observed here in our Pyradyne Laboratories, there is an "energy shift" when working with the instantaneous quantum transmission, occurring when focused directional thought is applied to our "Holographic Projectors," in that the result of the event shifts, ever so slightly, depending on the energies of the meditators who apply their thought energies to the device.

Albert Einstein, being a classical physics scientist, had many problems understanding and believing, not only in Heisenberg's work, but also that of Niels Bohr. The three of them had many documented classic arguments over the validity of what was known of quantum mechanics at the time. However, as time went on, the arguments of Bohr and Heisenberg came to be known as fact, and ***Einstein gradually accepted the new age of quantum physics***.

After the war Heisenberg became interested in **plasma physics** and nuclear fusion. He traveled the world giving lectures including one in 1973 at Harvard University, on the historical development of the concepts of quantum theory.

Heisenberg was married on April 29, 1937 to Elizabeth Schumacher whom he met at a music recital. Over the next 12 years they had seven children and one of them, their son Jachen, became a physics professor at the University of New Hampshire.

Wolfgang Ernst Pauli

"The fact that the author thinks slowly is not serious, but the fact that he publishes faster than he thinks is inexcusable."—Wolfgang Ernst Pauli

Wolfgang Ernst Pauli (April 25, 1900-December 15, 1958) born in Vienna, was an Austrian theoretical physicist **known for his work on spin theory** (in quantum mechanics spin is a fundamental property of atomic nuclei, hadrons, and elementary particles' spin direction, or polarity), **and for the discovery of the exclusion principle**, presenting a strong foundation to the structure of matter, and the whole of chemistry.

Pauli attended the Ludwig-Maximilians University of Munich, working under Arnold Sommerfeld, where he received his Ph.D. in July 1921 **for his thesis on the quantum theory of ionized molecular hydrogen**.

Pauli's first big discovery was in 1930 when he was studying the conservation of energy and momentum, and the conservation of angular

momentum and beta decay. If you remember, radioactive substances emit beta particles, which are high-energy high-speed electrons or positrons emitted by certain types of radioactive nuclei such as potassium 40. The particles are a form of ionizing radiation, also known as beta rays. Radioactive beta decay consists of a proton, neutron and electron.

Pauli found out the neutrino stole the missing energy!

Previously in 1914, James Chadwick (1891-1974, who in 1935 won the Nobel prize for the discovery of the neutron) was working in the University of Berlin under the supervision of Fritz Geiger, where they were studying the spectrum of beta rays emitted by various radioactive substances. The result of his measurement, however, contradicted the law of the conservation of energy. Some energy was missing, and Wolfgang Pauli resolved the problem in 1930 by pointing out the missing energy was being carried out by an undetectable small particle, which another scientist Enrico Fermi named the "neutrino" in 1934. ***The neutrino itself is defined as an elementary particle that travels at the speed of light, has a zero electrical charge and is almost massless and undetectable.*** Neutrinos are created as a result of certain types of radioactive decay, such as those that take place in the sun, in nuclear reactors, or when cosmic rays hit atoms. There are three types or, "flavors," of neutrinos; electron neutrinos, muon neutrinos and Tau neutrinos.

The neutron itself was first detected by Niels Bohr and Ernest Rutherford. When determining a structure of nucleus of the atom it is necessary to satisfy two conditions. First, the positive electric charge of the nucleus must be equal to the number of orbital electrons in the atom, making it electrically neutral. Second, since the bulk of the atomic mass is concentrated in the nucleus, its weight must be close to its atomic weight. When they worked with a Hydrogen atom, they easily found out that there was one proton in the nucleus and one electron in the orbit. But when they examined Helium, the second element, with an atomic weight of two, the logical conclusion was that it must have an atomic weight of four; therefore, it would need four electrons and four protons, which it did not have; so why was it heavier than Hydrogen? Their logical conclusion was that there had to be two heavy particles, but with no electrical charge; therefore, they would not need additional electrons to balance the energy. They tentatively called these two heavy neutral particles "neutrons." However, it was James Chadwick who got the credit for the discovery when he was examining beta decay, which is a form of radioactive decay in which an unstable atomic nucleus loses energy by emitting ionizing

particles and radiation. The end result of this product is called a "parent nuclide," where the unstable element evaporates into a stable element. ***The International System of Units (SI) term for one transformation of decay per second is called the Becquerel (Bq) named for Henry Becquerel, discoverer of radioactivity.***

Wolfgang Pauli is probably remembered most by his famous "exclusion principle," formulated in 1925. It states that no two identical Fermions (and elementary particles such as an electron, possessing a half integer spin or lower energy spin) can occupy the same quantum state at the same time. In direct quotation it is written as "no two electrons in an atom can ever be in the same quantum state; that is, no two electrons in the same atom can have the same set of quantum numbers."

Wavelength is inversely proportional to a particle's momentum. Each moving particle has a related wave.

When looking at this from a quantum point of view, ***we often say that an electron, when transformed into a quantum state, can be in many places simultaneously, hence the term "teleportation."*** What the exclusion principle is saying here is that only one, not two electrons, is going to be involved. ***If there were a second electron, it would always be doing a different task somewhere else, away from the first one.*** This becomes interesting when studying Helium, a simple element, which has only two electrons in its outer shell, and is probably why this process was carefully examined in beta decay.

In 1945 Pauli received the Nobel Peace Prize for his work on the exclusion principle.

The two scientists who originally brought the attention to the spin of the electron were Samuel Abraham Goudsmit (July 11, 1902-December 4, 1978) and George Eugene Uhlenbeck (December 6, 1900-October 31, 1988) a fellow University of Michigan student, who introduced the concept of intrinsic electron spin. ***Called the "spin magnetic quantum number Ms," it detected the magnetic spin dependent on the rotation of the electron around its own axis, which can be either "up or "down.*** With the Pauli exclusion principle in place, it became possible to determine the electron orbits for each sub shell "Q" and also the maximum number of electrons "N" corresponding to each quantum level in each of the electron shells surrounding the atom. For more information in my book *Rays of Truth Crystals of Light*, on

page 247, is a good drawing depicting not only this discovery, but also its effects on human consciousness.

Louis-Victor-Pierre Raymond, 7th duc de Broglie

"Two seemingly incompatible conceptions can each represent an aspect of the truth ... They may serve in turn to represent the facts without ever entering into direct conflict."
—7th duc de Broglie

Louis-Victor-Pierre Raymond, 7th duc de Broglie (August 15, 1892-March 19, 1987) was born in Dieppe, Seine-Maritime, Normandy France as the younger son of Victor, 5th duc de Broglie, Duke of France. De Broglie received his first degree in history. Afterward, though, he turns his attention toward mathematics and physics, and during World War I he was an Army radio communication specialist.

In 1924 at the faculty of sciences at Paris University his research paper on quantum theory gave him his doctor's degree. He then went on to postulate his particle-wave duality theory of matter (all matter and energy exhibit both wave-like and particle-like properties, based on the work of Albert Einstein and Max Planck and the earlier work previously mentioned of Christiaan Huygens).

His research culminated in ***the de Broglie hypothesis (wavelength is inversely proportional to the momentum of a particle, and that the frequency is directly related to the particle's kinetic energy), and that any moving particle or object has an associated wave.*** Simply, this work stated that the electron or photon followed the wave, giving the wave mass, therefore creating a wavelength. The wavelength of matter is also called the Broglie wavelength.

This created a new field of physics called wave mechanics, which united the physics of light and matter. For this he won the Nobel Prize in Physics in 1929. Among the applications of this work has been the development of the electron microscope, because you can get much better image resolution with a shorter wavelength of the electron versus the optical microscopes which rely on light (photons).

In 1961 he received the title of knight of the grand Cross in the Legion d'honneur. de Broglie was awarded a post as a counselor to the French High Commissioner of atomic energy in 1945 for his efforts to bring industry and science closer.

Arthur Holly Compton

It turns out X-rays, too, are waves and particles.

Along with this work, an American physicist **Arthur Holly Compton** (1892-1962) **discovered that X-rays also had a particle nature, as well as a wave-like nature.** This became known as the "Compton effect" (energy decreases, wavelength increases of an X-ray when it interacts with matter). Likewise, for his work, Arthur Compton received the Nobel Peace Prize in 1927.

Erwin Rudolf Josef Alexander Schrödinger

"I insist upon the view that 'all is waves'". —Erwin Schrödinger (in a letter to John Lighton Synge, as quoted by Walter Moore in Schrödinger: Life and Thought (1989) ISBN 0521437679

"What we observe as material bodies and forces are nothing but shapes and variations in the structure of space."—Erwin Schrödinger

"Multiplicity is only apparent, in truth, there is only one mind...."—Erwin Schrödinger

A careful analysis of the process of observation in atomic physics has shown that the subatomic particles have no meaning as isolated entities, but can only be understood as interconnections between the preparation of an experiment and the subsequent measurement."—Erwin Schrödinger

Physics and psychology.

Erwin Rudolf Josef Alexander Schrödinger (August 12, 1887-January 4, 1961) was an Austrian theoretical physicist born in Vienna to Rudolf Schrödinger, a botanist and and his mother Georgina Emilia Brenda. ***His early interest work was in physics and psychology.***

From 1906 to 1910 he was a student at the University of Vienna and during the first World War he served as an artillery officer. In 1920 he became a professor at the University of Zurich. In 1927 Schrödinger moved to Berlin as Max Planck's successor. In 1934 he was invited to lecture at Princeton University and was offered a permanent position there but did not accept.

While vacationing for two and half weeks in the Swiss Alps with his girlfriend, he derived his **famous Schrödinger's wave functions.** He was

married at the time, but his wife stayed home. Apparently, she accepted the fact that he had a girlfriend, as all three lived together.

In 1933, he received the Nobel Peace Prize for his "Schrödinger equation" which described the quantum state (a mathematical vector space in which distances and angles can be measured, in this case electron-wave measurements). ***Put in simple terms, the square of the amplitude of the wave function Y^2 described the density distribution of the matter waves.*** In 1935, after extensive correspondence with his personal friend Albert Einstein, who was noted for his thought experiments, he proposed the now famous in physics, **Schrödinger's cat thought experiment.**

Famous cat experiment tests if a cat is both alive and dead at the same time.

Schrödinger's thought experiment was intended as a discussion to an article written by Einstein, Podolsky and Rosen (EPR article) in 1935—the EPR article that highlighted the strange nature of quantum super-positions, which is basically all possible states of the subatomic particle which can happen in quantum physics instantaneously, in a wave-like manner. But ***when a measurement is made, the entire system collapses at the moment of measurement.*** This phenomenon is called ***the "Copenhagen interpretation."*** The term itself came about when Niels Bohr and Werner Heisenberg did their work in quantum physics in Copenhagen around 1927.

When you try to measure (or separate out one frozen frame of a happening from the entire universal hologram), you limit yourself from being able to realize or cognize all the other infinite possibilities of that situation. You can't separate the particle from the wave just because you want to!

In Schrödinger's experiment he posed the question, "When does a quantum system stop existing as a mixture of states and become one or another?" The thought experiment went like this: a cat, along with a flask containing poison, is placed in a sealed box shielded against environmentally induced quantum coherence (isolating an experiment completely away from the real world as to have no interaction whatsoever). An internal Geiger counter detects radiation when the flask is shattered, releasing the poison which kills the cat. ***The Copenhagen interpretation of quantum mechanics implies that after a while, the cat is simultaneously alive and dead.*** Yet, when we look in the box, *we see the cat either alive or dead, not a mixture of alive and dead.* Einstein's

comment at the time was, "does the moon exist only when a mouse looks at it?"

Chapter 6: The Quantum World

Modern Day Shakers and Movers

Some were my role models!

In this chapter we will look at some of the finest individuals in science of modern times. Some of them are my role models, and some of them would have been my role models as they lived in the present times. Occasionally when time permits for them, I interview these great scientific minds on my radio show. Unfortunately, I cannot cover all of the greatest scientists of the present time, but this is an earnest attempt to give a glimpse of the lives of the greater shakers and movers.

Paul Adrian Maurice Dirac

"Pick a flower on Earth and you move the furthest star."—Paul Dirac

The Dirac equation led to knowing about anti-matter and depended on anti-particles.

Paul Adrian Maurice Dirac, a Leo like myself, born on August 8, 1902 was a British theoretical physicist and considered one of the most brilliant mathematical minds of the 20th century. He held the Lucasian chair at Cambridge University from 1932 to 1969, the same chair held by Newton, and the chair currently held by Stephen Hawking. He was a very tall and imposing figure of a man. As a young physicist, he took on the challenge to reformulate the Schrödinger's equation to accommodate the theory of relativity, which he succeeded in doing in 1928 which stunned the physics world. Called **the "Dirac equation"** it provided a description of elementary $1/2$ spin integers, (also called fermions), such as electrons, consistent with both principles of quantum mechanics (particles and waves existing simultaneously) and the special theory of relativity. His equation was dependent on the existence of anti-particles, predating their discovery making the discovery of the positrons (the positron was observed by Carl Anderson in 1932), which led into the concepts of antimatter. He based his relativistic equation on a mathematical object called "spinors" (discovered by Eli Joseph Cartan in 1913). Classically, spinors in three dimensions are used to describe the spin of the non-relativistic electron. They are used to describe very precise vector angles, which are

important when describing spin coefficients of less than one in subatomic particles such as a quark.

He went on to establish a phenomenon called the "**Dirac Sea**" which was a theoretical model of vacuum as an infinite sea of particles possessing negative energy. The positron, the antimatter counterpart of the electron, was originally conceived as a hole in the Dirac Sea, well before its experimental discovery in 1932. A similar technology is used in specific transistor design and the Dirac Sea has also been expounded upon for time travel in sci-fi movies.

In 1930 Dirac published a book called *Principles of Quantum Mechanics* which quickly became the standard textbook on quantum mechanics. In 1933, he published a paper on magnetic monopoles, showing the existence of a single magnetic monopole, which is a hypothetical particle with only one hole. Within the field of theoretical physics, modern approaches agree that monopoles exist, particularly in the Grand Unified Field theories and the String Theory. When looking at the magnetic field of a human being, it is a non-polarized field generated by a living organism. In ordinary magnetism, there is always a South and North Pole. When looking at magnetic moments in the electron, a polarized field is observed for a very brief instant of that moment. ***In both the grand unified field theory and the string theory, which we will cover shortly, consciousness is a directly affecting element.***

All possible results can be summed up in 1 result. QED shows how light and matter interact with each other.

During World War II he conducted important theoretical and experimental research on uranium enrichment by gas centrifuge. Dirac is regarded as **the founder of quantum electrodynamics (QED)**, which described intrinsically how light and matter interact, including the interactions between electrons, positrons, and photons. In classical optics light travels over all allowed paths and when the waves collide, the interference is called the Fermat's Principle. In QED, light or any other particle like an electron or proton, passes over every possible path allowed by the apertures for lenses. The Observer, at a particular location, detects the mathematical result of all wave functions added up, and as the sum of all the lying integers. It's sort of a quantum light description of Schrödinger's cat. Physically, QED describes charged particles and their anti-particles interacting with each other by the exchange of light or photons. Richard Feynman, a very dear friend of Paul Dirac, went on to receive a Nobel Prize for his work in QED. Because of the unification of anti-particles, QED has been one of my personal studies.

In 1933, Dirac shared the Nobel Prize for Physics with Erwin Schrodinger "for the discovery of a new productive form of atomic theory."

Paul Dirac went on to receive many other awards and passed away in Tallahassee, Florida in 1984. In 1995, a plaque in his honor bearing his equation was unveiled at Westminster Abbey in London with a speech from Stephen Hawking.

Charles Thompson Rees Wilson

Charles Thompson Rees Wilson, born February 14, 1869, was a British physicist and meteorologist who received the Nobel Peace Prize in Physics for his invention of the Wilson cloud chamber. Wilson was born in Edinburgh, Scotland to a farmer John Wilson, and his mother Annie Clark Harper. After his father died in 1873, his family moved to Manchester, England and he was educated at Owens College, studying biology, but later he transferred to Sidney Sussex College in Cambridge where he became interested in physics and chemistry. He then became interested in meteorology, and in 1893 began to study clouds and their properties. He later experimented with the creation of cloud trails in a micro-environmental chamber that he manufactured, caused by ions and radiation. For this invention of a "cloud chamber" he received the Nobel Prize in 1927. ***A cloud chamber was then adapted to atom-smashing equipment such as the linear accelerator, and the cyclotron.***

Wilson discovered that ions acted as centers for water droplet formation in the moist air of his chamber. When an alpha or beta particle interacts with a mixture, it ionizes it and the resulting ions act as condensation nuclei, around which a mist will form. The high energies of alpha and beta particles leave trails as they ionize the moist air within the chamber. These tracks leave distinctive shapes as an alpha particle's track is broad and straight, and the electron is thinner and shows more evidence of deflection, being a lighter particle. When a vertical magnetic field is applied, positively- and negatively charged particles will curve in opposite directions. When a trail completely reverses on itself, this is an indication of an antimatter or anti-particle.

A similar device called a bubble chamber is filled with superheated transparent fluid, most often liquid hydrogen, and also detects electronically-charged particles. It was invented in 1952 by Donald A. Glasser, for which he was awarded the 1960 Nobel Prize in Physics. However, these are limited to using in very high-energy experiments. As the field moves on, the bubble chamber has been found useful for looking at weakly interacting massive particles (WIMPS) in search of dark matter. These particles interact with the

weak nuclear force and gravity, rather than the strong nuclear force generated by atom-smashing equipment.

Charles Wilson died on November 15, 1959 at the age of 90 in Edinburgh, Scotland.

Henry Brugt Gerhard Casimir

Superconductive metals—without a magnetic field.

Henry Brugt Gerhard Casimir (July 15, 1909-May 4, 2000) was a Dutch physicist best known for his research on two fluid model superconductors (a phenomenon occurring in certain metals, whereby at very low temperatures, they possess superconductivity without an interior magnetic field, called the Messner effect), and the Casimir effect.

Plates, even without magnetism, can be attracted to each other!

In physics "**the Casimir effect**" are physical forces arising from a quantized field. For example, two parallel charged metallic plates in a vacuum, placed a few micrometers apart, without any external electromagnetic field, with no measurable electromagnetic field, have a tendency to be attracted to each other. When this field is studied using quantum electrodynamics, it is seen that the plates do affect virtual photons which constitute the field and generate a net force, either causing an attraction or repulsion depending on the specific arrangement of the two parallel plates.

Zero Point Energy = energy without matter.

Although the Casimir effect can be expressed in terms of virtual particles (a virtual particle exists for a limited time and space, introducing uncertainty in its energy and momentum due to the previously mentioned Heisenberg uncertainty principle) and is more easily understood in terms of zero point energy (zero point energy is the lowest possible energy that a quantum mechanical physical system may have and is the energy of the ground state). In cosmology it is used as a synonym for vacuum energy, or energy that exists in outer space devoid of matter.

Henry "Henk," studied theoretical physics at the University of Leiden, under Paul Ehrenfest, where he received his Ph.D. in 1931. His Ph.D. thesis

dealt with the quantum mechanics of a rigid spinning body and the group theory of rotations of molecules.

In 1942, during World War II, Casimir moved to the **Philips Research Laboratories** in Eindhoven, The Netherlands. He was considered one of the great theoretical Dutch physicists, and retired from Philips in 1972.

It's interesting to note that the president of Philips, during Casimir's time at Philips, around 1960, had a **UFO experience** when his sailboat struck a submerged saucer-shaped object, while sailing on one of the Dutch lakes near the North Sea. Supposedly he then made some form of contact with beings from a planet called Larga which had a slower rotation and larger diameter than Earth and was located some 10 light years away.

Did aliens give Philips Corp. new technologies?

There was an information technology exchange, and suddenly Philips Corp. had a whole new state-of-the-art product line, from consumer items to highly advanced electronic equipment, much of which I purchased and used at the time. Coincidentally Casimir's work in Philips, bordered on technologies that approach some of the theoretical engineering contemplated as to the operation of UFO propulsion systems.

Edwin Powell Hubble

"At the last dim horizon we search among ghostly errors of observations for landmarks that are scarcely more substantial. The search will continue. The urge is older than history. It is not satisfied and it will not be oppressed!"—Ed Hubble

Edwin Powell Hubble (November 29, 1889-September 28, 1953) was born to an insurance executive in Marshfield, Missouri and moved to Wheaton, Illinois in 1889. In his younger days he was noted for his athletic prowess, more than his athletic abilities. He was an amazing boxer, and if he'd continued in that field, probably would have been a world heavyweight champion!

He received his bachelor of science degree in 1910 at the University of Chicago, concentrating on mathematics, astronomy, and philosophy. He spent the next three years as one of Oxford University's first Rhodes scholars, where he originally studied law. After receiving his Masters degree he returned to the United States and taught Spanish, physics, and mathematics at the New Albany high school in New Albany, Indiana. In 1919 Hubble was offered a staff

position at the Mount Wilson Observatory, near Pasadena, California and remained on the staff until his death.

UFOs coming toward you are BLUE ("blue shift")

In 1929 he and Milton L. Humason (August 19, 1891-June 18, 1972, an American astronomer born in Dodge Center, Minnesota) formulated "**Hubble's law**" which described the velocity at which various galaxies are receding from the earth being proportional to their distance from us. He also defined the "**Cepheid variable**" which is a standard candle (measurement of light) that determines the distance between clusters and galaxies. He also did considerable work on "**red shift**," which is visible light being emitted by an object as it moves away from us, therefore increasing in wavelength into the red spectrum. The opposite of that is "**blue shift**," wherein objects are moving towards us in the universe, and shifting to lower frequencies such as ultraviolet.

On March 6, 2008, the United States Post Office released a \$.41 stamp honoring Hubble on the sheet entitled "American scientists." His citation reads: Often called "a pioneer of the distant stars," he "played a pivotal role in deciphering the vast and complex nature of the universe." Had he not died suddenly in 1953, Hubble would've won that year's Nobel prize in physics. The famous "Hubble Telescope" located in space was named after him.

I feel his work was tremendous during the time that astronomy really began to merge with physics.

Ernest Orlando Lawrence

"In the Radiation Laboratory we count it a privilege to do everything we can to assist our medical colleagues in the application of these new tools to the problems of human suffering."— Ernest Lawrence

Ernest Orlando Lawrence, another Leo born on August 8, 1901, same birthday as Paul Dirac, one year earlier, was an American physicist and inventor of **my favorite toy when I grew up, The "Cyclotron."** When I was at the University of Michigan working in the Randolph laboratory, under the supervision of Doctor Katz, the cyclotron was the machine from which I learned the true nature of nuclear physics. I'll never forget the first time I saw a machine in operation, sending out a huge stream of heavy hydrogen particles called deuterons, which bombarded calcium as a target. The actual

bombardment took place in a Wilson cloud chamber, which detected negative energy and antimatter particles. *To be exposed to the possibility of antimatter, at 14 years of age, I felt I was living in a sci-fi novel.*

How centrifugal force releases antimatter particles.

A cyclotron consisted of two large circular electro-magnets, shaped like a hockey puck. Normally a magnet is wound with wire, but in a cyclotron, because the current is so high, ordinary wires would burn up or melt, so steel bands are used, much like you see holding an old oak barrel together. Each band is covered with a heavy insulator type tape. Secondly, imagine the hockey puck cut in half and the two halves separated so that one can have a positive charge while the other has a negative charge, and these two charges are constantly oscillating back and forth creating a huge vibrating magnetic field. In the center is where the ions or particles start, and jump across the magnets (called Dees) in a circular path, and the centrifugal force of their increased momentum eventually projects them to the outside of the Dees, where they strike a target with tremendous force, causing atomic collisions that release anti-matter particles.

Earlier versions of atom smashers were called "linear accelerators," whereby a particle was accelerated from one end of the tube to the other with a succession of magnets along the way constantly pulling the electron to the magnet, and when it reaches the magnet changing to a positive charge, thus pushing it to the next magnet. The particle can build up tremendous velocity in this manner, but a linear accelerator would be too long to achieve what a circular cyclotron could achieve.

When the cyclotron was actively engaged, we stood on the outside of it behind very large water tanks that absorbed huge amounts of artificially-created radiation.

Ernest started college at Saint Olaf College in Minnesota, but transferred to the University of South Dakota after his first year where he earned his bachelor degree in 1922. He received a master's degree in physics from the University of Minnesota in 1923. In 1925 he received his Ph.D. in physics at Yale University.

Lawrence's invention started out as a sketch on scratch paper. While sitting in the university library one evening, he saw how big a linear accelerator would be, far too large for the average laboratory, so he decided to set a circular accelerating chamber between the poles of electromagnets. The magnetic field level sent the charged protons in a spiral path, as they were accelerated just

between two semi-circular electrodes connected to an alternating potential (A/C). After 100 revolutions or so, the protons would impact the target as a beam of high-energy particles.

He received a patent for the cyclotron in 1934, which he assigned to the Radiation Research Corporation, which became part of the University of California at Berkeley, and Lawrence was formally appointed as its director.

In November 1939, Lawrence was awarded the Nobel Prize in Physics for his work on the cyclotron and its applications. The award ceremony was held on February 29, 1940 in Berkeley California, where he was the first Nobel laureate to be so honored while at a state-supported University.

During World War II, Lawrence was part of the Manhattan Project, developing electromagnetic separation methods to enrich uranium.

In July of 1958, President Eisenhower requested Lawrence to travel to Geneva, Switzerland to negotiate a proposed treaty with the Soviet Union to ban nuclear weapons testing. Lawrence was suffering from colitis, and had to come back from the conference and was rushed to a hospital at Stanford University, Palo Alto, California, where he died a month later at the age of 57. A few days after his death, the Regents of the University of California voted to rename the Lawrence Livermore and Lawrence Berkeley laboratories after him. The Ernest Orlando Lawrence award was established in his memory in 1959. Chemical element number 103, discovered in 1961, is named "lawrencium" in his honor.

Obviously E.O. Lawrence was one of my early and very "Great" role models.

Now...Atomic Energy: Science's Big Jump ***Atomic Physics is about antimatter and anti-particles.***

From this point, science moved more into "Atomic Physics." During E.O. Lawrence's time, atom smashing (high-energy particle physics) lead us into the science of "Antimatter" Antimatter is sort of the reverse of matter. For every particle discovered, and indeed there is a particle zoo, too many to cover in this book, there is an antiparticle. In high-energy physics, such as the latest development, the CERN (European organization For Nuclear Research) High Energy Hadron Collider is the world's most powerful nuclear accelerator and collider. The difference between an accelerator and a collider is that the accelerator increases the energy of the mass of the particle and it collides with a target, and the collision is observed in a Wilson cloud chamber or bubble chamber. The Large Hadron Collider, is like two linear accelerators aimed at

each other, resulting in a double whammy collision inside a detector that is the size of a small high-rise building. Although the predicted antimatter particle can now be observed, its half-life is a mere oftentimes billionth of a second!

When particles and anti-particles come together, they create great energy waves called gamma waves.

All particles have anti-particles. As previously mentioned, electrons (- charge) have positrons (+ charge), protons have anti-protons, and neutrons have anti-neutrons (neutral charge). When the two come together, they destroy each other leaving pure energy—i.e. light waves of great energy called "**gamma waves.**" And just as any other radiant energy, gamma waves can be considered heat energy, therefore creating these tremendous nuclear bombs. In order to understand the tremendous energy released by unbinding the strong nuclear force, a standard atomic bomb is only .7% efficient, whereas when antimatter collides with matter, the efficiency is 100%!

Leo Szilard

"If One Knows Only What One Is Told, one does not know enough to be able to arrive at a well-balanced decision."—Leo Szilard

"We turned the switch, saw the flashes, watched for 10 minutes, then switched everything off and went home. That night I knew the world was headed for sorrow."—Leo Szilard, on the night the bomb went off at Los Alamos

Leo Szilard was born February 11, 1898, a Hungarian physicist who would release the first nuclear chain reaction. He was born in Budapest under the Austro-Hungarian Empire. His father was a civil engineer. He was enrolled as an engineering student at Budapest Technical University in 1916 and joined the Austro-Hungarian army in 1917 as Officer Candidate, in artillery. Because of rising anti-Semitism under the Horthy regime (Admiral Nicholas Horthy was the Regent of the Kingdom of Hungary during the interwar years and throughout most of World War II, originally siding with Hitler, but eventually renouncing the axis powers), he moved and studied at the Institute of Technology in Berlin-Charlottenburg where he began studying physics. Some of his teachers were Albert Einstein, Max Planck and Max von Laue (won 1914 Nobel Prize for Physics for his discovery of diffraction of X-rays by crystals).

In 1923 he received a doctorate in physics from the Humboldt University of Berlin. He was an avid inventor, receiving German patents on the linear accelerator, the German cyclotron, and work with Einstein on the construction of a refrigerator with no moving parts (US patent 1,071,000 541, on November 11, 1930). Freon was discovered shortly after, so the refrigerator idea never went anywhere.

Szilard first attempted to create a chain reaction using beryllium and indium, but with no success. In 1936 he assigned the chain reaction patent (GB patent 630,726) to the British Admiralty to ensure secrecy. Along with Enrico Fermi, Szilard was the co-holder of the patent on the nuclear reactor (US patent 2,708,656).

The principle of nuclear fission proposed by Szilard was based on a nuclear reaction, in which the atom of a heavy nucleus, such as uranium, splits in two. This lowers the mass, releasing what is called binding energy. Binding energy is a tremendous energy that holds the nucleus together. Once the reaction is started, slow neutrons are released from the nucleus, thereby sustaining the fission process, until the element is completely used up. This process could be started in any large atomic structure, but to sustain it requires a consistent release of neutrons, and that they in turn bombard the remaining element. Fissionable uranium, such as thorium U-235, is preferred. In order to purify uranium it requires a large scientific process, involving centrifuges and other specialty equipment. When nations start purchasing these items, or enrichment equipment, red flags come up in the world community, as it's quite obvious what the nation is trying to do.

In 1942 Szilard set off the very 1st human-controlled chain reaction.

In 1938 Szilard began working at Columbia University in New York along with Enrico Fermi. After learning about nuclear fission in 1939 he concluded that uranium would be the perfect element for sustaining a chain reaction. Working with them was Walter Zinn, whom demonstrated that neutrons were emitted in fission. In 1940 he received a \$6,000 research grant from the government. Working with Enrico Fermi and Herbert Anderson, they successfully performed a small-scale experiment with carbon demonstrating that a uranium-carbon system might sustain a chain reaction. In 1942 he moved to Chicago to begin employment at the University of Chicago's metallurgical laboratory. Here he manufactured boron carbide rods, which would stop uncontrolled nuclear reaction. As a result, the first human-controlled chain reaction occurred on December 2, 1942 in the racquet court under Stagg field.

Because of this, Szilard was directly responsible for the creation of the Manhattan Project, which of course, as we all know, created the first two atomic bombs.

Szilard received his original motivation for nuclear fission when he read a fictional story written by H.G. Wells called "The World Set Free, a novel foretelling the advent of nuclear weapons, published originally in 1914. When Leo read the book in 1932, he conceived the idea of nuclear chain reaction and filed for patents in 1934.

Molecular biology and physics are connected.

Szilard changed his field of study to molecular biology because he did not want to see any further development of atomic weapons. He did propose, however, in February 1950, a cobalt bomb, which would create huge amounts of radioactive fallout and would have been constructed in conjunction with an H-bomb (hydrogen bomb). I remember as a student of nuclear energy in the mid-50s, discussions of the design of such a bomb, and I'm glad that the final research was never pursued.

In 1959 he published a book on the theory of aging, and then later was diagnosed as having bladder cancer. He rejected the standard treatment at the time to design his own radiation therapy. Later in 1959, he won the "Atoms for Peace Award" along with fellow Hungarian scientist, Nobel laureate and coworker, Eugene Wigner. The Atoms for Peace Award was established in 1955 by the Ford Motor Company fund.

A physicist who cured himself of cancer because he designed his own "radiation" therapy—later died of a heart attack... hmmm.

In 1960 he underwent self-designed radiation therapy at Memorial Hospital, New York City and cured his own cancer. Also, in that year, he had a personal meeting with Soviet Premier Nikita Khrushchev, during Khrushchev's visit to New York, and part of his proposal of peace between the US and USSR included setting up a Washington Moscow "hotline."

In 1961 he moved to Washington D.C. and was elected to the membership of the National Academy of Sciences. He then published a short story collection entitled "The Voice of the Dolphins."

Then, in his later years, he became very active in nuclear disarmament. In 1963 he moved to La Jolla, California and continued his biological work at

the Salk Institute. He died in his sleep of a heart attack in La Jolla, California on May 30, 1964 at the age of 66.

Enrico Fermi

"If I can remember the names of all these particles, I'd be a botanist."—Enrico Fermi

"It is no good to try to stop knowledge from going forward. Ignorance is never better than knowledge."—Enrico Fermi

Enrico Fermi was born on September 29, 1901, in Rome Italy, and spent a lot of his life working with Leo Szilard. He was also credited as a coworker on the first nuclear reactor, and for his contributions to the development of quantum theory, particle physics, nuclear physics and statistical mechanics. In 1938 he was awarded the Nobel Prize in Physics for his work on induced radioactivity, whereby a previously stable material has been made radioactive by the exposure to a specific radiation.

His father Alberto Fermi, was a chief inspector of the Ministry of Communications and his mother Ida d Gattis was an elementary school teacher.

In 1918 Fermi enrolled at the Scuola Normale Superior in Pisa, Tuscany Italy. It might be noted that the school was founded in 1810 by Napoleon as previously mentioned in earlier chapters, who was a great supporter of the scientific community. Here he received his doctoral degree. At age 24 Fermi took a professorship at the University of Rome in atomic physics. During his time in Rome, Fermi and his coworkers made many contributions to theoretical and practical physics. Some of these were beta decay, and the discovery of slow neutrons which provide pivotal energy for working in nuclear reactors.

After he won the Nobel Peace Prize, specifically for his related discovery of nuclear reactions brought about by slow neutrons, he moved to New York and joined Columbia University. He then moved to the University of Chicago and along with Leo Szilard developed the first nuclear pile.

Fermi then moved to Los Alamos in the latter stages of the Manhattan project to serve as a general consultant. 1944 he became a naturalized citizen of the United States.

In his later years Fermi did important work in particle physics, especially related to pions and muons. He was a very inspiring teacher at the University of Chicago and came up with what was called *the "Fermi Paradox" in which he believed that with all the stars in the sky, there*

should be more evidence of extraterrestrial presence. His work on that level inspired Francis Drake to come up with **the Drake equations** during his work with the SETI program and radio telescopes. Obviously, Fermi, had never been exposed to the Roswell incident. He died at the age of 53 on November 28, 1954 and was interned in Chicago's Oak Woods Cemetery.

Since the 1950s, the United States Atomic Energy Commission has named its highest honor the Fermi Award, after him. Recipients of the award include well-known scientists Otto Hahn, J. Robert Oppenheimer, Freeman Dyson, John Wheeler and Hans Bethe.

John Archibald Wheeler

"We live on an island surrounded by a sea of ignorance. As our island of knowledge grows, so does the shore of our ignorance." —John Wheeler

John Archibald Wheeler (July 9, 1911-April 13, 2008) was a very eminent modern American theoretical physicist. John was born in Jacksonville, Florida. He graduated from the Baltimore City College high school in 1926 and later received his doctorate from Johns Hopkins University in 1933. He was a professor of physics at Princeton University in 1938 until 1976, and one of his students was one of my all-time favorites, Richard Feynman. Two other notable students were Kip Thorne and Hugh Everett.

Wheeler's Scattering Matrix describes particles in their 1st and final states.

John Wheeler was well known for his famous S. matrix or ***scattering matrix which relates the initial state and the final state for the interaction of particles.*** It is used to describe some of the characteristics of the wave patterns of the principles of quantum mechanics, describing the initial state and the final state of the interaction of particles. John also contributed to the Manhattan Project, working at the Hanford site complex on the Columbia River in Washington state. That was the site of the first full-scale plutonium reactor in the world. Plutonium was necessary for the success of the bomb, and it was separated and produced at the Hanford facility.

In the 1950s **he formulated Geo-metro-dynamics, a program of physical and ontological reduction for physical phenomena such as gravitation and electromagnetism, to the geometrical properties of a curved space-time.** He also worked on the contributions to Einstein's general

relativity which was published by Albert in 1916. General relativity is a current description of gravity in modern physics. Einstein's theory had important astrophysical implications, pointing toward the existence of a black hole. However, the actual "black hole" turn came to life in 1967 during a talk that Wheeler gave at the NASA Goddard Institute of Space Studies.

Quantum science and mental telepathy are related.

It might be noted that in 1979, Wheeler spoke to the American Association for the Advancement of Science (AAAS) asking them to expel parapsychology, calling it a pseudoscience. However, they refused his request. It might also be noted here that **when working in quantum tunneling and quantum entanglement, there is a direct connection between quantum science and mental telepathy.** Wheeler's generation was not prepared for life-after-death studies; however, the next generation was very much open to the fact.

On April 13, 2008, Wheeler died of pneumonia at age 96 in Hightstown, New Jersey.

Murray Gell-Mann

*"We are driven by the insatiable curiosity of the scientist, and our work is a delightful game."
"I do not keep up with the details of particle physics." — Murray Gell-Mann*

"I have been interested in phenomena involving complexity, diversity and evolution since I was a young boy."— Murray Gell-Mann

Murray Gell-Mann was born September 15, 1929 on New York's lower East side, and entered Yale University at age 15. After graduating valedictorian from the Columbia Grammar and Preparatory School in 1969, he won the Nobel Peace Prize in Physics for his work on elementary particles. This work in particle physics included studies of the elementary constituents of matter and radiation and the interactions between them. These particles are created and detected during energetic collisions of other particles, usually in particle accelerators already mentioned. All elementary particles and interactions of the observed so far—and the list is updated daily—fall within the Quantum Field Theory known as the "Standard Model." The standard model has 17 species of elementary particles, the first being 24 fermions. These are elementary particles named after the above-mentioned Enrico Fermi, and consist of the electron, or composites, such as the proton. All observed fermions have half

integer spin ($n=1/2$) as opposed to bosons (force carrier or mass carrier particles) which have an integer spin (whole or complete). In the Standard Model, there are 24 types of elementary fermions: quarks (12) and leptons (12). Each of these 24 particles, in turn, have corresponding anti-particles which are determined mathematically, and observed in high-energy particle interactions, within nuclear accelerators such as the Large Hadron Collider.

Continuing on the standard model, there are **four vector bosons** (a vector boson is a boson with a spin (rotation of particles around their own axis) with a quantum number equal to 1. Vector bosons are also considered elementary particles which include: **the gauge boson** (carrier of natural fundamental forces), **the photon** (in the standard model of particle physics, photons are described as a necessary consequence of *physical laws having a certain symmetry at every point in space-time*. The intrinsic properties of photons, such as charge, mass and spin, are determined by the properties of this gauge symmetry.), **the W and Z bosons** (elementary particles that mediate the weak nuclear force), **and the gluon**, which is another elementary particle and is directly involved with the binding force of quarks, protons and neutrons in the presence of atomic nuclei.

***The unpolarized Boson particle gives mass to thoughts and to particles!
It could be the tunnel in quantum entanglement.***

Finally, there is **the "scalar boson"** with a spin component along its axis, with a value of zero. If the scalar bosons are taken to the quantum, or smallest field, then this field is called a scalar field, thereby giving it the term "scalar." When relating to Pyradyne's Nuclear Receptor, or Irradiator Systems, explanations in my book *Rays of Truth, Crystals of Light*, I give a detailed description of the complicity of the scalar wave and how it is modulated or created. Although not yet understood in classical physics or quantum mechanics, **the boson is also a particle that provides "mass" to all particles, including "thought particles"** which are, so far, unnamed. The above-mentioned gluon is a particle that acts such as glue to hold other particles together. The boson, therefore, would have a gravity factor, and **this un-polarized energy particle could be considered a missing link between the powerful instantaneous quantum entangling field linking man's mind to particle physics**. I know there will be several new readers here who won't understand all of this part of the book, but use these explanations as a guide for further exploration.

Murray Gell-Mann and George Zweig (a Russian particle physicist, trained under Richard Feynman) went on, and in 1964, first postulated the

existence of quarks. There are **six types of quarks**, known as **up (u)**, **down (d)**, **charm (c)**, **strange (s)**, **top (t)**, and **bottom (b)**. Up and down quarks have the lowest masses of all the quarks, and those are generally stable and very common in the universe. The other quarks are much more massive, and will rapidly decay into lighter up and down quarks. Because of this, charm, strange, top and bottom quarks can only be produced in high-energy collisions of particle accelerators or cosmic rays. Quarks have various intrinsic properties, such as electric charge (usually measured in $1/3$ - $2/3$ charge), color charge (a property of quarks and gluons that is related in the particle's strong interactions in the theory of Quantum Chromodynamics), spin and mass. For every quark flavor there is a corresponding anti-particle called "antiquark" that differs from the quark only in that some of its properties have the opposite sign.

In particle physics color charge consists of three values: red, green, and blue; and antiquark intake on one of three anti-colors: anti-red, anti-green, or anti-blue, respected as cyan, magenta and yellow, respectively. Gluons are mixtures of two colors such as red and anti-green, which constitutes their color charge. Quantum Electrodynamics (QED) considers eight gluon colors and a possible ninth color combination to be unique. The strength of the interaction of these different charges is considered to be the coupling constant.

Color comes from the astral plane—so do anti-particles! So do photons.

So far in physics, color charges are not meant to represent the color of things that we see and observe. However, because color originates on the astral plane, and anti-particles and photons originate from the astral plane, there is a growing connection between W bosons and photons, called "**the electroweak interaction**" which occurs at very high energies, wherein electromagnetism interacts with the weak nuclear force. *When looking into the human brain, there is a connection between color interpretation and the weak nuclear force.*

Gell-Mann's "eightfold way"

Murray Gell-Mann is the author of *The Quark and the Jaguar*, published in 1994 in which his ideas on simplicity and complexity are presented to the general readership. One of his contributions to physics was called the "eightfold way" which brought order out of the chaos created by the discovery of some 100 kinds of particles and collisions involving atomic nuclei. This, of course,

included the above-mentioned quarks which are the building blocks of neutrons and protons.

Some of his other accomplishments include board membership in the Wildlife Conservation Society, the American Academy of Sciences, the American Philosophical Society, and the Council on Foreign Relations. From 1969 to 1972 he was on the President's Science Advisory Committee and the President's Committee of Advisors on Science and Technology from 1994 to 2001. In addition, he has received honorary degrees from many universities including Yale, Columbia, University of Chicago, Cambridge, and Oxford. In 1994, the University of Florida ordered him an honorary degree in environmental studies, and in 2005 Professor Gell-Mann was awarded the Albert Einstein medal by the Albert Einstein society.

In 1984 Murray Gell-Mann co-founded the Santa Fe Institute, a non-profit research Institute in Santa Fe, New Mexico where he is currently spearheading the Evolution of Human Languages program. He can be seen on YouTube. He is fabulous and a very big role model with a great sense of humor!

Richard Phillips Feynman

"I'm smart enough to know that I'm dumb."

"Science is the belief in the ignorance of experts."

"The First Principle Is That You Must Not Fool Yourself and you are the easiest person to fool."

"If you thought science was certain, well that was just an error on your part."

"If you could explain it to the average person, it would have been worth the Nobel Prize."

"It doesn't matter how beautiful your theory is, it doesn't matter how smart you are. If it doesn't agree with the experiment, it's wrong!"—Richard Feynman

Richard Phillips Feynman (1918-February 15, 1988) was a humorist, musician, artist, author and one of the greatest physicists of all times! His birthplace was Far Rockaway, Queens, New York. His family was Jewish but not ritualistic in the practice of Judaism. His father, Melville, encouraged them to ask questions to challenge orthodox thinking. One of them was "where does the photon come from?" He had a small laboratory in his home and was constantly

tinkering with radios. In addition, he spent a lot of time studying algebra. He had a younger sister named Joan who later on attended Syracuse University and became a physicist.

There's a movie of a true love story called "Infinity"

When Richard was 15 years old, he met 13-year-old Arline Greenbaum, and married her just before he went to work on the Manhattan Project. While they were dating, they found out that Arline had tuberculosis. Because of this, Arline never had enough energy to set up housekeeping, so when Richard moved to Los Alamos, New Mexico, Arline was placed in a hospital in nearby Albuquerque. On weekends he would hitchhike down to see her, and visit her for the two days that he had off. Sometimes he would borrow a car owned by Klaus Fuchs, who was later discovered to be transporting nuclear secrets in his car in Albuquerque for the Soviets. (Klaus later served nine years for espionage before returning to Germany). During the week they would write each other letters, often in code and this went over like a lead balloon with the government censors. Arline Feynman died on June 16, 1945 in Albuquerque, New Mexico just seven weeks before the bombing of Hiroshima. Richard was only 27 years old. This tragic story was portrayed in a well-written major motion picture in 1996, entitled "Infinity."

He was married a second time in June 1952, to Mary Louise Bell (no relation to me) of Neodesha, Kansas, but this being a rebound marriage was brief and unsuccessful. He later married Gwyneth Howarth from Proponden, Yorkshire, England, who shared his enthusiasm for life and spirit of adventure. Besides their home in Altadena, California, they had a beach house in Baja, California, the latter which was purchased from the prize money of Feynman's Nobel Prize, which at the time was \$55,000 of which he was entitled to one-third. They remained married until Feynman's death. They had a son Carl, in 1962, and adopted a daughter, Michelle in 1968. Michelle had a cameo role in the movie *Infinity*. *Infinity* was a well portrayed love story about the marriage of Richard to Arline.

Feynman attended the Massachusetts Institute of Technology (MIT) where he received his bachelor's degree in 1939, and in the same year was named a Putnam fellow (a scholarship given to the top medical students). While he was at MIT, he took every physics course offered, including a graduate course on theoretical physics, while only in his second year. He obtained a perfect score on entrance exams to Princeton University in mathematics and physics, an unprecedented feat, but did rather poorly on

history and English portions. At the first lecture he gave at Princeton, some of the attendees were Albert Einstein, Wolfgang Pauli, and John Van Neumann. He received his Ph.D. from Princeton University in 1942; his thesis advisor was John Archibald Wheeler.

While he was working on his Ph.D., he was offered a position in the Manhattan Project, by Robert R. Wilson (March 4, 1914-January 16, 2000) American physicist and group leader at the Manhattan Project, which he accepted after considering that Nazi Germany might build the bomb first. At Los Alamos he was assigned to Hans Bethe's theoretical division. He and Bethe developed the Beth-Feynman formula for calculating yield of the fission bomb which built upon previous work by Robert Serber, another American physicist (Serber created the code names for all three bombs, "Little Boy," "Thin Man," and "Fat Man" each named for a different type of detonating device).

As a junior physicist, he was not central to the project. A group of young men had been recruited to do the computations for the project but were unable to do anything. When Feynman took over the project, IBM shipped in their newest computer, which Feynman single-handedly not only assembled but also got up and running. IBM's comment was "no one has ever done this before without our help." One of Richard's helpers there was John G. Kemeny, who later would go on and write the computer language BASIC. Later, with Nicholas Metropolis, Feynman assisted in establishing a system for the IBM punch cards for computation. I remember when I worked at NASA myself, we were still using the BASIC and COBALT computer languages and the punch-card system. Those systems, along with the CDC tape transporters, were beyond dinosaurs in today's computer science.

While working at Los Altos, Feynman enjoyed a hobby of visiting everyone's filing cabinet, and figuring out how to open the combinations. This actually proved helpful when one of the base generals forgot his combination to his classified information safe. In another case, he found the combination of a colleague's filing cabinet to be 27 - 18 - 28 after the base of natural logarithms $e=2.71828$. Overall, Feynman's humor helped keep the morale of the Manhattan Project on a high level.

Immediately after the war, Richard accepted a position as an associate professor of theoretical physics at Cornell University, offered him by Hans Bethe. He remained there from 1945 until 1950, when he realized he was tired of shoveling snow, like the rest of us from the East Coast. So he headed west and landed in Pasadena, California.

QED—calculating about electrons and antimatter positrons—interacting.

After considering several other teaching positions and job offers, Feynman accepted a professorship at the California Institute of Technology. There he worked in the field of Quantum Electrodynamics, where he won a Nobel Peace Prize in 1965. While there he also worked with above-mentioned Murray Gell-Mann, where one day when they were having a heated discussion, he threatened to remove the dash in Gell-Mann. Murray's response was, he threatened to put a dash in Feynman, therefore creating fine man! **Richard also created the "Feynman diagrams," which took a lot of the computations out of physics, and simplified much of the math required to reach a conclusion by conceptualizing in calculating interactions between particles in space-time, notably the interactions between electrons and their antimatter counterparts, positrons.** Richard had a 1972 brown and white Dodge van, and so he painted all of his Feynman diagrams all around the front, sides and back. In addition the California license plate read "QUANTUM" I know for a fact it was in the family for quite some time, and would love to find it and restore it! If anyone out there reading this book knows where the van is, please let me know.

Although Feynman was not a proponent of the string theory, quoting an interview, "I don't like that they're not calculating anything," he said, "I don't like that they don't check their ideas. I don't like that for anything that disagrees with an experiment, they cook up an explanation—a fix-up to say, 'well it still might be true.'" ***Strangely enough, later on the Feynman diagrams are now fundamental for the string theory and the M-theory.***

He made numerous trips to Brazil, and became a very well-known conga drummer. While there he participated in many ceremonies and parades, playing so well that the natives accepted him as a brother. You can go to YouTube and see some of his drumming videos. He met an artist named Jirayr Zorthian at a party, who began to teach him how to do drawings of faces and bodies. Later on his daughter Michelle, published a book entitled *The Art of Richard R Feynman: Images by a Curious Character*. I was able to procure one of these books, after a long search, which I found in England. I might add, his art was brilliant! In the beginning Richard signed his paintings as "Ofey," but as he got better and more well-known, he would sign his own name. His paintings got so popular that they began to have regular showings at Caltech.

Richard and Jirayr often met at Gianone's Steakhouse, located at 1453 N. Lake Ave. in Pasadena on Thursdays. Angelo, the owner, was a good friend

of theirs. The unique thing about this restaurant was that it was a "bottomless bar" In the Los Angeles Times article, dated Saturday, November 8, 1969, entitled "Bottomless Helps Nobel Physicist with Figures" written by Jack Birkinshaw, describes Richard's court appearances, trying to help Angelo keep his bar open, after the city of Pasadena tried to close it. It eventually was closed.

The Esalen Institute—a place of free scientific and spiritual exchange and relaxation in the 70s and 80s. A more modern "social network" than Junto.

During the late 70s and early 80s I gave workshops and seminars at the Esalen Institute in northern California. As was usual for me in those days I always wore a pyramid on my head. Usually after a seminar, several people wore pyramids on their head. It was not uncommon to see John Lilly or Jerry Brown and other notable people hanging out or enjoying the natural sulfur baths that were perched on the porch overlooking the ocean. Of course, a regular there was Richard Feynman! Most of the buildings had wooden floors and everyone sat on a pillow. Richard would oftentimes play the conga while others played various flutes and drums. At the time I was a fairly popular figure there, and Richard was very humble and fairly quiet, and unfortunately I didn't really know who he was at the time.

That was part of the character of Esalen, as that the focus there was the practice of yoga, meditation and relaxation, so that incredibly famous people mixed with everyone else and no one thought of fame or fortune, or other things that seem to impress people. As Faustin Bray, one of the yoga teachers there described Esalen, "Esalen is a mecca for unusual concepts and, yes, the fruits, nuts, and flakes, no doubt. But there is a lot of good work going on there, and of course, it's heaven!" I'm not sure what category I fit in, but I would say probably "nuts."

Feynmann wrote the report on what went wrong with the Challenger Space Shuttle (see Appendix B).

After the space shuttle Challenger disaster which occurred on January 28, 1986, 11:40AM, on its 10th mission, STS-51-L, where the space shuttle broke up 73 seconds into its flight leading to the deaths of the seven crew members, Feynman was requested to serve on the presidential Rogers commission which was to investigate the accident. William P. Rogers was not a technical man but was placed in charge of the commission. Several other notables were Neil

Armstrong, the first man to walk on the moon, Chuck Yeager retired Air Force general, the first person to break the sound barrier in level flight, and Sally K. Ride the First Woman in Space.

Richard got to see firsthand the same problems I had when I worked at NASA, with a management team that was not only incompetent, but also ignorant, way out of touch with the engineering staff, with a goal of getting the job done, regardless of who falls in harm's way! Quickly they soon became friends with Air Force General Donald J. Kutyna, who immediately (although Feynman resisted for a time because he hates politics), taught him the political ways of Washington D.C. and NASA.

Feynman quickly realized that NASA's reliability claim, one accident in 100,000, was completely ridiculous, as the reliability was computed on the failure ratings of nuts and bolts, and the various components, and the assessment they made claimed they could launch a shuttle every day for the next 274 years without an accident! When he gave them the real reliability, it was about one out of 100, which seems to have been proven true. As a matter fact, they've had so many accidents at the recently launched "Endeavor", which was actually a prototype and never meant to fly!

When Feynman finally was able to demonstrate to them the O-rings made by Morton Thiokol, that a lack of resilience at temperatures around freezing, which were the temperatures on the day of the launch. NASA (Never a Straight Answer) did not want to hear about this problem and tried to suppress it, but during a press conference with the news present, Richard, previous to the scheduled conference, attached a C. clamp to a Thiokol O-ring, and tightly squeezed the clamp, and then the compressed O-ring into a glass of ice water. When the camera finally came to him, he pulled the clamp off of the frozen O-ring, and the O-ring remained compressed, where the clamp head had been placed. The news media immediately seized on what was going on, and overnight Richard Feynman became a sensational news item.

When the report finally came out, still NASA would try to hide his report and he insisted that before he signed off, it would at least be part of the addendum. Finally it was, and I am reproducing it in this book (see the Appendix in the back of this book), to just show you what really goes on behind the scenes in a government space project. President Ronald Reagan gave him a presidential citation for his work. Feynman later wrote about the investigation in his 1988 book, which I highly recommend to be read, *What Do You Care What Other People Think?*

In 1979 Richard was diagnosed with a rare form of cancer. He continued on working and became a friend and associate of William Daniel "Danny" Hillis (born September 25, 1956 in Baltimore Maryland) who

founded a company called Thinking Machines Corp. According to Hillis, who fundamentally played a great critical role in developing the first massively parallel computer, commonly thought of today as supercomputers. I remember back in the early 60s, when I was at NASA we used a lot of equipment from Control Data Corporation (CDC). **Seymour Cray (September 28, 1925-October 5, 1966) was probably the most recognized name in the supercomputer industry. He joined CDC in 1960, completed the first design of the CDC 1604, and then later on the very famous CDC 6600, which we used in NASA's Saturn program, a lunar mission to the Moon.** The system that Richard was working on took the idea one step further, and was allowing for "artificial intelligence" to be introduced to the computer industry.

Richard always saw the humor in every situation, and one of his books, and he wrote several, was my favorite called *Surely You're Joking Mister Feynman*. Another book that's quite interesting is called *Tuva or Bust* by Richard's friend Ralph Leighton. This was one of Richard's last crazy places to go, located in the geographic center of Asia, which had become the republic of the Soviet Union. At the time they wanted to go there no one was allowed, but just before Richard died, the Russian government granted him a visa; however, unfortunately, his health never permitted the journey.

A few weeks before his death, on February 15, 1988, at 10:34 PM he was placed in the hospital. He could've been placed on life-support systems, and probably lived another month, but Richard was quite clear he was not afraid to die, therefore nixed the life-support idea. His friend, Danny Hillis, when walking with him in the hills behind his house, made a comment about the imminency of his death from cancer. Richard answered that it "bugs me, sometimes. Yeah it bugs me, but it doesn't bug me as much as you think it would, because I feel like I've told enough stories to other people and enough of me is inside their minds. I can't spread me all over the place. So I'm probably not going to go away completely when I'm dead!" I personally believe that he was right on! Here's an example of why.

A scientific interchange even beyond the grave!

Danny was working on a very complicated equation after Richard passed over. One night he had a dream, and Richard was there, and he explained to Richard the problem that he had and the solution. The dream was very realistic, and so Danny wondered if he knew that he was dead. So he made a comment to

Richard in his dream, "Hey, Richard! How come you're talking to me? You're dead!"

And Richard's comment in the dream was, "Oh Well. At least we will not be interrupted this way!"

Freeman John Dyson

"I am acutely aware of the fact that the marriage between mathematics and physics, which was so enormously fruitful in past centuries, has recently ended in divorce."—Freeman Dyson

"The more I examine the universe and the details of this architecture, the more evidence I find the universe in some sense must've known we were coming."—Freeman Dyson

Freeman John Dyson was born December 15, 1923, in Crowe Thorne, Berkshire England, the son of an English composer George Dyson. Dyson's mother was trained as a lawyer, but worked after Dyson was born, as a social worker.

"Spin Waves" are a kind of Boson (a particle that exchanges forces).

Dyson worked as an analyst for the RAF bomber command during World War II. After the war he obtained a BA in mathematics from Cambridge University in 1945. In 1947 he moved to the US on a fellowship at Cornell University, and joined the faculty there as a physics professor in 1951. While at Cornell he became the very good friend of Richard Feynman and worked with him on the "equivalence of formations" of quantum electrodynamics. He also worked on "spin waves" which are propagating disturbances in the ordering of magnetic materials. ***In the particle zoo, spin waves are known as "magnons" which are a type of boson.***

Although he never won a Nobel Peace Prize for his work in nuclear physics, he has won several smaller prizes, such as the Lorenz Medal (1966) and the Max Planck medal (1969). He wrote a recent book in 1999—*The Sun, The Genome, and the Internet*—describing green technology. He still lives today in Princeton, New Jersey, where he has resided for the past 50 years. At some point I hope to have him on my radio show.

Julian Seymore Schwinger

"Apart from a Brief Period of apostasy, when I echo the conventional wisdom that atomic and nuclear energy scales are much too disparate, I retain my belief in the importance of the lattice."—Julian Schwinger (lashing out at the resistance of acceptance of the possibility of Cold Fusion)

Julian Seymore Schwinger (February 12, 1918-July 16, 1994) was an American theoretical physicist and the alter ego of Richard Feynman. While Feynman drove around in casual clothes, in an old van or old car, Julian wore suits and ties and drove around in his Cadillac. Both were from New York City.

Julian received his BA from Columbia University in 1936 and his Ph.D. in 1939. He worked at the University of California, Berkeley under J. Robert Oppenheimer and was later appointed to the position at Purdue University.

During the war he worked at MIT in the radiation laboratory on the development of radar. He was asked to participate on the Manhattan Project with Feynman, but chose to stay at MIT. He also worked with Freeman Dyson.

Schwinger, in 1989, was not allowed to publish his findings! No more free speech? No more honest interchange in science? Are we killing science, or hoarding it for business purposes?

In 1989, Schwinger, after Feynman's death became interested in non-mainstream research of low-energy nuclear fusion reactions (ColdFusion). He wrote a theory about it. He resigned from the American Physical Society after their refusal to publish his papers. He felt that cold fusion research was being suppressed and academic freedom violated! He wrote "the pressure for conformity is enormous. I've experienced it in editors' rejection of submitted papers, based on venomous criticism of anonymous reveries. The replacement of impartial reviewing by censorship will be the death of science."

I personally had worked on ColdFusion at the University of Michigan. I believe that the United States already had working systems, and that they are presently installed on top-secret deep space aircraft. Any time there is so much ridicule made of an area in science such as sustaining a nuclear reaction at room temperature, anyone who dares to publish or experiment in this area, was harshly rebuked, and several scientists were thrown out of the academic circles as a result of their efforts!

In 1965, he shared the Nobel Peace Prize for his work in quantum electrodynamics, with Richard Feynman. Both men were very close and very competitive, to the point of humor, and both will be missed!

Doctor Edward Teller

"When you get to the end of all the light you know and it's time to step into the darkness of the unknown, faith is knowing that one of two things shall happen: either you will be getting something solid to stand on, or you will be taught how to fly."—Ed Teller

Doctor Edward Teller (January 15, 1908-September 9, 2003) known as "the father of the hydrogen bomb" was a Hungarian American theoretical physicist, born in Budapest, Hungary. Teller graduated in chemical engineering at the University of Karlsruhe and received his Ph.D. in physics under Werner Heisenberg at the University of Leipzig. While in Karlsruhe, young Edward became intrigued by physics, and in 1928 transferred to the University of Munich to pursue this interest. While in Munich, a streetcar accident cost Teller his right foot. After Teller recovered from his injury and learned to walk with prosthetics, he transferred to the University of Leipzig to study with Werner Heisenberg.

Quantum tunneling is like "pre-jävu"

He became friends with George Gamow (March 4, 1904-August 19, 1968) who was a Russian-born physicist and cosmologist. George moved to the United States in 1934. He was well known for discovery of Alpha decay via quantum tunneling (***quantum tunneling is the effect of an electromagnetic wave that works with other atoms to bring on a spontaneous effect. For example, the phone rings, and you know who the caller is before you answer it***). George also worked with Francis Crick and James Watson on why the four different kinds of bases in DNA (adenine, cytosine, thimine and guanine) could control the synthesis of proteins from amino acids.

Because of his relationship with George Gamow, Teller was invited to the United States to become a professor of physics at George Washington University, where he worked with Gamow until 1941. In 1942 Teller was invited to be part of Robert Oppenheimer's summer planning seminar at the University of California, Berkeley for the origins of the Manhattan Project, the Allied effort to develop the first nuclear weapons.

Teller became a part of the theoretical physics division at the then-secret Los Alamos Laboratory during the war, and continued to push his ideas for a fusion weapon even though it had been put on a low priority during the war. Teller was not very well liked by the Los Alamos scientists but was

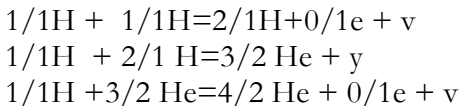
important in developing the implosion mechanism that started the fission reaction within the bomb. After the war was over, the rift between Teller and many of his colleagues was widened and in 1954, he testified against Robert Oppenheimer, causing him to lose his secret clearance!

In 1949 the Soviets detonated their first atomic bomb. President Truman announced a crash development program for the hydrogen bomb, and Teller returned to Los Angeles in 1950 to work on the project. Although Teller took credit for the hydrogen bomb, he had a very important co-developer on the project. Stanislaw Marcin Ulman (April 13, 1909-May 13, 1984) a Polish mathematician, was important in the development of the "spark plug" that produced the high temperature detonating force. (After the "Ivy Mike" project he developed the "Nuclear Pulse Propulsion," which later was designated for two interstellar satellite programs called "Project Daedalus" and "Project Longshot.") The actual mechanism of the hydrogen bomb is called the "Teller-Ulam" design.

The hydrogen bomb, of course, was a nuclear fusion device that differed from the atomic bomb, being a nuclear fission device.

During nuclear fusion, two light nuclei (the proton-neutron component of the center of the atom, minus the electrons), usually hydrogen atoms, combine to form a heavier nucleus, in this case, helium. In this process, the strong binding nuclear force along with a small amount of the original mass of the two hydrogen atoms, releases tremendous energy, which is much higher than any fission process, which is a splitting of the atom and the consequent release of the strong nuclear force energy.

The process involves three steps: First, the two combined nuclei of hydrogen $1/1\text{H}$ produce a nucleus of deuterium (H_2) along with an electron (e) and a neutrino (ν). Then another hydrogen nucleus combines with the nucleus of deuterium, yielding a nucleus of the isotope of helium ($3/2\text{He}$) and a gamma ray (γ). Finally, yet another hydrogen nucleus fuses with the isotope of helium producing a helium nucleus ($4/2\text{He}$) along with an electron (e) and a neutrino (ν) less energy. The formula is written as such:



I put this formula in because it is also describing the thermal nuclear reactions of the stars. In order for this to work, very high temperatures are required. In the case of the hydrogen bomb, it is pre-detonated by an atomic bomb. ***In the case of a star, huge gravitational pressures are required.***

In 1952 the 1st nuclear fusion test was done (hydrogen bomb exploded) on Elgelab island and had a blast 700 times that of Hiroshima. The cloud spread out 100 miles.

Ivy Mike was the code name given to **the United States nuclear test of the first fusion device**. It was detonated on November 1, 1952 on the island of Elgelab on the atoll Enewetak, in the South Pacific Ocean, part of the Marshall Islands. **The blast was 700 times more powerful than the explosion that leveled Hiroshima.** The device itself was in a large building. The Russians derisively referred to Ivy Mike as a "thermal nuclear installation" It was a combined effort of 9,350 military and 2,300 civilian personnel!

The device itself produced close to 12 Megatons (MT) and had a fireball 3.25 miles wide. The mushroom cloud rose to 57,000 feet in less than 90 seconds. After stabilizing at 136,000 feet (25 miles) the top eventually spread out to a diameter of 100 miles. The blast created a crater of 6,240 feet and was 164 feet deep. The radioactive fallout was tremendous and traces of it lasted for years.

Obviously today, the hydrogen bomb is much smaller, so they can be carried as a warhead, and as technology progresses things get much smaller and deliver even higher energies.

After the Ivy Mike project, Teller went on to become the director of the Lawrence Livermore National Laboratory, and established the Department of Applied Science at the University of California, Davis.

For over 20 years Teller advised Israel on nuclear matters and obviously helped them develop their atomic programs. In 1979 Teller suffered a heart attack, which he blamed on Jane Fonda, after the Three Mile Island incident. The actress had outspokenly lobbied against nuclear power while promoting her latest movie, *The China Syndrome*, which was released a week before the incident!

Teller died in Stamford, California on September 9, 2003. He was an accomplished pianist, scientist and inventor. I personally did not care for him as I never saw him smile and he was not very friendly to anyone other than the military and other governmental institutions. However, during the Bush administration, which was trying to disclaim global warming, he did sign the Global Warming Petition Project, which was a good thing.

Chen-Ning Franklin Yang

"I should like to say that I am as proud of my Chinese heritage and background as I am devoted to modern science, a part of human civilization of Western origin, to which I had dedicated and I shall continue to dedicate my work."—Chen Yang

How protons behave within quantum chromodynamics.

Chen-Ning Franklin Yang (born October 1, 1922) and Robert L. Mills (April 15, 1927–October 27, 1999) were a Chinese-American team that developed the Yang-Mills theory, which developed a unified description of two of the four fundamental interactions of nature: being electromagnetism and weak nuclear interaction. Being part of the gauge theory (a mathematical field theory) their work was important in describing the behavior of photons within the quantum chromodynamics, earlier developed by Richard Feynman.

Peter Ware Higgs

"I suppose I'll open a bottle of something if they find it."

Pete Higgs, commenting on The Large Hadron Collider's research on the Higgs Boson.

Peter Ware Higgs, born May 29, 1929 was a British theoretical physicist and an emeritus professor at the University of Edinburgh. He is ***best known for his 1960s proposal of broken symmetry (when an object is rotating, and then breaks its rotation and starts a different movement)*** and electroweak interaction (the above-described Yang-Mills theory), explaining the origin of mass within elementary particles in general of the W. and Z. bosons. This so-called Higgs mechanism is an energy transformer that causes an object to possess weight.

Scalar means having the same strength in all directions.

Differing from other electromagnetic and fundamental fields, ***the Higgs field has the same strength in all directions. This in scientific terms, is given the name Scalar.*** I have found in my research that the scalar wave is affected by shape energy. This is logical because any time a form interrupts space and time, that interruption by form constitutes mass. Some forms have a tendency to oscillate amongst themselves. The shape that I have been working with that has tremendous oscillation potential within, is a pyramidal shape, consisting of

an octahedral, or four-sided, *pyramid*. Placing one right side up, and another upside down, underneath, creates a perfect octahedron. This is the natural shape of hemoglobin, the red blood cell in our body.

The pyramid shape creates energy

It has been found that not only does ***this shape appear to create energy, but also the energy thus transformed into the human psyche, not only allows the body healing process to speed up, but also transforms human energy into action via scalar waves.*** I developed a device called the **Pyradyne Irradiator** that has successfully been able to direct the Higgs boson. This device has been tested in various laboratories around the world and verified to produce a boson phenomenon.

Leonard Susskind

"There is a philosophy that says that if something is unobservable—unobservable in principle—it is not part of science. If there is no way to falsify or confirm a hypothesis, it belongs to the realm of metaphysical speculation, together with astrology and spiritualism. By that standard, most of the universe has no scientific reality—is just a figment of our imaginations."—Leonard Susskind, from his book *The Black Hole War: My Battle With Stephen Hawking to Make the World Safe for Quantum Mechanics*

Leonard Susskind, born in 1940 is the Felix Bloch Professor at Stanford University and one of the perpetuators of the string theory. String theory is a developing branch of theoretical physics that combines quantum mechanics and general relativity into a quantum theory of gravity. The strings are one-dimensional oscillating lines that form the smallest units of matter, which then go on to form the "Theory of Everything" (a sought-after theory that links all known physical phenomena together). This leads into the holographic principle first proposed by Susskind's good friend, Gerard't Hooft (July 5, 1946). Both Leonard and Gerard are currently working on the black hole information paradox, which results from a combination of quantum mechanics and general relativity, suggesting that physical information could disappear in a black hole, thus allowing many physical states to evolve into precisely the same state. This, of course, would be a violation of the conservation of energy. In order to look at this, the string theory breaks things down harmonically to a point where sound becomes matter. In the case of a black hole, anything drawn into it breaks down into what is called a

"singularity." Leonard teaches evening classes at Stanford that are very popular. I have spoken to him personally many times, and at some point he has agreed to come on my radio show for an interview. His work is very inspiring to me personally.

Kip Stephen Thorne

Kip Stephen Thorne (born June 1, 1940, is an American theoretical physicist, working in gravitation physics and astrophysics and has a high degree of popularity currently in the physics world. He is a longtime friend of Stephen Hawking and the late Carl Sagan. Currently he is the Feynman Professor of theoretical physics at Caltech and one of the world's leading experts on astrophysical implications of Einstein's general theory of relativity. Kip was born in Logan, Utah, the son of Utah State University professors D. Wynne Thorne and Allison C. Thorne.

Gravity waves—will affect Earth.

Thorne is considered to be one of the world authorities on gravitational waves. Like Richard Feynman, Kip Thorne studied under John Wheeler at Princeton University, where he received his Ph.D. His presentations on black holes, gravity radiation, relativity, time travel, and wormholes have been included in PBS shows in the US and in United Kingdom on BBC. He co-founded, in 1984, the previously mentioned LIGO project (Laser Interferometer Gravitational Wave Observatory).

I feel in the coming years he is a great contender for a Nobel Peace Prize in his work on gravity waves, which I feel will be affecting our planet fairly soon as we process through the equinox. I look forward to having him on my radio show. He currently is teaching at Caltech and his address there is www.its.caltech.edu/~kip/

Stephen William Hawking

"Consideration of particle emission from black holes would seem to suggest that God not only plays dice, but also sometimes throws them where they cannot be seen."—Stephen Hawking

Stephen William Hawking was born January 8, 1942 and is a British theoretical physicist. He is the Lucasian professor of mathematics at the University of

Cambridge, a post held by Sir Isaac Newton. He is known for his contributions to the fields of cosmology and quantum gravity, and especially the context of black holes, where he has predicted that black holes emit radiation which today is known as "Hawking radiation."

His father, Doctor Frank Hawking is a research biologist and his mother Isobel Hawking is a political activist. He received his BA degree at Oxford University in 1962. He studied astronomy and was fascinated by the study of sunspots. He moved on to Cambridge, and started developing symptoms of Amyotrophic lateral Sclerosis (Lou Gehrig's disease) which cost him most of his neuromuscular control. In spite of this he continued on to receive his Ph.D. He was elected one of the youngest fellows of the Royal Society in 1974, and was created a Commander of the Order of the British Empire in 1982; he also became a Champion of Honor in 1989.

Hawking—a pioneer of gravity and black hole research—and the 1st quadriplegic to float in zero gravity!

At the 50th anniversary of NASA, Hawking gave a keynote speech on the final frontier (of space). At a celebration of his 65th birthday on January 8, 2007, Richard Branson paid 100,000 pounds for a zero gravity aircraft flight (vomit comet!) to Zero Gravity Corporation. The flight took place on April 26, 2007. Dr. Hawking became the first quadriplegic to float in zero gravity! He has made and is making media appearances worldwide. He, Kip Thorne and Leonard Susskind worked together and they're all pioneers of black hole and gravity research, as I said earlier, and are steadfastly reaching the forefront of physics. I have tremendous respect for Dr. Hawking.

Michio Kaku

"Thus the yeoman work in any science, and especially physics, is done by the experimentalist, who must keep the theoreticians honest."

"The Air Force is to be applauded for investigating technologies that may have value for national security. But wormholes, negative energies, warp space-time, etc., require futuristic technologies centuries to millions of years ahead of ours. The only thing going down the wormhole is taxpayers' money."—Michio Kaku

Michio Kaku born January 24, 1947 is a Japanese American theoretical physicist, and a leading researcher in the string field theory. Kaku was born in

San Jose, California and attended Cubberly High School in Palo Alto in the Early 1960s. At a National Science Fair in Albuquerque New Mexico, he attracted the attention of Doctor Edward Teller, who took him on as a protégé, awarding him the Hertz Engineering Scholarship. He received a BS degree from Harvard University in 1968, where he placed first in his physics class. He went on to attend Berkeley Radiation Laboratory at the University of California, Berkeley and received a Ph.D. in 1972.

Michio currently holds the Henry Semant Chair Professorship in Theoretical Physics at City College of New York.

Michio Kaku defines 11 dimensions of space-time.

Since 1969, along with Professor K. Kikkawa, he wrote the first paper on string field theory which summarizes each of the five string theories into a single equation. **He also published on the M-theory, in which 11 dimensions of space-time may be identified.** Because the dimensionality exceeds the dimensionality of the five superstring theories in 10 dimensions, it was originally believed the 11-dimensional theory is more fundamental and unifies all string theories. Although a full description of the theories is not yet known, the low entropy dynamics are known to be super-gravity interacting with two- and five-dimensional membranes.

Part of the string theory involves quantum tunneling, sometimes called **electron tunneling**. Electrons in the field have been observed to jump from one orbit to another without traveling through the intervening space, and without having any time elapsed, thereby instantaneous transition beyond the speed of light. Physicist Niels Bohr was the first to describe such a "quantum leap."

The question then arises, how does an electron jump from one spot to another without going through the space between the two points, and does it take any time to complete the process? Looking again at string theory, imagine a tunnel through which electrons pass exists in another universe within many universes, and with each universe having its own space-time matrix, the only connection becomes the tunnel itself. This could be expressed mathematically as **an Einstein-Rosen Bridge**. Furthermore, string theory also explains how subatomic particles have both properties of a particle and a wave.

The string theory states that everything is made of tiny vibrating strings which are identical. One may manifest as a heavy particle like a proton, another

is an particle without mass, like light. The difference being, they vibrate at different frequencies. According to $E=mc^2$, the more energy something has, the more mass it has, so a heavy particle is a string vibrating at a high frequency, and a light particle is a string vibrating at a lower frequency. Strings are very small. If an atom were illustrated as the size of our solar system, a string would be the size of an elephant.

It may be that parallel universes can be found inside the 11th dimension!

The 11th dimension is the dimension that may contain within it any number of parallel universes. But if our universe is vibrating out of phase with the others, even though they may be intertwined, we would not be aware of their closeness.

Michio's harmonic concept of matter and form is similar to the AUM sound creating matter (such as "In the beginning was the Word"... John 1:1).

Having spoken to Michio personally, as well as interviewed him on my radio show, his description of the string theory is much like each string is a vibrating, beautiful violin-sounding concert in which the body of music is the beginning of matter and form! This coincides with **the ancient Sanskrit teachings that matter comes from the sound AUM.**

One of the things I admire most about Michio Kaku is he is a "Brilliant Figure Skater" on ice. He has appeared on many forms of media including Good Morning America, The Screen Savers, Larry King Live, 60 Minutes, Nightline, 20/20, CNN, all news channels, and Countdown with Keith Olbermann. In addition, he makes regular presentations on The History Channel, The Science Channel, and the Discovery Channel. He and I both have, independently, been on "Coast to Coast A.M." with Art Bell, George Noory, and Ian Punnet.

He is also a well-known author; some of his titles include, *Physics of the Impossible*, *Parallel Worlds* and *Hyperspace*, which I recommend for further detail, extending beyond this book. To me his books and his work is absolutely brilliant, and his ability to simplify very complicated physics is a very important gift to the processes. He is definitely one of my great role models!

As we come to the conclusion of this chapter, I feel the need to add a few people, who never really got the true mainstream acceptance, because some of their approaches were from the occult side of nature. In order to be

accepted, a certain conformity by sciences that have been considered "mainstream" are necessary, oftentimes followed by published works. However, many who have published in the mainstream community have been highly inspired by occult thinking, and had the ability to transform this information into mainstream terms. This required an education on both sides of the fence.

Viktor Schauberger

"I must furnish those who protect or save life, with an energy source, which produces energy so cheaply that nuclear fission will not only be uneconomical, but ridiculous. This is a task I've set myself in what little life I have left."—Viktor Schauberger

Viktor Schauberger (June 30, 1885-September 25, 1958) was an Austrian naturalist, philosopher, inventor, and experimenter on the forces of nature, especially with the fluidic vortices of water. Viktor was born in Holzschlad, Austria to a long line of Austrian Forresteres traced back to early Germanic tribes. Their beliefs in nature were quite different from today's views.

A trout creates a centripetal spiral movement that creates a vortex that moves him fast upstream!

I know for a fact that when he was studying the migrating habits of trout, he wondered why they swam in the center of the stream, going upstream in the brunt of the current, versus swimming to the edge, where the current was much less. His deduction on that was that water was densest when it was cold, and there were many layers in the structure of flowing water. He deduced from that, water has a centripetal force which moves in the opposite direction of the current, and that the trout moved within that force, and was pulled upwards as though in a whirlpool. He concluded that water passing through the trout's gills created a hyperbolic centripetal spiral movement, this combined with the trace elements within the gills, created a vortex that allowed the trout to either stand still, or move lightning fast against the stream. He also concluded that there was a similar action in birds as they flew through the air.

Based on this design, he built a turbine, which was later on converted into a flying saucer by the Germans in World War II. In 1934 Viktor met with Adolf Hitler and had discussions about the fundamental principles of agriculture, forestry and water engineering. From here it is believed he went with his ideas to the German Reich, whether willingly or forcibly, has still not

been determined. Later in 1941, in Augsburg, Schauberger worked with Messerschmitt on engine cooling systems, and still later with designer Heinkel, on aircraft engines.

After the war he continued his work, and on February 28, 1956, he wrote a letter to the West German defense minister defining his work on advanced aircraft propulsion principles and a flying saucer that he had built. Straus explained how the first flying saucer rose unexpectedly and then was wrecked. A few days later an American group appeared and seized everything relating to this project; then, after a very thorough investigation by a high-ranking officer, he was taken into protective custody for nine months. During this time, a Russian group blew up Viktor's apartment, possibly to destroy information that had been overlooked. Viktor had been working with a number of Russian prisoners of war who were later returned to the Soviet Union. Following this, after his release, he moved to Linz, Austria and went back to work in agriculture, where he died on September 25, 1958. I have made a personal study of his life over the years, and even talked to some of his surviving family members. From what I was able to gather, Viktor was highly persecuted from the time he worked for the Third Reich, until he went back into his agricultural work. He is probably one of the first scientists, after World War II, to have gone through the NSA confiscation and interrogation process, and possibly likewise with the then active KGB. Since then I've seen this repeated several times on inventors, some very close to me, over controversial inventive science.

Edwin D. Babbitt

"The blue ray is one of the greatest antiseptics in the world."—Doctor Babbitt in his classic book *Principles of Light and Color*

Edwin D. Babbitt (1828-1905) was one of the most influential American pioneers and writers in the field of color therapy and color research. His book, "Principles of Light and Color: Classic Study of the Healing Power of Color," was one of the most brilliant books I ever read in my early days.

Babbitt, by clairvoyance, described the atom. Psychic power is quantum entanglement.

He outlined, by clairvoyant vision, the first structure of the atom, called the "Babbitt Atom." He used this structure to explain bonding, electricity light and

color and friction, and even psychic power, which, of course, today would be considered quantum entanglement.

Annie Wood Besant

"Those who can serve best, those who help most, those who sacrifice most, those are the people who will be loved in life and honored in death, when all questions of color are swept away and when in a free country free citizens shall meet on equal grounds."—Annie Besant

Annie Wood Besant (October 1, 1847-September 20, 1933) was born in London to a middle-class family of Irish origin. Early in life she became a freedom fighter for women's rights, starting with freedom of thought, women's rights, and secularism, and she became leader of the Theosophical Society. She was initiated into the Theosophical Society by Madame Helena Blavatsky (August 12, 1831-May 8, 1891) who was one of the founders (1875) and was considered the one who brought occult teachings to the West, with her book entitled *Secret Doctrine*.

As the leader of the Theosophical Society, she initiated into Theosophy 12-year-old Jawaharlal Neru, the first prime minister of independent India. While at the Theosophical Society, she developed her gift of clairvoyance, and along with Charles Leadbetter (1847-1934) began mapping the physical structure of the hydrogen, oxygen, and nitrogen atoms in November 1895. In the same month previously mentioned, Rontgen discovered X-rays that made atoms visible to conventional science.

7 layers of spirals around spirals (the Anu) is the life force related to our consciousness.

In 1909 they published another book that I studied, entitled *Occult Chemistry*. They visualize the subatomic structure as seven layers of recursive spirals around other spirals. The same description matches much of what Michio Kaku has explained in his string theory. The basic structure they called the "Anu." Also the Anu has been linked to the life force of the photonic output of our sun, in what is described as having a healing and animating quality to all living things. During the late morning, it is said that the sun has its highest healing quality photonic output.

Continuing on with their work and bringing it to the Orthodox physics community has been the mission of well-known British physicist Stephen M. Phillips. In 1980 he published a book entitled *The Extra Sensory Perception of*

Quarks with a follow-on book entitled *The ESP of Quarks and Superstrings*, both of which I have read; they have a tremendous cross-link between consciousness and particle physics.

David Joseph Bohm

"In some sense man is a microcosm of the universe; therefore what man is, is included in the universe. We are enfolded in the universe."

"Thought has been constantly evolving and we can't say when that system began."

—David Bohm

David Joseph Bohm (December 20, 1917-October 27, 1992) was a British quantum physicist, who made significant contributions in the fields of theoretical physics, philosophy, neuro-psychology, and indirectly to the Manhattan Project.

David was born in Wilkes-Barre Pennsylvania to a Hungarian Jewish immigrant father and a Lithuanian Jewish mother. In 1939 he graduated from Pennsylvania State College and then headed west to the California Institute of Technology, and then after a year, was transferred to the theoretical physics group under Robert Oppenheimer at the University of California Berkeley where he got his doctorate.

Unable to be approved for secret clearance to work at Los Alamos, he remained at Berkeley teaching physics, where his work and research "scattering calculations, of collisions of protons and neutrons" were very useful for the Manhattan Project and immediately classified. He was unable to access his own work, as he did not have a security clearance, so in order to satisfy the University, Oppenheimer declared Bohm had successfully finished his work and was granted a Ph.D.

Your movement within the giant hologram affects all.

Like Stephen Phillips, David Bohm's occult studies of the work of Jiddu Krishnamurti (May 12, 1895-February 17, 1986, one of the most famous educators of modern times), began to merge with his work in quantum mechanics. This work eventually evolved into ***the presentation of all existence as a giant, yet small hologram, in which all parts are the same, and the movement of one affects all.***

Our quantum-connection (to all others through mental quantum tunneling) is part of the entire hologram.

One of his ideas was called "**the holonomic brain theory**" originating with psychologist Karl Pribram and initially developed in collaboration with Bohm. Their ideas were that the cognitive function of the brain was guided by wave interference patterns (the superposition of two waves), situated temporarily between hologram-like organizations, and the discrete effective, quantum vectors derived from reward anticipation potentials. In simple terms, we are conditioned by images, and ***as children growing up, we question what the images are. When someone, usually an adult, explains what they are, we are quantum-connected to all others who asked the same question, and this connection, via what is called quantum tunneling, connects us to the overall hologram of existence.*** In this case the part of super-positioning occurs in the visual cortex, and the explanation of what had just occurred is recorded in the auditory system. This is further verified in the somatosensory cortex, which is sensitive to the feeling of touching.

Bohm continued his work in quantum physics until his retirement in 1987. He wrote several books, the last one—*The Undivided Universe: An Ontological Interpretation of Quantum Theory*—was published in 1993, one year after his death. David died of a heart attack in Hendon, London on October 27, 1992 at age 74. I feel his death was a tremendous loss to the scientific and physics community.

In previous chapters I have tried to present a historical thread of scientific development that now brings us upon the infinity of science. These chapters could've been filled many times over with names of people who were incredibly important for us to reach our present-day understanding of life within the realm of science. As science moves forward, many new unheard-of researchers will receive many new Nobel prizes, and other rewards in subjects that have not even been created yet. My personal philosophy with all of this is not only to have an "open mind" but also an "open heart" as the sacrifice that is given in the name of science, by all those who contribute to moving it forward, cannot be ever measurably understood, unless you were that person walking in the moccasins of progress.

Chapter 7: The Emergence of Evils: Combined Intelligence in Today's World

The Flu—The Prison, The Plan

Children are Expendable

"When the people fear their government, there is tyranny; when the government fears the people, there is liberty." —Thomas Jefferson

In this chapter we will examine some very old historical health and consciousness lessons that probably most of us were never aware of, or if so, have forgotten. The government, and the government affiliate research agencies, have done their due diligence on how to manipulate population control, psychological fear for control of the masses, eradicate the older part of our population, to relieve the debt to society as they encounter age-ridden problems, present disinformation on the topics of advanced education, extraterrestrial involvement in governmental affairs, and finally, programming our children in a destructive way so as to impede our constitutional freedoms in the future generations.

There is a tremendous movement of underground activity exposing the contents of information that I am presenting in this book. The internet is a great source of digging into all types of subject matter. However, some of it is not true and part of the disinformation campaigns are to attack conspiracy terrorists, and spread a blanket of ignorance over what is conspiracy and what is conspiracy theory. Because I lived right through a good portion of what's out there, I am presenting an overall picture of what I saw and see today. I hope this provides valuable insight to the reader's own personal quest for truth.

As I mentioned earlier, I spent a lot of time with The National Health Federation. We had two full-time lobbyists in Congress; one is a dear friend of mine, Clinton Miller, who worked very hard to allow Americans to make freedom of health choices, and that included freedom to protect their children from these horrible vaccines that we are about to cover momentarily. Since then another movement doing exactly opposite of what we stood for, **Codex Alimentarius, another Tavistock Institute-initiated ploy (a thinly veiled propaganda arm of the international pharmaceutical industry), has begun to try to pass many laws taking away all of our health choice freedoms.** A friend of mine, Rima E. Labow, M.D., and her husband, Former Army General Albert N. Stubblebine (*founder of the U.S. Army's remote viewing program*) have begun an active crusade against the Codex assault. They, in turn,

have come under heavy fire from the disinformation specialists of the pharmaceutical industry. There is a great bit of Internet fodder to follow.

The History of Epidemics, Pandemics and Plagues

Again, let's turn to the past. This time let's examine the history of epidemics, pandemics and plagues.

Invading microbes trying to reproduce

All infection is a race between the invading microbes in the host. The microbe following the indelible rules of evolution, strives to reproduce and survive. Meanwhile, the host immune system mounts a warlike defense designed to find, destroy and eliminate it. If an agent kills its host too quickly, then it cannot be spread. This was found out when the government distributed its evil Ebola virus in Zaire, South Africa in 1976! Germs, viruses, and bacteria which can be reproduced and passed from one host to another, therefore, are favored in population control.

Prevalence of the disease is the number of diseased individuals in any one point (point prevalence) over a given period (period prevalence). The **incidence** is the number of new cases of a disease that occur within a defined population over an established time. An example would be cases per 100,000 of a given population. Any excessive unrelated incidents of a particular disease above what is normally expected in a population is defined to be an **epidemic**. When an epidemic extends beyond the confines of a wide area, typically a continent, and becomes a more widespread problem, it is called a **pandemic**. Any disease with a low-to-moderate normal base level incidence rate in the population, but not necessarily constant, is said to be in an **endemic**. The common cold is endemic in northern latitudes.

Individuals who are infected and show either no or only mild symptoms are said to have a sub-clinical infection. Sub-clinically infected individuals with no symptoms are identified as well-carriers of the disease because they are carrying and frequently shedding the disease agent (Germs). Once an individual is infected, there is an incubation period (*time between exposure and the first detectable symptom*), latency period (*time when the disease is concealed, hidden or inactive*), and the infectious period (*time during which the disease can be transmitted with or without contact*).

In the following table the (V) is virus, the (B) is bacteria and the (P) is for protozoa.

Common Source Epidemic Diseases			
Disease	Causative Agent	Infection Sources	Reservoirs
Anthrax	<i>Bacillus anthracis</i> (B)	Milk or meat from infected animals	Cattle, swine, goats, sheep, horses
Bacillary Dysentery	<i>Shigella dysenteriae</i> (B)	Food contamination of food and water	Humans
Botulism	<i>Clostridium botulinum</i> (B)	Soil-contaminated food	Soil
Brucellosis	<i>Brucella melitensis</i> (B)	Milk or meat from infected animals	Cattle, swine, goats, sheep, horses
Cholera	<i>Vibrio cholerae</i> (B)	Fecal contamination of food and water	Humans
Giardiasis	<i>Giardia</i> spp.(P)	Fecal contamination of food and water	Wild mammals
Hepatitis	Hepatitis A, B, C, D, E (V)	Infected humans	Humans
Paratyphoid	<i>Salmonella paratyphi</i> (B)	Fecal contamination of food and water	Humans
Typhoid Fever	<i>Salmonella typhi</i> (B)	Fecal contamination of food and water	Humans

(B) = Bacteria (P) = Protozoa (V) = Virus

Host-to-Host Epidemic Diseases			
Disease	Causative Agent	Infection Sources	Reservoirs
<i>Respiratory Diseases</i>			
Diphtheria	<i>Corynebacterium diphtheriae</i> (B)	Human cases and carriers; infected food and fomites	Humans
Hantavirus pulmonary syndrome	Hantavirus (V)	Inhalation of contaminated fecal material	Rodents
Meningococcal meningitis	<i>Neisseria meningitis</i> (B)	Human cases and carriers	Humans
Pneumococcal pneumonia	<i>Streptococcus pneumoniae</i> (B)	Human carriers	Humans
Tuberculosis	<i>Mycobacterium tuberculosis</i> (B)	Sputum from human cases; contaminated milk	Humans, cattle
Whooping cough	<i>Bordetella pertussis</i> (B)	Human cases	Humans
German measles	Rubella virus (V)	Human cases	Humans
Influenza	Influenza virus (V)	Human cases	Humans, animals
Measles	Measles virus (V)	Human cases	Humans

Adding synthetic vitamins to natural foods such as milk, etc., actually lowers the frequency of the immune system.

Host-to-Host Epidemics			
Disease	Causative Agent	Infection Sources	Reservoirs
<i>Sexually Transmitted Diseases</i>			
HIV Disease	HIV (V)	Infected body fluids, blood, semen, etc.	Humans
Chlamydia	<i>Chlamydia trachomatis</i> (B)	Urethral, vaginal, and anal secretions	Humans
Gonorrhea	<i>Neisseria gonorrhoea</i> (B)	Urethral and vaginal secretions	Humans
Syphilis	<i>Treponema pallidum</i> (B)	Infected exudate or blood	Humans
Trichomoniasis	<i>Trichomonas vaginalis</i> (P)	Urethral, vaginal, prostate secretions	Humans
<i>Vector-borne Diseases</i>			
Epidemic typhus	<i>Rickettsia prowazekii</i> (B)	Bite from infected louse	Humans, lice
Lyme disease	<i>Borrelia burgdorferi</i> (B)	Bite from infected tick	Rodents, deer, ticks
Malaria	<i>Plasmodium spp.</i> (P)	Bite from infected Anopheles mosquito	Humans, mosquitos
Plague	<i>Yersinia pestis</i> (B)	Bite from infected flea	Wild rodents
Rocky Mountain Spotted Fever	<i>Rickettsia rickettiae</i> (B)	Bite from infected tick	Dogs
<i>Direct-contact Diseases</i>			
Psittacosis	<i>Chlamydia psittaci</i> (B)	Contact with birds or bird excrement	Wild & domestic birds
Rabies	Rabies virus (V)	Bite from carnivore	Wild & domestic carnivores
Tularemia	<i>Franciscella tularensis</i> (B)	Contact with rabbits	Rabbits

In the past there were **two major types of infectious diseases which developed into the epidemics: common source and the host of host.** Common source epidemics arise from the contaminated source, such as water or food. Because we have a world of supermarkets today, it is quite easy to spread consciousness-destructive, severe depression-causing chemicals into entire societies. A few examples are the arsenics that are used on tomatoes to kill the large green worms often seen on the plants. As most people know, arsenic is a very good undetectable slow-killing poison. Bromine is in common

use on strawberries and attacks the lungs. Synthetic vitamin poisoning occurs when you substitute or add synthetic vitamins to natural food substances. For example, adding vitamin A and vitamin D, usually in a synthetic form, to dairy products, lowers the frequency of the immune system (vitamin A) and leads toward heart and bone problems (vitamin D). The reason this happens is that if you place a natural vitamin next to a synthetic vitamin, the synthetic vitamin absorbs the life force from the natural vitamin. So in the human body the natural life force is gradually drained. Especially in the case of synthetic vitamin D, as D is necessary for synthesis of calcium, which the bones require for maintenance, and the heart requires to produce actin which causes heartbeat. In the past, sunlight was a good source of vitamin D. Now, due to the gradual pollution of the atmosphere and the very destructive chemtrails, getting a supply of natural vitamin D for encouraged health is becoming increasingly more difficult. For years now, the government has been trying to take away our health choices, including the freedom to purchase natural vitamins which contain life force. If they had their way, the doctors would write a prescription, which the drug companies would fill with synthetic vitamins, thereby increasing drug sales, that would follow as people became ill and depressed. Most the host infections are transmitted from one infected individual to another by many different routes, including deliberate transfer, contaminated articles such as needles, and terrorist-driven attacks.

Anything causing a disease is called a "pathogen." Antigens are building blocks for pathogens. Many antigens are carried in and distributed through poor protein sources. A "vector" is an organism that serves as an intermediary in the transmission of a host-to-host disease. For instance, many infections are transmitted by mosquitoes, fleas, ticks, etc. to people. A fomite is an inanimate object that adheres to transmit infectious material, i.e. to bedding, clothing, surgical instruments, etc.

A Brief History Of Plagues

Without going into too much detail, one of the earlier recorded plagues began with the exodus of Moses from Egypt. As you well know, the Israelites were being held hostage in Egypt by Pharaoh Amenhotep II and Hatshepsut before him. It is said that God spoke to Moses and his brother Aaron. Although Moses was the main channeler of God, Aaron was the one who spoke for him in the Egyptian courts. It was said that if the Pharaoh did not release the Israelites, there would be a series of 10 plagues.

These plagues were to be **First:** rivers and water sources turning to blood, killing all fish and all water life. Several biblical scholars attempted to rationalize what these plagues were in more common terms.

Here is a brief breakdown of each Plague:

In **the first plague, the blood** is a red clay that slipped down the Nile from the Ethiopian highlands in Egypt. The mud then choked the fish in the area inhabited by the Israelites. This created a bacterial situation, probably producing anthrax.

Second plague—frogs: The fish then were caught in the swamps where the frogs lived; the fish, soon infected with anthrax (now developed as a bio-warfare chemical) caused the frogs (the second plague) to leave the Nile for cool areas, taking refuge in people's houses. Since the frogs were already infected with the disease, they died in the new habitats.

Third plague—lice or gnats: and as a consequence of the lice in the third plague, **flies—the fourth plague—began** to multiply, feeding off the dead frogs. This gave rise to a pestilence that drove wild animals onto the Egyptian farms, killing domestic animals and people.

In the fifth plague, cattle were feeding on grass, which by then had also become infected. Thereby most livestock also perished.

In man, the symptom of the same disease that causes **boils** (called buboes) **was the sixth plague.** This **affected all of the Egyptians and their livestock.**

The seventh plague is related to atmospheric and climatic conditions in Egypt. **Hailstorms—the seventh plague—came out of nowhere.** Although not common, hailstorms do occur rarely in Upper Egypt and occasionally in Lower Egypt during the late spring and early fall.

The eighth plague—locusts—is a more common occurrence, not only in Egypt but worldwide.

The ninth plague—darkness—probably was a Libyan dust storm.

And finally, **the 10th plague, was the death of all Egyptian first-born males**—no one escaped, from the lowest servant in Pharaoh's first-born son, including first-born livestock. This was the hardest and cruelest blow on Egypt and convinced the Pharaoh to let the Israelites leave Egypt. This final plague was definitely holographic in nature and was a form of what we call today "quantum entanglement." More on this later.

The next plague in recorded history arrived **in Athens in 430 BC**. It has never been precisely defined, but it arrived through the port city of Piraeus.

In 165-180 AD the Roman empire was struck by another disease you know of as smallpox or measles. **It reoccurred in 251 AD**.

In the sixth century AD, the Bubonic Plague (a form of bacteria known as *Yersinia Pestis*, an infection of the lymphatic system usually resulting from the bite of an infected flea) struck and killed millions. It broke out in the Byzantine Empire (areas around Rome, Italy) and spread throughout Europe, killing 25% of the population.

In 1346 the Black Death (bacteria) killed 1/3 of Europeans or 25 million people.

Bubonic Plague (often called The Black Death) broke out again in Crimea (located on the northern coast of the Black Sea, hence the name Black Plague) **in 1346** and soon spread across Europe. It reached England in 1348, **killing about** one-third of the population, or approximately **25,000,000 people**.

In continental Europe the plague lasted longer. In Western Europe **the last outbreak of the plague was in southern France between 1720 and 1722**. **Then it moved to the Middle East**. There it continued to claim many lives until the 19th century. **Istanbul, Turkey had an outbreak of plague in 1841 and it struck Egypt in 1845**.

Cholera—a bacterial infection

The first outbreak of cholera (infectious gastroenteritis caused by a protein toxin, gram-negative bacteria *vibrio cholera*, producing dysentery) **occurred in India in 1816, and became a pandemic by spreading from Bengal,**

across India, and to China in the Caspian Sea. The second pandemic of cholera affected Europe and North America in the late 1820s, and since then, there have been five other pandemics. The second and most major outbreak (1961-1966) began in Indonesia and reached Bangladesh, India and the Soviet Union.

In 1894, two scientists, Alexandre Emile Jean Yersin and Shimbasaburo Kitasato, separately described organisms they found in the lymph nodes and other organs of the bodies of the Bubonic Plague victims and isolated the bacteria, thereby determining the cause; and **in 1897 the first vaccines were created.**

Bubonic Plague is still prevalent in more than 20 countries. In the United States the last rat-borne epidemic occurred in Los Angeles in 1924-1925. Approximately 2,000 cases a year break out in smaller countries worldwide.

Pandemics and Pandemic Threats since 1900

Historical Overview

History suggests that influenza pandemics have probably happened during at least the last four centuries. Since 1900, three pandemics and several "pandemic threats" have occurred.

1918-1920: Spanish Flu Pandemic (*Virus*)

The worst viral flu pandemic was the Spanish Flu. Over 50 million people died. It was first seen in Fort Riley, Kansas in the United States. The worst viral flu pandemic was the Spanish Flu. Over 50 million people died. It was first seen in Fort Riley, Kansas in the United States.

The Spanish Influenza pandemic is the catastrophe against which all modern pandemics are measured. It is estimated that approximately 20 to 40 percent of the worldwide population became ill and that **over 50 million people died.** Between September 1918 and April 1919, approximately 675,000 deaths from the flu occurred in the U.S. alone. Many people died from this very quickly. Some people who felt well in the morning became sick by noon, and were dead by nightfall. Those who did not succumb to the disease within the first few

days often died of complications from the flu (such as pneumonia) caused by bacteria.

This was not a bacterial-related pandemic but a viral pandemic. Most of its victims were healthy young adults—in contrast to most influenza outbreaks which predominantly affect juvenile, elderly, and otherwise weakened patients. **The pandemic lasted from March of 1918 to June 1920, spreading even to the Arctic and remote Pacific islands. *The disease was first observed at Fort Riley (home of Gen. George Custer and the seventh Calvary) in Kansas, United States on March 4, 1918 and in Queens, New York on March 11, 1918. The disease killed 600,000 people in the United States and between 20 million to 50 million people worldwide.*** The Spanish flu was the first and most severe of a spree of pandemics of influenza in the 1900s.

Less severe pandemics occurred in 1957 (Asian flu) and in 1968 (Hong Kong flu).

1957: Asian Flu (*Virus*)

The viral Asian Flu in 1957-58 killed about 69,800 Americans.

In February 1957, the Asian influenza pandemic was first identified in the Far East. Immunity to this strain was rare in people less than 65 years of age, and a pandemic was predicted. In preparation, vaccine production began in late May 1957, and health officials increased surveillance for flu outbreaks.

Unlike the virus that caused the 1918 pandemic, the 1957 pandemic virus was quickly identified, due to advances in scientific technology. Vaccine was available in limited supply by August 1957. The virus came to the U.S. quietly, with a series of small outbreaks over the summer of 1957. When U.S. children went back to school in the fall, they spread the disease in classrooms and brought it home to their families. Infection rates were highest among school children, young adults, and pregnant women in October 1957. Most influenza- and pneumonia-related deaths occurred between September 1957 and March 1958. The elderly had the highest rates of death.

By December 1957, the worst seemed to be over. However, during January and February 1958, there was another wave of illness among the elderly. This is an example of ***the potential "second wave" of infections that can***

develop during a pandemic. The disease infects one group of people first, infections appear to decrease and then infections increase in a different part of the population. Although the Asian flu pandemic was not as devastating as the Spanish flu, about 69,800 people in the U.S. died.

1968: Hong Kong Flu (*Virus*)

The viral Hong Kong Flu in 1968-69 killed about 33,800.

In early 1968, the Hong Kong influenza pandemic was first detected in Hong Kong. The first cases in the U.S. were detected as early as September of that year, but illness did not become widespread in the U.S. until December. Deaths from this virus peaked in December 1968 and January 1969. Those over the age of 65 were most likely to die. The same virus returned in 1970 and 1972. The number of deaths between September 1968 and March 1969 for this pandemic was 33,800, making it the mildest pandemic in the 20th century.

There could be several reasons why fewer people in the U.S. died due to this virus. First, the Hong Kong flu virus was similar in some ways to the Asian flu virus that circulated between 1957 and 1968. Earlier infections by the Asian flu virus might have provided some immunity against the Hong Kong flu virus that may have helped to reduce the severity of illness during the Hong Kong pandemic. Second, instead of peaking in September or October, like pandemic influenza had in the previous two pandemics, this pandemic did not gain momentum until near the school holidays in December. Since children were at home and did not infect one another at school, the rate of influenza illness among schoolchildren and their families declined. Third, improved medical care and antibiotics that are more effective for secondary bacterial infections were available for those who became ill.

1976: Swine Flu Threat (*Virus*)

When a novel virus was first identified at Fort Dix, it was labeled **the "killer flu."** Experts were extremely concerned because the virus was thought to be related to the Spanish flu virus of 1918. The concern that a major pandemic could sweep across the world led to a mass vaccination campaign in the United States. In fact, the virus—later named "swine flu"—never moved outside the Fort Dix area. Research on the virus later showed that if it had spread, it would probably have been much less deadly than the Spanish flu.

The 1976 Swine Flu never moved out of the Fort Dix area where it began.

In 1976 a novel virus was identified at Fort Dix, Burlington County, New Jersey (home of the largest US federal prison) called the "swine flu." Although feared to be a strain of the Spanish flu, it never left Fort Dix.

1977: Russian Flu Threat (*Virus*)

In May 1977, **influenza A/H1N1** viruses isolated in northern China, spread rapidly, and caused epidemic disease in children and young adults (<23 years) worldwide. The 1977 virus was similar to other A/H1N1 viruses that had circulated prior to 1957. (In 1957, the A/H1N1 virus was replaced by the new A/H2N2 viruses). Because of the timing of the appearance of these viruses, persons born before 1957 were likely to have been exposed to A/H1N1 viruses and to have developed immunity against A/H1N1 viruses. Therefore, when the A/H1N1 reappeared in 1977, many people over the age of 23 had some protection against the virus and it was primarily younger people who became ill from A/H1N1 infections. By January 1978, the virus had spread around the world, including the United States. ***Because illness occurred primarily in children, this event was not considered a true pandemic.*** Vaccine containing this virus was not produced in time for the 1977-78 season, but the virus was included in the 1978-79 vaccine.

1997: Avian Flu Threat (*Virus*)

The most recent pandemic "threats" occurred in 1997 and 1999. In 1997, at least a few hundred people became infected with **the Avian flu virus A/H5N1**. This occurred in Hong Kong and 18 people were hospitalized. Six of the hospitalized persons died. This virus was different because it moved directly from chickens to people, rather than having been altered by infecting pigs as an intermediate host. In addition, many of the most severe illnesses occurred in young adults similar to illnesses caused by the 1918 Spanish flu virus. To prevent the spread of this virus, all chickens (approximately 1.5 million) in Hong Kong were slaughtered. The avian flu did not easily spread from one person to another, and after the poultry slaughter, no new human infections were found.

1999: New Avian Flu (*Virus*)

In 1999, another novel avian flu virus —A/H9N2—was found that caused illnesses in two children in Hong Kong. Although both of these viruses have not gone on to start pandemics, their continued presence in birds, their ability to infect humans, and the ability of influenza viruses to change and become more transmissible among people is an ongoing concern.

Is the Flu a Manufactured Virus?

Making flu viruses for profit

Flashing back to **October 21, 2005**, a deputy of the ultranationalist Liberal Democratic faction of the Russian State Duma, Aleksei **Mitrofanov**, **said** in a parliamentary speech **that the bird flu was invented by Americans who wanted to dominate the world's poultry markets.** "The idea of a pandemic among humans is something from science fiction," Spanish agricultural Minister Elena Espinosa said on a private radio station Cadena Sur, as Europe braced for the further spread of the H5N1 strain of the fake Bird flu. Doctor Marc Siegel, a practicing internist and associate professor of medicine at the New York University school of medicine also stated that "if anything is contagious right now, it's judgment clouded by fear."

New Man-Made Swine Flu (*Virus*)—April 12, 2009

The media is creating a swine flu hysteria, with info fed by the companies that create and/or sell the vaccine for profit.

Well, after writing this chapter, I found it necessary to revisit this part. If you remember back in 2005 and 2006, **Donald Rumsfeld and company pushed the news media as hard as they could by creating an Avian flu scare.** Well, it seems just a few weeks ago, around the middle of April 2009, our little bio-weapon buddies went down to Veracruz, Mexico, on April 12, 2009 and released the newest **DESIGNER VIRUS** designed at **Fort Dix back in 1976.** Remember, *Fort Dix is the largest Federal corrections institute that loves to do bio-experiments.* Republican Ron Paul, a medical doctor by trade, commented that this definitely must've been a man-made virus. Mexico is a logical place to start a false pandemic, as recently there have been border disputes, drug-running disputes, and other issues between the United States and Mexico.

April 27, 2009

New York Times

Tracking Swine Flu Cases Worldwide

"Health officials continue to report mild cases of swine flu throughout the United States and worldwide. Among the hundreds of confirmed infections, **53 people have died**, including 48 in Mexico, three in the United States, one in Canada and one in Costa Rica."

Below is an example of the type of propaganda that is currently being used to scare people into taking a poisonous vaccine for the swine flu. It has been said that the Tamiflu vaccine may not even work, as the virus is said to mutate over time—it being a combination of bird, swine and human flu strains. Yet the government is still encouraging people to step forward to take it!

July 24, 2009

Swine flu could sicken over 2 billion in 2 years

Pandemic still in early stages, WHO flu chief says; vaccines expected by fall
msnbc.com news services

Atlanta--U.S. health officials say swine flu could strike up to 40 percent of Americans over the next two years and as many as several hundred thousand could die if a vaccine campaign and other measures aren't successful. Those estimates from the Centers for Disease Control and Prevention mean about twice the number of people who usually get sick in a normal flu season would be struck by swine flu. Officials said those projections would drop if a new vaccine is ready and widely available, as U.S. officials expect. The U.S. may have as many as 160 million doses of swine flu vaccine available sometime in October, and U.S. tests of the new vaccine are to start shortly, federal officials said this week.

Source: msnbc.com (7-27-2009)

"The 2009 H1N1 influenza pandemic has spread globally with unprecedented speed."

Sources: World Health Organization, Associated Press, Reuters (*map shows confirmed cases in dark areas*)

Gilead Sciences (GILD on stock market)

Gilead Sciences —selling the "balm of Gilead" from the Bible

So why are we back where we were four years ago? When we look at the way creeping fascism works, if the population control doesn't work today, some people think "let's try the same game again tomorrow," with the same rules but different facts (make-believe facts). In fascism, **there is always a financial gain for someone**, as well as control. Well number one, would be the Board of Directors of the Tamiflu manufacturers starting with: Lodewijk J.R. de Vink, board of directors of Hoffman-La Roche, (Bilderberger Member); George Schultz, Board of Directors, Gilead, (Bilderberg Member); Donald Rumsfeld, former chairman of Gilead (creator of the Tamiflu vaccine), from 1997 to 2001 and owns at least \$5 million worth of stock which in April 2009 alone, has jumped from \$35 to \$47 a share from the scare. If you want to research this quite quickly, the NASDAQ name for Gilead is "GILD." Simply go on the internet and look at the stock since 1992 to the present, and then paste in the "fake" scares.

A Possible Next Step—Martial Law

Detention centers are already set up for people who resist vaccination and to cremate the infected dead.

What would be a possible logical next step? Obviously, martial law, for those who fail to comply with a mandatory vaccination request. ***This already has been anticipated. A good example is a detention center located in Marion County, Indianapolis, Indiana. Formally an Amtrak rail car repair facility, it has been fenced in, large furnaces installed, with 3- to 4-inch gas mains (crematoria), helicopter landing pads, existing railway with railheads for prisoners including, red, blue and green zones for classifying or processing incoming personnel, one-way turnstiles, barracks, towers, high fences with razor wire, pointed to keep people in.***

FEMA (Federal Emergency Management Agency) has long been the SS of the United States. I have personally sold products to people who manage

FEMA. Back in the early 80's I had predicted that they would be a force to be reckoned with in the future, when I found out in 1979 they had run a black ops project on downtown Los Angeles, under the guise of a Russian nuclear briefcase bomb. Over the years I have had several contacts within the organization. **FEMA became part of the Department of Homeland Security on March 1, 2003.**

As a result, there are between 600 and 800 prison fences in the United States, all fully operational and ready to receive prisoners. They are all staffed and surrounded by full-time guards, but most of them are empty, with the exception of a few illegal immigrants being held. **To initiate a strong martial law, all that is necessary is a Presidential signature on a proclamation, and the Attorney General's signature on a warrant to which a list of names is attached.**

Some of the programs are as follows—the **"Rex 84" program was established for a mass exodus of illegal aliens crossing the Mexican US border**, whereby they would be quickly rounded up and placed in the FEMA detention centers. **Operation "Garden Plot"** is a program to control the population. **Operation "Cable Splicer"** is a program for an orderly takeover of state and local governments by the federal government. **FEMA is the executive arm of the coming police state and thus will head up operations.** So you can see that behind the "Virus Scares" there already exists a control program.

It's quite amazing, as I write this book, but here's an update on what recently occurred. First a company called Poly Guard and Co. <http://polyguardvaults-com.it.pip.com/index.cfm.?ID=1>, telephone number 1-800-654-1067, has been supplying plastic coffins, in numbers approaching the millions and storing them in Madison, Georgia. Ordered by FEMA, under a CDC contract, these coffins are stored in fields around Georgia. In the year 2000, there was a meeting at Robins Air Force Base, in Perry, Georgia hosted by the then Armed Services Committee Senator, Senator John Warner, who was preceded by Georgia Senator Sam Nunn (US Senator of Georgia 1972-1996).

The meeting was regarding discussions of a possible nuclear threat, wherein millions of Americans would be killed by the year 2010. Therefore, these coffins were necessary. But *after seeing the deadly effects of Tamiflu, it becomes quite*

obvious that there might be a second use for these coffins, possibly for a man-made induced plague!

FEMA's website announced that in July 2009 the 1st US exercise on US soil using foreign governments in conjunction with U.S. armed forces (presumably against American citizens) was to take place! WHY?

It is currently being announced on the FEMA website www.FEMA.gov (FEMA news desk 202-646-4600), that **National Level Exercise 2009 (NLE09)** is scheduled for **July 27 through July 31, 2009** as a first major exercise conducted by the United States government that will focus exclusively on terrorism prevention and protection, as opposed to incident response and recovery. **This exercise will, for the first time, invite foreign governments from Australia, Canada, Mexico, and the United Kingdom to participate with our own armed forces on US soil!**

If you start reading through what is in the Patriot Act, and look at what FEMA and other US agencies are doing conjointly, a better picture of the New World Order begins to become quite focused.

A very powerful constitutional regulating group with one of its leaders being former Arizona **Sheriff Richard Mack** has been formed (**Google Sheriff Richard Mack to find many listings**). Called Oath Keepers [Http://oathkeepers.blogspot.com](http://oathkeepers.blogspot.com), their information is very much on top of the latest ploys to deceive the American public. I highly recommend you check this group out. **NOTE: This blog will soon be replaced with: www.oathkeepers.org.**

Unfortunately, today modern science is using the bacterium from these plagues as a consideration for bio-warfare. **The UK's Porton Down laboratory's researcher Prof. Rick Titball has recently carried out safety tests of a newer vaccine on human subjects, because of the threat of germ warfare.** As you may recall, troops fighting in the 2003 Gulf War were given vaccines against anthrax.

Population Control

Now at this point let's start looking at the possibility of population control, and the brilliance of the Tavistock Institute and all of its medical satellites. The worst and most dangerous pandemics started at Army

bases. As I said earlier, I had experience at the Bioweapons army base in Little Rock, Arkansas. As I also said earlier, prisons are the most infamous places to carry on bio-warfare research, especially in viruses. It's pretty obvious that the Spanish flu virus got out of control at Fort Riley, but as science progressed, a similar occurrence happened at Fort Dix in 1976, which was contained before it reached general society. Fort Dix, established in June, 1917 is the largest federal correctional institute, and as of April 5, 2006, it housed 4,226 inmates, and a minimum-security satellite camp with an additional 426 male prisoners. It is also one of the largest bio-warfare centers, where inmates are the guinea pigs.

Now that we're in the editing process I have another update.

Taubenberger and his team in 1997 intentionally recreated the killer Spanish flu virus that killed 50 million people—and he combined gene segments from humans, swine and birds just so a vaccine can be sold.

I just found out that **a team of "viral pathologists" that was led by Doctor Jeffrey Taubenberger at Fort Dietrich, Maryland began work in 1997 to re-create a 1918 "killer virus," and this odious task was successfully completed in the year 2003.** In his initial 1997 report, Taubenberger wrote:

"The "Spanish" influenza pandemic killed at least 20 million people in 1918-1919, making it the worst infectious pandemic in history. Understanding the origins of the 1918 virus and the basis for its exceptional virulence may aid in the prediction of future influenza pandemics. RNA from a victim of the 1918 pandemic was isolated from a formalin-fixed, paraffin-embedded, lung tissue sample. Nine fragments of viral RNA were sequenced from the coding regions of the hemagglutinin, neuraminidase, nucleoprotein, matrix protein 1, and matrix protein 2. **The sequences are consistent with a novel H1N1 INFLUENZA, A VIRUS THAT INCORPORATES A SUBGROUP OF STRAINS THAT INFECT HUMANS AND SWINE, AS WELL AS THE AVIAN SUBGROUP.**"

source: www.sciencemag.org/CGI/content/abstract/275/5307/179

When pressed by the researchers as to the reason he would undertake such a controversial project as re-create such a deadly pathogen, **Taubenberger defended his work by declaring that genetically re-creating the virus in**

a petri dish was necessary, as it would allow the DEVELOPMENT OF A VACCINE TO FIGHT IT!!! In 1997 this virus was extinct as dinosaurs. Taubenberger's reasoning is flawed. Why genetically re-create a deadly velociraptor dinosaur merely to create an advanced weapon to destroy it??

Isn't it strange that the CDC (Center for Disease Control) and the WHO (World Health Organization) are telling the world today that this "pandemic virus" is a **new subtype** of the A/H1N1 virus, not previously detected in swine or humans? **THIS "NOVEL" H1N1 INFLUENZA (SWINE FLU) VIRUS ISA TRIPLE-RECOMBINANT, INCLUDING GENE SEGMENTS OF HUMAN, SWINE, AND AVIAN ORIGIN. ISN'T THIS DOCTOR Taubenberger's 1997 discovery?**

This "new" H1N1 Swine Flu Virus is not new at all—it's just Dr. Taubenberger's 1997 rebuilding of the deadly Spanish flu, combined with bird and several other human flu viruses!

Over one million Americans are now infected with the swine-avian-human flu virus now renamed as "H1N1 Influenza A'. According to the CDC's latest report, over 44,000 cases have been identified, and to date, there have been 302 deaths. So far. As the Fall season approaches, many of you are concerned about how best to protect your families and loved ones. **As a "lab-created" pathogen, this "swine flu" virus does not exist in nature, and humans have no known immunity.**

In a provocative article written by Dr. True Ott, N.D. entitled "**Startling New Evidence that the "Swine Flu" is man-made—Novartis Patent Detailed and Mass Murder Charged,**" the origins of H1N1 Influenza bear a distinct resemblance to the 1918 Spanish flu that infected 20-40 million in 10 months and killed 500,000 worldwide. In 1997, Dr. Jeffrey Taubenberger and his team successfully re-created a "weaponized" version of the 1918 Spanish flu virus at Fort Detrick, Maryland, a US Army weapons lab. According to Dr. True Ott, the 1918 killer virus was a recombinant or "split-influenza" virus composed of bird flu, swine flu, and multiple strains of human flu.

Sound familiar?

Taubenberger, who rebuilt the world's worst killer virus after it was DEAD AND GONE, worked for Novartis, which filed a patent for the vaccine kits that will actually SPREAD THE VIRUS THIS FALL!

In 2005, Dr. Taubenberger worked for the NIH (National Institutes of Health) and focused on creating a vaccine for the virus that he and his team had reverse engineered. Dr. Ott makes the case that in fact, **Taubenberger was working for Novartis, the largest pharmaceutical company headquartered in Basel, Switzerland. In November 2005, Novartis filed a provisional patent for a "novel pandemic flu" vaccine that was almost identical in detail to the work that Dr. Taubenberger was involved in.** These "influenza vaccine kits" would contain live (attenuated) viruses in a squalene (water and oil) adjuvant that ironically make these viruses more potent, lethal, and spread very effectively. ***Rather than preventing the spread of disease, anyone receiving this vaccine will become the actual vectors and source of contagion.***

Deadly vaccine kits will be resold by Novartis and private-labeled by other companies.

And no one is telling people about the VACCINE'S SERIOUS NEUROLOGICAL SIDE EFFECTS !!!!!!!

These "kits" would be sold to other pharmaceutical companies that want to private-label their own brand of vaccine. **As of 2005, President George W. Bush signed a bill that granted pharmaceutical manufacturers "carte blanche" immunity from prosecution from people who suffered adverse reactions to vaccines!** With this newfound immunity, the Obama administration will use fear and disinformation to launch a massive propaganda campaign and vaccinate "at risk" people such as first responders, children, pregnant women and the elderly. ***None of the vaccine's serious neurological side effects will be disclosed.***

The H1N1 virus has already developed almost total resistance to Tamiflu! It has already mutated in Brazil!

Although not widely publicized by the CDC or the mainstream media, **on June 17, 2009, this novel "swine flu" was reported as having mutated in Brazil. See: [174](http://www.bild.de/BILD/news/bild-english/world-</p></div><div data-bbox=)**

news/2009/06/17/swine-flu-new-fears/killer-h1n1-virus-has-already-mutated.html

With mutations now a reality, one must ultimately ask, how effective are vaccines? (See more details in the Appendix.)

According to Dr. David Williams, MD, in the June 2009 issue of his Alternatives newsletter "Swine Flu, Round Two," **vaccinations actually cause more damage than the flu.** The swine flu vaccine fiasco of 1976 showed Americans and our government reason to reconsider the effectiveness of vaccines. In 1976, **President Ford and Congress mandated mass vaccination for the "swine flu" virus that killed only one soldier in Fort. Dix, New Jersey.** Unfortunately, the vaccine crippled approximately 500 Americans with a degenerative neurological disorder called **Guillain-Barre Syndrome or GBS.** As corroborated by a 1979 "60 Minutes" documentary, over US \$1 Billion worth of malpractice claims ensued. This documentary aired only once. Here is the link to watch it on the web: <http://loveforlife.com.au/node/6636>.

FEMA plans to use the military to enforce vaccinations against the H1N1 Swine Flu virus.

As of July 29, 2009, various news agencies like CNN and Fox News reported that the US Military will work with FEMA to "assist" with the possible H1N1 outbreak. A possible direct violation of the Posse Comitatus Act of 1878 that substantially limits the Federal government's use of military for law enforcement, this development sets the stage for possible forced mass vaccination on the American people.

Aside from vaccines, **the CDC is treating H1N1 cases with two anti-viral medications, Tamiflu and Relenza.** At present, five cases in the US have become resistant to Tamiflu. In fact, **the ordinary H1N1-type flu virus has developed an almost total resistance to Tamiflu.** In Japan, both antiviral medications have been banned because of a potential increase in serious neurological side effects in children. According to Dr. David Williams, *using these antivirals makes one susceptible to secondary bacterial infections,* particularly the bacteria *Streptococcus pneumonia,* which are responsible for the high rates of death in previous flu pandemics.

Now let's take a closer look. **The origin of AIDS began in 1979 in San Francisco when 2,000 homosexual men were injected with a mixture of a sheep Vishnu virus** (*a viral infection, carried by midges, flies, can affect those, deer and cattle, normally found in the Mediterranean regions, but that does not pose a risk to human health*) **and a cattle bovine virus** (*a cattle respiratory disease causing impairment of the immune system*) **laced inside a hepatitis B vaccine. In 1980, the same occurrence occurred in New York. Most of the original 2,000 died.**

Other examples of population control attempts

This is an obvious implementation of population control. ***Because of the type of sex that males normally have with each other, hepatitis B is quite common. Therefore, a hepatitis B vaccination is the perfect carrier for experimental warfare viruses.*** HIV is a lentivirus, and like all viruses of this type attacks the immune system, just as the cattle bovine virus attacks the immune system of cows. Because of similarities between sheep and man, the Vishnu (*research originally traced a string created by Nazi Germany or Icelandic sheep "wasting" experiments began in 1932*), genetically altered, is the perfect link to jump species. The name "lentivirus" literally means "slow virus" because they take a long time to produce any adverse effects in the body. Remember the example of **Ebola in 1976 in Zaire South Africa**. The problem with that experiment was that it spread too fast, therefore making it too hard to use as a global population control unit.

The disinformation campaign that followed the discovery of AIDS was that it originated from monkeys, and transferred over to humans in a process called "zoonosis." The original government program was called US Special Cancer Virus Program 1962-1978, a CIA cover-up program. Zoonosis is when an infectious disease is able to be transmitted from animals to humans or vice versa. In this case, a vector is involved. In epidemiology, a vector is an organism that does not cause disease, but transmits infection by conveying pathogens from one host to another, serving as a route of transmission. A classic example is the anopheles mosquito, which acts as a vector from the disease malaria by transmitting the malaria parasite, Plasmodium, to humans. In this case Plasmodium is harmless to the mosquito (it's an intermediate host) that causes the disease malaria in humans (its definitive host).

Antiviral drugs today can contain hypnotic agents within them. Sometimes the drug itself IS THE ACTIVE HYPNOTIC AGENT!

Vectors occur in two forms: **1) a viral vector** is a virus that has been modified *to transduce* a specific genetic material into a cell (*a process where DNA is transferred from one bacterium to another by a virus*); and **2) a plasmid vector** is made by splicing a DNA construct (*an artificially constructed segment of nucleic acid that is going to be transplanted into a target tissue or cell*). It often contains a DNA insert which contains the gene sequence encoding a protein of interest. I firmly believe that the designers of the AIDS virus were in great hope that it would be transferred by mosquitoes. In the early days when new AIDS cases were reported in the news on a regular basis, there were several cases of newborn babies contracting the disease, shortly after birth, although neither parent tested positive for AIDS, nor anyone else in the family, in any shape or form. A logical explanation would have been a vector transmitted through mosquitoes.

Another example of population control was during the Vietnam War. Agent Orange was a code name for a powerful herbicide or defoliant called **malathion**. During the Vietnam War US estimates of the amount of Agent Orange spread over our US troops and the Vietnamese was approximately 21,136,000 gallons! ***4.8 million Vietnamese people were exposed to Agent Orange, resulting in 400,000 deaths and disabilities and 500,000 children with birth defects.*** From 1961 to 1971, Agent Orange was by far the most widely used of the so-called "Rainbow Herbicides" employed in the Herbicidal Warfare program. During the production of Agent Orange, purple, pink and green dioxins were produced as a contaminant.

Kissinger and Haig were both part of Tavistock Institute!

In the early 1950s, malathion was used in Japanese birth control experiments. Being slightly after World War II it's easy to see how this research was filtered into our own governmental research. The use of malathion, combined with the shock and awe of its delivery systems, was a natural thing to try experimenting on the Vietnamese populace. To the dismay of the military strategists, Vietnamese women actually produced more offspring during the Vietnamese war. This came to light in a 1981 article in the Linden Laroche magazine, "Executive Intelligence Review," March issue, where the "Hague Kissinger De-population Program first surfaced" **Remember, Henry Kissinger and Alexander Haig were both part of the Tavistock Institute.**

Viruses

The next frontier for mass extinction during peacetime, **I believe, will be the spreading of a non-existent human disease called the Avian flu.** Let's examine this very carefully.

First, let's examine the types of influenza viruses. The influenza virus uses RNA (ribonucleic acid, a DNA building block) as genetic material. This nucleic acid is usually a single-stranded RNA, but occasionally is a double-stranded RNA. **Notable are human diseases caused by RNA viruses, including:**

- **SARS (severe acute respiratory syndrome)**, a favorite genome used to construct the AIDS virus
- **Influenza**, and
- **Hepatitis B**

Another term for RNA viruses that explicitly excludes retroviruses (viruses that unwind DNA) is **"ribovirus" which is found in AIDS.** RNA viruses can be both single- and double-stranded.

The influenza viruses fall into a category of **orthomyxoviridae (mucus-forming)**, of which there are: **Type A, B, and C viruses** (that cause influenza in vertebrates, including birds, humans and mammals), the **Isavirus** (a virus that affects Atlantic salmon), and **Thogotovirus** (a virus transmitted by infected and uninfected ticks). The **rhinovirus** is probably the most popular in our cultures, as it is the one that causes the common cold.

Influenza virus is the most common one that can be divided into different serotypes (antigens that cause the immune system to respond) Influenza viruses A, B, and C are very similar in structure. The virus particle is 18-20 nanometers in diameter and usually roughly spherical, although filamentous forms can occur.

Usually a virus is a genome (chromosome set) and not a single piece of nucleic acid; it contains seven or eight pieces of segmented negative-sense (negatively-polarized nucleic acid molecules) RNA. **The influenza A genome encodes 11 proteins:** hemagglutinin (HA), neuraminidase (NA), nucleoprotein M1, M2, NS2 (NEP), PA, PB1, PB1-F2 and PB2. HA and NA are large glycoproteins (integral Membrane proteins also occurring in cytosol) on the outside of the viral particles (there are a total of nine NA types). HA (of which there are a total of 13 different types), is a lectin (sugar-binding protein) that mediates binding of the virus to target cells and entry of the viral

genome into the target cell, while NA is involved in the release of progeny virus from infected cells, by cleaving sugars that bind the mature viral particles.

These proteins are targets for antiviral drugs. Today, antiviral drugs often contain mind-controlling or hypnotic agents laced with their active ingredients. Sometimes they *are* the active ingredient.

March, 2009

Baxter mixed the H5N1 virus with the seasonal H3N2 virus and then distributed it to 3 international labs—angering other countries!

A recent example of this occurred in March, 2009. **An American company called Baxter (a typical CIA subcontractor), manufactured and distributed a flu vaccine contaminated with H5N1 (a level 3 bio-hazard) Otherwise known as the human form of Avian flu, one of the most deadly biological weapons on earth with a 60% kill rate, was received in labs of the Czech Republic, Germany, and Slovenia. When questioned, Baxter tried to stonewall questions and never did come up with a straight answer. The fact that Baxter mixed the deadly H5N1 virus with a mix of seasonal H3N2 virus is a smoking gun.** If there were a bio-warfare breakout of the H5N1 virus in the United States, martial law will be called, and the 600 empty prison managed by the US Army will begin getting business.

Influenza are viruses classified into subtypes based on antibody responses to HA and NA, forming the basis of age, and in distinctions that WE see in print, for example, H5N1, which is a form of shorthand. **Examples are:**

- **Asian flu H2N2**
- **Spanish Flu H1N1**
- **Hong Kong Flu H3N2**
- **Avian Flu H5N1**

Antiviral Drugs

Antiviral drugs are a class of medication used specifically for treating viral infections. Unlike antibiotics used against bacteria, specific antivirals treat against specific viruses. Unlike antibiotics, however, ***antiviral drugs do not kill the virus; they only stall their development. Therefore, they become***

a perfect host for other biological manipulations. Designing safe and effective antiviral drugs is difficult, because the viruses use the host cells to replicate.

Ingredients in the Tamiflu vaccine now being prepared for pregnant women, children and the elderly, are highly toxic and poisonous, and are some of the elements used to produce PCP or Angel Dust—(psychotropic drugs)!!!!!!!!!!!!!!!!!!!!

Let us now go into the world of the very popular bird flu antiviral, **Tamiflu (Oseltamivir phosphate)**. Tamiflu is manufactured by **Hoffman LaRoche Laboratories**, but was not invented there. Founded in 1896 by Fritz Hoffman LaRoche, the company was early on known for producing vitamin preparations and derivatives. In 1934, it became the first company to mass produce synthetic vitamin C (remember our discussion earlier about synthetic vitamins stealing from natural vitamins), under the name of **Redoxin**. In 1957 the company introduced a class of tranquilizers known as benzodiazepines (a class of drugs with varying hypnotic, sedative, muscle-relaxant and amnesic properties).

Through the years the company was accused of price-fixing, when Stanley Adams, Roche's World Product Manager and Basil was arrested for unauthorized disclosure and imprisoned. His wife having learned he might face decades in jail, committed suicide. In the United States, **Roche pleaded guilty for price-fixing and paid a US \$500 million fine.**

Gilead Sciences developed a way for the virus to be released from a host cell to another cell!

And Gilead (GILD) is creating the Tamiflu vaccine today! A financially convenient plan!

Oseltamivir is a neuraminidase inhibitor (neuraminidase is an enzyme on the surface of influenza virus that *enables the virus to be released from the host cell to another cell*) and was originally developed at **Gilead Sciences (GILD on stock exchange)**. Gilead Sciences was originally founded under the name of "Oligogen Inc." in August 1987 by Michael Riordan, a medical doctor who was 29 years old at the time. *The company's name and logo referred to the Balm of Gilead (today called Jordan) where a healing tree*

with resinous gum was found in biblical times. Personally, I become very skeptical of these companies with these religious commentating names. You will find out more about this in further chapters, when we talk about the Blue Beam Project, wherein the government is orchestrating the prophecies of Revelation into its fascist takeover.

Donald Rumsfeld and his company Searle

Riordan recruited Donald Rumsfeld, who in 1998, was appointed Chairman of the company.

Previously, **Donald Rumsfeld** was on President Reagan's transition team, and the day after he took office he **appointed an FDA commissioner who would approve a poison manufactured by his (Rumsfeld's) company Searle, call Aspartame** (*it is an addictive additive found in diet soft drinks and over 5,000 foods, drugs and medicine*). In 1995 the FDA released a list of 92 Aspartame symptoms as reported by thousands of victims. It is marketed under the name of **NutraSweet**. *The FDA set up a board of inquiry of the best scientists. Their conclusion was Aspartame is not safe and causes brain tumors, and the petition for approval was revoked. However, the new commissioner, Arthur Hall Hayes, overruled a board of inquiry and then went to work for the PR agency of the manufacturer, Burstyn Marsteller, rumored to be paid \$1,000 a day and has refused to talk to the press ever since.*

In November, 2005 President George W. Bush urged Congress to pass \$7.1 billion in emergency funding to prepare for the bird flu pandemic, which the government seems to have had problems launching, of which **\$1 billion is solely dedicated to the purchase and distribution of Tamiflu**. In normal times, this would've been a conflict of interest many times over with the principals involved. The **Baxter** example is another failed attempt to kill a lot of people and make a lot of money.

Obviously, once again, we have two more companies that are perfect subcontractors for Tavistock Institute's depopulation policies. As you can see, we are dealing with tremendous corruption and very obvious power and greed control issues. **Even our own FDA could not deal with the power of the Rumsfeld dynasty.** He was the Secretary of Defense of the United States, twice! Once under Gerald R. Ford (the 13th secretary of defense) and again under George W. Bush, he became the 21st Secretary of Defense in January,

2001. This gave him control over the Pentagon and the CIA and other intelligence agencies.

Tamiflu Vaccine for Swine Flu

Cyclohexane (C6,H10) and Cyclohexene (C6,H12) are ingredients in the Tamiflu vaccine! Look up these ingredients on the internet and just see what they are used for!

Quickly, let's take a look at some of the ingredients in Tamiflu. In the 12 mg/ml oral suspension we find, Oselvimivar, saccharin sodium, sodium benzoate, sodium dihydrogen citrate, sorbitol, titanium dioxide, tutti-frutti flavor, maltodextrin, propylene glycol (anti-freeze), Arabic gum, natural identical flavoring substances (mainly consisting of banana, pineapple and peach flavors), and Xanthan gum.

Now, let's look at the active ingredient in Tamiflu. Technically called **(A) (3R,4R,5S)-4actamindo-5-amino-3-(ethoxypropyl)-1-cyclohexane-1-carboxylic acid. (C16,H31,N2,O8,P)** If you wanted to buy a small amount of Osetamivir phosphate (for your own experimentation) without the garbage that's put in the Tamiflu, contact Medical Isotopes, 100 Bridge St Pelham, New Hampshire, 03076, USA telephone 603-635-2255 or go to www.medicalisotopes.com.

Now, you may wonder why I am showing slightly more technical details. For even further details you can go to www.raysoftruth.tv. My purpose here is that it is incredibly important to be understood and it's worth the extra effort to gain access to more technical details on what is happening with this type of chemistry—because it is directed at the youth of the world and not in a healthy way.

Many drugs being produced that are highly poisonous are connected to Donald Rumsfeld's G.D. Searle Company.

If you were to Google cyclohexane (C6,H10) or cyclohexene (C6,H12) you would find them to be highly toxic, extremely poisonous, and very dangerous chemicals. ***When combined with another chemical, piperidine, you end up with (C17,H25,N) commonly known as phencyclidine, with the familiar street name of PCP or Angel dust.*** When ingested into the body,

either by smoking or inhaling through the nose, in such a manner as people do cocaine, it breaks down into 1 phenyl-1-cyclohexane (PC) and piperidine. **It should become quite obvious now, in spite of a little technical jargon, where we are going with these various drugs that are being given to the American public, not only in the form of vaccines, but also as SSRI inhibitors and MOA inhibitors.**

PCP was used by the Army and the CIA in many mind-controlling and mind-expansion experiments. It never was an "elephant tranquilizer" as popular disinformation voiced its cowardly lies. **It was patented in 1963 by Parke-Davis and named Sernyl (referring to serenity), but was withdrawn from the market two years later because of side effects. A second drug was also developed by Parke-Davis similar to PCP called Ketalar** (ketamine hydrochloride) known on the street as **ketamine** or Vitamin K.

PCP is very addictive. Its repeated use can lead to craving and compulsive PCP-seeking behavior. After using PCP once, people will continue to use it a second time. At high doses of PCP, blood pressure, pulse rate and respiration drop. You can create a Superman attitude, depression, paranoia, feelings of impending doom, and schizophrenia. It is, over time, cumulative in the fat cells of the body and has long-term effects, sometimes even years after its usage is discontinued.

Several years ago in the early 70's I ran a drug rehab practice in Laurel Canyon, California. There I helped people to withdraw from PCP usage. On one occasion, I found myself at the UCLA medical ward, taking a person I knew who was a patient, out of the straitjacket at one o'clock in the morning! Several of the people that I've been associated with have died either directly from its usage or from accidents that occurred while they were under the influence. In most users at one time or another it creates a godlike consciousness, which of course is only temporary. In my 30-year history of working with people who were consistent users of Angel Dust, unless they stopped at some point, they either died or were killed in some form of death-related PCP trip. In my estimation, no one, regardless of how strong their personal constitution is, no one, can conquer this drug. I'm not going into the chemistry of it here, but it will be available at the www.raysoftruth.tv website.

I have seen many people take their own lives on both PCP and ketamine. The prime ingredients, piperidine, cyclohexane and cyclohexane are used today to slowly kill our citizens who are experiencing some form

of depression or mood swing. Because these ingredients are found in **Tamiflu**, I did a series of shows back in 2006 at BBS radio. One of the things that I was concerned about was that when they released an agent with this much toxicity, *it would affect the children fairly quickly*. Then sure enough in Japan, 2007 *Japanese teenagers, after taking Tamiflu, became suicidal*; eight died jumping off buildings, running into traffic or taking other rash actions. Therefore, Japan and Korea banned the drug for children under the age of 17. This is the same "Superman phenomenon" that people often experience when ingesting Angel Dust.

Diprivan

Once again, now while we are in the editing stages, I find it necessary to do another update! On June 25, 2009 we lost Michael Jackson, a well-known worldwide entertainer, considered the "King of Pop," possibly to an overdose of the very dangerous **heart-rate-controlling drug called Propofol, marketed under the name of Diprivan**.

Originally developed by Imperial Chemical Industries as ICI 35868, initial studies indicated that due to anaphylactic reactions (*allergic type reactions that cause an immediate drop in blood pressure*), it was withdrawn from the market. Afterwards, it was diluted with soya oil and relaunched in 1986 by Astra Zenica with the brand name Diprivan. The current preparation is 1% propofol, 10% soybean oil, 1.2% egg lecithin and 2.25% glycerol as a tonicity (cell absorption) stabilizer.

The dangerous part of this drug is that constant EEG (electroencephalograph) monitoring is necessary minute by minute. If the person monitoring does not understand the safe values of blood pressure of any given patient, whereby too low a dosage awakens the patient, and too high a dosage puts the patient into an unrecoverable coma, they become liable to the patient's well-being.

The active ingredient is called 2,6, Dissorpropylphenol, $\{(CH_3)2CH\}2C_6H_3OH$. If you break the chemistry apart, you will see that you have Dissor Propyl Phenol. The chemistry for propofol alone is $C_{12}H_{18}O$. When you look at the **Phenol**, the chemistry is C_6H_6O .

Phenol itself is found in naturally-decaying dead organic matter like rotting vegetables and coal. It was first isolated in 1834 from coal tar and has remained the main source of phenol until the first world war. It is

primarily used in low-cost resins for the adhesion of plywood, and the production of nylon. It is highly corrosive and moderately toxic. It affects humans by burning the skin and other tissues that comes in contact with it. It can affect the central nervous system, which will firstly lead to sweating, weakness, dizziness, and twitching, but with prolonged exposure, leads to nausea, vomiting and coma.

Another drug called **Midazolam**, manufactured by Roche is very similar to **Propofol**. Both are GABBA inhibitor neurotransmitter receptors that lower blood pressures severely. Other drugs that work in a similar fashion are **Ketamine** and previously mentioned, **Phencyclidine**. All of these drugs produce not only an anesthetic action but also produce euphoria, as they contain plasticizing ingredients, which have that effect on the human body. *If you do any great research on any of these drugs, there is usually a strong connection to the clandestine G.D. Searle Co (Donald Rumsfeld's company).*

All of these drugs are manufactured from highly toxic and poisonous substances. It's quite obvious that the drug companies do not care what the overall results, over a long passage of time, do to the human race!

A Little Theory on the Drug Companies' Moral Values

Universities in the United States that are controlled by the Tavistock Institute!

Americans spend over \$200 billion a year on prescription drugs. Prescription drug costs are quite high for the consumer. **We are led to believe that these high costs are due to research and development (R&D), but this is not true. Most research is done in Tavistock Institute-controlled universities such as John Hopkins, Harvard, Brown, Duke, MIT, University of Pennsylvania, and many others, too numerous to list here. The universities pay for their own research, and then receive royalties once the drugs are put on the market.** Secondly, the studies are often conducted by the drug companies themselves, which, especially in the case of mood elevators, *should be conducted at the university level after the creation of the drug.* But this is not the case; so, therefore, what drug company would ever give an accurate report on an individual drug study? Case in point: previously mentioned Aspartame.

Medical drug market—rigged

Once the drug is approved by the drug company as "safe," and approved by the FDA, a massive disinformation program is launched via television commercials, visits to doctors and medical groups, etc. In many cases, non-existent official medical problems are created to market their drugs, an example of which is restless leg syndrome, a non- In the case of a new drug, the FDA classifies the drug in two ways. First, it looks at the compound itself which the agency calls the "chemical type." Is it a new molecule that is already on the market in some form? Or is a brand new one—what the FDA calls "a new molecular entity (NME)"? ***If it's a new molecule, that is classified as a Number One drug.*** Otherwise, it is classified as a chemical derivative, or new formulation or combination of an old drug. Or it might be an old drug with a new manufacturer.

The second that the drug is classified as to whether it is likely to offer any benefits above drugs already on the market to treat the same condition, the FDA gives it more rapid attention. This is called a **"priority review,"** which is for drugs likely to represent a "significant improvement compared to marketed products, in the treatment, diagnosis, or prevention of a disease." The agency lists these drugs with the **abbreviation "P."** All other drugs receive a standard—or "S"—review. A "standard review" drug, in the FDA's words, "appears to have therapeutic qualities similar to those of one or more already-marketed drugs."

The New Anti-Depressant Drugs

Prozac, Paxil, Celexa, and Lexapro all inhibit serotonin, which is what the body uses to CONTROL mood and aggression.

Prozac, made by Eli Lilly, was one of the first new anti-depressant drugs called "selective serotonin reuptake inhibitor" (SSRI's). It was developed mainly on the basis of research done outside the company. **In 1987, the FDA approved Prozac for the treatment of depression,** in 1994 for the treatment of obsessive-compulsive disorders, in 1996 for bulimia, and in 1999 for geriatric depression. **Prozac soon accounted for one quarter of Eli Lilly's revenues, with annual sales reaching \$2.6 billion.** GlaxoSmithKline's **Paxil** came on the market in 1997, followed by Pfizer's **Zoloft** in 1999. Then

the New Player on the block, Forest Laboratories, put itself on the map with **Celexa**, then created a copycat called **Lexapro**. *All of these drugs contain some form of cyclohexane, cyclohexene, or piperidine, or a derivative thereof.* The tremendous money is again not only spent on marketing, but also on lobbying in Congress.

What is one of the largest markets for these drugs and who was the target? Obviously, **the adult market** is one that is sought out first. Then the secondary market which is becoming quite explosive is that of **children**, starting youngsters out on Ritalin, and moving teenagers into all of the above-mentioned drugs. Next, ask yourself what are the side effects? The answer is basically everything—from nausea, hallucinations, severe liver and kidney damage, headaches, loss of appetite, with the more serious side effects being, homicidal ideation, uncontrollable anger, paranoia and suicide. The more prevalent one is, especially in teenagers, who don't have their brain chemistry yet developed (yet it is being manipulated by these drugs) is "homicidal ideation." ***Homicidal ideation has been a key player in our infamous schoolyard shootings that have occurred in the past two decades.***

Schoolyard Violence: A New Phenomenon

I personally have interviewed parents and shooting victims on my radio show at www.BBSradio.com for many years. I was present at Columbine High School, in Colorado along with VP Al Gore, and US Atty. Gen. Janet Reno, during the farewell ceremonies that were conducted soon after the campus was habitable after the tragic shooting of 35 people, on April 20, 1999, of which 12 died and 23 others were wounded by Eric Harris and Dylan Klebold.

Mark Taylor, the seventh student to be shot (coincidentally shot seven times) but survived, and his mother, had been on my radio show several times discussing the incident. Mark later wrote a book entitled, *I Asked, God Answered: a Columbine Miracle* (Fate publishing), I also spoke to a second student Marjorie Lindholm, who also wrote a book called *A Columbine Survivor's Story* (Regenold Publishing).

73% of school shootings by young people are caused by the psychotropic drugs they were prescribed.

Now, let's examine a little history of this violence in schoolyards. I spent many years studying the phenomenon of who the shooters were, their personal history, parental history, and scholastic history and whether or not drugs or

alcohol were involved. Unfortunately, in almost all cases there was a huge amount of drug involvement, mostly prescription! ***On the average, eight out of eleven shootings are related to psychotropic drugs (73%!)***

On the following pages is only a partial list of the many incidents that occurred in these time periods.

Feb. 2, 1996 Two students and one teacher killed, one other wounded when
Moses Lake, Washington 14-year-old Barry Loukaitis opened fire on his algebra class.

March 13, 1996 16 children and one teacher killed at Dunblane
Primary School by
Dunblane, Scotland Thomas Hamilton, who then killed himself. 10 others wounded
in the attack.

Feb. 19, 1997 Principal and one student killed, two others wounded by
Bethel, Alaska Evan Ramsey, 16.

March 1997 Eight people (six students and two others) at
two schools killed
Sanaa, Yemen by Mohammed Ahman al-Nazini.

Oct. 1, 1997 Two students killed and seven wounded by
Luke Woodham, 16,
Pearl, Mississippi who was also accused of killing his mother. He
and his friends were said to be outcasts who worshipped Satan.

Dec. 1, 1997 Three students killed, five wounded, by Michael
Cameal, 14, as
West Paducah, Kentucky they participated in a prayer circle at Heath
High School.

Dec. 15, 1997 Two students wounded. Colt Todd, 14, was
hiding in the woods

Stamps, Arkansas
parking lot.

when he shot the students, as they stood in the

March 24, 1998
wounded outside
Jonesboro, Arkansas
false fire alarm.

Four students and one teacher killed, 10 others
as Westside Middle School emptied during a
Michelle Johnson, 13, and Andrew Golden, 11,

shot at their class-
be noted here that
charges (of the 3-year-old)
Arkansas.

mates and teachers from the woods. It might
age 11 Michelle Johnson was up for rape
in Minnesota a year earlier, before he moved to

April 24, 1998
wounded at a dance
Edinboro, Pennsylvania
Wurst, 14, was charged.

One teacher, John Gillette, kited, 2 students
at James W. Parker Middle School, Andrew

May 19, 1998
seeing a psychiatrist
Fayetteville, Tennessee
him shooting and killing

One student, Honor student, Jacob Davis, was
who prescribed him **Dexedrine** just prior to
a classmate in the parking lot at Lincoln

County High School three
was dating the

days before he was to graduate. The victim
ex-girlfriend of the killer.

May 21, 1998
cafeteria at Thurston
Springfield, Oregon
had been arrested and
school. His parents were
Prozac.

Two students killed, 22 others wounded in the
High School by 15-year-old Kip Kinkel. Kinkel
released a day earlier for bringing a gun to
later found dead at home. Kinkel was on

June 15, 1998

wounded by a
Richmond, Virginia

One teacher and one guidance counselor
14-year-old boy in the school hallway.

April 16, 1999

one at
Notus, Idaho
Idaho. **Sean was being**

Sean Cooper, a 15-year-old sophomore wounds
Notus Junior-Senior High School in Notus,
treated on a mixture of anti-depressants.

April 20, 1999

killed, 23 others
Jefferson County,
nation's deadliest
Colorado
Klebold, 17, had plotted

14 students (including killers) and one teacher
wounded at Columbine High School in the
school shooting. Eric Harris, 18, and Dylan
for a year to kill at least 500 and blow up their
of their hour-long rampage, they turned their

school. At the end

guns on themselves.

on Luvox.

The leader of the attack, Eric Harris was

April 28, 1999

fatal high school
Taber, Alberta, Canada
14-year-old boy,

One student killed, one wounded at W. in first
shooting in Canada in 20 years. The suspect, a
Todd Cameron, had dropped out of school
ostracized by his classmates. He was a student
was seeing **a psychiatrist who prescribed**
to the shooting.

after he was severely

of the school and

him Dexedrine just prior

May 20, 1999

Thomas Solomon, 15,
Conyers, Georgia
up with his girlfriend.

Six students injured at Heritage High School by
who was reportedly depressed after breaking
Solomon was on Ritalin.

- November 19, 1999**
Tena, 13, in the lobby
Deming, New Mexico Victor Cordova Jr., 12, shot and killed Aracell of Deming Middle School.
- December 6, 1999**
opened fire with a
Fort Gibson, Oklahoma Four students wounded as Seth Trickey, 13, 9mm semi-automatic handgun at Fort Gibson Middle School.
- December 7, 1999**
17-year-old student.
Veghel, Netherlands One teacher and three students wounded by a
- February 29, 2000**
Elementary School
Mount Morris Township, Michigan Six-year-old Kayla Rolland shot dead at Buell near Flint, Michigan. The assailant was identified as a six-year-old boy with a .32-caliber handgun.
- March, 2000**
who then shot himself.
Branneburg, Germany One teacher killed by a 15-year-old student, The shooter has been in a coma ever since.
- March 10, 2000**
while leaving a dance
Savannah, Georgia Two students killed by Darrell Ingram, 19, sponsored by Beach High School.
- May 26, 2000**
Lake Worth Middle
Lake Worth, Florida One teacher, Barry Grunow, shot and killed at School by Nate Brazill, 13, with a .25-caliber semi-automatic pistol on the last day of classes.
- September 26, 2000**
during a fight at
New Orleans, Louisiana Two students wounded with the same gun Woodson Middle School.
- January 17, 2001**
Clifton Eastern One student shot and killed in front of Lake

Baltimore, Maryland	High School.
January 18, 2001 Sweden	One student killed by two boys, ages 17 and 19.
March 5, 2001 Williams, 15, Santee, California	Two killed and 13 wounded by Charles Andrew firing from a bathroom at Santana High School.
March 7, 2001 student Kimberly Williamsport, Pennsylvania High School; she was Prozac.	Elizabeth Catherine Bush, 14, wounded Marchese in the cafeteria of Bishop Neumann High School; she was depressed and frequently teased. Bush was on
March 22, 2001 Jason Hoffman, 18, Granite Hills, California and wounded anger management	One teacher and three students wounded by at Granite Hills High School. A policeman shot Hoffman. Hoffman had undergone an program.
March 30, 2001 year-old student who Gary, Indiana School.	One student killed by Donald R. Burt, Jr., a 17- had been expelled from Lew Wallace High School.
May 24, 2001 attempts suicide Mexico City, Mexico shocked as they	A teenager, 15-year-old Diego Orlando Rosales, in front of his girlfriend. Mexican authorities believed this was an American phenomenon.
November 12, 2001 the Caro Learning Caro, Michigan	Chris Buschbacher, 17, took two hostages at Center before killing himself.

April 10, 2001
to his high school,
Wahluke, Washington
hostage while on a dose

16-year-old boy Cory Baadsgaard took a rifle
and **killed 23 classmates and a teacher**
of Effexor.

January 15, 2002
Luther King Jr.
New York, New York

A teenager wounded two students at Martin
High School.

February 9, 2002
from which he had been
Freising, Germany
headmaster of the
expelled. He also wounded

Two killed in Eching by a man at the factory
fired; he then traveled to Freising and killed the
technical school from which he had been
another teacher before killing himself.

April 26, 2002
10 wounded by
Erfurt, Germany
Gutenberg secondary school.

13 teachers, 2 students, and 1 policeman killed,
Robert Steinhauser, 19, at the Johann
Steinhauser then killed himself.

April 29, 2002
Petkovic, 17, who
Vlasenica, Bosnia-
Herzegovina

One teacher killed, one wounded by Dragolav
then killed himself.

October 28, 2002
school at the
Tucson, Arizona
female professors and

Robert S. Flores, Jr., 41, a student at the nursing
University of Arizona, shot and killed three
then himself.

April 14, 2003
wounded at John
New Orleans,
teenagers (none

One 15-year-old killed, and three students
McDonogh High School by gunfire from four

- Louisiana** were students at the school). The motive was gang-related.
- April 24, 2003** James Sheets, 14, killed principal Eugene Segro of Red Lion Area Junior High School before killing himself.
Red Lion, Pennsylvania
- September 24, 2003** Two students are killed at Roconi High School by John Jason McLaughlin, 15.
Cold Spring, Minnesota
- September 28, 2004** Three students killed and 6 wounded by a 15-year-old Argentinian student in a town 620 miles south of Buenos Aires.
Carmen de Patagones, Argentina
- March 21, 2005** Jeff Weise, 16, killed grandfather and companion, then arrived at school where he killed a teacher, a security guard, 5 students, and finally himself, leaving a total of 10 dead.
Red Lake, Minnesota
Weise was on Prozac.
- November 8, 2005** One 15-year-old shot and killed an assistant principal at Campbell County High School and seriously wounded two other administrators.
Jacksboro, Tennessee
- August 24, 2006** Christopher Williams, 27, looking for his ex-girlfriend at Essex Elementary School, shot two teachers, killing one and wounding another. Before going to the school, he had killed the ex-girlfriend's mother.
Essex, Vermont
- September 13, 2006** Kimveer Gill, 25, opened fire with a semi-automatic weapon at

Montreal, Canada
and more than a dozen
killed himself.

Dawson College. Anastasia De Sousa, 18, died
students and faculty were wounded before Gill

September 27, 2006
Canyon High School
Bailey, Colorado
himself.

Adult male held six students hostage at Platte
and then shot and killed Emily Keyes, 16, and
himself.

September 29, 2006
School principal
Cazenovia, Wisconsin

A 15-year-old student shot and killed Weston
John Kiang.

October 3, 2006
the one-room West
Nickel Mines,
schoolgirls, ranging in
Pennsylvania
Five of the girls and

32-year-old Carl Charles Roberts IV entered
Nickel Mines Amish School and shot 10
age from 6 to 13 years old, and then himself.
Roberts died.

January 3, 2007
Samnang Kok, 17,
Tacoma, Washington

Douglas Chanthabouly, 18, shot fellow student
in the hallway of Henry Foss High School.

April 26, 2007
Seung-Hui, killed two in
Blacksburg, Virginia
classroom building.

A 23-year-old Virginia Tech student, Cho
a dorm, then killed 30 more 2 hours later in a
His suicide brought the death toll to 33, making
rampage the most deadliest in U.S. history. 15

the shooting
others were wounded.

September 21, 2007
D. Brandon, shot and
Dover, Delaware
University campus.

A Delaware State University Freshman, Loyer
wounded two other Freshmen students on the

murder, assault, reckless

Brandon is being charged with attempted engagement, as well as a gun charge.

October 10, 2007
school, Asa H. Coon,
Cleveland, Ohio
before he shot

A 14-year-old student at a Cleveland high school shot and injured two students and two teachers and killed himself. The victims' injuries were

not life-threatening.

November 7, 2007
shot and killed five
Tuusula, Finland
Joketa High School.

An 18-year-old student in southern Finland shot two boys, two girls, and the female principal at Joketa High School. At least 10 others were injured. The gunman shot himself and died from his wounds in the hospital.

February 8, 2008
and then herself
Baton Rouge,
in Baton Rouge.
Louisiana

A nursing student shot and killed two women in a classroom at Louisiana Technical College

February 11, 2008
shot and wounded
Memphis, Tennessee

A 17-year-old student at Mitchell High School shot a classmate in gym class.

February 12, 2008
Junior High School
Oxnard, California

A 14-year-old boy shot a student at E.O. Green Junior High School causing the 15-year-old victim to be brain dead.

February 14, 2008
and wounded 17
DeKalb, Illinois
Northern Illinois

University. The gunman killed five students and then himself, more when he opened fire on a classroom at Northern Illinois University. The gunman, Stephen P.

Kazmierczak, was identified

in 1007.

as a former graduate student at the university

Kazmierczak was on psychotropic drugs.

September 23, 2008

least nine students

Kauhajoki, Finland

330km (205 miles)

A 20-year-old male student shot and killed at and himself at a vocational college in Kauhajok, north of the capital, Helsinki.

November 12, 2008

Fort Lauderdale,

killed by a classmate

Florida

A 15-year-old female student was shot and at Dillard High School in Fort Lauderdale.

March 11, 2009

Albertville Technical High

Winnenden, Germany

old boy who

Fifteen people were shot and killed at School in southwestern Germany by a 17-year-old boy who attended the same school.

Sources: Newspaper reports

The following letter was written by Dr. Ann Tracy who I worked with on the Columbine case and was presented to the Food and Drug Administration during hearings September 13, 2004. Dr. Tracy has appeared on my radio shows numerous times and has a tremendous background in pharmacology. She has come to the same conclusion as myself and several others as far as ingredients of these psychotropic drugs being precursors, and main ingredients in ketamine and phencyclidine (PCP).

A letter presented in 2004 to the FDA regarding the Columbine shootings.

Ann Blake Tracy, Ph.D.,

Executive Director, International Coalition For Drug Awareness

Website: w.drugawareness.org

Author: *Prozac: Panacea or Pandora? - Our Serotonin Nightmare*

and CD or audio tape on safe withdrawal: "Help!

I Can't Get Off My Antidepressant!"

Order Number: 800-280-0730

Phone Number: 515-987-8044

Cell Number: 801-209-1800

E-mail: atracyphdi@aol.com

Dr. Ann Blake Tracy's September 13, 2004 letter to the FDA

I am Ann Blake Tracy, PhD, head of the International Coalition for Drug Awareness. I am the author of "Prozac: Panacea or Pandora? - Our Serotonin Nightmare" and have testified in court cases involving antidepressants for 12^{1/2} years. The last 15 years of my life have been devoted full-time to researching and writing about SSRI antidepressants.

Giving psychotropic drugs to the young makes their reasoning faculties unable to develop properly!

Research on serotonin has been clear from the very beginning that the most damaging thing that could be done to the serotonin system would be to impair one's ability to metabolize serotonin. Yet that is exactly how SSRI antidepressants exert their effects.

For decades research has shown that impairing serotonin metabolism will produce migraines, hot flashes, pains around the heart, difficulty breathing, a worsening of bronchial complaints, tension and anxiety which appear from out of nowhere, depression, suicide—especially very violent suicide, hostility, violent crime, arson, substance abuse, psychosis, mania, organic brain disease, autism, anorexia, reckless driving, Alzheimers, impulsive behavior with no concern for punishment, and argumentative behavior.

How anyone ever thought it would be "therapeutic" to chemically induce these reactions is beyond me. Yet, these reactions are exactly what we have witnessed in our society over the past decade and a half as a result of the widespread use of these drugs.

In fact, we even have a whole new vocabulary as a result with terms such as "road rage," "suicide by cop," "murder/suicide," "going postal," "false memory syndrome," "school shooting," "bi-polar"—every third person you meet anymore—along with the skyrocketing rates of antidepressant-induced diabetes and hypoglycemia.

Can you remember two decades ago when depressed people used to slip away quietly to kill themselves rather than killing everyone around them and then themselves, as they do while taking SSRI antidepressants?

A study out of the University of Southern California in 1996 looked at a group of mutant mice in an experiment that had gone terribly wrong. These genetically-engineered mice were the most violent creatures they had ever witnessed. They were born lacking the MAO-A enzyme which metabolizes serotonin. As a result their brains were awash in serotonin. This excess serotonin is what the researchers determined was the cause for this extreme violence. Antidepressants produce the same end result as they inhibit the metabolism of serotonin.

These are extremely dangerous drugs that should be banned as similar drugs have been banned in the past.

Antidepressants inhibit the metabolism of serotonin, so they can cause extreme violence.

As a society we once thought LSD and PCP to be miracle medications with large margins of safety in humans. We have never seen drugs so similar to LSD and PCP as these SSRI antidepressants. All of these drugs produce dreaming during periods of wakefulness. It is believed that the high serotonin levels over-stimulated the brain stem leading to a lack of muscle paralysis during sleep, thus allowing the patient to act out the dreams or nightmares they are having. The world witnessed that clearly in the Zoloft-induced murder-suicide of comedian Phil Hartman and his wife, Brynn.

Connecticut witnessed the Prozac-induced case of Kelly Silk several years ago. This young mother attacked her family with a knife, then set the house on fire killing all but her 8-year old daughter who ran to the

neighbors. As she stood bleeding and screaming for help she explained, "Help! My mommy is having a nightmare!"

Out of the mouths of babes we will understand these nightmares for what they are. She understood that this was something her mother would do ONLY in a nightmare, never in reality.

This is known as a REM Sleep Behavior Disorder. In the past it was known mainly as a drug withdrawal state, but the largest sleep facility in the country has reported that 86% of the cases they are diagnosing are patients on antidepressants.

Because this was known in the past as a condition manifesting mainly in drug withdrawal, you should see how dangerous the withdrawal state from these drugs will prove to be. That is why it is so critical to make sure patients are weaned EXTREMELY slowly so as to avoid ANY chance of going into a withdrawal state."

Here the letter ended and was signed by Dr. Tracy.

When we witness and hear about these different incidents involving adolescents, even first-graders have been involved, ***we wonder why these children were so aggravated in the first place to be needing some form of counseling and help.*** In some situations, family and home life are factors, but often these children come from stable homes and loving backgrounds. In my studies and travels worldwide I've observed children in many countries, and have also reflected on my own background as a child.

If we study past lives, we may come to a conclusion that could help us with the present-day situations that arise, especially from young people. The examples I have given in my lectures are that we evolve spiritually over each decade of our lives. The first 10 years is usually getting in touch with our bodies, finding out what they're capable of, i.e. are we going to be a future athlete, or are we going to participate in something that requires tremendous mental skills, and lesser physical skills? We then learn to read the language and write the language of the country we were born into, we learn basic social skills, and how to interact with other human beings. In the second decade, we become vocational, we become aware of our sexuality, and at this point regardless of our past karmic history we are able to see what the truth really is,

and know the difference between right and wrong, and expressions with or without harmful actions. However, due to the nature of this world, teenagers quite often are preached right and wrong by their parents, but observe that the parents themselves are not practicing what is being taught.

This leads to an internal conflict between devotion to the home and the truth. When this happens, it can trigger past life experiences and oftentimes, hidden anger surfaces. ***Because the brain of the growing adolescent is not fully developed, the reasoning faculties are not always on a true course. Then with the ingestion of psychotropic drugs, the reasoning faculties can never develop properly.*** Marijuana given to teenagers who don't have fully developed brains, usually produces a retardation of the emotional body, which becomes apparent in the next decade.

In the third decade, careers are becoming important, marriage often becomes important and we work hard to educate ourselves, or find a standing place in our society, wherein we can earn enough money for some form of lifestyle. It's usually in this decade, that educators become educated, criminals become hardened, and floaters begin drifting.

In the fourth decade, we have made some choices, and now we have to live with them, whether they be good or bad. Retirement is thought about, although it's still a ways away and oftentimes we are dealing now with our own children's adolescence.

In the fifth decade and beyond, our spirituality usually becomes fairly apparent, and we start reflecting on what our life has been about so far. If we had not maintained good health habits, then we become plagued with health problems. If we have made good choices, we now seriously can plan our lives and the future decades.

In the sixth decade, some of our friends are no longer around because of choices in life that they made. Some of our other friends by now have become lifelong friends, and a stronger bonding usually occurs. At this point, we usually pay close attention to our actions towards others, and how we treat ourselves, and how we reward ourselves.

In the seventh decade, we are well down the road towards something, and we think more along the lines of humanity's needs, our children's needs, and this continues into the future decades.

Chapter 8: Drugs, Drugs and More Drugs

Drug Companies, Health, Manipulation, Deception, Power —*in short, Deceptive Mind-Control !!!!*

Definition: A drug, broadly speaking, IS ANY SUBSTANCE THAT, WHEN ABSORBED INTO THE BODY OF A LIVING ORGANISM, "ALTERS NORMAL BODY FUNCTION"!

Drug stores started in Baghdad!

The earliest drug stores date back to the Middle Ages. **The first known drugstore was opened by Arabian pharmacists in Baghdad in 754.** Soon many more began operating throughout the medieval Islamic world, and eventually moved to medieval Europe. By the 19th century many of the drug stores in Europe and North America eventually developed into large pharmaceutical companies. Most of today's major pharmaceutical companies were founded in the late 19th and 20th centuries. Key discoveries were made in the 1920s and 30s such as insulin and penicillin, which then became mass manufactured. Switzerland, Germany and Italy were the most recognized manufacturers, followed by the United Kingdom, the US, Belgium and Netherlands.

The homeopathic world, and allopathic world, split around the time that Louis Pasteur (December 27, 1822 - September 28, 1895) discovered **penicillin** (pharmaceutical), and Samuel Hahnemann (April 10, 1755 - July 2, 1843) popularized homeopathic (natural) remedies. Legislation was acted upon to test and approve drugs and to require appropriate labeling. Prescription and non-prescription drugs became legally distinguished from one another as the pharmaceutical industry matured. The industry got underway in earnest from the 1950s, in the development of systematic scientific approaches, understanding human biology, and sophisticated manufacturing techniques.

Numerous new drugs were developed during the 1950s and mass-produced and marketed through the 1960s. These include the first oral contraceptive called "the pill," cortisone, blood pressure drugs and other heart medications, MAO inhibitors, SSRI (selective serotonin reuptake inhibitors) drugs, and finally Thorazine, Haldol and other **tranquilizers** brought upon **the age of psychiatric medication.** **Valium (diazepam)** discovered in 1960, was

marketed from 1963 and became the most rapidly enlarged prescribed drug in history.

I first became aware of mind control when I joined the US Air Force in 1959 and participated in special training programs. By 1960, I was stationed at the 776th Radar Aero Squadron, at Point Arena Air Force Base, located in Northern California. Our jobs there were to protect the Western part of the United States from any form of attack. This was during the height of the Cold War, so our position was considered instrumental in national global defense.

Our equipment (Early Warning Radar) mainly consisted of an ANFPS-35 search set that looked out over the ocean over 400 miles, and an ANFPS-28 height set that looked at how high an object was. This information was then fed over to the Strategic Air Command headquarters (SAC) located at Beale Air Force Base also in Northern California. If we sensed a threat, we would send out interceptor aircraft to check it out.

In 1960 I was told to "forget" the objects I saw when in the Air Force—coming at 20,000 mph and at 5,000 feet up.

One of the first things I noticed was that very often in late descending night we would observe objects coming from outer space descending vertically at a rate of 20,000 mph, and an approximate altitude of 5,000, feet then taking a horizontal path in the direction of Mexico at about 5,000 miles an hour. These observations were made on a Planned Position Indicator (PPI scope) and the operator, nicknamed "scope dope," would fill out a classified government form DDS-332 detailing the events. The PPI room was small, with several operators, all possessing Above Top Secret Clearances. As soon as they left the room, they handed the forms to a Senior Tech Sergeant, who often shredded the reports. This, to me, was a little over the top as all this work was paid by US taxpayers, and they were never notified and most of the information was destroyed. Some of it obviously was kept in files somewhere, but due to the overwhelming rapidity of these observations, the reports were status quo. When I complained about it to the base commander, I was told in no uncertain terms to absolutely forget what I saw. Those that could not heed these specific commands often would find themselves institutionalized at Letterman General Hospital, an Army base located in the Presidio of San Francisco.

When I left the Air Force and went to work for **North American Aviation**, later known as Rockwell, and was assigned to NASA to work on the Saturn spacecraft, I found myself working for several scientists and their assistants, who were formerly part of the Nazi Third Reich, and had been brought over to America at the end of World War II under **Operation PAPERCLIP**. Werner von Braun was the main director, but his henchmen, all from Germany, were the ones (Werner von Lossberg, being the chief instigator) who behaved like the Gestapo. Once again, mind control tactics, and no individual thinking towards the project that we were assigned to. If anyone appeared to get out of hand, they were threatened with breaching national security and some form of mental confinement. I didn't realize it at the time, but later on, I learned that a lot of this came from the dictates of a **German company, I.G. Farben**.

When I left NASA, I went out into the civilian sector as a consultant for many different types of scientific, medical, chemical and engineering projects. In the next decade, until I started Pyradyne, I visited over 2,000 different companies. During these visits I had many eye-opening experiences. For example, when I visited Hughes Aircraft Company in El Segundo, each different department was working on an overall classified objective. Although the need-to-know rule was in place in companies like this, whereby one department did not completely understand what the other was doing—because they were all my clients, and I was consulting on their projects, I got to see the big picture. Of course, at the time, I had to keep my observations to myself as I, too, still maintain a secret clearance, and to reiterate one department's work to another, even though it's in the same company, that would've been considered a severe security breach. But because I visited so many companies, I was able to get a true national picture of the leading edge of all classified discoveries and experimentations being conducted at that time. My favorite place in those days to visit was Los Alamos (site Y) and Sandia Labs, both located near Albuquerque, New Mexico. This I have well-documented, including all of the related documents of the military and civilian companies I was involved with at my radio show network, located in the archives of www.BBSradio.com.

In 1976 when I started Pyradyne, I began lecturing on what I have learned and saw that in the future there would come a day when the entire world would fall under some form of One World Governmental Control. I proceeded to get a Ph.D. in Homeopathic Medicine so that I could round out my knowledge. Afterward, I began to develop anti-ELF devices and market them worldwide.

ELF waves (Extremely Low Frequency electrical transmissions) hurt the human body's electrical balances (see chart at end of Chapter 12)

As I began to study the effects of ***ELF (extremely low frequency electrical transmissions that violate internal human organelle electrical balances)***, I noticed that a large part of the American public was being given mind control drugs to calm them down, when, what was really upsetting and creating excessive stresses on them was the ELF waves their bodies were exposed to on a daily basis. Along with ELF, I found that man-made radiation, from over 900 nuclear bomb tests had contaminated the drinking water worldwide. This, of course, was causing **the spread of cancer** (breast in women and prostate in men) at an alarming rate.

I then directed my studies towards cancer research and quickly found out that there were several very well-documented **cures for cancer**, but the pharmaceutical and medical societies did not want the news of a cure to get out to the general public. So then I began to see how this information is inaugurated into a society. I saw many people, often very qualified doctors, harassed and imprisoned for curing cancer and other diseases without using pharmaceuticals.

By now I had been able to market my devices in several clinics and universities worldwide. I began a worldwide lecture tour soon thereafter and today I continue to do so. Now, let's examine the facts with a little history.

I became involved when I began to work in a clinic in Newport Beach, California in 1979, where I ***found out that the greatest amount of drug prescribed was Valium, and that the victim was the American housewife.*** I then began to look at a darker side of the drug industry and I was astounded at what I found to be the cold heart of a hidden financial empire whose motive was to control the populace of the world. As the curtain rises, the 20th century is a good beginning.

I. G. Farben

I.G. Farben, the 4th largest company in the world in 1925, set up 2,000 cartel agreements with companies like Standard Oil, DuPont, Dow Chemical and many others, worldwide.

Several of the current drug companies today have their roots from a company called **I.G. Farben**. (IG translates to *interessen-gemeinschaft*, i.e. **community of interest**). At the beginning of the 20th century three major firms, BASF, Bayer and Hoechst, all German companies, dominated the world chemistry industry in synthetic dyes. All three major firms also integrated into the production of essential raw materials, and then they began in the areas of chemistry, such as pharmaceuticals, photographic film, agricultural chemicals and electro-chemicals. **The chairman of Bayer**, (world's largest manufacturer of aspirin), Carl Duisberg, came to the United States in the spring of 1903. There he visited several large American trusts such as Standard Oil, US steel, International Paper and Alcoa. After returning to Germany he **proposed a nationwide merger of pharmaceuticals and dye technologies with American interests**.

Companies that were earlier part of I.G. Farben that still exist today are: Bayer, BASF, Agfa and Hoechst.

I.G. Farben was founded on December 25, 1925, as the brainchild of German genius Hermann Schmitz, with a merger of six companies—**BASF, Bayer, Hoechst, Agfa, Chemische Fabrik Greisheim-Elektron, and Chemische Fabric Vorm**. And the I.G. Farben building, headquarters for the conglomerate, was in Frankfurt am Main, Germany. By 1938, the company had grown to 218,000 employees! During its heyday *it was the fourth-largest company in the world*, behind General Motors, US Steel, and Standard Oil.

Between 1927 and the beginning of World War II, I.G. Farben doubled in size, due in great part to American assistance, by bond issues, such as one for \$30 million offered by National City Bank. By 1939, I.G. Farben acquired a participation and managerial influence in some 380 other German firms and over 500 foreign firms. If you look around today, you will see the same thing happening all over again as the One World Government marches the United States towards fascism. Large companies are buying out small ones by the dozens. **There were 2,000 cartel agreements between I.G. Farben and foreign firms, including Standard Oil of New Jersey, DuPont, Alcoa, Dow Chemical and others in the United States**. In the beginning of Hitler's rise to power, I.G. Farben contributed 400,000 reichsmarks to Hitler's political "slush fund."

In 1928 the American holdings of I.G. Farben (i.e. the Bayer company, General Aniline Works, Agfa, Ansco and the Winthrop Chemical Company), were organized into a Swiss holding company G. Chemik. In the following year these American firms became the American I.G. Chemical Corporation, later renamed General Aniline & Film. Hermann Schmitz now became president of American IG. During the war, Hermann's brother Dietrich A. Schmitz became the American president of I.G. America until 1941.

In 1929 Ivy Lee, (Firm of Ivy Lee & T.J. Ross) became the public relations counsel for I.G. Farben in the United States. Previous to that, Mr. Lee had been the Rockefeller's public relations manager.

Some of the directors of both the American and German I.G. Farben empire were: from the Federal Reserve Bank of New York, Charles E. Mitchell, Walter Teagle, and Paul M. Warburg; from Ford Motor Company, Edsel B. Ford, and Carl Bosch; from the Bank of Manhattan (now called Chase Manhattan Bank) H.A. Metz and Paul M. Warburg; from Standard Oil of New Jersey, Walter Teagle. It's fair to say that Edsel Ford resigned after the war because of the legal unhealthiness. Of course, some of that karma was passed on to the Ford Motor Company, with the ever unpopular Edsel. Now currently looking at our present day situation, the same Federal Reserve Bank that supported the Nazi I.G. Farben, won't account for a lot of the money authorized by them to bail out several American banks and other industrial compounds. This fact should be duly noted as a major part of The Inside Track!

During the planning of the invasion of Czechoslovakia and Poland, and World War II, I.G. Farben dictated and directed to Nazi officials, which chemical plants should be secured and delivered to I.G. Farben. By this time **John D. Rockefeller's United States-based Standard Oil Company had formed a cartel with I.G. Farben.** Although today I.G. Farben is not the largest company that it was, it **has been diversified into several other companies, and the original name dropped.** Look how big businesses were in those days so corrupted, just as most large businesses today are likewise corrupted.

During WWII, I.G. Farben company used 83,000 slaves in Germany to produce the pesticide used in gas chambers. Some U.S. companies and the N.Y. Federal Reserve Bank sat on I.G. Farben's Board!

I.G. Farben built a factory (named Buna Chemical Plant) to produce synthetic oil and rubber from coal in Auschwitz, which was the beginning of SS (Schutzstaffel, Hitler's private guard "Praetorian," an idea derived from guards used by Roman Emperors) activity in camps in this location during the Holocaust. At its peak in 1944 this factory made use of 83,000 slave laborers. One of the products manufactured at the time by I.G. Farben was the pesticide Zyklon B, which was used in the German Reich gas chambers.

Heinrich Himmler, the chief of the SS, was the main director of the building of Auschwitz. Himmler delegated SS Maj. Carl Wolff, chief of his personnel staff to be liaison officer between the SS and I.G. Farben. During a meeting with Heinrich Buetefisch, (the manager of I.G. Farben's Auschwitz concentration camp gasoline plant) it was determined that I.G. Farben would pay the SS three Reichsmarks for each unskilled concentration camp inmate, and four reichsmarks for skilled inmates. Later as the war progressed, the SS agreed to furnish children at 1^{1/2} reichsmarks per day. Of course, the inmates receive nothing and barely enough food and water to sustain themselves.

At the end of WWII, I.G. Farben was split between the U.S. and Russia and 24 directors of the company were indicted in the Nuremberg trials. But some indicted became the new leaders of new companies.

At the end of the war, due to the severity of the war crimes committed by I.G. Farben, the company was too corrupt to be allowed to exist any longer and it was divided between United States and Russia. During the Nuremberg trials, a United States military tribunal, 24 directors of I.G. Farben were indicted. Thirteen were sentenced to prison terms between one in eight years. Some of those indicted in the trial were subsequently made leaders of many postwar companies. Two-thirds of the six companies that owned I.G. Farben are still in business today. They are Bayer, BASF, Agfa and Hoechst. If you look carefully, you will see products from these companies everywhere.

A brief psychological interlude leading into Mind Control

The ONE WORLD ORDER MOVEMENT

Now let's chart a parallel psychological progression and blend it in with **the Big Pharma Giants** and their real goals. Continuing on with this chapter, we will begin to examine where **The One World Order Movement** got its psychological roots leading today into **mind and population control**. Although starting from very subtle beginnings, even before what we described here, this section will alternate between modern drug companies and their manipulations, individuals and their actions, and finally the effects on our children, which represent the future of the world. Still later on we will cover the more advanced delivery systems, beyond pharmaceuticals and into the **electronic and ELF harassment devices, often coming from our satellite systems**. You will see as we move into further chapters, I was able to bear witness on several of the originations of these operational programs. Although I was ignorant of **the big picture** at the time, looking back it's more than obvious this is not a conspiracy theory, but a factual historical deluge of pure simple facts that can be examined in great detail from sources outside of this tome.

In 1900, Clifford Whittingham Beers, a Yale University graduate developed an excessive fear of mental collapse subsequent to the death of a brother who died from epilepsy. He became suicidal and spent several years in a mental institution. He eventually recovered and in 1909 five years after his release, he formed **the US National Committee For Mental Hygiene** and called for *a network of mental hygiene societies worldwide*. Then in **1916** John Dewey (October 20, 1859-June 1, 1952) a well-known American psychologist and educational reformer wrote that "there is always the danger that increased personal independence will decrease the social capacity of an individual. It often makes an individual so insensitive in his relations to others as to develop an illusion of being really able to stand and act alone—an unnamed form of insanity which is responsible for a large part of the remedial suffering of the world."

The "danger" of increased personal independence

To me the keywords here are **"a danger that increased personal independence will decrease the social capacity of an individual."** Our Constitution was trashed during the Bush administration (the U.S. Constitution is the supreme law of the United States). It was adopted September 17, 1787 by the Constitutional Convention in Philadelphia, Pennsylvania and later ratified by conventions in each US state in the name of

"The People" It has since been amended 27 times, the first 10 amendments being known as the Bill of Rights.

Previous to the US Constitution was the Declaration of Independence. When we celebrate the Fourth of July, we are celebrating the day that our original 13 states, then our Congress declared our freedoms later be supported in detail by the U.S. Constitution. The date of the declaration is July 4, 1776. In the second paragraph, it clearly states that "we hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. --That to secure these rights, Governments Are Instituted among Men, deriving their just powers from the consent of the governed." As you read further into this tome, remember this paragraph!

John Dewey was a mixed case of idealism and pragmatism. In the doctrine of pragmatism, it's where an individual makes progress by repetition and logic. The opposite of that is spontaneity, whereby logic is removed. Observation of action is the direction of cause. In 1935 Dewey, together with Albert Einstein and Alvin Johnson, became members of the United States section of the International League for Academic Freedom. Later one of Einstein's closest friends, philosopher Bertrand Russell, was dismissed as Professor of Philosophy at the College of New York in 1940 because he had liberal views at the time, one of which was sex should be permitted before marriage. John Dewey and Horace M. Kallen, a Harvard graduate in philosophy, were editors of the case against Russell.

I remember when Lenny Bruce first started his version of being a comedian. The world was shocked by his vernacular at the time, and he was jailed several times for his humor, but today as in Russell's case, Lenny's humor and Bertrand's beliefs are commonplace. Therefore, there has always been a delicate line between what is socially acceptable and what is punishable by social law.

In **1919** with funding from the Commonwealth Fund and the Rockefeller Foundation, Clifford Beers formed the predecessor of what became the **World Federation for Mental Health** and the **Committee For Mental Hygiene**. Included in the formation were Clarence Hinks, M.D. of the Canadian Medical Association, Adolf Meyer, M.D. of Johns Hopkins Hospital, and psychologist William James of Harvard. William James, John Dewey and other **socialist**

visionaries spread the philosophy of pragmatism, which denies Biblical truth, sees truth as relative, and test its validity by its practical and measurable effects.

Socialist change experts—use a real crisis to then expand their control web to take away more of our freedoms each time. . . "slip-sliding away."

In almost every public step in the social revolution, one gained public sympathy and acceptance at the time by focusing on a real crisis. But in the hands of socialist change agents, ***the nice-sounding "solution" became a stepping stone to an ever-expanding web of control, and chipping away of our national freedoms, thereby reducing our inalienable rights to social rights.***

A good example of this occurred on August 1, **1966** when Charles Whitman killed 14 people and wounded 32 others from the University of Texas observation Tower in Austin. Charles grew up as a very bright student, was a hero in the Marine Corps and was attending college on a USMC scholarship. During an autopsy, he was found to have had **two implants in his brain**. A few years ago television network ABC did a special on this very subject. The implants were probably placed earlier on in 1966. These often produce irritability and tension in the hosts. Charles complained of mental tension and was first prescribed Valium, by a University of Texas doctor, Dr. Jan Cochran. Later he was prescribed a powerful CNS (psychostimulant) Dexedrine. The official autopsy report to the public was that he had suffered from astrocytoma brain tumor. **After this incident our government began a serious legislation to remove our constitutional freedoms within the second amendment of the "Bill of Rights" wherein we are granted the Right to Bear Arms.**

The Tavistock Institute

Tavistock—has major control of every aspect of politics, business, religion, banking, insurance, mining, fossil fuels, and medicine, and is above the law in ALL COUNTRIES! And it's headquarters are in England!

One of the greatest kept secrets of the One World Order today that has the greatest effect on what direction not only our American society is going,

but many other countries, as well, is the Tavistock Institute. www.Tavinstitute.org **OPERATING ABOVE THE LAW IN ALL COUNTRIES**, Tavistock has a major control of every aspect of politics, commerce, religion, banking, insurance, mining, the fossil fuel industry and even the drug trade. Operating on an annual budget of \$6 billion a year, its network of foundations in the US is all funded by US taxpayer's money. There are 10 major institutions, 400 subsidiaries, and over 3,000 study groups, all involved to increase the control of the One World Order.

Originating in 1920 as the **Tavistock Institute of Medical Psychology (TIMP)**, it pioneered research into **psychological warfare** under the direction of Brig. Gen. John Rawlings Rees. In 1921 the Duke of Bedford, Marquis of Tavistock (hence the name Tavistock), the 11th Duke, gave a building to the TIMP group. This was for a program instituted by the British Army to study the effects of severe stress and shell shock on British soldiers and research the **human "breaking point"** in order to learn **how conflict and psychological shock could be used to manipulate and manage large human populations**.

In 1947, the **Tavistock Institute of Human Relations** was formed as a **non-profit organization with a grant from the Rockefeller Foundation which was interested in social psychiatry**, based on the work of Sigmund Freud who had moved to England and was given a mansion by Princess Bonaparte.

The Institute began developing brainwashing techniques that were used experimentally on the American prisoners of war in Korea. From there, experimentation was developed and used for **crowd control in America**.

Oftentimes the American government needs support from the American public to enter a theater of war. Part of the roots of the **psychological manipulation** began when a German refugee, Kurt Lewin, became director of the TIMP group in 1932. He came to the United States in 1933 as a refugee, and set up a Harvard Psychology Clinic, which originated the propaganda campaign to turn the American public against Germany and involve us in World War II. In 1938 Roosevelt executed a secret agreement with Churchill that led to the formation of **the OSS (now the CIA)**. *The entire OSS program, as well as the CIA, is constantly working within the parameters established by the Tavistock Institute.*

The Japanese bombing of Pearl Harbor was an event that could have been stopped, as there were plenty of warnings just as there were before the attack on the World Trade Center on 9/11.

A British agent named Tricycle warned the FBI ahead of time of the coming attack on Pearl Harbor.

On August 10, 1941, a top British agent named "Tricycle," told the FBI that a planned attack on Pearl Harbor would occur very soon. He also reported that a senior Japanese naval person had gone to Taranto, Italy to collect all secret data on the attack there. In addition, the Matson liner, SS Lurline, heading from San Francisco to Hawaii on its regular route, is said to have heard and plotted via "relative bearings" unusual radio traffic, and the telegraphic code was very different from the international Morse code. In addition, the offshore radar and AFNFPS 8, (we had one of these still in use when I was stationed at Point Arena Air Force Station) had detected the Japanese fleet approaching—as well as a radio station, Hypo (an Army listening station that had decrypted the famous 5-NUM Japanese code) located on the east side of Oahu, Hawaii. However, the situation there was the same between Britain and United States as it was during 9/11. In this case Pres. Roosevelt had been secretly meeting with Winston Churchill aboard a large warship on the East Coast of the United States just previous to the United States involvement in World War II.

The combined British and American intelligence was overwhelming, as many agents were stationed in Japan at the time Pearl Harbor was bombed.

It was by no means a surprise. In the case of the 9/11 bombing, FBI agent Coleen Rowley and FBI translator Sybil Edmonds both accuse the FBI of hampering attempts to alert others of the fact that 9/11 was about to occur. Previously **on July 5, 2001, then acting FBI director Tom Pickard had a meeting with then Atty. Gen. John Ashcroft, about the impending World Trade Center attack, and was rudely brushed off by Ashcroft.** Then, once again, after the attack there was a bond between George Bush and Tony Blair against terrorism. Being a false flag operation in the first place, the real message, including the orange, red and amber alerts, was to feed the American fears in a way outlined by **the guidelines of the Tavistock Institute for population control.**

Tavistock Institute's Use of Drugs

Another earmark of the Tavistock strategy is the use of drugs. Tavistock was the instigator of the MK ULTRA program of the CIA in which a large number of drugs including LSD and PCP, were used.

Included in the holdings of Tavistock in America are the Brookings Institution, the Hudson Institute, National Training Laboratories, University of Pennsylvania, Wharton School of Finance and Commerce, Flow Laboratories, Merle Thomas Corporation, Walden Research, Institute for Policy Studies (IPS), Stanford Research Institute, Massachusetts Institute of Technology, Albert P. Sloan School of Management, and the infamous RAND Research and Development Corporation, the most prestigious think tank in the world. Overshadowing all of these organizations is a group called The Committee of 300.

The Tavistock Institute is headquartered in London at 30 Tabernacle St, London, England EC2A4UE.

The RAND Corporation got involved in studying "social welfare."

Probably the most infamous of the secret Tavistock Empire is the RAND Corporation. The RAND (the name was an acronym for Research ANd Development Corporation) was founded in October 1945 as an Army Air Forces research and engineering shop at the Douglas Aircraft Company, the brainchild of Gen. Henry H. "Hap" Arnold (my direct up-line commander, along with Gen. Curtis LeMay, when I served in United States Air Force). General Eisenhower supported the idea of a think tank for military purposes, and so the RAND headquarters was officially set up in a two-story building at the corner of Broadway and 4th Street in Santa Monica.

Under the Guidance of Mert Davies, RAND began to do advanced studies on satellite reconnaissance and aerial spy networks. Soon another personality, Richard "Dick" Leghorn (a very well-known World War II reconnaissance pilot) was on the scene working with Mert Davies. Funded by Lawrence Rockefeller, and further financed by Lawrence and David Rockefeller, a company called Itek (the first successful manufacturer of spy cameras)

was founded in Lexington Massachusetts, on October 10, 1957. Not too many years after that, I regularly visited Itek as a vendor and consultant to their engineering projects. I was not aware at the time of the total conglomeration of intelligence experts that were involved. Another client of mine was the Polaroid Corporation, founded by Edwin Land. Joining them was Richard M. Bissell, then working with the Office of Strategic Services (OSS), which later became the CIA (Central intelligence agency) in 1947. Also, it's interesting to note that **the United States Air Force was officially created in September of 1947.**

With ideas streaming from RAND, Davies, Leghorn and Bissell, Project Corona, the first spy satellite program began. Also known as Argon and Lanyard, Project Corona began in the mid-1950s with the first launch in 1959. The intelligence community used designators KH-1, KH-2, KH-3, KH-4, KH-4A and KH-B for the Corona systems. Other KH numbers were used later which we will discuss in further chapters.

All these people were former RAND affiliates.

It wasn't long before the RAND Corporation began to get involved in the same types of matters as the Tavistock Institute, one of their principal studies being "Social Welfare." The serpent of Fascism began to raise its ugly head during the Bush administration. It's no coincidence that **some of the RAND participants were Daniel Ellsberg** (leaker of the Pentagon papers), **Henry Kissinger**, **Lewis "Scooter" Libby**, **Condoleezza Rice** (former intern at RAND 1991-1997), **James Schlesinger** (former Secretary of Defense and former Secretary of Energy), and **Donald Rumsfeld** (former Secretary of Defense, 1981-1986).

Today the RAND Corporation has 1,600 employees and five principal locations: Santa Monica, California (headquarters), Arlington Virginia, Pittsburgh Pennsylvania (adjacent to Carnegie Mellon University and the University of Pittsburgh); Cambridge, United Kingdom and Brussels, Belgium (RAND of Europe).

Now, let's go back slightly with our timeline in 1919—with funding from the Commonwealth Fund and the Rockefeller Foundation, Clifford Beers for the predecessor of the World Federation for Mental Health called The International Committee for Mental Hygiene (ICMH). Supporters of the time

were Clarence Hinks, M.D. of the Canadian Medical Association, Adolf Meyer, M.D. of Johns Hopkins Hospital and psychologist William James of Harvard. William James, John Dewey and other socialist visionaries again spread the philosophy of pragmatism, which denies biblical truth, sees truth as relative and tests its validity by its practical and measurable effects. Then in 1947, the final product, The World Federation for Mental Health (WFMH) was founded. ***All of the above-mentioned people were part of the Tavistock Institute.*** The first notable interface between the two was when Britain's John R. Rees, a pioneer in social psychiatry, found the Tavistock clinic and fostered the use of shock treatments in the British Army. Among the US participants were Brig. Gen. William Menninger, founder of the Menninger Foundation, and Surgeon General of the United States Army during World War II.

The UN has strong ties with Tavistock, RAND and the World Health Organization.

In 1948 the World Health Organization (WHO) was founded with Brock Chisholm as its first director general. Brock was very much disliked for his Marxist policies while believing that psychiatry was the only way to solve society's problems. He did not believe in God or religion and even attacked Sunday school for children. Born on May 18, 1896, George Brock Chisholm was a Canadian in the first world war. At age 18 he joined the Canadian Expeditionary Force serving the 15th Battalion, as the cook, Sniper, machine gunner, and Scout. He rose to the rank of captain and returned home in 1917. He earned his M.D. from the University of Toronto, and in 1924 interned in England where he specialized in psychiatry. He then attended Yale University where he specialized in the mental health of children. During this time **Brock developed a strong view that children should be raised in as intellectually free an environment as possible, independent of the prejudices and biases—political, moral, and religious—of their parents. He firmly believed that children should not believe in Santa Claus. His public perception as a lecturer was that he was "Canada's most famously articulated angry man"!**

By now I would hope that as we examine these various organizations and the personalities that funded, founded, organized, and directed were basically very insecure and paranoid individuals, and that the national, political, and societal situations of the time fostered their belief systems. Having gained power and

recognition through the war years, a foundation was set in place that definitely has great power, and is not needed in today's society.

The United Nations was founded as a successor to the League of Nations, which was widely considered to have been ineffective as an international governing body as it had been unable to prevent World War II. The term "United Nations" was first used by Winston Churchill and Franklin D. Roosevelt, in the 1942 declaration by the United Nations, which united the Allied countries of World War II under the Atlantic Charter, and soon became a term widely used to refer to them. Its first session was convened on January 10, 1946 in the Westminster Central Hall in London and included representatives of 51 nations. Currently there are 892 United Nations member states, excluding Vatican City, which has observer status. **Although appearing to solve world crises and conflicts, it has very strong ties with Tavistock, RAND, and the World Health Organization, among others. In recent years several members have been involved in various scandals, including one involving Kofi Annan.**

The Kaiser Wilhelm Institute for Psychiatry

Now our final jump back into history's timeline. In 1925 the Rockefeller Foundation funded the Kaiser Wilhelm Institute for Psychiatry in Munich, Germany. Additional funding came from the Harriman family, the Warburg family, and the British Crown!

Although the institute included luminaries such as Albert Einstein, Fritz Haber, and Werner Heisenberg, the psychiatric group was on a slightly different path of ethics.

Its director **Ernst Ruden** (April 19, 1874 - October 22, 1952), was the **ultimate geneticist**. Ernst was recognized as **the founding father of the National Socialist Ideology (NAZI)**, and his work was endorsed officially by the Nazi Party. He wrote the official commentary for the racial policy of Nazi Germany: **"Law for Prevention of Hereditary Disease Offspring" (a Nazi sterilization law enacted July 14, 1933 which allowed compulsory sterilization of any citizen who in the opinion of a "Genetic Health Court" who suffered from a list of genetic disorders);** and was awarded medals from the Nazis and Adolf Hitler, personally. This was a historic act of racial sterilization!

In 1933 Hitler came to power and delegated Ruden to direct the German Society for Racial Hygiene. **The German Society for Racial Hygiene** was an organization founded on June 22, 1905, by Alfred Ploetz in Berlin. **By 1933 the society had 1,300 members, many high in the Nazi party.** After the war its branches spread to Sweden, United Kingdom, United States and the Netherlands, which called for sterilization or death of people considered "racially impure." The Rockefeller Foundation then funded an anthropological survey which was eugenically corrected by Nazi eugenicists Ernst Rudin and others.

In the 1940s Otmar and his assistant Dr. Josef Mengele together wrote a report for special courts which enforced Ruden's racial purity law against illegal cohabitation of Aryans and non-Aryans.

The 1955 Mental Health Study Act passed by Congress actually changed the US government's primary duty to protect and promote personal liberty and property TO protecting and promoting the MENTAL HEALTH OF CITIZENS IN THE COMMUNITY AS A WHOLE!

In 1955 Congress passed the Mental Health Study Act. This led to the establishment of the Joint Commission on Mental Illness and Mental Health (CMHA). The CMHA provides grants to states for the establishment of local mental health centers under the overview of the National Institute of Mental Health. ***In effect, the act ratified the recasting of the very nature of the American government—changing its primary duty for protecting and promoting personal liberty and property, to protecting and promoting the mental health of citizens in the community as a whole.*** In the following chapters we will begin to examine exactly how "protecting and promoting" the mental health of citizens of the United States of America actually occurred and is occurring as you read this tome.

Chapter 9: The Beginnings of Evil Mind Control of the World Populace

"The Central Intelligence Agency owns everyone of any significance in the major media."—
William Colby, former CIA Director

Back in the day when I had my electronics company, in addition to having many clients that were R&D companies, manufacturers, aerospace firms, military facilities, defense contractors, government agencies (including CIA at Langley, FBI at Quantico, NSA at Fort Meade, and various Atomic Energy Commission sites), schools, colleges and chemical companies, I also called on hospitals and mental institutions. Some of them were very clean and comfortable to visit. Others were very dim, dirty and some of the institutions were quite depressing. As my duties in those days were to supply medical equipment, I had no idea of the experimental undercurrents that were taking place in some of them at that time.

The Tavistock Institute started full mind-control programs on a global level.

As I mentioned in the previous chapter, **Tavistock had laid the groundwork, starting at the turn of the century, for full-blown mind control programs not only on a localized level but as it's pretty obvious today, on a global level.** The plan laid out was very long-term, and therefore had a very low profile, and only when massive human rights violations occurred were there any preventive measures instituted to derail the evilness of full-blown mind control. Let's start with one of the main characters who was in and out of almost everything during this time.

William J. Donovan

William J. Donovan (January 1, 1883 - February 8, 1959) was an American soldier, lawyer and intelligence officer and best remembered as a war-time head of the Office of Strategic Services (OSS). He is also widely known as **the father of today's Central Intelligence Agency (CIA)**. Donovan was born in Buffalo, New York and attended St. Mary's Collegiate Institute at Niagara University before starring on the football team at Columbia University. As a member of the phi Kappa PSI Fraternity he graduated from Columbia in 1905. In 1912 Donovan formed and led a troupe of cavalry of the New York State

militia that in 1916 served on the US-Mexico border in the Panchio Villa campaign. In World War I he was awarded the Medal of Honor and three Purple Hearts.

After the war he was the US Attorney for the Western District of New York, famous for his energetic enforcement of Prohibition.

After World War I, Donovan traveled extensively in Europe and met with foreign leaders, including Adolf Hitler of Germany. Donovan openly believed that a second world war was inevitable. President Franklin D. Roosevelt put great trust in Donovan's ability to gather intelligence. Likewise, so did Winston Churchill.

In June 1941, Donovan received his most important assignment when Roosevelt named him Coordinator of Information (COI). America's foreign intelligence organizations at that time were fragmented and isolated from one another. Donovan forged ahead and laid the groundwork for a centralized intelligence program and in October, 1941 his headquarters were set up in New York in room 3603 of the Rockefeller Center. He then asked Allen Dulles (April 7, 1893 - January 29, 1969) to become the director of COI. Previously, the same offices were staffed by Britain's MI6 (Britain's overseas intelligence agency).

In 1882 the Office of NATO Intelligence was established. Later other intelligence agencies were created in the US such as the NSA and ACTION.

In 1942 the COI became the Office of Strategic Services (OSS) and Donovan was returned to active duty in his World War I rank as Colonel, and by the war's end would be promoted to Major General. During the war, the OSS conducted successful espionage and sabotage operations in Europe and parts of Asia.

The OSS was disbanded in 1945, and resurrected as the CIA on July 26, 1947. The first director of the CIA was Rear Admiral Roscoe Henry Hillenkoetter (May 1897 - June 18, 1982). ***It is interesting here to note that Adm. Hillenkoetter was a member of a civilian group—National Investigations Committee on Aerial Phenomena (NICAP)—and during***

his term at the CIA tried to expose the United States Air Force coverup of UFOs to the general public.

Donovan then lasted a few more years with his intelligence dream realized, and appointed Allan Dulles to become the next director of CIA from 1953 to 1961. After that, he worked with Telford Taylor, the chief prosecutor of the Nurenberg trials. Following that, he retired and went back to practicing law.

Other Intelligence Agencies Were Formed

As time went on, other intelligence agencies were formed, perhaps the most powerful today is the **Office of NATO Intelligence**, established in 1882. Several of its documents have been related to very powerful UFO cases. In addition, there are **the NSA (National Security Agency), ACTION**, and other clandestine intelligence groups.

At the end of World War II, German scientists and technical experts were being held in a variety of detainment camps by the Allies and Russians. The British, French, Americans and Russians became embroiled in a highly competitive recruiting effort to secure the services of the German specialists. Many could not qualify for immigration visas into the United States because they were war criminals who had actively served the Nazi cause. This led to secret programs called PAPERCLIP, PROJECT6, and NATIONAL INTEREST.

Through these programs over 1,000 German scientists and their families were secretly brought to the United States without State Department scrutiny or approval. These programs and related projects continued into the 1980s. Of course, one of the more famous people who came here on this program was my old boss, Werner von Braun.

Dr. Whitfred Overholser

The CIA created MK ULTRA projects to test out all kinds of mind control, and various drug interactions, then used it for the CIA to control people. The US taxpayers paid for these horrible experiments on unwitting victims.

Some of the greatest mind control experiments were conducted by **Dr. Kurt Plotner at Dachau** during World War II. He administered mescaline to

unwitting subjects by spiking prisoners' drinks. Concurrently in the United States similar experiments were being conducted involving mescaline, marijuana, barbiturates, and scopolamine at St. Elizabeth's Hospital in Washington D.C. by Dr. Whitfred Overholser. Overholser's experiments were conducted under the auspices of the OSS. A participant in the experiments, **OSS Officer George White**, later became the contractor on the CIA's MK ULTRA subprojects 3, 14, 42 and 149 which ran from 1953 to at least 1964. In all, they entailed or consisted of 149 subprojects, which many will be presently discussed. (*See the Appendix in the back of this book for information on the MK ULTRA projects.*)

149 MK ULTRA Subprojects of the CIA

As you can see, we are now going into a deeper level of **MK ULTRA**. To give you a little bit of cover-up history, *all MK ULTRA documents were destroyed on January 31, 1973 on instruction from CIA director Richard Helms*. Helms subsequently admitted having ordered their destruction. This hampered a complete understanding of many subprojects funded. However, the attempted destruction was only partly successful because *the cache of MK ULTRA documents was later discovered*.

In June 1977, a bundle of MK ULTRA documents was found. These had escaped destruction, apparently by mistake. **The Senate Select Committee On Intelligence held a hearing on August 3, 1977 to question CIA officials on the discovered records, many of which have since been made public. They told a compelling story about criminal medical acts that occurred with the acquiescence of universities, medical leadership and individual academics. From these documents and other government investigations, the names of the involved academics and universities are now known. Furthermore, as presented here much is known of the way in which contracting with universities occurred.**

Theodore Wegner-Jauregg worked at the Kaiser Wilhelm Institute in Germany before the war, and then worked with the **Edgewhere Arsenal** from 1948 to 1955 before returning to Europe. **The Edgewhere Arsenal was one of the key centers for the CIA and Army LSD mind control research during the 1950s and 60s.**

The Tuskegee Syphilis Study

It wasn't until 1964 that the World Health Organization (WHO) issued The Helsinki Declaration that required that subjects be informed and willingly give consent before medical experiments are done on them.

Public attention probably began with the discovery of **the Tuskegee syphilis study which began in 1932 and continued until it was discovered by a reporter in 1972.** It was a direct violation of the 1943 Henderson Act, an Alabama public health statute for mandatory **reporting of tuberculosis and venereal disease,** and in 1964 the World Health Organization (WHO) issued **The Helsinki Declaration,** in which research subjects must be given informed consent.

The experiment was conducted on 399 Afro-American men in the late stages of syphilis. Informed that they were being treated for "bad blood" the physicians had no intention of curing them. By the end of the experiment 28 of the men had died directly of syphilis, 100 were dead of related complications, 40 of their wives had been infected, and 19 of their children had been born with congenital syphilis.

People and organizations that knew about the Tuskegee study included the Surgeon General, the American Heart Association, the Macon County Medical Society, The Public Health Service, and the Center for Disease Control. The first recorded protest about Tuskegee was by a medical doctor, which did not occur until 1964, when Dr. Irwin J. Schatz, a staff member at the Henry Ford Hospital in Detroit, wrote to the first author of a 1964 paper on the study. Dr. Schatz' letter was referred to the Center for Disease Control, where it was filed, but not answered. A note by Dr. Anne R. Yobs, a co-author of the 1964 paper, was stapled to Dr. Schatz' letter. It read, "This is the first letter of this type we have received. I do not plan to answer this letter."

The men were given \$25 each, one dollar for each year of participation. In 1973, one of the subjects, Herman Shaw, testified at a hearing of the Subcommittee on Health, Committee on Labor and Public Welfare conducted in the United States Senate in 1973 by Sen. Edward Kennedy.

The Tuskegee Syphilis Study was eventually shut down in 1972 because of the efforts of Peter Buxtun, an investigative journalist.

Once the Tuskegee Syphilis Study was in the media, official medical reaction condemned it and it was shut down. On July 23, 1973 attorney Fred Gray filed a \$1.8 billion class action suit in United States District Court for the middle District of Alabama. **Defendants in the suit were the Department of Health Education and Welfare, US Public Health Service, The Center for Disease Control, the State of Alabama, the State Board of Health for Alabama and the Milbank Fund.**

December, 1974 the government agreed to an out-of-court settlement for \$10 million. Cash payments were made as follows: \$37,500 for every living subject; \$15,000 to the heirs of the deceased subjects; \$16,000 to living control subjects; and \$5,000 to the heirs of the deceased controls. In May, 1997 President Bill Clinton issued an official apology to the Tuskegee subjects and their families.

1 million US citizens in Kansas were intentionally given a cancer virus—but it was given to them as a vaccine for polio! Bill Clinton apologized for this.

While I was working for The National Health Federation, a group that lobbied continuously for the American public's freedom of health choices-i.e., the ability to purchase vitamins without a prescription, ***it was discovered that 1 million people in Alabama had been given a cancer virus, which was presented as a polio vaccine. President Bill Clinton had to apologize for that discovery when it was made public.***

Radiation Begins

Unethical radiation experiments were conducted on about 600 subjects in the United States ***beginning in the 1940s and running into the 1970s.*** These experiments overlapped chemical and biological weapons research and mind control experimentation.

As was true of mind control and biological weapons ***research, radiation experiments were conducted on children and unwitting civilians.*** President Clinton set up The Advisory Committee On Human Radiation Experiments, a committee to look into radiation experiments after they were described in the media in late 1993. The information had been made public in a Senate subcommittee report produced by Rep. Edward Markey of Massachusetts in 1986, but did not generate any public reaction at the time.

Remember, in creeping fascism when human rights, both spiritually and constitutionally are violated and no one complains, then the fascist activities continue until a civil complaint is registered.

An example of an unethical radiation research is the experiment done on Ebb Cade, a 53-year-old African-American man who was in a car accident on March 24, 1945. He was in treatment for fractures and other bone injuries at Oak Ridge Army Hospital when he was injected with 4.7 mcg of plutonium on April 10. Five days before his records were sent in, the experimental protocol was to sample his blood for four hours after injection, bone tissue 96 hours later, body excretions for 40 to 60 days, all to measure the plutonium levels. Bone samples were taken when his fractures were set, and also some teeth were extracted for analysis.

Data on Mr. Cade was presented at a "Conference on Plutonium" in Chicago in May, 1945 by Wright Langhan of the Los Alamos Laboratory's Health Division. Mr. Cade was given the Subject Number HP-12 which stood for "human product," a code also used in radiation experiments at the University of Rochester. Ebb Cade died as a result of heart failure on April 13, 1953 (8 years later) in Greensboro, North Carolina.

Radiation and biological experiments were done on humans without their consent—from the 1940s through the 1970s.

Many people were injected with plutonium, X-rayed and exposed to other forms of radiation without their informed consent. Elmer Allen and his wife Fredna, another Afro-American couple, were pleased in 1973 when doctors offered them a free trip to New York to study why he survived bone cancer for so long. (The Dallas Morning News, December 31, 1993 page 1A). As part of the trip they were picked up by limousine in Chicago and Mr. Allen was taken to the Argonne National Laboratory while his wife went sightseeing. Previous to this, 30 years earlier, doctors at the University of California and San Francisco, on July 14, 1947 had injected Mr. Allen with plutonium—four days before his leg was amputated for bone cancer. Mr. Allen and 17 other patients were injected with plutonium in an experiment run by the Manhattan Project.

Los Alamos Labs, site of the Manhattan Project, also conducted many other radiation experiments on the human populace. Clouds of

radioactive material were released into the atmosphere and tracked as they moved downwind often through populated areas. In one experiment code-named Green Run, radioactive iodine 131 was released from the Hanford nuclear facility in Richmond, Washington and drifted over Spokane. The cloud contained hundreds, perhaps thousands of times as much radiation that was released accidentally at Three Mile Island in 1979.

In 1961 researchers at Harvard Medical School, Massachusetts General Hospital and Boston University School of Medicine gave radioactive iodine to 70 retarded children at Wrentham State School. These institutions also received CIA mind control money through a program called MK ULTRA.

Other institutions that injected non-therapeutic radioactive materials into children included Johns Hopkins University, University of Minnesota and Massachusetts Institute of Technology (MIT). MIT gave radioactive substances to children at the Fernald School by putting it in their food. The Advisory Committee notes that no risks of radioactivity were mentioned in the consent form signed by the parents. The consent form stated that the purpose of the experiments was "helping to improve the nutrition of our children."

The radiation experiments were interwoven with research on chemical and biological weapons, and infectious diseases. As in radiation experiments, children were subjects of biological experiments. ***It is unknown how many mentally retarded children have been injected with viruses and bacteria in North America.*** Dr. Saul Krugman (1911-1995) was a medical researcher who discovered a vaccine against hepatitis B. However, his work was considered very unethical, since while working at New York University, he and his staff liberally injected severely mentally retarded children at Willowbrook State School with hepatitis virus in the 1950s and 60s. He claimed that his injections were immunoglobulins (gamma globulin proteins that are found in the blood and are used by the immune system to identify and neutralize foreign objects, such as bacteria and viruses) and would help the body's natural immune system recognize and combat hepatitis-type infections. The problem was the children and elderly that were injected were not informed as to the true nature of the experiment, therefore, they were nothing more than laboratory guinea pigs.

Dr. Krugman's research was funded by The Army Medical Research and Development Command under contract DA-49-193-M.D.-2331. It was also sponsored by the Commission of Viral Infections, Armed Forces Epidemiological Board, and Office of the Surgeon General.

Radiation is still a worldwide problem

Radiation continues to be a great problem worldwide; due to the thousands of nuclear tests conducted by the United States, in Russia, the Middle Eastern countries, England and France, a gradual buildup in the terrestrial water supply of radioactive water has become apparent. Radiation levels continue to rise on an annual basis—the most common symptoms of radiation poison for most people is breast cancer in women and prostate cancer in men, as mammary glands have a tendency to store the radiation. Along with this has been the threat of terrorist-launched dirty bombs. On a daily basis somewhere in the world small amounts of radioactive substances are stolen from labs, universities and businesses dealing with radioactive isotopes. If a terrorist were to micronize some of these materials and place them within an air-conditioning duct in a large hotel, in a matter of hours people would be overexposed to radiation. In some, the effects would be noticed within a few hours, but most would not notice anything from 3 to 5 days. After this, people would experience severe nausea and eventually death.

Knowing full well the dangers of fatal subtle radiation poisoning, a friend of mine, Shane Connor, developed a small matchbook size device called the **Nukalert**. When placed on your keychain it provides 24 hours a day, seven days a week, for 10 years, monitoring of the environment that you are in. The Nukalert sensor is based on a cadmium sulfide photocell that is exposed to light emitted by a radio luminescent rare earth phosphor. When X-ray or gamma radiation is detected within the active sensitivity range, the device chirps alerting the owner. To determine the actual radiation level, the owner refers to a table located on the back of the device with a chirp count. I have endorsed this product to all my clients and feel that everyone should have one.

Immediately after 9/11, Cheney's company K14U, sold thousands of them to the federal government who then distributed them to all their employees. Our own government is one of his best clients.

Mind Control

An actual US program called Project Stargate did mind control experiments on people until 1984.

Mind control experiments began during World War II and continue today. ***Paranormal experiments under Project Stargate continued until 1984, and Army doctors were actively involved in LSD testing until the 1970s.***

Subjects of LSD experiments included children as young as five years old, and brain electrodes were implanted in children as young as 11 years of age. **Four of the CIA's MK ULTRA subprojects were on children.** Occasionally, one of these clandestine experiments is discovered publicly and receives negative publicity. When this happens, the CIA has a term for it, "Blowback."

Project Bluebird and Artichoke created amnesia and actual hypnotic couriers.

Project Bluebird was approved by Roscoe Hillenkoetter, director of the CIA on April 20, 1950. In August, 1951 the project was renamed Artichoke. The Korean War began in 1950, and according to CIA career officer and foreign correspondent Edward Hunter, ***projects Bluebird and Artichoke included a great deal of work on creation of amnesia, hypnotic couriers, and the Manchurian Candidate.***

The Manchurian Candidate is generally regarded as fiction. However Artichoke documents prove that couriers functioned effectively in real-life simulations conducted by the CIA in the early 1950s. The degree to which such individuals were used in actual operation is still classified.

The basic premise of the book, *The Manchurian Candidate*, is that a group of American POWs in the Korean War are brainwashed while crossing through Manchuria to freedom. They arrive back in the US amnesic for the period of brainwashing and one of them has been **programmed to be an assassin.** His target is a candidate for the President of the United States. His handlers at home (a handler is one who directs a field agent or a program) control him with a hypnotically implanted trigger—a particular playing card.

In 1953, an Air Force psychiatrist described the Steps to create a controlled person !!

Robert J. Lifton, an Air Force psychiatrist who was later a researcher and teacher at the Washington School of Psychiatry, Harvard University, and the John Jay College of Criminal Justice, along with the late Dr. Louis Jolyon West, who once killed an elephant, Tusko, by dosing it with too much LSD, and was the Chief of Psychiatry Service at Lackland Air Force Base, where I once was stationed—*had some interesting comments about the Chinese Manchurian Candidate Program in 1953:*

- One:** A Manchurian Candidate is a deliberate creation.
- Two:** A new identity is implanted.
- Three:** Amnesia barriers are created.
- Four:** Subject is later used in some actual operations.

Both Bluebird and Artichoke were administered in a compartmented fashion. The details of the program were kept secret even from other personnel within the CIA. For security reasons, CIA operations including internal counter-intelligence investigations are routinely kept secret from other divisions of the CIA. Although effective intelligence work could not be carried out without *compartmentalization*, the structure *makes it easier for CIA officers in charge of mind control to contract unethical doctors.*

In most instances, senior administrators within the CIA participate in plausible denial and other disinformation and cover-up strategies concerning CIA operations conducted on US soil. Like the activities of the Artichoke Team within the United States, *such operations had to be sacred because the CIA was prohibited by its charter from carrying out operations in the United States. Most of the 149 subprojects of project MK ULTRA, were carried out on US soil.*

In 1952 **the CIA** began to survey mail between the US and Soviet Union at a New York postal facility. **In 1953 it began to open and read mail.** The program was approved by the director of the CIA and three Postmaster generals, Arthur Somerfield, Edward Day, and Will Blount, as well as the Atty. Gen. John Newton Mitchell (the first United States Atty. Gen. to ever be convicted of illegal activities and imprisoned, because of his Watergate involvement). From 1958 to 1973, the FBI received 57,000 pieces of mail from the CIA in this program. In the final year of the operation, out of 4,350,000 pieces of mail between the US and Soviet Union, the CIA examined the outside of 2,300,000 pieces, photographed 33,000, and opened the 8,700.

Similar mail intercept operations were run in San Francisco from 1969 to 1971, in Hawaii from 1954 to 1955, and New Orleans in 1957. Since 9/11, I have seen other operations similar to these—one was conducted through Phoenix, Arizona. Usually what happens during one of these clandestine mail operations is that it takes an unusually long time for the mail to arrive or leave the area under mail surveillance.

The Bluebird and Artichoke Documents, although available through the Freedom of Information Act, are heavily redacted. A great deal of text has been whited out, and other documents must still be classified. A Memo to the Director of Security of the CIA entitled "Report of Artichoke Operations, 22 to 23 of January, 1955; states that "these operations were the first Artichoke operations undertaken in the United States."

The Artichoke Interrogation—how they put false memories and hypnotic triggers into people's brains using drugs and brainwashing.

The Artichoke interrogation was conducted in a safe house in the remote countryside staffed by security cleared personnel. It was conducted under medical cover for a routine physical and psychological assignment. The subject was transported to the safe house in a "covert car" which picked him up in a secure location. At the safehouse he was given a conventional interrogation and then some whiskey. This was followed by 2 grams of phenobarbital, which put him to sleep.

The next day a lie detector test was administered and the subject was given intravevous chemicals. Following the chemically assisted interrogation, according to CIA terminology, the "Artichoke" techniques were applied in three stages:

One—a false memory was introduced into the subject line without his conscious control of the process, which took 15 to 20 minutes.

Two—the procedure was repeated, this time taking 40 to 45 minutes.

Three—the procedure was repeated again with their interrogation added.

The Artichoke team used medications including barbiturates amphetamines and scopolamine, hypnosis, interrogation, and the deliberate introduction of

false memories of the procedure. The subject was told that the part he remembered was actually a dream. The Artichoke team concluded the procedure was successful; "the subject, although not having a specific amnesia for the Artichoke treatment, nevertheless was completely confused and memory was vague and faulty."

The Russian Nosenko's torture interrogation was done with mind control for 1 YEAR AND 4 MONTHS (located at the CIA's TRAINING CAMP)!

The interrogation involving Artichoke techniques and positions was conducted on Russian defector Yuri Nosenko (October 30, 1927 - August 23 2008), when his claims contradicted another defector, Anatoli Goitsyn. Some of the information was in reference to the KGB's involvement in the surveillance of Lee Harvey Oswald. The basic information stated that Oswald was "too mentally unstable; "a nut," and therefore, unstable for intelligence work in the KGB.

James Jesus Angleton (December 9, 1917 - May 12, 1987) known to his colleagues as Jim and nicknamed "the Kingfisher" was a long-serving Chief of the CIA's counterintelligence group. Angleton was known as the foremost "spy catcher" with a creative genius for scenario building, espionage, detection and false flag operations, and even today his actions remain uneclipsed. Even the KGB used some of his teachings for their own agents. However, he was considered partially insane and definitely delivered a huge amount of paranoia to the thought character of the CIA.

Angleton suspected Nosenko of being a triple agent. A triple agent is someone who pretends to be a defector or double agent who is actually working for his original native country.

Nosenko was born in Nikolayev, Ukraine in 1927. He was trained by Russian Naval Intelligence before being transferred to MVD (Ministry of Internal Affairs), the precursor of the KGB in 1953. On June 5, 1962 Nosenko made secret contact with a US State Department official in Geneva, a meeting that resulted in his being recruited by the CIA as a mole. Nosenko provided a rich fund of intelligence information to the CIA until he defected in February, 1964.

Angleton, the Kingfisher; thought that Nosenko had been feeding the CIA a little bit of real information in order to cover up the fact he was a triple agent. In late March, 1964 a decision was made to apply Artichoke-like techniques to him.

Nosenko was strip-searched, given a lie detector test and then placed into solitary confinement in a tiny 10' × 10' cell in a safehouse in Washington for 16 months. One of his interrogators was Dr. John Gittenger. Dr. Gittenger worked for Dr. Sidney Gottlieb who had a reputation for operating safe houses in New York and San Francisco, where prostitutes, street people, and other unsuspecting civilians were given LSD and other mind-altering chemicals and observed. The San Francisco operation, in which the CIA prostitutes dosed their Johns was known as Operation Midnight Climax (CIA subproject 14, 16, 42, 132 run by contractor Col. George White, a federal narcotics agent). From April 4, 1964 to August 13, 1965, Nosenko was held at one of the safe houses and subjected to repeated interrogations.

From August 14, 1965 to October 28, 1967 Nosenko was held in solitary confinement in a tiny, windowless concrete cell at the CIA's training camp at Camp Perry, Virginia. He was subjected to sleep and food deprivation; there was neither heat nor air-conditioning in his cell, and he was monitored by closed-circuit television 24 hours a day.

In an interview with Tom Mangold (a very famous British journalist—www.tommangold.com) on June 12, 1990, John Gittenger described as being asked by CIA personnel to administer LSD to Nosenko. Gittenger claimed he did not do so. Nosenko, however, described being drugged on a number of occasions at Camp Perry. After administrative changes inside the CIA, Nosenko was released from confinement in 1967 and later became a US citizen. He was held in confinement for a total of 1,277 days before the CIA became convinced that he was, in fact, innocent of all suspicions.

Torture of this form has been going on since the history of government. Although being popularized more recently in Hitler's time, continuing on into the Cold War, it is very much alive and even more clandestine, with many more advanced procedures today.

Project MK ULTRA

In the MK ULTRA projects subjects were given electroshock stimulation of their brain lobes with LSD—to figure out how to control people.

Project MK ULTRA was created by the CIA on April 3, 1953. Along with electroshock stimulation of the occipital and parietal lobes of the brain, LSD became the drug of choice at that time. MK ULTRA Subproject 18, Under Top-Secret Clearance, was for the appropriation of \$400,000 given to **Eli Lilly** for the procurement and manufacturing of LSD due to the fact that the Russians had purchased all of the LSD manufactured by the Swiss manufacturer Sandoz.

The first suicide attributable to LSD was the death of Frank Olson, the acid having been administered without consent by the notorious Dr. Sidney Gottlieb and director of MK ULTRA. Olson was a Fort Dietrich biological warfare expert, and the LSD was hidden in Cointreau liquor by Dr. Gottlieb! Olson committed suicide by jumping out of the tenth floor window of a hotel room on November 28, 1953. He was being babysitted by the notorious biochemist Dr. Stanley Lovell, who fell asleep in his chair while Olson was tripping. Lovell was Dr. Gottlieb's director of the OSS's "dirty tricks" Research and Development section. Olson's family determined that he committed suicide subsequent to a bad LSD trip only after reading Nelson Rockefeller's 1975 report on the CIA, published 22 years after Olson's death. They were given \$750,000 in compensation by Congress.

Merck Pharmaceuticals is today involved in secret operations against the American public.

Also occurring at that time at Fort Dietrich was **biological warfare research.** ***One of the key personnel who worked there for the CIA was George Merck. George was one of the members of the founding family of Merck Pharmaceuticals—even to this day who are involved in clandestine operations against the American public.*** One of the more recent ones is ***an admission by Dr. Maurice Gillman, who recently disclosed why Merck's vaccines have spread AIDS, leukemia and other horrific plagues worldwide.*** All part of the depopulation policies. For more information on this go to www.liveleak.com

The 1961 MK ULTRA Subproject created multiple personalities in children—ON PURPOSE!

George Merck is identified in the Biological Testing involving the Department Of Defense, in a hearing before the Subcommittee on Health and Scientific Research, United States Senate 95th Congress, first session, March 8 - May 23, 1977 as having been a consultant on biological warfare to the Secretary of Defense during the second World War. **Merck & Co.** is listed as having two contracts from Fort Dietrich, one running from May 1955 to December 1956 and the other from April, 1962 to June, 1961.

The actual *Manchurian Candidate* work was done under MK ULTRA Subproject 136, which was approved for funding on August 23, 1961. ***The deliberate creation of the multiple personality in children was an explicitly stated plan in the MK ULTRA Subproject proposal submitted for funding on May 30, 1961.*** The Top-Secret clearance status for the Principal Investigator of Subproject 136 had been initiated by the Technical Services Division of the CIA at the time the subproject was approved. The now **infamous case of Cathy O'Brien** was one of the prime examples of a child who was part of this program and later became a sex slave to foreign diplomats. This case was also discussed in the 1977 95th Congress investigation.

A brief story of a functioning Manchurian Candidate—Candy Jones

I mention this case, as it is well documented since Candy Jones was married to Long John Nebel who was one generation before Art Bell, and who I occasionally was a guest on his very famous New York talk show, "the Long John Nebel Show." This was a very fun show. As UFOs were one of Long John's favorite topics, and I being a well-known contactee, meant that he was no stranger to my world at the time. George Van Tassel, another very famous contactee (George and I were very close and I attended his UFO conferences at Giant Rock in California), was also a frequent guest. His co-host at the time that I was interviewed on station WMCA was none other than Candy Jones!

On December 31, 1972 in the lavish apartment suite of the New York lawyer friend, Long John Nebel (born John Zimmerman June 11, 1911 - April 10, 1978)—called "Long John" because he was 6'4"—married Candy Jones, then 47 years old, after a 28-day lightning courtship! As a result, he did not know her that well other than her fame as a model and actress.

The CIA chose a person who had been abused as a child to become their "Manchurian Candidate"

Previous to that, Candy was voted the Model of the Year in 1943 by a panel of judges that included Loretta Young. Also, during that year she completed an eight-month show on Broadway ("Mexican Hayride" produced by Mike Todd), and then launched her musical career at a military base in the United States. Partly to escape from her mother, in 1944 she left for the South West Pacific to do a USO tour as a troop entertainer. She, along with Betty Grable were the leading US troop entertainers in World War II. In 1943 alone she had graced the covers of 11 major national magazines in a single month. During the Pacific campaign in World War II, photos of Cathy in a white polka dot bathing suit adorned the interiors of ships, tanks and foxholes.

The actual Manchurian Candidate who MK ULTRA created

Cathy Jones was born Jessica Wilcox in Wilkes-Barre, Pennsylvania on December 31, 1925. Her mother separated from her father when Candy was three years old. She was raised by her mother and grandmother, who she called "Ma Ma." Her family was fairly well off, and her grandmother was a retired osteopathic physician who had a bedroom in Candy's large house. Her mother separated from her father when Candy was three years old. During a visit by her father, when she was four, she was abused physiologically and physically. This involved threats and manipulation by her father, and his squeezing her fingers hard enough in a nutcracker to cause bruising. The father's rationale for the abuse was to demonstrate that he could make her cry. This was done in retaliation for her not crying at the end of his visitations. Other methods of physical abuse included beating with a leather riding crop and being locked by herself in a small third floor bedroom at night with no light bulbs or lighting fixtures. In addition, her mother would beat her on the legs so that she had to wear thick stockings to conceal the welts. She was not allowed to associate with other children.

During the school term, Jessica had to go directly home from school, then do all her homework. She had to dress formally for dinner, which was served at 5:00 PM and was in bed every night by 6 PM. At age 11 her bedtime was extended to 7 PM. She was very close to her grandmother, "Ma Ma" who also died when she was 11. And they loved to play in her grandmother's room, dress up in her clothes and sit in front of her big dressing table. The dressing

table had pull-out mirrors that surrounded her on three sides, displaying seven images of little Jessica. These different images probably inspired her to create her imaginary friends. During the winter months of her childhood, her only outside playmate she saw only occasionally, was the daughter of the family's laundress.

In order to cope with this combination of abuse and neglect, Jessica Wilcox developed imaginary friends in childhood to keep her company from the lonely isolation of her home. These included Arlene, Dotty, Pansy, Willie, and an identity named Doll. She would see them in her grandmother's mirror and they would come to tea. Arlene was the strongest created identity in the group, therefore, she was the one that was easiest to summon under hypnosis by the manipulators who would come into her later life.

In late 1936, Jessica's mother moved to Atlantic City and by 1941 she had grown tall and beautiful, a towering six-foot four-inches, and at the age of 16 won the Miss Atlantic City contest. Her mother's reaction to her triumph was critical and condescending.

Tall 6'4" model becomes a real Manchurian Candidate

One of the judges of the Miss Atlantic City contest was John Robert Powers. He owned a famous modeling and acting school and talent agency in New York. Some of his graduates included Lucille Ball, Grace Kelly, Jacqueline Kennedy Onassis, Candace Bergen, Raquel Welch, Ava Gardner, Cary Grant, Lee Remick, Ann-Margret, Henry Fonda And Tyrone Power, which meant that Candy was starting her professional career at the top of her game.

After the contest, she went up to New York but instead of signing with John Robert Powers, she ended up at the offices of Power's Biggest rival, Harry Conover and 52 Vanderbilt Avenue. After a brief wait she was introduced to Conover, who immediately gave her the name Candy Johnson Conover launched her career. She began modeling and traveling. While she was traveling in the Philippines she contracted malaria and brucellosis, the latter from unpasteurized milk flown in from Australia. She was hospitalized in Leyte, Philippines and there she met a young military medical doctor psychiatrist named Gilbert Jensen.

On July 4, 1946 Candy Jones and Harry Conover were married in a ceremony attended by 2,000 guests. After being married 12 years and having three sons, Candy found out that Harry was bisexual. The marriage ended in divorce in 1959. Previous to that in 1958 Harry disappeared with \$125,000 in Candy's modeling fees, none of which Candy ever saw again. Eventually he spent two years in prison for theft and non-payment of alimony. These events were headline news in New York.

After Harry was gone, she continued to run her modeling school (she had started her own modeling school right next door to Harry's, because other models working for the Harry Conover Modeling Agency were complaining of favoritism) out of 52 Vanderbilt, spending most of her time in room 808, across the hall of the offices rented by former heavyweight boxing champion, Gene Joseph Tunney (May 25, 1897 - November 7, 1978 who defeated famous Jack Dempsey twice). Tunney was a handsome ex-Marine prizefighter before he became World Heavyweight boxing champion. In addition, she also began appearing regularly on NBC's weekend radio news program Monitor.

One night when Candy was working late about 7:30 PM, she observed a middle-aged woman trying a series of keys on Tunney's door. This was unusual because the cleaning woman used a single master key. The woman entered the suite, did not turn on the light, and used a flashlight around in the office. The next day she learned that the office had been burglarized. Gene Tunney told her that nothing important was stolen. Two nights later a young couple began trying different keys in Tunney's door. Candy approached them, spoke to them briefly, then they left.

A week later, Candy met the retired Army General William J. Donovan, former OSS director, with whom she was acquainted from her old USO days, in front of her office building. As they rode up the elevator together, the general mentioned that he was visiting Gene Tunney. Candy, the general, and Tunney talked briefly before she went on with her afternoon's business.

A few days later an FBI agent appeared in Candy Jones's office and presented his ID and asked her about the burglary across the hall. Then he asked her about a microphone she had purchased from Alan Funt, who was doing a radio version of what would become known as "Candid Camera," on television, and then he asked to borrow it for a long-term surveillance assignment on West 157th Street. His reason for this request was that this was a better microphone than those supplied by the FBI.

A month later, the agent returned with a second agent and the microphone, but to propose to Candy that she would allow mail for them to be delivered at her office. Again, she agreed. The arrangement was that the mail addressed to fictitious names at Candy's agency would be received and held for pickup by the agent. As well, there might be mail from your address to Candy or a specific man's name. In response, he was supposed to phone a number and report its arrival.

Two weeks later, Gene Tunney moved out of the suite across the hall. The Army general maintained contact with Candy throughout the year and she used her office as a mail drop for whatever agency was employing her. Late in the summer of 1960, Kennedy received a letter from the FBI saying that she would expect a call within a few days. This turned out to be from the Army general. He asked her to deliver a letter to a man who would be her contact at St. Francis Hotel in San Francisco during the trip she had scheduled there. The contact was Dr. Gilbert Jensen (possibly a fictitious name) whom she had met earlier in the hospital in the Philippines.

Being a controlled agent for the CIA could land you \$50,000 a week—back in 1960

On November 16, 1960, Candy Jones and Gilbert Jensen had dinner, at the Mark Hopkins Hotel (one of my favorite spots often called Top of the Mark) in San Francisco. Dr. Jensen said that he now works for the CIA and had an office in Oakland across from the Bay Bridge. He asked Candy if she wanted to get deeper into the covert intelligence business, reminding her that it would prove lucrative as the CIA pays very well there. Today, for example, an agent can easily receive \$50,000 for a week's work. As Candy had three sons in private schools, extra cash or income for a little work on trips that she had already scheduled anyway should be just fine. Of course, there would be just trips for the CIA under her Arlene Grant name. Her first visit to Dr. Jensen's office in Oakland was in November 1960, and the next two were in late 1960 and early 1961. On her second visit she was introduced to "Dr. Marshall Berger" apparently Dr. Jensen's handler or superior officer. It was later found out that his real name was Dr. William S. Kroger (1906-1995), who was one of the most famous medical doctor hypnotists in the world and was well known to teach hypnosis to the government). He presented her with large sums of cash, which is also not uncommon for CIA recruiters.

The CIA suppressed one of my workshops in the early 1970s.

I have seen this pattern before where a person is spotted as a potential for government undercover work. Usually they are vetted before the second phase takes place. In Candy's situation she was a very high profile, and while in the Philippines, Dr. Jensen had probably suggested to one of the agencies to consider her for some form of undercover work. As this scenario was unfolding, it's a familiar pattern to one who has been down this path before. To the unsuspecting it would appear to consist of a lot of spontaneity or possible intrigue. Even today high profile movie producers and celebrities are often vetted by one of the governmental intelligence agencies, when their work crosses into the filling of their intelligence needs. One example of this was a program that I was part of called **"Project Awareness."** This was a **mid-70s governmental attempt to release classified information to the general public** via lectures and workshops, films and other forms utilized in the entertainment industry. The idea of this program was to prepare the American public for the eventual emergence of extraterrestrial cohabitation of this planet without causing hostile public outcry ("blowback") when the public finds out that they were lied to for so many years by their trusted servants. I became personally aware of this program when the CIA suppressed one of my very large workshops to be held in Dallas, Texas in the early 1970s. Strangely enough when I look back at this, it was during the time that I was communicating with Long John Nebel in New York.

Dr. Jensen asked in detail about Candy's group of childhood imaginary friends, and asked her to choose one of the fictitious names for her CIA passport. He recruited her for the CIA as a courier prior to starting mind control. He had her choose a last name for her fake passport, which she did using grandmother Ma Ma's married name Rosengrant. This is how Arlene Grant acquired her last name. Dr. Jensen explained that she would do courier assignments in the United States, in conjunction with her business trips. She would switch to Arlene Grant for occasional overseas trips that were not linked to her personal business travel.

When working as a courier or agent, and being a legitimate professional who travels worldwide, this is the perfect cover for being an intelligence agent. Dual identity is usually established so that when the person is not traveling for their profession, it leaves little suspicion on unannounced trips.

Dr. Jensen also asked Kennedy about Arlene's appearance in the mirror, when she had seen Arlene during childhood. He then provided Candy with a brunette Arlene Grant wig to match the description. He had a photographer come to her hotel room to take the Arlene Grant passport photograph. And he kept a copy of this photo, which appears in her biography "The control of Candy Jones" written by Donald Bain. This book was suppressed by the CIA when it first appeared. In the biography, there is a signed statement from lawyer William J. Williams, dated February 27, 1976, confirming that in the early 1960s, Candy had given him an envelope to open in the event of her dying or disappearing under unusual circumstances, particularly, if she died under a different name. She specified the name Arlene Grant in the letter.

While Dr. Jensen had Candy under hypnosis, he began to develop Arlene into a major personality accessible by posthypnotic suggestion or sounds. In addition, he used drugs such as sodium amytal, Thorazine and sexual abuse. As Dr. Jensen succeeded in bringing forth Arlene, Arlene was then able to control Candy and Dr. Jensen controlled Arlene easily! With this accomplished he was able to send Candy (with Arlene's much deeper voice and manner) on various experimental missions both in the US and abroad. Candy would change into Arlene in appearance too, wearing a wig, and a different makeup character. His aim was to create a perfect messenger, who would not reveal even under torture, anything about the message she carried, where she came from, or who sent her.

The CIA could even order Candy to kill herself if that became necessary!

The operation was vast and highly organized, Arlene the zombie, visited training camps, military bases and secret medical facilities all over America. She was trained in covert action, explosives close combat, disguise and communications. Jensen took her to several military installations and demonstrated her abilities as Arlene and even bragged that he could order her to kill herself if that became necessary. When Candy was herself as Candy, she would not remember anything that Arlene had done or any of the places that she had traveled to. Candy maintain a box number 1294 at Grand Central Station from August 1961 to 1969, which is for CIA mail and to receive messages from Jensen.

On her first overseas trip to Taiwan, Candy was switched to Arlene Grant at Dr. Jensen's office using intravenous drugs. He told her that a Chinese businessman would recognize her (who wouldn't? she was 6'4" tall) and she should hand him her courier envelope. She was then escorted to a large mansion on big grounds about 20 miles outside of Taipei. At the house, she observed two young Chinese women in white lab coats, but they were said by the businessman to be domestic workers. She slept late, ate well, and returned to San Francisco well rested after a three-day stay.

On the second trip, the Chinese businessman and his associates used a variety of physical torture techniques to attempt to extract information from Arlene. She had no information to give them beyond what was in the envelopes she had given them. While strapped in a chair she was given electric shocks to her wrist, shoulders and fingers. Following the torture, the torture became very friendly and they explained the purpose of the shocks was to help jog her memory in a scientific way. On her return to San Francisco, Dr. Jensen gave her another injection and explained that the torture was a mistake. He said it was due to a typographical error.

In the third trip, again she went to the same house, and was offered a drink, by a Chinese-looking man who spoke very fluent English. The drink was drugged, and it knocked her out for at least two days, during which she vaguely remembers being interrogated viciously. When she returned to San Francisco after this incident she went immediately to see Gilbert Jensen and told him about the incident. He seemed very concerned and wanted to see her arms, but she refused to show them to him. After that trip she pretty much did not want to be involved in this kind of work any more.

The CIA was going to kill Candy on the day she was getting married.

During the wedding reception, on December 31, 1972, Long John Nebel noticed a curious change come over his normally warm and charming wife, Candy. Her voice changed to that of another woman entirely, and later that evening while they were at a Chinese restaurant (named Ho Ho) having dinner, Nebel noticed the transformation again—as if she were uncomfortable with the Chinese decor, wall mirrors and candles. Even later while preparing for bed, **Candy began speaking in the Arlene voice**, had a completely different attitude and was very harsh. When Nebel asked her about it later he was astonished—she hadn't noticed the emergence of another voice or personality.

Another switch to Arlene occurred on January 1, 1973 a few days later. As Arlene, Candy became inexplicably angry. She then reverted back to her usual warm pleasant manner. The switching back and forth caused much marital conflict. Candy could not remember or account for her changing behavior, and Long John could not understand the inconsistency.

On June 3, 1973 John Neville suggested to Candy that he should try to treat her chronic insomnia with hypnosis. He was not qualified as a hypnotist or psychotherapist. His efforts were successful, though, with a large reduction in Candy's sleeplessness. During one of the hypnosis sessions, Candy spontaneously regressed to childhood, a common occurrence during hypnosis, and relived events from childhood. During subsequent sessions under hypnosis, Candy spoke from a persona identified as Doll, while she regressed back to age 11. Such age regression can occur in good hypnotic subjects who do not have a dissociative disorder, and is not by itself evidence of a multiple personality disorder.

During the hypnotic work, Nebel was gradually introduced to the various personalities of Candy's imaginary childhood friends. When Candy described visiting Dr. Jensen in California as part of her CIA work, Neville took little interest in this at first. He was not looking for or expecting anything like the mind control story that would unfold. He had been told by Candy previously about her FBI involvement, but nothing was ever mentioned about the CIA. On a later date in June, Arlene spontaneously took executive control during hypnosis, and spoke to Neville for a lengthy period of time. Once Nebel had met Arlene, and knew her by name, the story of her mind control came to the surface.

Long John Nebel now sought consultation with Dr. Herbert Spiegel, who confirmed that Candy was highly hypnotizable. Further during the hypnotic work was discovered that Dr. Jensen had planned for Arlene to have gone to the Paradise Beach Hotel in the Bahamas and jump off a cliff there. The trip was canceled because of her wedding on December 31, 1972, the day this was planned. It's my personal feeling that because the suicide date was probably a posthypnotic trance suggestion, and coincidentally occurred on the wedding day, it caused the confusion factor in Candy's mind that for the first time in front of Long John Nebel she began to split into two people.

The CIA's final attempt to use her was recorded on John Nebel's answering machine on July 3, 1973; "as a Japan Airlines calling on oh-three July at 4:10 PM. Please have Ms. Grant call 759-9100 she is holding a reservation on Japan Airline flight five, for the sixth day of July, Kennedy to Tokyo, with option on to Taipei. This is for Cynthia that we are calling." When Candy Jones called the telephone number and asked for Cynthia, she was told that no one of that name worked at the reservations desk. Donald Bain, the author, speculated that "Cynthia" might have been "Arlene's" CIA contact, or perhaps a "code word" that could trigger it, not a suggestion.

Larry King took over Long John Nebel's TV spot.

Long John Nebel died of prostate cancer on April 10, 1978. His timeslot on The Mutual Broadcasting System was taken over by Larry King. Having known him, I felt his passing was a great loss. I absolutely adored his radio character and he was an absolute blast to be on the air with, and I suppose today with my radio show I picked up a lot of his habits and use them when I'm on the air. Candy died on January 18, 1990.

Project Often

Soldiers and prisoners can easily be forced to comply without their consent.

Another CIA program divided into two subcomponents was begun at Edgewood Arsenal in 1967. Testing on human subjects continued until at least 1973. Project Often was designed to test the behavioral effects of drugs on animals and humans, while another co-program Chickwit was created to gather intelligence on a new drug development in Europe and the Orient. One of the drugs tested in project Often was a hallucinogen called EA 6167. It caused psychosis with subsequent amnesia lasting 3 to 4 days. Under Project Often compounds were developed that could simulate a heart attack or stroke in a targeted individual. ***Subjects in Often were soldiers and prisoners, two groups that could be compelled to participate without true informed consent being given.***

Bacteria, Fungi & Viruses Released on General Population Areas

Biological warfare (BW) and chemical warfare (CW) research were run out of Edgewood Arsenal, and would also involve testing in many other locations,

including Dugway proving ground, Utah. As in the radiation experiments described earlier, BW/CW research involved releasing bacteria, fungi and viruses in the general population areas. The bacterium *Serratia marcescens* was released into many locations including New York (June 7-10, 1966), San Francisco (September, 1950), and Pennsylvania State Hwy. 16 westward for 1 mile from benchmark #193 (January 7, 1955).

I know for a fact then as I traveled around the country in the 70s, 80s and 90s, that there were many other viruses released on unsuspecting communities ***One was a flesh-eating virus that affected children in remote school districts, none of which were close to one another.*** Other countries were not immune to these deadly intrusions. In Zaire, South Africa Ebola (named after a river in Zaire), first broke out in 1976. Ebola is a hemorrhagic fever (a virus found in five categories of RNA: the Arenaviridae, Filoviridae, Bunyaviridae, Togaviridae, and Flaviviridae) which thins the blood, causing high fever, severe headache and death within seven days.

People died too fast from the Ebola virus so it was not a good thing to use to spread around to a lot of people for population control.

Unofficially the first outbreak of Ebola occurred at the Yambuku Mission Hospital which was run by a group of Belgian monks. Their main facility consisted of an outdoor tent-like hospital. One morning in early August, three individuals showed up with fever-like symptoms. As in most small communities everyone knows everyone else. These were treated for what they thought was malaria, with an injection of chloroquine (trade name quinine), but other symptoms, severe headache, bleeding from the eyes, severe temperature and finally death occurred within a few days. Before an investigative study could be made, these three individuals disappeared. Officially on September 1, 1976 four days after returning from a tour of northern Zaire, the index case was a 44-year-old male teacher at the Mission school, who was treated likewise for suspected malaria and later died. In my study of this incident, ***my conclusion was this was a TAVISTOCK PLAN orchestrated through different covert agencies.*** Furthermore, although the Ebola virus proved to be a great killer or population control, people died so fast that it was almost impossible to spread it over a large area. So the idea was abandoned and today almost forgotten and likewise no more cases are appearing, as one would expect on a failed chemical warfare project.

ESP Research under Project Stargate

Another incident that occurred on my watch under Project Stargate was ESP research. In the early 1970s I was one of the pioneers of medical studies of body disturbances—physical, mental and psychic—using **Kirlian photography**. In my book *Death of Ignorance* (published early 1979) I described in great detail the electrical connection of the body, mind and spirit. During this time I crossed paths with Dr. Thelma Moss (January 6, 1918 - February 1, 1997) at the University of Southern California (UCLA).

Project Stargate was about paranormal research, using LSD and Ritalin, and a downer that calms the effects of LSD and Speed.

Dr. Lewis Jolyon West (mentioned earlier) was appointed head of the department director of Neuropsychiatry Institute at UCLA in 1969. Working for him was Dr. Thelma Moss on a project funded by the CIA in paranormal research through "Stargate" and MK ULTRA. Moss was then an assistant professor of the Neuropsychiatric Institute beginning in 1966; her curriculum vitae lists 43 publications from 1961 to 1973, many of which are about **ESP paranormal**. One of the papers that she co-wrote was entitled "dimensions of the LSD, Methylphenidate (Ritalin—a form of Speed causing heart problems as a side effect by increasing plasma concentrations), and Chlordiazepoxide (Librium, a downer and earlier form of Valium that is often given to patients to calm them as the effects of LSD or Speed are wearing off), Side effect is acute accumulation over time in the liver. Detoxing on Librium or Valium sometimes causes death experiences."

Dr. Moss consulted to NASA, the RAND Corporation (Contractor on MK ULTRA Subproject 79), ARPA (the Defense Department's advanced research projects agency) and the CIA on radiation photography, known as kirlian photography, which I was bringing forth to the scientific community and the general public at the time. *I am sure that you can see the tentacles of Tavistock as they spread through these agencies.*

Brain Electrode Implantation

Most of us are familiar with some form of brain implant. ***Starting in the 50s,*** it was common to use brain implanted electrodes that were hardwired to a control box. In the 1960s, the field progressed to remote control or wireless boxes. In the 1970s, 1980s and early 1990s, due to reverse engineering of

Reticular technologies and other forms of alien sciences, a new method was found. It consisted of a form of remote hypnosis, shock, hallucinogens and an alien type abduction, wherein the victim is transported into a spaceship, strapped to a table, and either injected or beamed some form of implant. The method used for this type of procedure was similar to one used in the masking techniques of the semiconductor industry.

A photographic image of a complete circuit is burned by a laser type device into a substrate that is capable of conducting electrons through various circuit-like junctions. The power source for the completed product is usually a plus and minus five-volt power supply. In the case of humans, a projection is beamed into the brain or some other body part. The proteins and minerals of the body become the circuit material and the central nervous system becomes the electrical supply. By the mid 80s, radiology labs all over the world are trying to figure out what these foreign objects were found in many human beings. Morgellons disease is a messy, tell-tale by-product of these implants being broken apart by the body's immune system. Today implants are now obsolete because of harder to detect, advanced satellite technology.

In 1956 the CIA spent \$138,936.74 to find out the effects of stress on the brain, using brain implants (with your tax money!).

Dr. Harold G. Wolf (1898-1962) was a Professor of Medicine at Cornell University and a Director of the CIA cutout, The Human Ecology Foundation, and the Investigator on ***MK ULTRA subproject 61, in 1956 project entitled "Studies of the effects of stress on the brain," and funded for the amount of \$138,961.74.***

In one of the MK ULTRA Subproject 61 documents, Dr. Wolf defines the historical context for the CIA's interest in mind control in general, which is almost the context of motive for Military Funding of Brain Electrode Implant Experiments.

"The investigations of the highest integrative functions are fundamentally aimed at increasing our understanding of the functions of the human cerebral hemispheres of overall adaptive behavior. They arose out of our laboratory and clinical experience during the past 20 years and especially of our interest in the phenomena exhibited by men exposed to extremely threatening life

situations; and they were initiated during the period when we were investigating the untoward effects of communist police procedures."

In 1959 the CIA did successful inhumane remote-control experiments on animals!

MK ULTRA subproject 94, (1959), a Top-Secret project granted to Bio-Research Inc. (currently located at 55 Rome St., Farmingdale, NY, tel 631-249-8400), and Panoramic Research Inc., 24621 Wyandotte Street, Mountain View, California tel 650-694-7717) in the amount of \$57,431.82 **was for brain stimulation studies—remote control of animal behavior.** An earlier Top Secret project was given to Biotech Research Inc. in 1959 entitled, **"Drug studies on Animal Models for drugs useful to the CIA"** based on results of subprojects 22, 44, 45, 46, 51, 53, 58, 62, and 70 in the amount of \$71,760. As I said earlier, these CIA covert companies are operating secretly in plain sight. If you go on the internet you will see very little about what they do.

A CIA memorandum describes **another Top-Secret subproject 142 (1962 funded at \$7500) as using animals for delivery of biological and chemical weapons, and control of animals through stimulation of brain electrodes.** A memorandum for subproject 142 dated May 22, 1962 states:

"the reason for separating this work financially from the other efforts of (whited out) in the agency's behalf is to allow him (name still classified) to engage in some practical experiments at some point in the work which would present security problems if this effort were handled in the usual way. Some of the uses proposed for these particular animals would involve possible delivery systems for BW/CW agents or for direct Executive action type operations as distinguished from the eavesdropping application of (whited out)."

This was one of the highly classified programs as "Executive Operations" means human assassination!

The Stimoceiver

The stimoceiver STIMULATED EMOTIONS AND CONTROLLED BEHAVIOR!

Dr. José Delgado, (a modern-day Josef Mengele), then a neurosurgeon and professor at Yale University received funding from the Office of Naval Research, the Air Force 657 1st Aeromedical Research Laboratory (Grant number F 29600 - 67 - C - 0058) and the Public Health Service for brain electrode research on children and adults. In addition to this grant, *he did similar research on monkeys and cats and in one paper heartlessly describes them as "mechanical toys."* He was able to control the movements of his animal and human subjects by pushing buttons on the remote transmitter box. The transmitter was called a "stimoceiver," a radio which joined a stimulator of brain waves with a receiver which monitored EEG waves, and sent them back on separate radio channels. *(The EEG waves that were monitored were the electrical signals produced by the brain that cause muscular contractions, often monitored by an electroencephalograph).* This allowed the subject of the experiment full freedom of movement while allowing the experimenter to control the experiment. *The stimoceiver could be used to stimulate emotions and control behavior.* According to Delgado, "Radio stimulation of different points in the amygdala in the hippocampus in four of the stations produced a variety of effects, including pleasant sensations, elation, deep thoughtful concentration, odd feelings, super relaxation, colored visions, and other responses." He further stated that, "**Brain transmitters can remain in a person's head for life.** The energy to activate the brain is transmitted by way of radio frequency." This was the beginning of what was later to be termed "alien implants," which occurred during the 1970s and 1980s in many unsuspecting individuals worldwide.

A brain transmitter can stay in your head for your whole life.

Psycho Civilized Society- *Civilized or psycho?*

Brain electrode research was also conducted independently of Harvard by **Dr. Delgado** co-authors, of a book that he wrote called *The Physical Control of the Mind: Toward a Psycho Civilized Society*. These included **Dr. Vernon H. Mark** (Harvard medical school), **Dr. Frank Ervin** (Tulane University school of medicine) and **Dr. William H. Sweet** (Harvard). **Dr. Delgado** supplied brain electrodes to the Harvard team through an Office of Naval Research contract. **Frank Ervin**, the psychiatrist of the team, was trained at Tulane by brain electrode specialist, **Dr. Robert Galbraith**

Heath. (Dr. Heath also experimented with a drug bulbocapnine, an acetylcholinesterase inhibitor, to induce stupor, using prisoners in the Louisiana State penitentiary as experimental subjects).

Dr. Heath was a member of the American Psychiatric Association Task Force on Medical Research involving Human Subjects from 1966 to 1968. Four years later he published a brain electrode paper entitled, "Septal Stimulation for the Initiation of Heterosexual Activity in a Homosexual Male."

Dr. Heath was a member of the Drug Abuse Research Advisory Committee, Food and Drug Administration from 1975-1977, a member of the Scientific Advisory Board of the American Council of Marijuana from 1980-1985, chairman and member of the Scientific Advisory Board for the American Council for Drug Education, and a member of the scientific committee of the National Foundation of Parents for Drug-Free Youth.

Dr. Heath did extensive research in which subjects with implanted brain electrodes in place had hallucinogens introduced directly into their brains. Subjects were monitored by EEG, self-report and clinical observations for their reactions. The hallucinogenic drugs he introduced in the patient's brains in this manner included LSD, mescaline, psilocybin, and a substance he called "taraxin" which he extracted from the blood of patients diagnosed with schizophrenia.

The psychotic government program experimented on poor schizophrenic patients.

Dr. Jacques S. Gottlieb of Detroit, Michigan's Lafayette Clinic wrote a paper entitled "**combining Sernyl and Sensory Deprivation**" in another study entitled "Comparison of Phencyclidine Hydrochloride [PCP or Angel Dust is made by Sernyl] and other Drugs," thanking Park Davis & Co. for supplying the phencyclidine and "subsidizing the normal controls." ***Subjects were both schizophrenic patients and normal controls. They were given LSD, phencyclidine (PCP) or sodium Amytal, and then tested for their cognitive abilities.***

Phencyclidine, which we will cover more later, is known on the street as PCP or "Angel Dust" and causes delusions, hallucinations, paranoia, amnesia, homicidal ideation, and agitation. In overdosing it causes seizures, coma and

death. There is a diagnostic category in **DSM-IV** (Diagnostic and Statistical Manual of Mental Disorders, a publication by the American Psychiatric Association providing diagnostic criteria for mental disorders). In 1994, DSM-IV was published listing 297 disorders in 886 pages, called "Phencyclidine Intoxication" that describe the symptoms caused by the drug.

The hippocampus is a main area of the brain where the mind control works.

Source: http://upload.wikimedia.org/wikipedia/commons/a/a6/NIA_human_brain_drawing.jpg

PCP, as a street drug, was first reported by medical professionals in Los Angeles in 1965. As for LSD, it was doctors in the mind control network who first distributed PCP in North America. The drug was first developed as an anesthetic in the 1950s, but is now a controlled substance like LSD. A milder drug with similar action is currently marketed under the trade name Ketamine.

I first became aware of Angel Dust when I was billeted by the US Army in Little Rock, Arkansas in 1959, as I was too young to wear a uniform and officially become a member of the armed services. My handlers at the time were biochemical warfare scientists developing different warfare methods. They had a supply of Phencyclidine and used it as a love drug. However, because it has building toxicity levels, probably not known about then, it becomes quite dangerous if used over a period of time. More on this later.

Non-Lethal Weapons

Non-lethal weapons is a broad category which includes devices for beaming various kinds of energy at human targets in order to temporarily incapacitate them or control or affect their behavior. **Non-lethal weapons research has been conducted at universities and subcontractors on contract to the CIA, and has overlapped with research on hallucinogens, and brain electrode implants funding of the experiments begun in MK ULTRA.**

Universities under contract with the CIA have done experiments on mentally disturbed and unwitting patients.

Dr. Charles Geschickter, a Georgetown doctor, serves both as researcher and funding conduit. CIA documents indicate Geschickter tested drugs on mentally disturbed patients at **Georgetown University Hospital in Washington**. For his own research he received \$655,000 and CIA funds. One of his experiments was subproject 62 (stimulation of monkeys' brains by radio frequencies in 1956). The Naval research laboratory and Rome Air Force Base supplied the equipment to generate the radio waves. Some of these experiments were quite cruel on the animals involved. Basically they were microwaving the brains of the animals in experiments from a distance. I will cover more on the human side further on in the book.

MK ULTRA subproject 54, entitled "a residence cavitation model of the brain-concussion experiments on cadavers; gave \$62,400 to the Office of Naval Research in 1955. The Researcher Funded in this Project Will Study How to Produce Concussions from a distance using mechanical blast waves propagated through the air. Under a heading of "Potential Applications of Research Findings," the contractor says that such concussion is "always followed by amnesia for the actual moment of the incident" and he also states: "the blast duration would be in the order of 1/10th of a second. Making a noise administration should not be difficult. It would be advantageous to establish the effectiveness of both the above methods as a tool in brain-wash therapy."

According to a report in "Defense Electronics Magazine," a consideration was given to using non-lethal weapons technology on David Koresh during the Branch Davidian siege in the spring of 1993. According to the article, the device was not used on David Koresh because of a software compatibility problem.

According to an article in *U.S. News & World Report*, **acoustic weapons research is ongoing at Scientific Applications and Research Associates Inc.** (SARA Inc., 6300 Gateway Dr., Cyprus, CA telephone 714-224-4410) **(with testing at nearby Camp Pendleton Marine Corps base)**; Mission Research Corps in Albuquerque, New Mexico (acquired by Alliant Tech Systems, 7480 Flying Cloud Drive, Minneapolis, MN 55344 in 2004), and the Armstrong Laboratory at Brooks Air Force Base, San Antonio, Texas.

From 1980 to 1983 the Marine Corps' **non-lethal electromagnetic weapons project** was run by a man named Dr. Eldon Byrd, who did work at the Armed Forces Radiobiology Research Institute in Bethesda, Maryland. Dr. Byrd was

a military researcher who worked on **non-lethal EMF weaponry** and electromagnetic aspects of living bodies on cells, tissues, thoughts and whole populations. He worked in acoustics, amplification and transduction. He published a paper on the **telemetry of brain waves** in "Proceedings" of the **International Telemetering conference in 1972**. He participated in panels for the **USPA (United States Psychotronic Association)** on ***scalar physics***, and **bio-fields** with Tom Bearden, Elizabeth Rauscher, Bob Beck and others. To show you again how small the world is, I personally traveled on the same lecture circuit with Tom Bearden and Bob Beck.

Chapter 10: Countermeasures- *After-the-Fact*

Having gone over some basic understandings of how our greed-motivated medical society, let's examine the realm of possibilities as to why so many children are having depression issues, and anger management problems requiring huge amounts of medications which, after a period of time and in the end only make the problem worse. Obviously, the problem runs far deeper than our present day society. If you look at where we are now, and realize where we are coming from and how we got here, a broader picture begins to emerge.

Just look our society and its changes in the last 150 years. In the earlier chapters we examined the personalities and talents which made huge scientific progress up to our present moment. What we did not look at was *our spiritual progress*. 150 years ago steam power was coming into being, which when connected to factories to power up many machines, caused people to lose their jobs, and seek other vocations. Those who were able to do that, spiritually would've grown from the disciplines involving the changes. Those who did not would have probably developed attitudes against progress. At the turn-of-the-century we went into mass production of everything from cars to appliances, air travel became possible, and ocean travel quicker in great comfort, communication changed, from the telegraph and telephone to radio and television, and finally came the internet. Look back at each decade-15 in all—and measure how you felt about these changes. I'm sure some of you go back quite a ways and others not so far.

Our whole solar system rotates around the central sun in the Pleiades star system.

As we look at the procession of the equinox, *our solar system has been rotating around the central sun Alcyone located in the star system Pleiades. This is a 26,827.5-year period. We have been making this rotation for several million years. Each time we got to this 26,000-year point, called the beginning of the Aquarian Age, science and spiritual growth came into confrontation.*

Our whole solar system rotates around the central sun in the Pleiades star system.

Looking back in history we see the rise and fall of Atlantis, taking place some 12,000 years ago, and the previous civilization, Lemuria—all of which left behind artifacts depicting an advanced society with great scientific achievements. When we look back at previous chapters, we can see that some of the greatest scientific minds had to meet great hardships and challenges to bring their work forward, and oftentimes it was blocked by greed because of a threat to a previous lesser invention. That is why I made such an emphasis on large companies, especially in the area of **Big Pharma**. If this were an ideal world, everybody would be a millionaire and no one would have to work for a living. Instead people could do what they want to do and profit from their efforts by sharing the fruit of their efforts with others. There are societies in the universe which function this way. They have come here for many millennia; but because they won't block free will, their visits remain suppressed by the efforts of groups such as Tavistock Institute, which are well aware of their presence, and quite prepared to keep it hidden away. Therefore, we have, as basic operational principles in our society—false information doctrines, disinformation doctrines, mind control, and poisoning of our foods—thereby destroying our ability to maintain a high consciousness lifestyle; and the list goes on.

Of course, now the children become targets. There are many who are just fine and are able to deal with and understand our current societal and spiritual problems, with a far greater understanding than the people who created them in the first place. For me, personally, it is always a blessing to be in the presence of these individuals. Then there are others who aren't so fortunate, or maybe "fortunate" is not a proper word.

One explanation for the "unfortunate" could be as follows. ***Past life influence.*** Did you ever wonder why a child such as Beethoven had tremendous talent at an early age? Even in the case of myself, at six years old I was inventing mechanical things, and by the age of eight, repairing radios and televisions which had only recently at that time been sold publicly. Meanwhile, other children at the same age have no apparent talents or interests in any sort of vocation. Does this make one child better than another? No, I don't believe so. My feeling is that there is a past experience that is engineered into our DNA. I am not trying to cross paths with religion or spiritual beliefs, only to be practical in why things are the way they are.

Although in American society, past life influence is just starting to gain its influence in helping individuals sort out psychological and in some cases, physical pressures, there is a strong basis in history for a solid foothold.

One society that has looked into this and gained tremendous spiritual insights is Tibet. The present Dalai Lama ("Ocean teacher" meaning a teacher as deep as the ocean) Tenzin Gyatso is considered the 14th Dalai Lama descending from the first one since the tradition started in 1252 A.D.

In 1252, Kublai Khan (the fifth great Kahn or ruler of the great Mongolian dynasty established by Genghis Khan, grandson of Genghis Khan), sought to keep the Mongolian Buddhist tradition alive, after a meeting with Karma Pakshi (the second great Karmapa or enlightened teacher). Karma Pakshi then wrote a will to protect established interests of his sect by advising his disciples to locate a boy to inherit the black hat. This instruction was based on the premise that Buddhist ideology is eternal, and Buddha would send in donations to complete the missions he had initiated. Karma Pakshi's disciples acted in accordance with the will and located the reincarnated boy of their master. This event marked the introduction of the teacher reincarnation system for the black outline of Tibetan Buddhism and later during the Ming Dynasty became an accepted fact in their society.

Today, 800 years later, Tenzin Gyatso is the 14th recognized Dalai Lama. When asked if he remembers anything, he only comments that he realizes he is the 14th Dalai Lama, and has no idea if he was the 13th or previous Dalai Lama. So, in my eyes, he has a very human and realistic view. Without getting involved in Buddhism or any other form of religion or doctrine, my point here is there is definitely something to look into if we want to understand why we are the way we are as individuals, in our desires and aspirations, habits and dreams.

Now, back to the question at hand—the children, what happened to some of the unfortunate ones, that made them so angry, confused, and hardened in some cases?

Millions of children were murdered over many decades.

Let's go back a few decades and look at some interesting things that happened to children. During the Holocaust, 1.5 million children were murdered!!!!!! This

figure includes more than 1.2 million Jewish children, tens of thousands of Gypsy children, and thousands of institutionalized handicapped children. Led by Klouse Barbie, Jewish children were picked up all over Germany, and other countries that were being conquered, and shipped to one of the six German death camps such as Auschwitz, Ravensbruck and Buchenwald.

Once they arrived, some were used for medical experiments, with horrible outcomes and side effects, some were put into labor camps, and some were tormented and killed. One of the things that the SS guard did to humiliate the Jewish children was to give them a Mohawk type haircut, paint the remaining hair purple, and parade them around to the other soldiers in the death camps. Then after that humiliation they were often told to go take a shower, and when they went into the shower, they noticed there were no drains—and they were then suffocated with Zycon B gas. This was an agonizing and humiliating, painful way to die. If I were a child who died in this manner, I probably would have serious issues in this life to deal with.

The Hitler youth movement began around 1922 and continued on, and by 1930 it had over 25,000 boys aged 14 and upwards. It also had a junior branch—the Deutsche Jungvolk (German young folks)—for boys aged 10 to 14. Girls from 10 to 18 were given their own parallel organization—the Bund Deutscher Madel (BDM, league of German Girls). By 1940 there were over 8 million children in the various Hitler youth movements. In 1940 Artur Axmann took over the leadership of Hitler youth. Axmann began to reform the group into an exhilarating force which could perform more duties. First they were cleaning up debris from Allied bombings and by 1943 they were performing full military combat operations, due to the fact that the main army had been inflicted with so many casualties.

Many of these young kids met their demise at the Battle of Berlin. Led by German Gen. Marshall Georgy Zhukov, in April of 1945 the Russians stormed Berlin with artillery fire and tanks. The other Allied forces refused to be present, as many knew the Russians were angry and the carnage would be great. Who do you think was the defense and took the brunt of the Russian forces? It was the Hitler youth movement, that put their lives on the line and suffered tremendous losses and death.

Another example is the convict, the convicted serial killer rapist that is on death row. This is a person, usually a male, who has tortured another human being and possibly killed that person in a gruesome way. Rather than reform

that person into a character who can realize the evilness of his actions, we put this person to death, and he or she dies with a vengeance and anger—just as the examples of the children previously given. What about Mitchell Johnson, the Arkansas shooter, who was up for rape charges, at age 11, in Minnesota for molesting a three-year-old? Food for thought!

Possible reasons for the pent-up anger in the younger generation—and alternatives to psychotropic drugs

These are only a couple of examples of how children or adults died tragically in the last 50 years. There is possibly a connection to the now present "skinheads" and other children who tattoo themselves quite heavily, creating heavy metal bands and music, and in general conducting themselves in a rebellious way in our society today. Food for thought!

I am not against any of these expressions, as they mean something to the soul of the individuals involved. As long as they keep their lifestyles under control, and not involve others who are unwilling to participate, this is a great expression of free will. However, there are those who weaponize themselves and harm others, and a lot of this has occurred within our school systems worldwide in the last decade.

Now that we have established a possible reason for some pent-up anger in our younger generation, let's look at alternatives to psychotropic drugs which only numb the problem in the individual for short periods of time, before they come apart internally.

First of all, let's take a look at the general mechanism of MOA inhibitors and SSRI drugs. As we previously established, basically they operate the same as Angel Dust. The difference between the effects of alcohol and PCP and the way they affect human behavior are as follows.

Let's imagine the effects of alcohol first. It's been a long day at work, so we have a few friends from work who decide to join us in a nice restaurant that features "happy hour." We're quite aware of the effects of drinking and driving, and were now even more aware of the fact that most states have federal funding to increase the police presence for people who are driving even slightly "buzzed." Drinking and driving is not what we normally do, but today we sit down with our friends and have one glass of wine. This allows us to relax and

our blood-alcohol so far is quite within the legal limits, regardless of our size or weight. The first glass lasts about half an hour before we feel the euphoria and feelings of relaxation. We realize that half of the alcohol is probably out of our system, so we order that second glass. That goes down a lot faster. Now our forebrain area (part of the brain that affects judgment), is quite relaxed and we feel very confident now and order a third drink, which takes us over the legal limit. Afterward, we leave the bar and get pulled over and the rest is history. This process probably takes place over a 3- to 4-hour period. Afterward, when we sober up, we usually are regretful of our actions. Hopefully, this time we didn't get caught in such a condition while driving.

Using psychotropic drugs on children—intoxicates the brain

Now let's look at **the influence of psychotropic drugs**. The process is much the same as alcohol, except a lot slower over a period of time—for **the brain becomes intoxicated, and remains so for longer periods**. Gradually with more drug ingestion, The Amygdala, the Basal Ganglia, and other parts of the brain are affected, and in many cases we go into a waking sleep. In this waking sleep, we begin to experience unreal circumstantial behavior, often caused by previous situations, both good and bad, that we have been involved in, not only in this lifetime, but possibly others. But as the process continues, by increased cognition, it extends deeply into our psyche experiences.

Psychotropic drugs change a child's dopamine level forever.

If a person ingests phencyclidine (PCP), the drug quickly accelerates the numbing process of the brain from the frontal lobes deep into the interior of the brain. Now depending on the person's personality, attitude, physical health, and spiritual development, the type of waking dream state produced will vary. Usually after the first ingestion, the drug wears off in about 12 to 14 hours, leaving a feeling of emptiness. This is because the areas of the brain, i.e. pituitary, have been depleted of the euphoria-producing hormone vasopressin, and the increased serotonin levels have dropped. Because a drug action inhibits the reuptake of the hormones that it stimulated, one of two things happens: a) The person reuses the drug, to fill in the void, this time using more of the drug, or B) the person does not reuse the drug and suffers for a period of up to a week, while the body replenishes the hormones from its amino acid and enzyme reservoirs. Occasionally a third solution occurs and the person switches to another drug (substitution of dependency) and concentrates on a

separate group of feelings. If the process is repeated enough times, the person now develops a habit or dependency on one or more drugs. Each drug, i.e. PCP, Cocaine, Marijuana, Methamphetamine, Heroin, Opium or Morphine, and others, produces a different effect, each one triggering different endocrine glands—all affecting the conduction of corticosteroids, norepinephrine, vasopressin, epinephrine, serotonin, and melatonin within the body in different combinations, producing different feeling sensations. ***What is common with all the drugs is that dopamine levels change—and eventually these changes are permanent.*** When this change becomes permanent, the genealogy of the body changes, especially in females, and a genetic trait is passed on to the next of kin. Therefore, in the genetic chain of making our offspring healthier, we have transformed a genetic craving for drugs that stimulates our endocrine system.

Let's get to the point where "our family is not susceptible to anything."

In the realm of evolution, we should be practicing good health practices and eating habits, building a stronger genetic system, and transforming that to our future generations. Did you ever go to a doctor, and the doctor asks you "do you have a history of cancer in the family"? Science found that a gene known as oncogene c-Myc, when found in humans, will contribute towards that person becoming excessively susceptible to cancer at some future time if they don't already have it. As the field of genealogy opens up, other genetic materials are being found that link us to a variety of diseases. However, ***if we holistically become aware of what it takes to reverse these negatively-acting genes from becoming effective, then we develop natural immunities, which we can then pass on to our offspring, so it won't matter what the doctor asks.*** The answer will be "no, our family is not susceptible to anything." Now, let's look at depression.

Depression

Major depression accounts for 4.4% of the total overall global disease burden, a contribution similar to that of Ischemic (atherosclerosis or blockage of the coronary arteries) heart disease, or diarrhea (dysentery causing dehydration, mostly prevalent in children in third world countries) diseases. In the United States the population's prevalence of major depressive disorder is between 5% and 10%, and the bipolar disorder, 1 to 4%. Major depression affects 5 to 13%

of medical outpatients, yet often it is undiagnosed and untreated. In real numbers this accounts for about 18.8% of all Americans.

Medically speaking, it is clinically diagnosed as differing patterns of neurotransmitter abnormalities in various brain regions. Usually this diagnosis includes that there is a deficiency of serotonin, norepinephrine, dopamine, amino butyrate acid (GABA) and an overabundance of other chemicals involved in brain balance, such as acetylcholine, Aldehyde (a group of hydrogen, carbon and oxygen molecules, the main one being acetaldehyde, which is produced after drinking alcohol, producing what is called a hangover), all of which produce a deficiency of electrons in the brain. As I said before, these conditions can be passed on to offspring.

Improper genes and stress alter the neurons size and the function of neuronal processes. The target of the SSRI drugs is what is called a ***5-HTT gene (called the "depression gene")***. The reason this is the target gene is that the 5-HTT gene is responsible for the reuptake and reuse of serotonin, which helps produce euphoria. When a person ingests LSD, the euphoria produced is because the LSD mimics the serotonin; therefore, the brain thinks there is a large amount present. The lysergic acid present in LSD is similar to the psilocybin found in mushrooms and other natural plants producing the same effect. That is why the Indians and the other ancient cultures used mushrooms and peyote to have a spiritual experience. But when you inject a reuptake inhibitor, you produce a serious unbalance in the brain, which will lead to a craving for more of the drug and thus develop a chemical dependency on the drug for reasons explained in previous paragraphs.

SSRI drugs that mimic LSD, if given to children, will cause permanent brain damage!

I have seen adults take mushrooms or LSD, then have a spiritually uplifting experience. Afterward, they share this experience, usually from a balanced point of view, and often in the case of the early Harvard researchers, write books and conduct lectures about their experience. However, I have also seen children take LSD, with undeveloped brain capacities, and never come back the same and suffer permanent brain function. ***So my feeling is that when you give an SSRI drug which mimics LSD, but then it produces a shortage of the natural serotonin as a side effect, it should never be used in children!*** Please note here that I am not encouraging drug use of persons

of any age, but am commenting on years and years of observation, and have been a part of drug rehabilitation programs helping both children and adults.

To confirm that there is indeed a serotonin shortage related to depression, brain imaging has been used to observe patients during major depression. Almost all of the different sections of the brain—including the amygdala, hippocampus and the brain stem—are affected. These brain areas regulate emotional, cognitive, autonomic (the nerves in the body that control heartbeat, respiration, and other subconscious) functions, sleep, and stress response behaviors.

Eli Lilly's drug, Fluoxetine, is sold as Prozac, Fontex, Ladose, Serafin, and Lovan. It impairs the liver and causes anxiety and homicidal ideation!

22.2 million people were taking it in 2007 in the US!

Let's take a look at the SSRIs. Fluoxetine is a very popular drug as it has a longer half-life than other SSRIs—which prevents once daily dosing. **It is marketed under the trade names of Prozac, Fontex, Ladose, Serifin, and Lovan.** Over 22.2 million prescriptions for generic fluoxetine were filled in the United States in 2007! It was developed by El Lilly. It has side effects of liver impairment, insomnia, anorexia, anxiety, and homicidal ideation, among others. ***It carries an FDA black box (may cause serious side effects) warning!***

Norepinephrine-reuptake Inhibitors

...and more drugs that cause homicidal ideation!

Nortriptyline, marketed under the name of Sensavol, Aventyl, Pamelor, Norpress, Allegron, and Nortlen inhibit the reuptake of norepinephrine (a stress hormone that regulates blood pressure, stress, and heart rate through the release of glucose for increased energy). Maprotiline, marketed under the names of Deprilept, Ludiomil and Psymion—and Desipramine, marketed under the names of Norpramin and Pertofrane have side effects that include nausea, diarrhea, disrupted sleep and heart attack.

Then there are *the dual-action reuptake inhibitors. These have proven to be the most deadly, especially on withdrawal.* Number one on the list is *Venlafaxine, marketed under the name of Effexor and Lexapro, Duloxetine marketed under the name of Cymbalta and Yentreve, and finally Milnacipran marketed under the names of Savella and Ixel.* Side effects include fatigue, vivid nightmares, increased sweating, decreased appetite and weight loss, blurred vision, tremor, hot flashes, jaundice, inflammation of the liver, suicide, and homicidal ideation. Of course, these drugs include the blackbox warning.

Monoamine Oxidase Inhibitors (MOI)

These are the last drugs to be used as they have the worst side effects. *They have the highest drug interaction risks of all of these psychotropic drugs.* Most of them are not allowed to be used in the United States. However, one of them, *Selegiline, under the brand of Emsam was approved by the FDA on February 28, 2006.* When playing with the chemistry of Monoamines (enzymes that manipulate amino acids) the body can quickly go into toxic shock. When the body is in an alkaline condition it is almost bulletproof against disease. However, when the body goes into an acidic condition, the natural defense system is highly compromised. Therefore, even the medical industry is quite cautious.

One last antidepressant worth mentioning is called **Mirtazapine (NaSSA)**. It is used for severe depression and has a tetracyclic (ring-like molecular structure) and is **marketed under the names of Ludomil, Remergil, Zispin and Avanza.**

All depression problems can be traced to a deficiency of electrons

Lithium is also used often in conjunction with the above-mentioned drugs. It is an anti-manic drug. It is the lightest metal with an atomic number three. It is also considered a trace mineral. And yes it's also used in batteries, as it is lightweight and can store large amounts of electrons. *Remember when we mentioned earlier that all of these depression problems can be traced to a deficiency of electrons?* This is because lithium has two electrons in its first orbit, and one electron in its second orbit. This single electron is seeking to complete its orbit—in this case a complete orbit pattern would be eight electrons in a second shell. This lonely electron is called a valence electron and is seeking actively to combine with something else. Therefore, in the brain, it

will readily give up its electron to help other atoms, which in turn completes the deficient molecular compounds, in this case brain chemicals.

Now let's look at a better way, a holistic way, to rid our society of depression—especially our children—without any side effects and the whole host of unhappy things happening to our bodily functions. I have not been overly excited to have to share all of this negative Pharmacological chemistry with you, but I feel it's necessary to understand how damaging these drugs are. On top of this, *these therapies often last six months, causing genetic damage, and then when the results are not satisfactory, which in most cases they are riot, the drug currently being used is usually switched for another one that is even stronger.*

The Emotional Body and Trace Minerals

First let's take a look at **how the emotional body**, responsible for moods, basically **operates**. The body is composed of 5% minerals. This 5% controls the other 95% of metabolic functions. *The body itself is biochemical on the lowest level, electrical on the next level, and the level of love that is called the electrical precursor level or etheric.* The etheric level is connected to the mind, not the brain. The brain is purely physical and responds electrically via the electrical precursors. As mentioned earlier, in mind control which has been used by various intelligence agencies, this was accomplished by controlling electrical signals, either by direct electrode implantation into the brain, or by radio waves from a transmitter, which then transmits to a small receiver, often called an "implant," into the brain. In the next chapter, we will study how this is now done via microwave transmissions from satellites. Right now, let's just concentrate on moods and attitudes.

Trace minerals are responsible for our feelings that inspire confidence and good thoughts.

Any control of the brain, being electrical in nature, depends upon various frequency bands. The minerals work in three different frequency categories within the brain, controlling all metabolic functions, especially mood swings. **The low-frequency minerals control the basic autonomic and absorption functions**—metabolism of iron, manganese, calcium, etc. and the autonomic nervous system which is responsible for unconscious functions such as heartbeat, breathing, and basic muscle movement. **Mid-range minerals**, such as chromium, selenium or any of the basic reflective minerals

control the sympathetic nervous system which is responsible for appetite, temperature control of the body, growth factors, immune system functions and flight-or-fright syndrome. The trace minerals, are functioning through the parasympathetic nervous system, and are responsible for our higher inner feelings, feelings that inspire confidence, inspiration, godly thoughts, meditation and basic freedoms.

The low-frequency minerals and the mid-range frequency minerals are quite available through nutritional products and vitamin and mineral supplements, readily available on all store shelves. However, **trace minerals, the high-frequency component and most important for a clear head, and good feelings are not available anywhere**, because we have destroyed them and the plants that produce them through poor environmental conditions over the last hundred years. Trace minerals were very important staples, derived oftentimes from the seawater, in use by the ancient Mayans, and other great civilizations. However, as the seawater became polluted, that source became unusable. Reemergence of trace minerals occurred about 80 years ago when a retired geologist living in Utah contracted a severe case of arthritis, which was a great life-threatening disease, much like cancer is today. He was retired living on a ranch, and nearby was a colony of Piute Indians. When they realized that the rancher, a Mr. Clark, had arthritis, they took him to a nearby stream and had him go into it for a while. So his arthritis began to go away. Being a curious geologist, he followed the stream up to an Artesian well which was full of red clay, left over from an earlier rainforest probably 2,000 years ago.

Soon the word spread that extracts from this red clay would rid the arthritis and thereby extend one's life. This was the beginning of the trace mineral reemergence into our society. Today it is big business, although most people are still not aware of the necessity of trace minerals. Other sources have been utilized, one is the great Salt Lake in Utah, but those trace minerals, although they will conduct electricity, do not have the proper life force to reinstall the proper health balances necessary within the brain.

When kids take trace minerals, it often changes their attitude for the better when the heavy metals stuck in their brains and fat cells get released out of the body.

One of the first things that happens to our youth is that they suffer from heavy metal poisoning, lead being one of the main ingredients, aluminum being

another one as many people use aluminum cooking utensils. ***Trace minerals, when given to children, often change their attitudes drastically—as they chelate the heavy metals from their brains where they are stored in the fat cells.*** Formulations, such as **Pyraloe** from Pyradyne at www.pyradyne.com are an excellent source of trace minerals. Remember earlier we discussed lithium. Lithium is often used in the treatment of depression, as it is an isolated trace mineral. However, in modern-day formulations, there are over 100 different trace minerals, found as they would have been in rainforests 2,000 years ago when people did not need SSRI reuptake inhibitors.

Now looking back at the body again, ***trace minerals help the body build enzymes, assimilate vitamins*** (first units of biochemistry that contain light frequencies necessary for all forms of cellular and bodily function), ***and bind proteins*** into polypeptide, and neuropeptide chains creating complete hormone structures. The important fact here is that once the trace minerals are in place, the body now needs a good source of vitamins. Remember as discussed earlier, ***the drug companies would like to give you synthetic vitamins which would rob your body of the proper ones.*** Psychotropic drugs manipulate the neuropeptide chain functions, and basically create a worse situation in the long term, overriding any short-term mood elevation.

The Neuropeptides and Popypeptides from Hormones

Next in our chain of body functions are the neuropeptides and polypeptides form hormones. Hormones are the first unit of biochemistry that possess consciousness. Feelings of energy, for example, come from the corticosteroids hormones located in the adrenal glands. Sexual energy or feeling or desire comes from the testosterone and estrogen hormones, located in the sexual glands of our bodies. Feelings of love come from the hormones located within the thymus gland located near the heart.

For reasons of our study on depression in teenagers and children we need to concentrate on the Pituitary gland and Pineal gland. **The pituitary gland** consists of an anterior lobe which contains a thyroid stimulating hormone (TSH), a follicle stimulating hormone (FSH), a luteinizing hormone (sexual control LH), prolactin (lactose regulating PRL), growth hormone (GH), adrenocortical tropic hormone (energy regulating ACTH), and Alpha Melanocyte Stimulating Hormone (brain repair hormone).

The pituitary also has a posterior lobe that contains a hormone called vasopressin (an incredibly important hormone for mood elevation) and

an **Oxytocin** (another incredibly important mood-elevating hormone affecting bonding between male and female).

The pineal gland is called the third eye

The other important gland to consider here is **the Pineal Gland**. It is often called the **third eye**. It produces **melatonin**, that affects the modulation of waking and sleeping patterns and seasonal functions. It also makes us very aware of various body sensations and produces a very grounding sensation. If it overstimulates, it produces feelings of claustrophobia and short breath. In great quantities it can produce an action that shuts down body functions and brings on a natural death. A good example of this would be a healthy older married couple, of which one of them passes on. The other although in good health, dies a few months later, usually from a heart attack or sometimes an undetermined cause. This usually works in conjunction with the other pineal hormone serotonin.

When psychotropic drugs affect serotonin in the body, they can disrupt the good feelings.

Serotonin (5-hydroxytryptamine, or 5-HT) is a monoamine neurotransmitter (a various biogenic group of neurotransmitters having a single amino group, such as dopamine, epinephrine and norepinephrine) **Serotonin is the foremost single hormone to produce godlike feelings, premonitions, feelings of extreme well-being**, and most of the higher and inner examinations. Because of its extreme inner-acting function ***it is the easiest one to disrupt***. Its actions are most prevalent in small children. For example, if an adult witnesses an argument, it has a much lesser emotional effect on that person, than it would have had on a small child. Remember when you were small and you looked at a large object, it appeared to be absolutely huge? And then as you got older the same object appeared to be smaller. This apparent difference is because the regulatory levels of serotonin have changed considerably with the maturation process. So it's not hard to understand why young adults react differently to stressful situations than adults.

The important thing to know about the pineal gland is that minimal stimulation creates a positive outcome of feelings in the body, whereas maximum stimulation quickly produces closing down of body functions and depression. This has been found as a root cause of sudden infant death

syndrome, when defective signaling of the child's brain occurred. Because of the fragility of the pineal gland, SSRI drugs are definitely not a good thing to consider. What is important to consider is to take time out of each day to become one with yourself. This is also the reason why meditation is practiced in many religions and by peoples worldwide. ***In addition, the pineal gland is called the third eye, as it is a target of meditation, in which it is calmed or put in a rested position.*** The other remaining 6 endocrine glands thrive on stimulation and produce almost all of the other physical body functions. Another point that I mentioned earlier is that LSD and psilocybin mimic the action of serotonin and were targets of governmental mind control.

When psychotropic drugs affect serotonin in the body, they can disrupt the good feelings.

Let's look at ***a healthy safe way to rebalance the hormone structure of the critical endocrine glands.*** First of all when we look at the structure of the hormones, we find that **there are between nine and 191 amino acids.** Obviously it is important to correct these amino chains that have been damaged somehow by stress, heavy metals, gene inheritance, or other means which cause them to malfunction, creating huge mood disorders.

When trying to correct the brain chemistry, the obvious place to start with is the hormone structures that are located within the brain itself. Since **all of the hormones in the entire body are simple chemical combinations of amino acids,** that is where our therapy should start. There are two factors to look at: 1) how will the amino acids cross the blood-brain barrier and recombine into a hormonal structure, and 2) why is there a deficiency in the first place?

In order to cross the blood-brain barrier we need to observe the time of day that we ingest different amino acids, we need the proper enzyme combination, and it's usually quite important to assimilate free-form amino acids on an empty stomach. One example about timing is the secretion of melatonin from the pineal gland. Melatonin is usually secreted after sunset, as light triggers the timing of the various endocrine glands, especially the pineal gland. This continues until about 2 AM in the morning for most people, and until about 3 AM for the elderly. The maximum amount of melatonin released in the body of the elderly, is only half of that in young adults. In the case of jet lag, circadian rhythm is usually disturbed, once again an issue with timing and body

functions, and melatonin can be taken as a supplement to overcome some of the effects. It is quite effective when used with the Pyradyne Nuclear Receptor.

Our bodies are made up of hydrogen, oxygen, nitrogen and carbon. The carbon atom has a pyramidal shape, and is a transporter of the other three gases into all cellular form. The nitrogen atom is the building block of protein, hence the amino acids. The oxygen atom carries the prang, or gaseous life force into the cellular structure of the body, causing it to breathe in life and exhale carbon dioxide which is the gaseous life force for plants. The hydrogen atom itself is the atom that our consciousness is derived from. ***The hydrogen atom consists of one proton and one free electron, so, therefore, it is chemically the most active atom in the body.*** When taking a quantum view of the hydrogen atom itself, we see a myriad of dancing frequencies of the electron, as it moves around its orbit of the proton. In early physics, we have discovered that the electron does not just rotate in a circular motion, but moves in wave-like motions that have been given terms such as "P." or "W." orbital. Now in the new extended physics, wherein quantum entanglement becomes a factor, it appears ***that single electron*** can almost appear to be in two places at once. ***The action of its motion is called "quantum tunneling," and where it releases energy is called "quantum entanglement."*** As mass consciousness moves more into the holographic reality of existence, the more quantification is required in treating depression and other like diseases.

Your hydrogen atoms are red in the morning and violet at midnight.

Secondly, when looking at **the hydrogen atom, it is Red in the morning** with the energy pointed at the nucleus of proton (the proton is approximately 1,645 times heavier than the electron, hence that is where the energy is most prevalent) **and Violet, usually around midnight.** ***This is why your thoughts are different in the morning when you wake up than they are when you finish the day*** and get ready for bed. Electrical pre-cursing devices such as **the Pyradyne Nuclear Receptor, www.pyradyne.com** will greatly aid in proper combination of the amino acid groups. For more information on this see the earlier book that I wrote entitled *Rays of Truth, Crystals of Light*.

The next thing we need to know about is **why there are deficiencies in the brain causing hormonal imbalances.** This is usually due to antagonists. Most antagonists are chemical, some come from stress. The biggest antagonist

in our society today is **carbon monoxide coming from fossil fuel exhaust.** Eight minutes of exposure to vehicle exhaust produces 24 hours of symptoms. The symptoms, starting with the smallest amount exposure and moving to the greatest amount exposure—i.e. one hour in bumper-to-bumper traffic—are as follows: **first, loss of creativity.** An example of that is you are an artist or musician and are writing a song. You get up in the morning you have great inspiration and you start into your creativity. Everything is going great! Then after about an hour you notice that you need to go to the store to pick up some bottled water. So you take a 20-minute break, drive five minutes to the store and back and sit down and try to pick up where you left off and find to your dismay that the creative juices aren't there anymore. Carbon monoxide!! **Second symptom:** you drive to work and it takes about half an hour. When you get to work you feel drowsy and probably don't wake up until sometime after lunch. This is because the carbon monoxide got into your system and the system could not rid itself of the symptoms for a least three or four hours. **Third symptom:** you have a two-hour drive to work, you're almost there and someone pulls directly in front of you cutting you off. You stop your car and start screaming at them. We call this symptom "Road Rage." In the final symptom, in which carbon monoxide has had the most serious detriment to your hormonal system, is at the end of the day when you feel extreme depression.

Amino Acids

I worked with many universities over the years examining these conditions in the working class. What was found is that ***the body begins to burn out hormonally.*** One of the most affected hormones is Vasopressin which is a pituitary hormone composed of two amino acids Lysine and Arginine. As a result of these studies medical science decided to make up synthetic hormones, in this case Lysine, and Arginine, and put them in a nasal sprayer form available only by prescription (these types of drugs are called **Nootropics**). **The company that manufactured this product called "diapid" is Sandoz in Germany.** Because these are synthetic and externally applied amino acids, I recommend that you just take the amino acids, along with a free-form formula available at any health food store, but if you want to try them without a prescription they may be obtained from In-Home Health Services, P.O. Box 3112, CH — 2800 Delmont Switzerland or InterLab, BCM Box 5890, London, WCIM 3XX, England. Another ordering source is Quality Health Inc. at <http://qhi.co.uk/index.asp> located in the United Kingdom.

Completely natural methods can restore balance to our moods—drugs don't need to be used.

Now that we've looked at a safer medical alternative, it's time to ***go to the perfect natural alternative method of restoring balance in the endocrine system and therefore restoring our moods to a positive outlook.*** The problem with taking synthetic amino acid formulas is that the body, being lazy, once again becomes drug-dependent. Once this happens, the digestive system goes into atrophy (sleep) and no longer manufactures the correct hormone structures, and as we said earlier amino acid combinations. When amino acids are taken directly, at the right times of day and night, the body then goes to work and fabricates the proper hormones. Unfortunately, because of the above-mentioned agonists, amino acids are very important and unless you live in the perfect world, supplementation of the amino acids is quite helpful. Remember, however, to start a regiment of trace minerals first, or the amino acids, will not cross the blood-brain barrier and be effective.

It is CRUCIAL TO HAVE ALL 8 ESSENTIAL AMINO ACIDS AT THE SAME TIME for your proteins to be synthesized right

The body requires approximately 22 amino acids arranged in a specific pattern to make human protein, which then is combined into polypeptides and neuropeptides. All but eight of these can be produced in the adult body. The eight that cannot be produced are called the "essential amino acids," because they must be supplied in the diet. ***In order for the body to properly synthesize protein, all essential amino acids must be present simultaneously and in proper proportions. If just one essential amino acid is missing, even temporarily, due to an outside antagonist, protein synthesis will fall to a very low level or stop altogether.***

The eight essential amino acids that the body can't manufacture and therefore depend on are: tryptophan, leucine, lysine, methionine, phenylalanine, isoleucine, valine, and threonine.

Foods containing protein may or may not contain all the essential amino acids. ***When a food contains all the essential amino acids it is termed a "complete protein."*** There are no guidelines for the amount of amino acid content that is required on a daily level. What I have found is that if your attitude is good, you feel secure inside and your health seems to be normal,

then you probably are receiving the proper amounts of amino acids. Unfortunately, most children have an taste for junk foods, that are amino acid antagonistic, and compound sugars in concert with junk food become great antagonists of proper amino acid balance. When this happens the combination of sugar and depleted amino acids creates a condition of hypertension that in most Americans, especially teenagers, creates a subclinical diabetic condition. A large part of America already has a lower form of diabetes, but does not have to be treated on insulin yet. The manifestation of the symptoms are energy that increases and decreases, hot flashes, sudden moods change, and eventually paranoid depression.

In treating depression, it's best to start with the main control center, which resides in the brain. The two major endocrine glands here are the pineal gland and pituitary. The pituitary gland is considered the most important of the two, as it contains tropical hormones, which affect all the other endocrine glands in the body, and is hormones are the first unit of biochemistry to possess consciousness—this is where we start. These first suggestions start on the biochemical level with amino acid and vitamin combinations. In order to ensure delivery into the proper organ structures, it is generally recommended to have an empty stomach, as proper blood-brain barrier activity is heightened considerably.

Amino acids that combat depression

Lysine and Argentine are two of the first amino acids to take for **depression**. Along with the vitamins B6 (Piroxidal phosphate) and B3 (niacin) are recommended along with vitamin C. ***Lysine and Arginine in combination, form Vasopressin.*** B6 is a co-factor of amino acid metabolism and is necessary for the enzymatic reaction governing the release of glucose from glycogen (proper energy releasing the system).

Niacin requires a little more in-depth explanation. It will perform several of the functions of nicotine (nicotine was first isolated from the tobacco plant in 1828 by German chemists Posselt and Reimann)—such as stimulation of the pituitary gland, releasing vasopressin and dopamine, and stimulation of the adrenal releasing norepinephrine, epinephrine, and other endorphins. However, when you begin a niacin regimen, it is wise to understand its detoxing characteristics first.

Everyone needs protein every day unless they are a breatharian in which case they would receive their protein from nitrogen in the air. That, probably, from a statistical point of view leaves only two or three people on the planet that live on air. Regardless of what the protein source is, there is always a small amount called an antigen. Antigens gradually build up the mast cells of the body (connective cells which contain granules of histamine and heparin, which fight infections and causes coagulation; heparin is the coagulant, in the case of physical injuries). If these trapped antigens are allowed to consistently multiply in the body, eventually they become pathogens, which creates some form of clinically apparent disease. ***When niacin is ingested, it opens the arteries, therefore increasing circulation and at the same time releases histamines.*** As a result of this, the histamines attack the trapped antigens, causing a burning sensation, until they are released from the body. Usually when beginning to take niacin for the first time, 25 to 50 mg is the recommended dosage. Gradually, as the flushing gets less and less, increase the dosage to about 500 mg a day. At this point then add the amino acids Lysine and Arginine, as you will get a resultant elevation of mood. Niacin can be used in many different types of therapies, because of its overall detoxing and mood-elevating effects. But before it can work properly, it's important to be able to reach the 500 mg daily amount.

Now let's compare it with nicotine. The body is inherently lazy. So when you smoke a cigarette, you get all the aforementioned stimulants released into the body, which definitely causes an increase of energy and mood elevation, but the problem is when the tobacco wears off, the body begins to crash, because this type of stimulation does not allow for the reuptake of the various hormonal combinations involved, so therefore the body goes into deflation. Nicotine, being a narcotic drug like several of the others mentioned earlier, thus becomes a habit and a physical dependency eventually ensues. When you take niacin it has the same action, but being a natural reaction in the face of body chemistry, the body is able to reuptake the various hormones thus stimulated. However, the assimilation of niacin can take as long as one hour depending on the stomach contents, so therefore its effects are not noticeable immediately as is the case of nicotine.

A second companion with niacin is vitamin C. **Vitamin C** acts as a "glue" with all connective tissue. This alleviates excessive internal tissue damage that can occur. Usually after three or four hours of ingesting niacin, I would take some PC lecithin (phosphatidylcholine) and vitamin E. These two vitamins eliminate any form of tissue scarring.

Amino acids that combat depression

A lot of people already take multivitamins that contain some of the above-mentioned ingredients. However, I have found that 90% of the vitamins on the store shelves are made with inferior ingredients, and therefore often cause more damage than good. Several years ago I began formulating for several different vitamin companies, located not only in the United States but also in Europe and Japan. One of the interesting things I discovered was that each country has an FDA equivalent which I had to work with.

Herbs such as Ginseng, Gota Kola and Fo-Ti contribute to electrolytes.

In Japan I was allowed to formulate with **Fo-Ti** (*polygonum multiflorum*), **Gota Kola** and **Ginseng**. ***These three herbs contribute to the amount of electrolytes in the human brain. An electrolyte is a substance that allows conduction of electricity, in this case the firing of synapses in the brain. Without electrolytes, people cannot function and go into severe depression very quickly.*** An analogy of this would be, you can have a brand-new car, but without a battery, it would not run. If it had a battery, it would only run if the battery itself had electrolytes. I would probably attribute this to the fact that after World War II scientists did radiation studies on the victims of Nagasaki and Hiroshima. What they found was some victims that were very close to the Ground Zero high radiation blast had minimal radiation aftereffects, whereas others who were many miles away from Ground Zero with much less radiation exposure, had severe symptoms of radiation poisoning. What was found was that the ***individuals who had large amounts of electrolytes in their brain and body suffered minimal damage. It was further found that these individuals were ingesting Fo-Ti, Ginseng, and Gota Kola.***

However, when formulating in Japan, I was not allowed to use high concentrations of vitamin B complex, especially alleviating the Nitrilosides which are vitamins B12 through B17. Nitrilosides are cancer-fighting, sugar-containing compounds. When I was formulating in Germany, I was not allowed to use any of the electrolyte herbs that I used in Japan. I also was formulating in Canada. The Canadian government would not allow me to use any free-form amino acids, as they considered them drugs.

Phenylalanine, combined with vitamin C and 86, produces a natural stimulant noradrenaline, and another brain chemical dopamine, which among other things boost our energy and produce euphoria. Phenylalanine also stimulates the release of **Cholecystokinin**, which is the body's own appetite suppressant. However, any time phenylalanine is ingested, it should be taken by itself, with only the supporting vitamins and no other amino acid, as it will conflict with other aminos. In addition, when taken with vitamin C, it will raise blood pressure due to the stimulating effect of noradrenaline.

Other amino acids to consider are: **L-cysteine, which helps prevent alcohol and cigarette smoke damage to the brain, also considered helpful for heavy metal poisoning removal;** methionine, another heavy metal detoxer; and L-Ornithine which stimulates growth hormone release.

free-form amino acids

When not taking any of the above-mentioned suggested vitamin amino acid combinations, it never hurts to go to the health food store and purchase **free-form amino acids**. These formulations are usually quite well-balanced and are taken on an empty stomach. Another formula that I recommend is one that I formulated called **Pyradyne Full Spectrum available at www.pyradyne.com**.

Herbs

The next area that I recommend is **the use of herbs**. Chinese and other forms of herbs have been around for thousands of years. Our society is not the only one that has ever suffered different forms of depression and deficiencies, leading to personality disorders. Herbs have active ingredients and are compounds that can be found in general categories. **Alkaloids**, found in herbs contain basic nitrogen atoms which contribute to, in this case, building hormones. **Anthraquinones**, serve as the basic skeleton for pigmentation in plants and when taken internally have laxative effects. **Bitters** are herbs that help with digestion and immune system building. **Flavonoids**, contain a natural source of phenylalanine and other parts of plants that contain vitamin C. They strengthen the healing, affect the blood vessels and lowering of blood pressure. **Mucilage**, is a water-growing gel-like substance, that helps form protective layers over mucous membranes in the skin. **Flax seeds or psyllium seeds**, which are used for intestinal cleaning, contain mucilage. **Saponins, are**

glycosides (sugar containing) and have a similar structure and function as human sex organs. They are often used in the treatment of women's problems. In addition they can produce a calming sensation. Tannins act as an astringent (a tendency to constrict body tissues) and are useful in treating cuts and wounds, hemorrhoids, varicose veins and various forms of inflammatory conditions of the digestive tract. **Volatile oils, or essential oils** are what give the aroma and flavor to herbs that we use in foods. Examples would be rosemary, marjoram, dill, basil, sage, thyme and mint.

Similarities between physics and the herbal kingdom

At this point **I would like to make a comment on the similarity of physics to the herbal kingdom.** As said before, the hydrogen atom is the atom that carries consciousness into our brain minds. The hydrogen atom is made up of a proton with a positive charge, and an electron with a negative charge. Knowing that the proton has 1,645 times the mass of an electron, it obviously has more energy. When delving into the proton and its subcomponents, the proton with its subcomponents is called a hadron. ***Within a hadron, which remember is the proton nucleus of the hydrogen atom of consciousness, are three quarks.*** Quarks (named by famous physicist Murray Gell-Mann, mentioned in earlier chapters, after the sound made by ducks, and spelling he found in James Joyce's book "Finnigan's Wake": "three quarks for Master Mark!") are particles that have less than a full electrical charge of one, usually measured in plus or minus $2/3$ or $1/3$. There are six kinds of quarks. They are up (u), down (d), (containing the lowest mass) charm (c), strange (s), top (t), and bottom (b). All the other quarks except up-and-down contain a higher mass, and during energy transfers decay into up or down quarks.

The hydrogen atoms in various herbs transfer balance into our consciousness.

In the case of the hydrogen atom, its nucleus, the proton, contains two up quarks $+2/3$, $+2/3$, and one down quark $-1/3$. When you do the math, you end up with 1. There are obviously sub particles within the quarks if you want to carry this further. **When this energy is transferred into the human brain via the synaptic and hormonal discharges, there is an electrochemical response that the brain computes from the mind (*the mind is not part of the physical body*), which causes the physical thinking sensation that occurs within the physical part of the body, the brain.** In addition, there are

nuclear binding forces present that have different repulsion and attraction characteristics (**quantum chromodynamics, QCD**, an area of research made famous by Richard Feynman). The combination of the above-mentioned ingredients creates our actions and personalities, from a mental standpoint.

As we mentioned earlier, there are some unbalances in our chemistry, and some of these unbalances are so strong, that it causes us to fail to interact in a balanced manner with other human beings. Civilizations have long noticed this and certain groups have found that different classes of herbs will correct these unbalances, allowing us to interact harmoniously with each other. ***When you look at the subcomponents of the various herbs***, not only the ones in this book, but all herbs, ***you will see that they have hydrogen atoms***. It is these hydrogen atoms that transfer the balance factor into our consciousness. **Ayurvedic (meaning science of life) medicine** is one form of traditional medicine that goes back thousands of years, acknowledging the ability of herbs to compensate for consciousness.

When looking at why quarks behave the way they do within the hydrogen atom, and when you study the structure of hydrogen atoms with carbon and nitrogen atoms in the formation of the various vitamin, enzyme and hormonal combinations found within the herbal kingdom, and that ***these clever combinations are the reasons for a consciousness shift towards balance***, you can begin to see where ***consciousness begins to cross the boundaries into quantum physics***. Here, again, is where the pre-cursing values, in this case electrical precursors, now directing their energy in the biological world, create biological wonders via the electrical responses.

Bio Quantum Physics will take a look at electrical causations of the hydrogen atom and the quarks inside it.

I believe in time, when physicists begin to look at these electrical causations, a new field, possibly called "Bio Quantum Physics" will be born.

One of my favorite herbal combinations that comes in an herbal beverage is **Shou Wu Shih**. It consists of the root of Polygonum Multiflorum (Fo-Ti) root of Angelica Sinensis (dong qui), Rhizome of Polygonatum sibiricum (underground horizontal root of King Solomonseal), Rhizome of Rehmannia Glutinososa (a Chinese flower like foxglove containing many vitamins), root of

Angelica (a perennial or all seasonal herb), fruit of *Amomum villosum* (an aromatic and pungent strong-tasting herb) and white ginger. Shou Wu Chih is produced in Guangzhou, Guangdong, China under the brand name of Yang Cheng and is exported to the United States. Pyradyne located in Southern California www.pyradyne.com is a current importer.

Shou Wu Chih—I have used Shou Wu Chih personally for years. It produces a tremendous euphoric feeling, as it balances the body chemistry perfectly, and is also a very good liver cleanser as well as other organs. It can also be classified as an aphrodisiac or an elixir. It's been around for thousands of years and is one of the best kept secrets in the herbal world.

Ginkgo Biloba—also known as maidenhair, improves brain function by increasing dopamine levels which are severely lowered by the use of alcohol and drugs. It works on people of all ages, and has a side effect that increases memory.

Siberian Ginseng—another of my favorites, contains serotonin-like adaptogens, that have an incredible ability to balance the underground system and immune system. It can be bought in health food stores in small ampoules that when opened contain a dark brown liquid. Drinking one of these on an empty stomach produces tremendous and long-lasting euphoria.

Yohimbine—although very popular for male erectile dysfunction, it is also a popular MOA inhibitor, so it can be an aphrodisiac. The server should be used with caution, however, as with all MOA inhibitors, the user must avoid tyramine-containing foods, i.e. dairy products and red wine.

Milk Thistle—this is a very good antioxidant herb that will help repair the damage done to the liver and other organs by the continuing use of tranquilizers such as Valium, SSRI drugs and MO NA inhibitors, and last but not least, alcohol.

Valerian Root—Has been used as a tranquilizing agent since ancient times Hippocrates, and Galen, both written about in earlier chapters, prescribed it as a remedy for insomnia. It is shown to balance the GABA (Y-amino butyric acid, that regulates excitability in the nervous system) neurotransmitter receptor system, which is often found in a state of unbalance in highly sensitive individuals.

Various helpful herbs and what they do

Passionflower—this is a very old remedy for insomnia, hysteria and convulsions in children. It is a very powerful sedative, containing serotonin. It is also a very powerful mood-shifting herb.

St. John's Wort—St. John's Wort's chemical constituents include tannins flavonoids, exanthones (*super antioxidants that remove free radical damage greatly boosting the immune system*), terpenes, (*a natural source of lipids and steroids*), Phloroglucinol derivatives (*anti-tumor agents*), and carotenoids (*another antitumor agent, lycopene being a popular one found in tomatoes*). Another extract of St. John's Wort, hypericin has been found to have anti-viral and anti-cancer activities. This has been found to **alleviate severe depression**. Having worked myself for many years with cancer patients, I have found two things that are usually present during the onset of cancer. First, the body's PH system becomes quite acidic, and secondly there is an unconscious paranoiac depression syndrome occurring deep within the victim's psyche. This often leads to a high saturated fat diet that creates free radicals that further fuel the cancer.

These are some of the mainline herbs that can be used in conjunction with the above-mentioned amino acid and vitamin therapies. There is enough information given here to take the reader to another level. Although we haven't reached the final chapters of this book yet, I'm going to bring up something in physics called "**string theory**." This is an evolving branch of theoretical physics that **combines quantum mechanics** (a set of principles underlying the most fundamental known description of all physical systems in a microscopic scale, i.e atomic level) **and general relativity** (geometric theory of gravitation published by Einstein in 1916) **into a quantum theory of gravity**, or as science hopes general theory of everything. *The strings of string theory are one-dimensional oscillating lines, resonating through the harmonics of our popular musical systems, which resonate into higher forms of matter, eventually structural parts of the atoms, molecules, and cells, and organs of our bodies.*

When studying these mechanisms, we come upon the electrical precursors that are necessary to set up the proper mechanisms of the strings and superstrings that densify our RNA into DNA. Oftentimes **unknown forms of stresses (see next chapter) can cause severe chemical imbalances** leading us into

depression and eventually disease, whether we are aware of it consciously or not.

The science of precursors got its big boost from Dr. Barry Sears, a former research scientist at the Boston University School of Medicine and the Massachusetts Institute of Technology (MIT). Dr. Sears wrote a book called *The Zone* in which he described a precursor form of hormones called eicosanoids, derived from omega-3 or omega-6 oils. It was a way of bringing their action to the body for a perfect balance of fats and carbohydrates. Dr. Sears' approach, mainly through diet and exercise, showed that your body can produce either good eicosanoids or bad ones. This, in turn, led to the production of balanced or unbalanced hormonal structures.

Shape Energy

About the same time that he was doing his research for his first book, we were doing ours one level beyond his, in that ***we were studying the electrical forces that pre-positioned the biochemistry involved in eicosanoidal and hormonal structures. This had to do with shape energy, as any time you build a structure of a given shape, it occupies a position in space-time continuum.*** This is why the red blood cell component hemoglobin contains four iron atoms in the shape of an octahedral structure, or parts of the brain are pyramid shaped. Using this research, we developed a device called ***the Pyradyne Nuclear Receptor*** which transmits an electrical precursor in a signal that ***transforms,*** on the atomic level, ***DNA and all related components into harmonious vibrating cells.*** These, in turn, over a period of time readjusts unbalanced body conditions, therefore ***contributing to the re-spiraling of the DNA which in turn becomes a factor in biological life extension.*** These devices have been successfully used worldwide and can be incorporated into all of the above-mentioned solutions. As we move forward in technology and science, electrical precursor devices will eventually become mainstream in our society.

Chapter 11: Electronic, Chemical and Psychological Harassment

In this chapter we will look at what I call different methodologies that the **One World Government wannabees** are trying to do to the peoples of the world so that they may depopulate different countries, destroy the well-established traditions of currency, and demoralize, decentralize, and render the various populaces to a position of insecurity and fear. This is the way fascism has always been installed. In addition, *due to our rotation around the central Sun Alcyone, every 26,827.5 years, we are being postured for a raising of consciousness.* These One World Government types are quite aware of this and are structuring various mind control and physical debilitating (population control) technologies, through the ingestion of food, the breathing of air, and the absorption of radiation in various forms.

Over time there have been many efforts to spy on and control people.

Since I was a small boy, at the University of Michigan, I have seen firsthand, **the inside track of these various methodologies** since their inception. At the end of World War II, the Cold War was very strong, and there was great fear that the Soviets were much more technologically advanced than we were. As a result, children like myself were indoctrinated at an early age to become crucial in various defense programs of the United States. When we began to develop the overhead spy systems, we opened up a whole new science of how to influence those being spied upon. The **types of harassment** listed below are just the opening salvo of this study and presentation.

Surveillance Harassment

Surveillance is the imposed observation of one's actions. In its crudest form it is still a nuisance consisting of listening devices, video recording, transmitting devices, and spectral imaging. In its more advanced form it includes high-imaging satellite photography, radionic ELF detection, and modulated neurophonic transmissions. As technology progresses, various methods are quite rapidly becoming more stealthy. You may have noticed that there are cameras virtually everywhere, in bars, restaurants, meeting halls, buildings, on street lights, etc. These cameras often are connected to photo comparison devices in a **program called Echelon**. This **information is then sent to a central control center, where a lot of it is matched with further surveillance, gathered from all phone calls, e-mails, credit card**

information, banking information, etc. to form a database of every person in the free world.

Electronic Interference/Sabotage

Electronic sabotage is the act of intentionally intending for personal property to either be destroyed or cause it to malfunction. Any type of intentional interference such as ELF generation, electronic noise generators, sound generators, high-intensity light generators, or spark gap disruptors, are a form of EMI (electromagnetic interference) which either destroys, causes malfunction, or loss of resources is considered electronic harassment.

Directed Harmful High Energy

The many forms of electronic harassment, implanted or generated from a distance

This is one of the more dangerous forms of electronic harassment, yet one of the easier ones to implement. Directed harmful high-energy weapons can include a vast array of devices and equipment available in almost every major city in the world. These devices can be a modified microwave oven, radar guns, lasers, tasers, ion beams, soliton (pulsed self-reinforcing) bombs, high-energy particle beams directed from satellite technology, and many other forms, too many to list here.

Implants

Implants are considered to be a very invasive form of harassment. Electronic implants consist of transmitters, Electrical Stimulating (ES mood-altering) generators, micro neurotonic transceivers, injectable implants, and holographically remote beam implants. Implants of the holographic nature are often mentioned in UFO abduction cases. Another platform for an implant was designed by the government over 25 years ago and is still used today. It consists of a **body fluid-powered circuit** capable of either transmitting voice, vital signs, or beacon signals. Due to the fact that the body is 5% mineral, which controls the other 95% of all metabolic functions, creating the electrolysis amongst the mineral content of the body is a relatively easy process. Because of this, the body, as long as it is well fed and proper nutritional levels are maintained, has an unlimited supply of electricity to operate these implanted devices. When these devices are selected, complete control of a human being is possible. More detail on this will be presented later.

Radiation

This is a very common form of harassment. Modified surplus X-ray equipment can be utilized. Overexposure to X-ray radiation has been shown to cause tumors, brain disorders, mental illness, headaches, seizures and many other health problems.

The Beginning of Modern Electronic Harassment

Well, if you're in a big hurry to experience even one of the latest machines available that will transmit sound directly into your head without disturbing your next-door neighbor, then you need a readily available **LRAD 500X**, made by the American Technology Corporation, 15378 Avenue of Science, Suite 100, San Diego, California, 92128, telephone 858 - 676-1120, website www.atsd.com. I sent them an email as if to place an order. They responded with a huge list of questions, wanting to know every aspect of what I would use it for without offering any sort of price or delivery date. I was inquiring about the LRAD 500X which, according to the Federal Emergency Management Agency (FEMA), was developed in response to the terrorist attack on the USS Cole in October 2000, see: https://www.rkb.us/contentdetail.cfm?content_id=192673 (probable CIA website) Normal companies do not interrogate you when you are a potential customer! Of course, this is the civilian side of a large military subcontractor.

Many types of electronic harassment devices

The New York City police ordered two LRAD-500x's during the Republican convention, the company ordered 400 units at a net price of about \$13,000 each, and in January, the US Navy ordered \$2.3 million to equip several ships. In addition, they are adding lasers, especially in the green spectrum, which the human eye is sensitive to, called Dazzlers. Since then several other law enforcement groups, including the Highway Patrol are starting to equip themselves with this type of weaponry. This, of course is just the tip of the iceberg, as more electronic harassment devices begin to reach and be utilized by local law enforcement. In addition, there are many companies out there now manufacturing all sorts of interesting harassment devices, thus ensuring greater civil unrest in the future on a very local level!

Let's go back to the beginning now and examine *the genesis of the electronic spying, mind control and emotional influencing science.*

The heart of this technology began previous to World War II with the discovery of the ability to detect distant metal objects with radio waves, by a German scientist Christian Hulsmeyer in 1904. Then in 1917, Nikola Tesla established the first principles regarding frequency and power level for the first primitive radar units. With further advances in microwave technologies, developed first in England, then in the US, France, Russia and finally Germany, the side effects affecting human consciousness, and the ability to induce cancer from a distance via the microwave beam, produced by radar signals became apparent.

Therefore, *it did not take long before the mind control-oriented intelligence agencies began to take a very keen interest in radar and microwave technologies.* During the 1920s and 1930s, Nikola Tesla, Edward R. Scott, Harry Grindel Matthews, and others postulated a **microwave particle beam or electromagnetic weapon.** Nikola Tesla's weapon was called a "Teleforce projector," but at his death on the morning of January 8, 1943, the government confiscated all of his drawings and work on this project.

After World War II Dr. Alan Frey, working on a grant from General Electric developed a **microwave voice-to-skull transmissions device** while he was at Cornell University in upstate New York. The phenomenon was discovered by radar technicians during World War II, who found they could hear the buzz of the train of pulses being transmitted by the radar equipment they were working on. His work was reported in several scientific journals, including the *Journal of Applied Psychology*, 17 (4):689-692 in 1962. **Dr. Frey discovered that the proper carrier frequencies, when pulsed, spanned from 125 MHz well on up into the high frequency microwave region.** As the field was developed, the term "**microwave hearing**" was coined, and of course, our previously mentioned Dr. José Delgado of Yale utilized these technologies in his inventions.

I myself have experienced this as I had worked on the ANFPS-8 and the ANFPS-6 Radars located at Point Arena, California. The minimal requirements for microwave hearing were about .3 W or 300 milliwatts per square centimeter of cell surface, or the amount of power that would be received in heat units from a 250 watt light bulb at 3 feet. Now, remember, this began during World War II and today still remains highly classified! Before we examine state-of-the-art technology of where we really are, let's revisit the history of the world briefly.

The US transported equipment from Peenemunde caves to the New Mexico facility.

At the end of World War II this country had a different mindset than it does today. The first notable event occurred when Russia and the United States captured the Nazi V2 rockets within the launching Center, located in the caves, at Peenemunde, an island located just off the Baltic Sea coast of eastern Germany. Previous to World War II, Peenemunde had been Wernher von Braun's grandfather's hunting lodge. Soon the V2 (Vergeltungswaffe-reprisal weapon-2) production facility, located nearby at Mittlework (Nordhausen, Thuringia-Germany) was captured by the United States, and we began moving equipment out and transporting it to a facility in New Mexico. The first shipment of rocket parts left in the US on May 22, 1945. A few days later, the Nordhausen area became part of the Soviet zone of occupation, and Soviet army officers arrived to tour the plant on May 26, 1945.

In June 1945, the United States Army left the Nordhausen plant as required by JCS Directive 1067/14 with parts, machine tools, and documents (including blueprints for the projected A-9/A10 two-stage intercontinental missile) left for the Soviets. It was not very long after that that the Soviets had greatly outdistanced the United States in missile technology. The main reason was although we removed several of the V2 parts, the drawings in hardware for the newer spacecraft, the A-10 (designed to reach New York City and other coastal cities) went to the Russians. Included in this was the design of a special hydrazine fuel pump that delivered massive amounts of fuel to the engine, allowing it to lift far greater payloads into orbit than the V2 was capable of.

Following that, Sergi Korolyov (the Russian equivalent of Werner von Braun) began making tremendous Russian technological steps in rocketry, and Igor Kurchatov (the Russian equivalent to Edward Teller) along with Andrei Sakharov succeeded in exploding a thermonuclear (hydrogen bomb) on August 12, 1953. Strangely enough, I might add, both these scientists after the Cold War ended, became human rights activists and Andrei won the Nobel Peace Prize in 1975!

Obviously, there was a tremendous amount of paranoia about the threat of a Russian attack on the United States. On the home front, **colleges and universities were looking into junior high and high school students for**

potential scientific recruitment. This is probably why I was chosen to enter science for the US government at an early age. **Today there is more of a corporate search into the universities, for outstanding management material.**

Gen. Dwight D. Eisenhower (October 14, 1890 - March 28, 1969) became the 34th President of the United States in 1953 until 1961 (a five-star general in the United States Army) and inherited the brunt of the Cold War. At that time rumors were flying around that the Russians had made tremendous advances in ICBMs (intercontinental ballistic missiles) and were planning to attack the United States.

Surveillance system needed to protect the US in the Cold War

In order to find out, we had to arrange some form of surveillance system to watch and observe the Soviet Union. A few poor attempts were made to fly over the Soviet airspace, but nothing was working. One such attempt was made by Hal Austin on May 8, 1954 flying a RB-47E, flying over Russia equipped with surveillance equipment and cameras, but his plane was severely shot up by the new Russian Mig-17's. Luckily Austin made it back to Fairford Air Force Base in England. Sadly, however 252 air crewmen were shot down on spy flights between 1950 and 1970, most directed against the Soviet Union.

The next person to get involved with new ideas for spying from the air or space was Trevor Gardner. In 1954 Gardner was a 39-year-old special assistant to the Sec. of the Air Force Harold D. Talbott. Born in Cardiff Wales on August 24, 1915, Gardner immigrated to the United States when he was 12 and grew up in Southern California. He studied business and engineering at USC (University of Southern California) and received a business degree. He was also an Olympic class water-polo player. In 1942 he was a research administrator at the California Institute of Technology. At one point, he was working at General Electric with his former roommate Simon Ramo. Afterward, Simon Ramo went to work for Howard Hughes, at Hughes Aircraft Company in El Segundo California.

While under Ramo's watch, Hughes Aircraft created a dominant position in supplying electronics for many military fighters and missiles. Because of the eccentricities of Howard Hughes, Gardner recommended that Ramo start his own company, which he did in 1954 along with Dean Wooldridge. Originally

called the Ramo-Wooldridge Corporation, it merged with an automobile parts manufacturer, Thomson products. Then it became known as it is today, the TRW Corporation. Later on in the 1960s Trevor formed a company in Pasadena California near the Rose Bowl called Hycom which manufactured the spy cameras for the U2 spy plane. One of the interesting things that happened at the time was that on September 29, 1963 Trevor, well known as a controversial figure at the time, was found dead in his Washington D.C. home, apparently from a heart attack. But knowing how all of these people were working deep within CIA, heart attacks could conveniently be arranged, although unnatural, especially considering the fact that he was only 48 years old!

Another incident that occurred a few years earlier was the death of James Vincent Forrestal (February 15, 1892 - May 22, 1949), former United States Sec. of the Navy and the first United States Sec. of Defense. Supposedly as a member of the famous Majestic 12 (MJ 12), **James was involved with the aliens taken into captivity from the Roswell crash.** The secrecy of alien intervention was heavy on his mind and finally he was asked to resign by Harry S. Truman, the United States President who preceded Dwight Eisenhower. **Forrestal was considered a security risk by the OS5 and MI-6 at the time and was placed under the care of none other than the aforementioned Dr. William C. Menninger (1899-1966) of the Menninger Clinic in Topeka, Kansas. Remember, Dr. Menninger was a great LSD experimenter, had strong CIA connections and was linked to the Tavistock Institute.** Forrestal was checked into the Bethesda Naval Hospital five days after treatment by Dr. Menninger. The LSD therapy was wearing off, as he gained 12 pounds before he was found dead after a fall from the 16th floor on May 22.

Dark times—both the threat of a communist bomb attack and the UFO situation

Obviously, during this era, between the UFO picture and the threat of a communist bomb attack on the United States, these were dark times.

A few years later, after I left NASA, and had my own electronic company, and one of my clients became Hughes Aircraft Corporation in El Segundo, where I, as a consultant to various projects, was introduced to the **high tech electronic systems used in missiles and satellites** at the time. Two of my

other customers nearby were Hycon and TRW. Right next door to TRW was a small United States Air Force Base, which was another one of my clients at the time.

Meanwhile, while Trevor Gardner was special assistant for research and development to the Secretary of the United States Air Force, he began to push Eisenhower and his administration into action for the **prevention of a surprise nuclear attack**. The Russians, meanwhile, had built several long-range bombers which were considered a threat, but the biggest threat, Trevor felt, was from Russia's ICBM missile program. Sharing his views at the time was James Rhyne Killian, then president of MIT, and later the first chair of the President's Foreign Intelligence Advisory Board. Very soon Air Force Brigadier Gen. Bernard A. Schriever, Richard M. Bissell Junior (CIA director), to be followed later by "Bud" Wheelon (CIA), Edwin H. Land (founder of the Polaroid Corporation and inventor of instant photography), Richard S. Leghorn (World War II reconnaissance pilot), **Clarence L. "Kelly" Johnson (Founder of Lockheed Skunk Works) and Mert Davies (RAND Corporation)** became a tightly knitted working group that would not only remove the paranoia of a Russian invasion, but become the forefathers of all of the high-tech and deep space projects of today. Years later, I became friends with Bud Wheelon, as after his retirement from the CIA, he went to work for one of my clients, Hughes Aircraft.

The 1st spy satellites

Joining this effort to do something about **spying on Russia** was Mert Davies (1917-2001). Davies was born in St. Paul, Minnesota and moved with his parents to Palo Alto, California two years later. He soon became a pilot, before graduating from high school and later graduated from Stanford in 1938 with a degree in mathematics. In 1947 he learned that a newly developed agency of the United States Air Force, the RAND Corporation, was doing studies on satellite engineering and reconnaissance systems. **RAND Corporation (the name was an acronym for Research ANd Development)** was formed in October 1945, as an Air Force's research and engineering shop, at the Douglas Aircraft Company and was the brainchild of Gen. "Hap" Arnold who, along with other men, believed the Air Force needed to get civilian scientists and industrial resources heavily involved with the Defense Department. RAND soon moved out of its location at Douglas Aircraft to a two-story building at the corner of Broadway and Fourth Street in Santa Monica.

A crash study of satellites ordered by Gen. Curtis LeMay found Mert Davies and RAND Corporation early in 1947. Although they would not be implemented until later times, **Davies was the RAND pioneer of satellite technology.** This early work with the creation of first spy satellites was called the Corona series. Although the spy planes were first used, eventually they were replaced by satellites. Mert Davies continued working for RAND long after these early satellites, and helped develop the CIA Clementine series (Earth orbiter), the Galileo satellites (GPS navigation satellite), and later on contributed towards digital photography on the Mariner Series (Martian fly-by satellites), and Viking orbital satellites.

Richard Sully Leghorn was born on February 7, 1919 in Brookline, just west of Boston. He graduated from MIT in 1939 with a degree in physics, and a keen interest in photography. He began work at Kodak in 1939. While there, eventually he became head of Eastman Kodak's European division. During the second world war, he was Commander of the 30th Photo Reconnaissance Squadron and after the war became the photographer for Operation Crossroads, which involved dropping Able and Baker, the first two atomic bomb tests located in the Marshall Islands (Bikini Atoll), shortly after World War II. Later on he developed a reconnaissance camera at his new company, Itek (short for Information Technology). **Itek was formed by Richard and his friend Theodore "Teddy" Walkowitz,** and funded by Laurence Rockefeller in 1957. Previous to this Nelson Rockefeller, along with his brother Lawrence and David funded a study on foreign policy and domestic issues facing America. Part of the study group included: Franklin Lindsay (former OSS spy, who later became Itek's vice president), Edwin Land, Dr. Edward Teller, Henry Luce (Time Magazine) and Teddy Walkowitz (Laurence Rockefeller's assistant at the time). Shortly thereafter Itek purchased the Boston University Physical Research Laboratory, which was a very advanced optics lab at the time.

What I find interesting in this part, was that Itek was one of my very good clients during the late 1960s and I had met Richard Leghorn and Frank Lindsey, who was then president of Itek several times. Leghorn had left his post at Itek earlier, but still visited occasionally. During this time I had no idea they were receiving funds from the CIA, with early contracts given by Richard M. Bissell, Jr. (joined the CIA in 1954, served as deputy director of the CIA, 1959 -1962), and were primarily a CIA subcontracting company. What I did know, was they were a very good client and bought a lot of equipment from

me. I remember seeing several of their cameras (they were surprisingly quite large—and today would be much smaller) that were being used at the time for the previous Corona and later Samos (Satellite and Mission Observation System) programs. I also had Fairchild Systems, Palo Alto, California, as a client, which were competitors of Itek. My visits to Itek were quite frequent, and as a result I fell in love with Boston, and still to this day remember how it was then versus now. In the late 60's Boston was much smaller and quite quaint. Since then, it has grown quite a bit. I also spent quite a bit of time at Logan Field, Boston's airport, due to the frequency of visits.

Richard Leghorn met Mert Davies at Wright Field (Now Called Wright-Patterson) in 1951, as both men were there to present their ideas to the Air Force laboratory. This began a long-term relationship where these men became the architects of advanced camera systems.

Having camera systems to spy with, next we needed a spy plane to carry them

Now, with the camera systems under development, some form of transportation was necessary to get them within a reasonable distance to utilize their photo reconnaissance abilities.

Enter Clarence 'Kelly' Johnson. homeboy from Michigan. Born on February 27, 1910 in the northern Michigan town of Ishpeming, not far from Marquette, he was the seventh of nine children born to Swedish parents, his father was a bricklayer, his mother a housewife. Once Kelly discovered the Carnegie Library in town, he visited every day and practically inhaled all the collection of Tom Swift books, including Tom Swift and his airplane. I can't help but think that I did the same thing, when I discovered the Ann Arbor public Library and read all of the Tom Swift books, also. Another interesting thing I found out about Kelly was that he soloed his first airplane in a Eurocoupe, a low wing, easy-to-fly airplane. When he was 12 years old, he was very determined to become an aircraft designer.

Kelly Johnson attended the University of Michigan in Ann Arbor in 1929. He studied aerodynamics at the University's wind tunnel as an assistant to Professor Edward A. Stalker, chairman of the aeronautical engineering department. I attended the University of Michigan much later (although my father, Alan Bell was there with Johnson), and the wind tunnel was a very cool

place to hang out, as I was studying physics at the time and I remember getting to know several of the professors there, and I was given several full-size aircraft models that were built by previous students. When I took them home, after disassembly and reassembled them in the backyard, my parents freaked out as these were not little models, but full-size mockups! I did the same in the water lab where they built and tested ship hulls. On a scale of 2 inches per foot, the discarded models made great canoes! In general, the U of M was a great playground.

The US needed spy planes until satellite spying matured

After the Depression, Lockheed Aircraft was in bankruptcy and was bought out by Robert and Cortlandt Gross for a mere \$40,000. After Kelly did a year of graduate work at the University of Michigan, he joined the firm and worked on the Lockheed Electra L-10 airliner, a plane that I flew on many times when I was a child growing up. He next designed the coolest airplane ever, the twin-engine P-38 Lightning, along with the P-51 Mustang (built by North American Aviation), which were the fastest airplanes of World War II. A short time later, Ben Rich joined Lockheed as a thermal dynamics specialist, and in later years succeeded Kelly Johnson.

Meanwhile, due to the paranoia of what Russia was doing missile and militarily wise, the Air Force sought assistance from some of the scientists mentioned before. Due to the insistence of General Bernard Schriever, and Colonel Richard Leghorn (still stationed at Wright Patterson at the time), for a high-altitude reconnaissance program over Russia, "Project Lincoln" had been started at MIT. The original group consisted of Edwin "Din" Land from Polaroid; James Baker, the Harvard astronomer and lens designer; Edward Purcell, Harvard physicist and Nobel Laureate; and Alan F. Donovan from Cornell aeronautical laboratory. By the end of 1951, this group had assembled in Boston to begin their research. Their headquarters were located above a Secretarial school on Beacon Hill.

"Be careful of the involvement between the civilian corporations and the military."

Then the deputy chief of staff for development of the Air Force, Major General Gordon P. Saville added 15 reconnaissance experts. They included the above-mentioned group, and Kodak physicist Carl F.P. Overhage became the

group's chairman. Other members added were: Peter C. Goldmark from Columbia Broadcasting System Laboratories (CBS); Stuart E. Miller of Bell Laboratories; Richard S. Perkin of the Perkin-Elmar Company; Lewis N Ridenour of Ridenour Associates; and of course Colonel Richard Leghorn was chief liaison officer. During January and February 1952 the Beacon Hill study group traveled every weekend to various air bases, laboratories and commercial firms or briefings on the latest technology and projects. By 1953 the group had presented its studies to the newly elected **President Eisenhower, who immediately agreed that until satellite technology matured, the need for a very high-altitude reconnaissance spy plane was absolutely immediately necessary.** Shortly after his election, Eisenhower appointed James Ryan Killian as the first White House science adviser. Under Killian's skillful leadership, The Beacon Hill Group, The Air Force's Scientific Advisory Board and Intelligent Systems Panel, and the Atomic Energy Commission General Advisory Committee, came under his watch and this began the very close interface between private companies, scientists and the military. **Eisenhower later made a comment, "be careful of the involvement between the civilian corporations and the military."**

It's interesting to note here again that CBS Laboratories, Bell Laboratories in Murray Hill, and Perkin Elmar were all of my clients in the next decade.

As soon as Kelly Johnson heard about the Beacon Hill study, he alerted Lockheed Aircraft to get involved. Thus the Lockheed Skunk Works was now going to be building the advanced aircraft, and reverse engineering alien spacecraft, as it is famous for today.

Skunk Works

The Original Skunk Works was formed in June of 1943, when The Air Technical Service Command (ATSC) wanted a jet fighter. Kelly chose an open area near the wind tunnel of the Lockheed Burbank plant and began dismantling engine crates from the Lockheed Hudson bomber and using them to build walls. He then rented a circus tent for a makeshift roof and acquired a local machine shop for tooling. He then selected a dozen of his best engineers, and his first contract was for the XP-80 Shooting Star (a beautiful aircraft which I made models of when I was a kid) which was built in 143 days.

A team engineer named Irv Culver was a fan of Al Capp's newspaper comic strip "Li'l Abner," in which there was a running joke about a mysterious place deep in the forest called the (Skonk Works). There, a strong beverage was

brewed from skunks, old shoes and other strange ingredients. Kelly Johnson's organization operated out of a rented circus tent, next to a plastic manufacturing plant that would produce a strong odor which permeated the tent. One day Culver's phone rang and he answered by saying "Skonk Works," "inside man Culver speaking." Several employees overheard this and the "Skonk Works" became "Skunk Works" which is now a registered trademark of the company. I had the fortunate experience of working there for about a year and you can see my resignation slip at www.BBSradio.com in the About Host Info.

Richard Bissell called Kelly Johnson on December 1, 1954 to confirm funding of (under Air Force codename of AQUATONE) the CL-282 **(U-2) project**. The Skunk Works had evolved into building 82, an old bomber production hangar. Kelly was already gearing up for the project and instructed Ben Rich (a budding bright engineer who later replaced Kelly upon his retirement) to work on the engine inlets, cabin heating and cooling and fuel control. The U2 had to fly at 70,000 feet and had to be very light as every pound of weight would sacrifice a foot in altitude. The wingspan was 70 feet in the fuselage 44 feet long. Flying this high required special high-altitude suits, and a lot of other technologies were developed that are still in use today.

By July of the following year the first U2 was ready for delivery. It was known around the Skunk Works as "Kelly's Angel" and officially labeled as article 351. Six days later the finished aircraft was ready for transport to Groom Lake, a mere six months after the beginning of the project.

The "Dynamic Sorer" Spaceplane

During World War II Groom Lake was used for bombing and artillery practice, but then was abandoned until April 1955, when it was selected by Kelly Johnson as the ideal location for testing the U2 spy plane. First called Watertown strip (Watertown, New York being the birthplace of then Director of the CIA, Allen Dulles), and later Area 51, and Dream Land. It is a 23 by 25.3 mile rectangular area of restricted airspace located in the Yucca Flat area near the town of Tonopah, Nevada located several miles north of Las Vegas. The base has seven runways, with one being over 23,300 feet long. Some of the known projects conducted there were project X-20 Dyna-Soar (United States Air Force "Dynamic Sorer" spaceplane), NERVA (Nuclear Engine For Rocket Vehicle Application), OXCART BLACKBIRD PROGRAMS (the SR

71 project later to be followed by the Aurora), Blackswift (a rapid strike hypersonic cruise vehicle HCV), project Have Blue (F-117 program), etc.

Three Pleiadean disc crafts stored in Area 51—after a deal the US made with the Theta Reticulans

I have been to **Area 51** several times and have observed a tremendous amount of unexplainable phenomena. Most of my visits were there during the mid-1980s and early 1990s. After Sean David Morton's grand exposé and tours, mostly on Wednesday nights, and finally the arrival of Larry King, the base appears to have been dismantled of all of the reverse-engineered alien technologies. **I know for a fact that there were three Pleiadian disc craft there, housed in hangars in the Groom Lake facility area.** These craft had been brought down by military aircraft utilizing special missile technology given to us by the Theta Reticulans, after **a deal was put together between Dwight Eisenhower and the Reticulans, which allowed a technology swap for underground sharing of military bases. This deal was supposedly made around March of 1952.**

Around **the late 1980's** while Sean David Morton was out there visiting Area 51, a **large triangular object completely filled the skies over the entire area.** My sources tell me that this was a very large slow-flying Andromedan mothership that was more than a mile wide. A similar incident occurred over Phoenix, Arizona on **March 13, 1997** and again on **April 21, 2008.**

The first U2 penetrated Soviet airspace on July 4, 1956 and was detected on Soviet radar. By September 1957, the U2 had flown only a handful of missions over Russia. Each flight was an invasion of Soviet territory with the potential to cause war. By late 1959 the Russians had made several improvements in their air defense system and it was now time to direct our energies to the satellites. Finally on May 1, 1962 Francis Gary Powers flew the U2, from Pakistan on the most ambitious mission in the history of the U2 program. Given the codename "Operation Grand Slam," ours was to fly across central Russia and land in Norway. This was to be the 24th mission flown by U2's over Russia. Neither the CIA nor Powers were aware that there was a newly installed missile base in Sverdlovsk, an industrial area in the eastern Russian Urals.

Russian radar had been tracking him while he was still over Afghanistan. Having been outwitted, and now flown by U2's previously, this time they were loaded for bear. Much later on, Khrushchev recalled "we were sick and tired of these unpleasant surprises, sick and tired of being subjected to these indignities."

Then the Russians shot down the U2 spy plane

He was shot down that day by an S-75 Dvina (SA-2 Surface to Air Soviet missile) over Sverdlovsk. For a half hour into his flight, the Russians were in hot pursuit. They fired three S-75 missiles. The first went off course, the second into one of their own planes, and a third exploded right behind Powers, causing him to lose altitude control. He tried to detonate his camera system, but due to rapid suit inflation, he could not reach the controls. Due to loss of cabin pressure, he was dragged out of his cockpit and his parachute deployed automatically. He ended on a farm and his U2 crashed nearby. He was quickly captured, and his plane was retrieved, fairly intact.

He was tried as a spy, and released two years later on a prisoner exchange program along with an American student, Frederic Pryor (who later became an assistant professor of economics at the University of Michigan) for Soviet KGB colonel Vilyam Fisher (a.k.a. Rudolf Abel). The actual exchange took place at Gliencke Bridge in Berlin, Germany which was a popular exchange point featured later in many spy movies.

Nikita Khrushchev, meanwhile, decided to be quiet about the capture of the U2 and its pilot. He wanted to throw the Washington spin machine into overdrive. When the U2 did not show up in the Norwegian Sea coast down Bodo, General Andrew Jackson Goodpaster, President Eisenhower's personal aide, notified him at Camp David. Eisenhower had predicted that if ever a U2 went down over Russia, "the winds are going to blow"!

Edwin Land and James Killian had warned CIA's Richard Bissell to be forthright if a U2 should ever go down over Russia. Bissell did just the opposite, claiming that a U2 was missing that had been, "on a weather mission originating in Adana Turkey. During flight in southeast Turkey, the pilot reported that he had oxygen difficulties. Search efforts are underway in the Lake Van area."

When the Americans found out later that this was a lie, it gave Americans, who were very gung ho about the government after World War II, a great surprise about deceitful information being disseminated from Washington. Unaware that Powers had been captured, the administration dispatched a NASA spokesman (this is where the term "Never A Straight Answer" for "NASA" began) and a State Department spokesman, Lincoln White, to parrot the story repeatedly. As soon as Khrushchev announced to the world the capture of Powers and his spy plane, the entire cover-up was blown.

Then stories began to circulate about who authorized these missions. Eisenhower, meanwhile, stood in the background but as Vice President Richard Nixon said, "If the president was not aware of spy flights, then it might be assumed that a war could start without his knowledge." So, funny, on May 11, 10 days later, Eisenhower gave a full disclosure speech, admitting he was aware of these flights and the ensuing cover-up. He did not, however, mention the ongoing satellite programs that were designed to replace the U2 program.

On May 16 Nikita Khrushchev and Dwight Eisenhower were scheduled to meet in Paris for a peace conference. When the news reached Khrushchev, the peace talks were terminated, and the Cold War continued.

Since then the government has lied about Vietnam, Watergate, the Iraqi wars, 9/11, Roswell, and all of the UFO cases. It has lied about vaccinations, mind control programs, and too many other events to even begin to mention here. But going back to the present era of discussion, we continue.

The U2 covered 15% of Soviet territories within 4 years of spying.

The CIA calculated that in four years of intermittent service, the U2 program generated 1,285,000 feet of film, and covered roughly 15% of the Soviet territories, which would be about 1.3 million square miles.

The SR 71 Blackbird

Then we needed a plane that could fly 5 times higher than the U2 and be undetectable by radar.

The next step was to build an airplane that would fly 5 miles higher than the U2, travel at 4,000 mph, and be undetectable by radar. Once again,

Kelly Johnson stepped up along with Ben Rich and built the A-12 OXCART, and all titanium aircraft which flew again at Groom Lake on April 25, 1962. Known as "Article 121" 18 were built. The much acclaimed title of "SR-71" is a designator continuation of the pre-1962 bomber series, which ended with the XB Valkyrie, a large delta-winged bomber to be built by either North American Aviation or Boeing Aircraft.

The SR 71 Blackbird flew many missions, during his lifetime and before his retirement in 1990. However, it never flew over Russia. However, I used to hang out with a group of engineers that not only worked on the OXCART programs, of which a very large craft was built called the Aurora which I had seen once physically in Laguna Beach. The rumor (and I cannot confirm this) is that the SR 71 did fly unofficially over Russia and that utilizing **Tesla's V. Beam weaponry**, a 2-foot section was shot off the starboard wing of an SR 71. After this, it was grounded, and the **Aurora program** was launched. I can confirm the existence of the Aurora, but not this rumor although it came from very credible sources. In its daily life, the SR 71 flew mostly missions over Vietnam and the Middle East. However, it did launch the Skunk Works into the stealth technology arena.

The Bermuda Triangle and Stealth Technology

Satellite technology became the super priority

Stealth technology, however, had a beginning in the Bermuda Triangle. During World War II mostly wooden ships, called Mine Sweepers had several metal parts on board, i.e. engines, electronics, and utility equipment. While traveling across the globe, they became magnetized by the Earth's magnetic field, thereby making them unusable for mine detection. So they had to remove the magnetic fields in a process called de-gaussing. This was accomplished at either the Philadelphia Naval shipyard, or the shipyard in Norfolk Virginia. When coming up from the Southern Hemisphere, they passed through the Bermuda Triangle. **The Bermuda Triangle possesses a vortex left over from Scalar Wave warfare that occurred some 12,500 years ago on the now submerged continent of Atlantis.**

As the ships passed through the Triangle, they were usually spaced about a mile apart. Although visual contact was made, occasionally radar contact was not possible and the ships were "invisible" to each other by radar. This

phenomenon disappeared once they were out of the general vortex area of the Bermuda Triangle. This led to the famous "**Philadelphia Experiment**" conducted during the early 1940s and terminated during the late 1950s. I was privileged to work on the termination end of the project, at the Randolph Laboratory (now demolished) under the tutorialship of Doctor Donald L. Katz. I might add in his honor, that Doctor Katz was a recipient of 24 national and international awards for his technical achievements, and was given a citation and award of the National Medal of Science by President Reagan in 1983. He died in May of 1989 and was over 90 years old.

Now that the U2 and SR 71 were no longer going to be effective, focus on getting reconnaissance and other types of satellite technologies into orbit was of great concern. The Corona program (a photo reconnaissance satellite) had been going on since the beginning of Eisenhower's presidency. However, progress was quite slow, therefore instituting the U2 and the SR 71 as the first step.

Now that overflights of Russia were no longer possible, with the threat of starting a nuclear war the US began to intensify its satellite programs—and was still very embarrassed by the fact that *the Soviets had previously launched 184-pound satellite Sputnik into orbit 550 miles above the Earth on October 4, 1957, and by the following November launched a 1,100-pound satellite carrying a dog named Laika, and in August of 1960 successfully launched and recovered two dogs named Belka and Strelka.*

In February of 1962 Richard Bissell resigned from the CIA after the failed attempt by the CIA to assassinate Fidel Castro with the exploding cigar, called the Bay of Pigs operation and several other strange plots. Bissell had been a great asset during the design, construction and operation of the U2's, but his time was over. So Bud Wheelon took over.

Bud Wheelon who I mentioned earlier, when I befriended him (I served as a metrology consultant for special equipment needs to his department) while he was working at Hughes Aircraft in the late 1960s, was a very cool guy. He grew up in Southern California, and his father Orville was an accomplished aeronautical engineer and an expert in titanium. Previously he had helped Kelly Johnson wrestle with the titanium problems associated with the supersonic A-12 (SR 71). It was because of his work that we at Pyradyne were able to manufacture a titanium pyramid back in 1976. During World War II Bud spent his summer vacations working at the Douglas Aircraft plant in Long Beach,

California. At 16 he enrolled in Stanford where he took graduate courses in physics and math. In 1952 he got his PhD at MIT. While in Cambridge he shared an office with another one of my role models, physicist Murray Gell-Mann, mentioned in earlier chapters, who worked quite closely with Richard Feynman. Both Feynman and Gell-Mann won Nobel Peace prizes.

Many military and scientific satellites were built from 1962 to 1975. Then launch facilities were needed.

Dr. Wheelon was responsible for technical collection and analysis activities, beginning with the U2 overflights, development of the SR 71, and **Corona reconnaissance satellites**. He worked at the CIA until 1966 when he joined Hughes Aircraft Space and Communications Group as Vice President of Engineering. Under his direction he built a large number of military and scientific satellites over the next 15 years. Later on he served on the President's foreign intelligence advisory Board. He currently lives in Santa Barbara, California.

Lockheed Missile and Space Division in Palo Alto, California was the prime contractor for the initial Corona project. James W. Plummer was the engineer who started the project. Previously James had gotten a degree in engineering from Berkeley and then joined the Navy where he finished his engineering studies at Harvard. To keep the project discreet, Plummer was instructed to find a secret facility away from the missile group. He selected a few of his best engineers and rented a building along the Bay shore freeway located near San Francisco, owned by Hillar helicopters. So this became the birthplace of the Corona project.

In order to get the Corona satellites in orbit we needed a launch system. However, to secretly launch spy satellites we had to create a diversionary program. This program was masked under the name of Discoverer, which was a 1,653 lb. satellite launched by a Thor-Agena rocket. The satellites returned film canisters to the earth in capsules called "buckets," which were captured (there were a lot of misses!) in mid-air over Hawaii by C-119 aircraft. I remember at the time seeing this program and its missile catching as a frequent news item. Initially the satellites were launched from Point Arguello later known as Vandenberg (nicknamed Vandyland) Air Force Base. Brandenburg Air Force Base was named after General Hoyt S. Vandenberg, the Air Force Chief of Staff from 1948 to 1953. It consists of about 98,000 acres around the

town of Lompoc, California. Here again I spent a lot of time as the base is another one of my better clients. If you ever are up there and want a great meal with a beautiful environment, I suggest a restaurant called "The Whale's Tail" located at 3950 Bluefin Circle, (Tel for reservations 805-985-2511), Oxnard, California, in the Channel Islands Harbor. This is where I usually took the base commander and several of his top technical people to lunch during the late 1960's. It was a trendy place as Jane Russell had a boat next to it and John Carradine was usually at the bar!

The buckets (return capsules) were manufactured by General Electric by its Space Reentry Program Division located in Philadelphia, Pennsylvania. To secure a secret facility, General Electric bought and refurbished a large six-story warehouse from A&P grocery chain located at 32nd and Chestnut Street near downtown Philadelphia. This was the beginning of our reentry technology—as **before that, no satellite had ever returned to Earth intact.**

The first 12 launches were pretty much total disasters, but the 13th was the charm which launched on my birthday on August 10th in 1962 and was recovered the next day and was recovered from the ocean by the US Navy. After experiencing many failures, James Plummer and his colleagues had a big celebration at one of my favorite places in Palo Alto, call Ricky's. When I was working in the Bay Area, a friend of mine set me up on a blind date. The meeting was to be a popular area and that was the nightclub located in Ricky's. The date went well, but today Ricky's no longer exists.

The first successful air recovery was Friday afternoon on August 19, 1960, by Captain Harold E. Mitchell, flying his C-119 box car, who caught the capsule at 8,500 feet and delivered it to Hickam Air Force Base outside Honolulu.

Arthur Charles Lundahl (1915-June 22, 1992) was a key organizer of CIA's aerial photography analysis photography lab, called the National Photographic Interpretation Center, now part of the National Geospatial Intelligence Agency. A graduate of Chicago University with a master's degree in 1942, he began as the chief of the Photogrammetry division of Naval photography just after World War II. He joined the CIA in 1953 and began the analysis of the **U2 photo reconnaissance program.** The grassroots of the program started on the top floors of the Steuart Building, a seven-story office building at the corner of New York Ave. and 5th Street, N.W. in Washington D.C. The Steuart Motor Co., a Ford dealership, occupied the first three floors with a

showroom on the bottom floor. Once again, I might point out, a stealthy CIA location!

Corona spy satellite program had 145 launches

This operation started with 13 people and at its termination in 1972 had more than 1,500 staff members and analysts. All documentation involving the Corona was top secret and stamped **Talent-keyhole**. All totaled, the Corona program had 145 launches, covered 520,000,000 miles of territory, with a mere program cost of \$850 million, which by today's standards would be chump change!

The Corona satellites were designated KH-1, KH-2, KH-3, KH-4 KH-4A, and KH-4B. The KH stood for Key Hole and is still a designate for today's modern programs. Up until this time these programs had a real purpose in national defense. The next programs were the ones that began to interfere with our personal freedoms, inflict depression via advanced transmission discoveries, and in general inflict electronic harassment. I personally respect all the above-named individuals and their work done at that time, as the Cold War was a serious threat that could have led to an atomic confrontation. I was very proud to have worked with several of the companies and individuals mentioned. I left the industry around 1973 shortly after the termination of the Corona program. I had seen, however, during that time technologies being developed that would lead the intelligence groups, directed by the Tavistock Institute, into today's times.

The next step, and the beginning of obtrusive spying started with the discovery of a charge coupled device, called a CCD invented by William S. Boyle and George E. Smith. Today you see them everywhere in our digital cameras and they basically made film obsolete. The second notable event was Bud Wheelon's last big project called **RHYOLITE, which was a geosynchronous satellite or a satellite that would be parked in one area over the earth.** This usually occurs at an altitude of about 22,000 miles. In addition, we have now **remote-controlled spy planes** such as the **Predator**, which made its operational debut in the air war over Kosovo in 1999 and the **Global Hawk** which has capability similar to the U2.

Star Wars Program

Under the watch of George Tenet, the space shuttle Atlantis launched STS mission 36, deploying a KH-11 satellite under a program called MISTY. This particular satellite works in conjunction with Project Echelon and the Star Wars defense system. It is a very highly classified system.

EYELASS—a laser beam system fired from space so satellites can destroy an object in Earth's atmosphere (seen in the mid-1990s).

I got a taste of the Star Wars Program back when I worked at Autonetics, a division of North American Rockwell. The program was called the EYELASS, an advanced laser system designed to be fired from space satellites in geophysical orbits. The first time I personally ever saw the system work, was much later in Newport Beach, California in the mid-1990s. What happened was I saw a large UFO hovering out over the ocean at quite a distance. Suddenly, a white beam came from somewhere in space above it creating a huge green flash as it struck the object. Immediately afterwards, the object was gone and some form of debris fell on the ocean. I later found out that the green flash was caused by the object being struck having a large constitution of magnesium, which flashes green when struck by a hot laser beam. Another homeboy from Kalamazoo, Michigan, Stephen Segal, made a movie called *Under Siege II*. The high point in the movie was when a satellite-directed energy beam struck a single individual on a moving train!

The HAARP Project directs high-frequency microwave beams to scan an area—hurting anyone in its penetration locale.

Another interesting program is **the Clementine Satellite Program**. Designed for deep space photography it also has special radar image sensing equipment on board. Clementine satellites are, therefore, perfect to use with **the HAARP (High Frequency Active Aural Research Program) Project**. **One of the HAARP programs involves X-raying underground enemy military installations in different locations anywhere on the earth, or even on the moon for that matter.** It sends a radar pulse into the investigative area and retrieves a reflected image that carries with it the desired intelligence. The normal problem with radar is that it only works in line of sight. So to solve this, a virtual mirror is necessary to reflect the radar beam around the Earth. To visualize this, imagine that you're standing in a room and you want to look through the door around a corner. So to accomplish this, you hold a mirror in

the door which allows you to see up to a 90° view of what you normally could not have seen.

So, this is where the HAARP Project creates a virtual mirror by heating up the ozone layer at a distance of 400 miles above the Earth, and creates a microwave reflection, allowing the beam to be directed somewhere below the equator. Of course, once the beam hits the object, the reflection containing the data will not return directly to the source, but will be reflected upward, and satellites such as the Clementine can now retrieve the information, and through the use of telemetry transmit back a video image.

To give you an example of the amount of power in the transmission **this technique allows HAARP to X-ray into the earth over 1 mile deep.** The problem here is that anyone near the point where the X-ray penetrates the earth will receive dangerous amounts of radiation and be prone to cancer or severe brain or other tissue damage.

In the next chapter we will explore how the delivery systems work and what is being downloaded onto the world populace.

Chapter 12: Electronic Harassment- Delivery Systems and Programs

Before we go into greater detail, let's examine some of the common symptoms of electronic harassment, delivered by handheld units, vehicle mounted units, satellite systems, and ground-based long-distance transmitters.

Having developed a love of anti-harassment devices over the years, the following are some of the problems I have witnessed.

This all started for me back about 1975 when I was lecturing at a National Health Federation Conference in Chicago Illinois. An elderly couple approached me, claiming that 19 January 2006 there was a gray van parked out in front of their apartment complex. On the top of it was a small dish-like antenna that was pointed directly at the part of the building where their apartment was. At night when they were going to bed, they felt very uneasy, had hot flashes and sometimes either heard voices in their heads or experienced a tinnitus ringing in their ears. Later they said the two men that were in the van had actually moved into an empty apartment adjacent to theirs. They said at that point, the intensity of the unpleasant experiences increased.

When you work in the preventive medicine world, which includes **energy medicine therapy**, you hear a lot of strange things, especially from the elderly. I now feel that the elderly actually make better observations, and therefore witness what others often miss. Anyway, at that time in my life I had not learned that lesson yet, so I dismissed the conversation. But then a month later, when I was in Miami Florida, giving another lecture with the National Health Federation, I had another couple, who was not familiar with the Chicago folks give a very similar story. Then my curiosity began to rise. As we continued throughout the United States that year, lecturing in major cities everywhere, I began to hear the same story over and over, and by the end of 1975, due to an incident in Russia I finally had one of the answers.

The United States started work relations with the Soviets during World War II and established a land lease mission in Moscow. This mission was housed in a building on the Moscow River close by the Kremlin, right next door to the British and other embassies.

From 1953 to 1975 the Russians beamed the U.S. Embassy with strong microwave signals in Project Pandora, killing at least 1 employee.

When full diplomatic relations were established, an embassy replaced the mission. So in 1952 the Soviet government asked the United States to move its chancery building from the neighborhood of the Kremlin to Chekovsky Street, several miles away. An empty apartment house had been reconstructed for the use of the American chancery. Before the move occurred, the Soviets had a chance to rebuild the building from the inside out. Periodic **electronic surveillance** of all the offices in the chancery was carried out and in 1953 a very peculiar signal was picked up. It was intermittent, but varied in frequency from about 2 GHz to 7 GHz, and was operating in an intermittent mode. Because of the very important American dignitaries housed there, the State Department decided to take over complete surveillance of this particular type of microwave signal that was present in this embassy on a very definite and routine basis. Periodically, spectrum analyzers, Bolometers (microwave power-reading equipment), and other equipment measured the actual intensity identifying the various frequencies. **From 1953 until May 28, 1975 there was a single source beaming the west facade of the chancery building, starting about the sixth floor, peeking around the tenth floor and on the roof.** The North, South and East had no evidence of any beaming whatsoever. The maximum intensity up into May 28, 1975, was 5 micro-watts.

By the end of May 1975, two beams appeared hitting the embassy, one from the east on the other side of Chekovsky Street and one from the top of a high-rise Soviet building. In one place in the South East corner the two beams converge.

Later on I found out that **this examination was called "PROJECT PANDORA."** Following this, the State Department, the CIA, and the DOD (Department of Defense), launched a similar group of programs known as, "TUMS, MUTS, and BAZAR."

It was later determined that the consensus among **the Soviet EMR researchers (electromagnetic radiation researchers)**, was that the Moscow signal was destined to produce blurred vision and loss of mental concentration. In an article by the Boston Globe, it was reported that the American ambassador had not only developed a leukemia-like blood disease, but also suffered from bleeding eyes and chronic headaches. It was further found that

embassy employees had an 40% higher average white blood cell count. At least one employee in this U.S. Embassy was known to have died because of this.

Of course, to the CIA this was nothing different than what they had already done to others. When I found out about this research at the end of 1975, *I developed a device that would break up this radiation, convert it to a friendly energy, and then transmit the unwanted components back into the ground. This device later on became known worldwide as the "Pyradyne Starr Orb."*

Synopsis of Some of the Symptoms

Now having presented my introduction to the world of ELF and its related harassing effects, let me give you **a synopsis of some of the symptoms that people have experienced and recorded.**

Sleep deprivation and fatigue, malaise and irritability, shortening of the attention span, daytime fatigue attacks, cataracts, blood changes that induce heart attacks, cancer and malignancies, circulatory problems, permanent deterioration of the central nervous system, blurred vision, loss of concentration, violent muscle triggering, whole body jerks, shaking of the body, heat flashes and artificial fever, shortness of breath, loss of control of vocal cords, unable to control thoughts while reading, spotlighting of memory wherein more than normal forgetfulness occurs, hypnotic triggers (specific phrases or other clues which causes specific involuntary actions), urinary problems, sudden sexual urges, suicidal and homicidal thoughts, full panic attacks, and in the case of a coincident implant, violent and criminal actions!

The following are a few of the **things that happen in the environment around a targeted person.** Stoppage of power to appliances, manipulation of appliance settings, temporary failures that fix themselves, movement of objects often off the shelf, under the floor causing breakage, precision manipulation of switches and controls, forced, obviously premature failure of appliances or parts, vast computer failures and errors. Several of these described events often mimic what happens to individuals when they are in extremely haunted environments.

Millimeter wave scanning and "thought reading" by monitoring vocal cord muscle movements via their electromagnetic activity

In addition, there **are several different through-the-wall surveillance methods now in use**, filtering down from government agencies to law enforcement. One is called "millimeter wave" scanning, whereby a microwave signal just below the infrared frequency or region is used. In addition, there is a technique called "thought reading." This is accomplished by remotely monitoring the electromagnetic activity of the speech control muscles in the vocal cords. Whenever we read or think aloud or sometimes just think, we subconsciously move our vocal muscles. This creates an electromagnetic signature that can be compared with a huge databank of emotional prerecorded responses made possible by our superconductor technology. Another type of thought reading is a "Mining Process," whereby a signal is sent into the brain and the resulting disturbing frequencies are monitored electronically.

Electronic mind control was used in the Gulf War against Iraqi troops in Kuwait in Desert Storm—on standard radio frequency broadcasts.

Judy Wall, writing in Nexis magazine October/November 1998, describes the use of electronic mind control in the Gulf War. The March 23, 1991 Newsbrief, "High-Tech Psychological Warfare arrives in the Middle East," describes a US Psychological Operations (Psi Ops) tactic directed against Iraqi troops in Kuwait during operation Desert Storm. The maneuver consists of a system in which subliminal mind-altering technology was carried on standard radio frequency broadcasts.

Looking at the technology that Judy is commenting about takes us to the LIDA machine made in the 1950s by the Soviets. The CIA purchased one through a Canadian front, for Doctor Ross Adey, and one still exists today at the Loma Linda Medical Center, where he used to work. Although the LIDA machine is not sold in the United States, it has a US patent number 3,773,049 dated November 20, 1973 entitled **"Apparatus for the Treatment of Neuropsychic and Somatic Diseases, with Heat, Light, Sound and VHF Electromagnetic Radiation."** If you choose to search this patent, you may have to go through the IBM Intellectual Property Network.

Doctor Ross Adey, formerly of the brain research center at the University of Southern California and before his recent death, worked at the Loma Linda University medical school on the CIA's infamous "PANDORA" project. His research involved inducing of **specific behavior modifications by**

electromagnetic means, as well as inducing calcium efflux events (a microwave or electromagnetic process that controls calcium ions of the receptor sites of the brain, therefore creating psychological, emotional and immune system degradation effects), to interfere with brain function—the *so-called "Confusion Weaponry."*

In the 1980s Doctor Adey demonstrated how a 147 MHz field with a power level of .8 mw per square centimeter caused an efflux, or release, of calcium ions from the irradiated brain tissue. This response only occurred when the 147 MHz carrier frequency was modulated at *6 to 20 Hz, which is considered ELF (extremely low frequency).*

The police have exclusive use of the 450 MHz microwave frequency range—the exact frequency used for CIA mind control work done earlier by Dr. Adey to modify people's behavior (and close to the 400 MHz range used by the UK's police)!

Secondly, the police have been granted the exclusive use of the 450 MHz microwave frequency range. This is the exact frequency used by Dr. Adey on his CIA mind control work for behavioral modification! Adey found that *using low-intensity microwave frequencies of 450 MHz, with ELF modulation, he can control all aspects of human behavior.* It was further announced on February 5, 2001, a home-office micro-wave system called **TETRA** (called PANDORA by the CIA), is to be the mainstay of the British police force communications and will be placed in every major population center. The British government is spending 2 1/2 billion pounds on the 400 MHz pulse-modulated microwave transmitter network which broadcasts 17.6 Hz (ELF) into the brains of Britain's police force and anyone living near the planned **30,000 transmitters**. The first transmitters were deployed in Glastonbury. The **TETRA System will also be deployed in New York** and London in underground subway systems. It might be noteworthy here, that there have been several serious confrontations in both New York and London subways since 2001.

Some of the symptoms of TETRA are short- and long-term memory disrupting, caused by the calcium efflux on brain synapses, disruption of synaptic neuronal networks, leading to the behavioral and character changes, maniac behavior, followed by nervous exhaustion after use or exposure, disruption of higher brain functioning, leading to the so-called

"zombification," development of precancerous cells, and a negative effect on the limbic system, leading to emotional and behavioral modification.

The reason for this ELF major control response is because the human DNA resonates in the 375 to 425 MHz range, the wavelength of such a resonance is between two and 3 feet. Years ago, when I saw this type of mind control coming, I developed a device called The Nuclear Receptor to neutralize or negate these negative effects. Part of its operational capabilities depend on its antenna length, which also doubles as a support chain, and determined that the proper length for this device, that negates mind control frequencies, was between 28 to 31 inches.

Supercomputers analyze human emotional EEG patterns, copy these "emotion signature clusters then at will, INDUCE EMOTIONAL CHANGES IN HUMANS.

A company called Silent Sounds Inc. received a **US patent number #5,159,703** for developing a system using supercomputers, to analyze human emotional EEG patterns and replicate them, then **store these "emotion signature clusters" on another computer** and, at will, "slightly inducing change to the emotional state of the human being." Immediately after filing the patent, the US government, according to Edward Tilton, president of Silence Sounds Inc, "classified all of the schematics," and now the patent is hard to find. However, Tilton states, "we make tapes and CDs for the German government, even the former Soviet Union countries, all with the permission of the US State Department." The actual patent date is October 27, 1992, entitled, "Silent Subliminal Presentation System" by Doctor Oliver Lowery of Norcross, Georgia.

The military will be able to make people think they see and hear things that don't exist!

In 1998, a news items stated that **General John P. Jumper "predicts that the military will have the tools to make potential enemies see, hear, and believe things that do not exist"** and that "The same idea was contained in a 15-volume study of the USAF Scientific Advisory Board, issued in 1996, on how to maintain US air and space superiority of the battlefields of the 21st century." General Jumper retired as chief of staff of the United States Air Force on September 2, 2005. Born in Paris Texas, he originally joined the Air

Force in June of 1966 after graduating from the Virginia Military Institute, with a degree in electrical engineering, in Lexington Virginia. While in the employ of the United States Air Force he spent time at the Royal Air Force in Bentwaters, England (site of many UFO incidents), Nellis Air Force Base in Nevada (control base for Area 51 and site of alien reverse engineering experimentation), and Langley Air Force Base (CIA headquarters). I would imagine he had firsthand experience in making those comments!

Friendlier Devices

The Audio Spotlight consists of a thin circular transducer array and specially designed signal processor and amplifier. Developed by F. Joseph Pompei at the MIT Media Lab, while he was getting his Ph.D. from MIT, it is an ultrasound device which **creates a narrow beam of sound**. Formerly a Bose engineer, Joseph started a company called Holosonics, www.holosonics.com, located at 400 Pleasant St., Watertown, MA, 02472. This device is considered to be an acoustic projector and is used in museums theaters, etc.

When looking at ultrasound acoustical projection, the power factor is very important. If it's kept at low intensity, it is a safe way to deliver audiophile sound. However, if the power levels are raised, it can become a weapon of sorts as it will transmit tremendous heat into its target.

In this business that utilizes sound, sound healing is one of the best Forms there is. I am currently working on a project called **the X1 Healing Machine** that utilizes sound as one of its working components. Nothing in the universe can heal a body, but science and technologies now available, can allow the body to heal at a much faster than normal rate. Another MIT graduate, Stephen Eberbach, former classmate of mine, who later on also worked for NASA, designing atmospheric research in space research instrumentation, and founder of DCM Corporation (early manufacturers of single-unit surround sound systems which Bose later copied) are now working together again, using our combined expertise to redirect some of the aforementioned "occult science" into healing and benefiting mankind. To see some of Steve's latest work, go to: www.binaural.com

Satellite Delivery Systems—How is it done?

As previously stated, the magnetic field around the head produces **brain waves of an individual that can be monitored by satellite**. The transmitter, therefore, is the brain itself, wherein brainwave monitoring results are fed back

to supercomputers that detect not only the emotional activity but also the mental activity.

Human thought operates at 5,000 bits per second. People can feel if their brain waves are being monitored.

Human thought operates at 5,000 bits per second and satellites and various forms of buyout telemetry can deliver these thoughts to supercomputers, which have a speed of 20 billion bits per second each. Usually the targets are aware of the fact that their brainwaves are being monitored, because of the neurotic feedback that's created, where the computer repeats or echoes your own thoughts. Obviously, when this happens—and you are not aware of what it is—it's going to create serious paranoia. I have had several clients targeted in this manner.

NASA's Blue Beam Project

Here we go back to the Age of Aquarius. Remember the song "When the Moon is in the Seventh House and Jupiter aligns with Mars, and peace will guide our planet, and love will steer the stars"—circa 1982? ***Originally targeted for 1983***, but due to technological delays, the Blue Beam Project was slow to be put into operation. The 800 or so prisons were not finished, management of them was still undetermined; and in general the One World Order was a little behind. ***However, now, under the auspices of the US Army, it's running full steam ahead.***

As previously mentioned, ***the Tavistock Institute, in this case, works through the United Nations in its quest of a New World Order.*** Europe had to come under one group (which it has); ***North, South, and Central America need to come under one group (which has not happened yet).*** The banks had to be nationalized, which has happened. People needed to be drained of their savings, as to make them insecure and malleable, as to force and levy their Constitutional freedoms, which is happening; a large national debt had to be incurred so that the **One World bankers** would have full monetary control, which is in the process of happening now.

Secondly, God has to be removed from the equation, which is happening as we have removed God from our Pledge of Allegiance, our currency, and in general, anything to do with national, state or local activities. This is bringing about a gradual decline of Christian activities, which will shift the power into

the manipulators of a New World Order. New holidays have been created that do not reference spiritual meanings (Christmas, Easter, Fourth of July, Thanksgiving, etc.) and these holidays are mostly acknowledged by the state and local governments and the banking system, and due to the increased financial pressures, the average person still has to put in the 8 to 5 routine. **This is considered the first stage of "Operation Blue Beam."**

The second phase involves detaining people who do not participate or accept The New One World Government. In fascism, political experimentation becomes a method of leverage. The government will begin to make examples of those who openly protest, and expose their actions. If the general public protests these actions, the government will back off, as it has with the presentation of the urgency of **swine Flu in 1976**. Then realizing that the public has, in general, a short attention span (*which is what happens when you feed poisons through foods and bombard them with ELF electromagnetic energies*), **it resubmits the swine flu scare again to see how the public reacts *this time*.** This process will repeat itself until the masses are beaten down into submission. Following this, having certain individuals create dastardly acts, such as terrorism, schoolyard shootings, abductions of small children, and family suicides, to name just a few, the government will eventually be given the excuse to legislate away more Constitutional freedoms.

An Indiana prison already has railroad spurs with color designations to sort out people to be kept there.

As I mentioned before, giving an example of ***the Indiana prison that already has railroad spurs installed with color classifications as to the assortment of the newly interned—some will go through psychological reorientation, and that would be one classification. Others will be part of the ongoing medical experiments*** already mentioned; and there will be a classification for international human organ Center, where organs will be removed, one by one, and the donor maintained in life with special life-support systems. ***The lowest classification will be for the prisoners to be executed.***

The third step will be to begin to **remove a lot of historical and educational programs.** Already there are **power plays for the internet**, which if successful, would price the quest for knowledge out of the average person's grasp. In addition, websites that portray important information are

already banned in some countries, and completely eradicated in other countries. For example when the government of Brazil posted a website showing all of their military data on extraterrestrial intelligence, that website went down and stayed down in one day. Same thing happened when the French government released their information on UFOs.

Included within the third step is a scenario of "natural" disasters, as forecasted in many holy Scriptures, and in the book of Revelation in the King James Bible. As an example, look at some recent tsunami incidents:

—**In 2004, the Indian Ocean tsunami,** affecting Thailand, India, and Sri Lanka, killed 275,000 people.

—**In 1993, the Okushiri tsunami** off the coast of Hokkaido, Japan killed 202 people on the island of Okushiri

—**In 1979, the Tumaco tsunami** struck along the Pacific coast of Colombia and Ecuador. It destroyed six fishing villages and killed 259 people.

Let's examine this a little closer, as ***the casualty numbers are significantly increasing.*** First of all, to cause a large tidal wave, such as a tsunami, we need a large disturbance. There are two ways to create such a disturbance, Earthquakes are the most common; however, in the 2004 tsunami there was talk of a detonation of an underwater nuclear device.

HAARP is able to create earthquakes with its beams.

Earthquakes have been a source of natural disasters for thousands of years. The Pacific Ring of Fire has 452 volcanoes and is the home to over 75% of the world's active and dormant volcanoes. It is a direct result of plate tectonics (the Earth's Lithosphere consisting of the crust and the uppermost mantle, which constitutes a hard and rigid outer layer of the planet), and the movement and collisions of the crustal plates.

BELOW THE GROUND OF EARTH'S SURFACE

Earth has had a solid crust for at least 4.4 billion years. Without it, man would not have evolved.

Note: Drawing not to exact scale.

Below the Ground

Looking at the Earth's surface, we have a crust, then the upper mantle, then the mantle, followed by the outer core and the inner core. With science as it is today, it is not a big technical task to **orchestrate seismic changes**. For this mission, the **HAARP project** fits in perfectly with this step of the Blue Beam Project.

Above the Ground

Starting with the surface of the Earth, our first atmosphere is called the **Troposphere**—extending from the surface of the Earth out 5 miles at the North and South Pole and gradually increasing to 10 miles away at the equator. ***This is where all weather changes take place, and is often manipulated during the hurricane season by HAARP.*** It is also quite popular with the ham radio operators who operate in the VHF and UHF frequency bands.

Next is the **Tropopause**, which is the atmospheric boundary between the Troposphere and the Stratosphere. It is a narrow sphere in comparison with the other layer where air ceases to get colder with height and becomes almost completely dry. Following this is the **Stratosphere**, which extends out from Earth by 10 miles at the poles and 31 miles out around the equator. ***The Stratosphere contains the ozone layer, and the airflow is mostly horizontal.*** As most people know, the ozone layer protects people from the Sun's ultraviolet radiation, which causes cancer to some individuals with poor pH factors or immune systems. ***Although there is a recent concern as to the destruction of the ozone layer of it being caused by man-made fluorocarbon compounds, this was only a ploy, as the Global 2000 Report To the President in 1976 clearly stated that this destruction was mostly due to high-flying jet aircraft.***

Continuing skyward, we have the **Stratopause** which extends from 6 miles above sea level to 31 miles above sea level. The next major layer is **the Mesosphere, which extends from 31 miles high to about 53 miles high.** This is where most meteors burn up. In the upper Mesosphere is the D-Layer. The D-Layer is only present during the day, when some ionization occurs, with nitric oxide being ionized by Lyman series alpha-hydrogen radiation (ultraviolet emission lines of the hydrogen atom as the electron changes on states, also related to the previously measured Ballmer series). The ionization is so weak that when night falls, and the source of ionization is removed, the free electron and ion form back into a neutral molecule.

Continuing on, we reach the **Mesopause layer** which is quite thin, opening up into the **Thermosphere**, which extends from 54 miles to about 400 miles. This is the level of the International Space Station, and also where the auroras occur. Because it is so rarefied, the temperature varies by extreme amounts. Following this is the **Thermopause**, which extends out to about 620 miles.

Next is the **Ionosphere**, which is ionized by solar radiation, which overlaps both the **Thermosphere** and the next layer up—the **Exosphere**. Extending out almost 900 miles, it owes its existence primarily to the ultraviolet radiation from the Sun. Following the Ionosphere is the **Exobase**, which is the lower boundary of the Exosphere. The Exosphere contains free-moving particles that migrate into and out of the **Magnetosphere** or the solar wind. ***This area is of extreme interest to the HAARP experiments, especially when it comes to creating earthquakes for the Blue Beam Project.***

The **Magnetosphere** is the area that is 6,213 miles out (10,000 km) from Earth's surface, and extends very far beyond out to 40,000 miles (64,373 km) away from Earth's surface. The Sun is between 91 and 94.5 **million** miles from Earth. The Magnetosphere interacts with the Sun acting as a shield for Earth from solar particles and "solar wind." The Magnetosphere consists of everything inside the dotted line in the drawing above (*the Magnetopause is its outer boundary*). The Van Allen Radiation Belts (*thicker outer and thinner inner*) also shield Earth from solar radiation. The **Ionosphere** is an area extending out from Earth between 54 to 900+ miles—even out to and into the **Exosphere**—where **HAARP** does experiments.

Magnetosphere

Note: the Magnetosphere is within the dotted line area

In 1916, Norwegian researcher Kristian Birkland was probably the first person to successfully predict that the solar wind, "from a physical point of view it is most probable that solar rays are neither exclusively negative nor positive rays, but both kinds"; in other words, the **solar wind consists of both negative electrons and positive ions**. Three years later in 1919, Frederick Lindeman also suggested that particles of both polarities—protons as well as electrons—come from the Sun.

A comet's tail always points away from the Sun, even if it is heading AWAY FROM the Sun!

Around the 1930s scientists determined that the temperature of the solar corona must be 1,000,000°C, because of the way it stood out in space as seen in total eclipses. In the 1950s, a German scientist named Ludwig Biermann noted that no matter what, ***whether a comet is headed toward or away from the sun, its tail always points away from the Sun.*** It was determined that the Sun emits a steady state stream of particles that pushes the comet's tail away. Later it was determined that solar wind was the plasma, and its influence was felt beyond the orbit of Pluto. This outer border was given the name of **Heliopause.**

"Solar wind" is a stream of charged particles, a plasma which is ejected from the upper atmosphere of a star. When originating from stars other than the Earth's Sun, it is sometimes called **"Stellar wind."** Because the solar wind is a plasma, it has those characteristics rather than that of gas; for example, it carries with it the sun's magnetic field, and is electrically conductive (resulting in a Heliospheric current sheet where the polarity of the sun's magnetic field changes from north to south). The Heliospheric current sheet rotates along the sun once every 27 days. For the first million miles, the solar wind moves in a spiral pattern by dragging its magnetic field lines with it, but beyond that distance solar wind moves onwards without much additional influence directly from the sun. Usually large outbursts of solar wind are caused by solar flares (more information on solar flares and the effect of humanity's consciousness can be found in Chapter 28 of Dr Bell's book *Rays of Truth Crystals of Light* or in other phenomena known as **"solar storms."** These storms can subject open satellites to strong doses of radiation. ***Solar wind particles trapped in the Earth's magnetic field tend to collect within the Van Allen Radiation Belt, which acts as a cosmic brake, slowing them down, whereby the HAARP systems can begin to manipulate their energies.***

Just how much energy is available? The mass of the solar wind is about 1,000,000 tons emitted into space every second. It is composed of 95% hydrogen; 4% helium, carbon, nitrogen, oxygen, neon, magnesium and silicon; and 1% iron. These atoms are all in the form of positive ions, which means they have lost their electrons because the temperature is so hot. When looking at this from an atomic level, **positive ions** possess a high mass in high-energy. **Their speed towards Earth varies from 900,000 mph to 1,340,000 miles**

per hour, thus giving an electron-proton combination of 1 Kev (1000 volt potential).

As the solar wind approaches the Earth, it is shielded by the Van Allen Radiation Belt. If you were to look at it from space, it would have a huge toroidal shape. On the sun side it is compressed because of the solar wind, and on the back side it is elongated to around three times the radius of the Earth. This creates a cavity called **the Chapman Ferro cavity, in which the Van Allen Radiation Belt resides.** The Van Allen Belt is split into two distinct belts, with energetic electrons forming the outer belt, and the combination of protons and electrons creating the inner belt. In addition to the belts, it contains lesser amounts of other atomic nuclei such as alpha particles (two protons and two neutrons bound together in a particle identical to a helium nucleus). **The Van Allen Belt extends from the inner belt, or about 420 miles, to the outer belt which extends from 16,000 to 20,000 miles.**

Ionosphere

Now let's look at how these winds and belts work together. The **Ionosphere** consists of four sub-layers.

D-Layer

The D-Layer was already mentioned in the above text and during solar events ionization can reach unusually high levels in the polar latitudes. Such events are known as Polar Cap Absorption (PCA) because of the increased ionization. ***The D-Layer is mainly responsible for the absorption of high-frequency radio waves, particularly at 10 MHz and below, with progressively smaller absorption as the frequency gets higher.*** The absorption is small at night and greatest about midday. The layer reduces greatly after sunset, but remains due to Galactic cosmic rays. A common example of the **D-Layer** in action is the disappearance of distant AM broadcast band stations in the daytime.

Normal TV frequencies of 56 to 250 MHz have now been shut down by the FCC—so there is more room for HAARP to operate in!

E-Layer

The **E-Layer** is the middle layer, 56 to 75 miles above the surface of the earth. Ionization is due to soft X-ray (1-10 nanometers) and far ultraviolet (UV) solar

radiation ionization of molecular oxygen (O₂). Normally this layer reflects frequencies in the 10 MHz range, but ***during sporadic ionospheric shifts it can reflect frequencies as high as 250 MHz, which is great for HAARP.*** In case you haven't noticed, the normal television frequencies of 56 to 250 MHz are being shut down by the FCC. ***Did you ever wonder why this was a mandatory governmental dictate? Answer: more room for HAARP!*** There is a sub-layer called the **EsLayer** or **Sporadic E Layer**. This layer reflects radio-wave transmissions from 25 to 225 MHz causing what ham operators call "skip." Skip is what ham radio operators use to transmit signals around the curvature of the earth. Unfortunately, for them, breaking the line-of-sight rules is dependent on **the Es Layer**, which is sporadic. ***HAARP does not have that problem, as it creates a virtual Lens in the sky, whereby signals can move around the curvature of the earth.***

F-Layer

The **F-Layer** is also known as **the Appleton layer**, and is about 75 to 373 miles (120-600km) above the surface of the Earth. Here extreme ultraviolet (10-100 nanometers) solar radiation ionizes atomic oxygen. **The F-Layer consists of one layer at night, but in the presence of sunlight during the day, it divides the two layers, labeled F1 and F2.** They are the thickest and most effective in refracting radio signals on the side of the Earth facing the sun. To build the HAARP database, NASA launched the AEROS and AEROS B satellites in 1972 to 1975.

In order to understand exactly **how HAARP can further affect the Earth**, let's look at the relationship of the Sun and the Earth. Imagine the Earth to be a basketball, and we are holding it directly in front of us at high level. Now we place a black dot at the exact top and bottom of the basketball. Next we tilt the ball 23.5° to the right, and this view that we have now is called **the ecliptic plane**. If we were now to move the ball around us, dividing this into four equal locations, each location would be called either a June solstice, September equinox, December solstice, or March equinox.

Now, as we move the basketball in quarter turns, the first quarter we hold the ball above our head, and assuming our head to be the Sun, we are now looking more at the bottom of the ball than the top; therefore, this would create more heat at the bottom of the ball, creating a summer solstice in the regions below the equator. Now if we would lower the ball to a position where we're looking down at it, this creates the summer solstice for the area above the equator, and

the winter solstice to the areas below the equator. When we lower the basketball from the high position, the process of lowering it is called **"declination,"** and when it reaches the position that we are looking directly at it again, this would be called the March equinox, which would be the first day of spring in the northern hemisphere, and the first day of fall in the Southern Hemisphere, and the night and day period would be equal in both hemispheres. If we started with the ball in its lowest position, and move it gradually upward, we would be creating an **"inclination period,"** and when the ball is level with our eyes, this would be the autumnal equinox, and once again the length of the day and night are equal in both hemispheres.

You can follow what HAARP is doing on its own website. HAARP uses transmitters to send ELF waves that hurt humans and can cause earthquakes, bad weather and even volcanic activity.

Now we spin it from left to right at 1,000 mph. This gives us the 24-hour day and night period. Now imagine that this is how the sun sees the earth from where our eyes are. If we move the basketball towards our face, getting it as close as we can while still maintaining a visual focus, this would be called a **"perihelion,"** which is when the Earth is the closest to the Sun, and that would be **January 3**. Now we push the basketball, still maintaining high level as far away from us as we can—that would be called an **"aphelion"** which would occur on **July 4, amazingly, a national holiday**. If we were to turn in one complete circle, with half the circle holding the ball close, and the other half holding it far away, we would have created **an elliptical orbit**, just as the earth experiences and rotates around the sun. ***I present this detailed look at the mechanics of the positioning of the earth and the sun, so that one can visualize the different angles of attack that are taken into consideration when working with high-frequency microwave, modulated with ELF, and if one so desires by knowing these annual repositioning postures, one can follow through the news, making notation of time of year versus the seismic, weather, and other global changes that may be occurring as the result of HAARP's military and weather control experiments.***

Auroral Electro-jet

HAARP uses high-frequency microwave beams, modulated with ELF, to do military and weather control experiments.

Now looking again at our basketball tilted 23.5° to the right, ***the top of the tilted area*** (which would be to the right of the actual top) ***is called the Auroral Electro-jet***. This is a very sensitive area, as the auroral oval is the doorway to the Van Allen Radiation Belt. ***Within the confines of the Auroral Electro-jet area, is a town called Gakona, Alaska, located approximately 180 miles northwest of Anchorage Alaska, and it is here on the Tok Highway that the HAARP facilities are located.*** If you go to <http://www.haarp.alaska.edu/haarp/index.html> you can see the basic outline of the HAARP facilities. Then click on the Online Data section and look at the different charts. There you will see the high-frequency **ionosonde chart** that tracks the HAARP transmitter on a frequency range of 1 to 40 MHz through the E and F2 layers of the Ionosphere. Next you will see the **Riometer** (Relative Ionosphere Opacity meter) which tracks the radio noise arriving at the auroral electro-jet. ***By reading the arriving amplitudes of energy, the HAARP transmitters can synchronize with these energies and thereby modulate them for their causes.***

In addition, you will see various **Magnetometers** that are used for calculating the Earth's magnetic field in the North Pole region. There are many other instruments that will not be shown on their web page, as they are highly classified, such as the equipment that generates a **3.39 MHZ, coupled with ELF, signal used for submarine communications** which are monitored in Wisconsin and Michigan. As the technology is progressing, the Navy recently announced that it would be shutting down the Clam Lake Wisconsin and the Michigan Escanaba State Forest facilities. ***This, to me, would mean that there are more satellites in position now to support the HAARP naval activities.***

Auroral Electro jet is the name given to the large horizontal currents that flow in the D. and E. regions of the auroral ionosphere. During magnetic quiet periods, the electro-jet is generally confined to the auroral oval as previously discussed. But during strong solar storms, the auroral electro-jet becomes a very powerful plasma, and it moves from the auroral oval area, down across the side of the earth and passes the equator. Once past the equator, it continues out the South Pole and back into space. As it exits the end Arctic regions, it creates a wide opening in the ozone layer of the South Pole. As it crosses the

equator it affects the tectonic plates, and therefore can affect volcanic eruption and earthquake potential. ***Because the HAARP transmitters are located in the northern node, they can modulate the Electro-Jet and thereby affect or cause severe changes in weather, seismic activity, volcanic activity and ELF (effects in human consciousness) activities.***

This then fits in with the previously mentioned **third step of the Disclosure Project**, giving credence to New Age predictions of great and tremendous earth changes.

The fourth step, as outlined by Pentagon General John P. Jumper, deals with gigantic spacial and optical holograms, and laser projections of multiple holographic images, and holographic sound projection. (One company suspected of this type of research is Loral Electro-Optical Systems, 300 N. Halstead St., Pasadena, CA, 91109) **to different parts of the world, wherein people will believe there is some form of occult or extraterrestrial activity.** As mentioned before, this step would also entail emotional mind control systems that have been created by the previously mentioned companies.

I will close this chapter with a statement from ***psychologist James McConnell*** (October 26, 1925-April 9, 1990) who spent his career at the University of Michigan's Psychology Department. Published in the 1970 issue of *Psychology Today*, he said, "the day has come when we can combine sensory deprivation with drugs, hypnosis, and astute manipulation of reward and punishment to gain almost absolute control of an individual's behavior. It should then be possible to achieve a very rapid and highly effective type of positive brainwashing that would allow us to make dramatic changes in a person's behavior and personality." He further commented that ***"we should reshape society so that we all would be trained from birth to want to do what society wants us to do. We have the techniques to do it. No one owns their own personality."***

Frequency (Hz) to Wavelength (m) Comparison

Visible light ranges from deep red, roughly 700 nm, to violet, roughly 400 nm (430-750 THz) (for other examples, see electromagnetic spectrum). The wavelengths of sound frequencies audible to the human ear (20 Hz-20 kHz) are between approximately 17 m and 17 mm, respectively, assuming a typical

speed of sound of about 343 m/s; the wavelengths in audible sound are much longer than those in visible light.

CGPM defined the meter in the new SI system as equal to 1,650,763.73 wavelengths of the orange-red emission line in the electromagnetic spectrum of the krypton-86 atom in a vacuum.

($U = 5 \times 10^{-16}$).[6]

Consequently, a practical realization of the meter is usually delineated (not defined) today in labs as 1,579,800.298728(39) wavelengths of helium-neon laser light in a vacuum.

Appendix A

"All Nobel Laureates in Physics"

The Nobel Prize in Physics has been awarded to 183 individuals since 1901. (John Bardeen was awarded the prize in both 1956 and 1972.)

- 1 1901 - Physics, Wilhelm Conrad Röntgen
- 2 1902 - Physics, Henrik A. Lorentz
- 3 Physics, Pieter Zeeman
- 4 1903 - Physics, Henri Becquerel
- 5 Physics, Pierre Curie
- 6 Physics, Marie Curie
- 7 1904 - Physics, Lord Rayleigh
- 8 1905 - Physics, Philipp Lenard
- 9 1906 - Physics, J.J.Thompson
- 10 1907 - Physics, Albert A. Michelson
- 11 1908 - Physics, Gabriel Lippmann
- 12 1909 - Physics, Ferdinand Braun
- 13 Physics, Guglielmo Marconi
- 14 1910 - Physics, Johannes Diderik van der Waals
- 15 1911 - Physics, Wilhelm Wien
- 16 1912 - Physics, Gustaf Dalén
- 17 1913 - Physics, Heike Kamerlingh Onnes
- 18 1914 - Physics, Max von Laue
- 19 1915 - Physics, William Bragg
- 20 Physics, Lawrence Bragg
- 21 1917 - Physics, Charles Glover Barkla
- 22 1918 - Physics, Max Planck
- 23 1919 - Physics, Johannes Stark
- 24 1920 - Physics, Charles Edouard Guillaume
- 25 1921 - Physics, Albert Einstein
- 26 1922 - Physics, Niels Bohr
- 27 1923 - Physics, Robert A. Millikan
- 28 1924 - Physics, Manne Siegbahn
- 29 1925 - Physics, James Franck
- 30 Physics, Gustav Hertz
- 31 1926 - Physics, Jean Baptiste Perrin
- 32 1927 - Physics, Arthur H. Compton
- 33 Physics, C.T.R. Wilson

- 34 1928 - Physics, Owen Willans Richardson
- 35 1929 - Physics, Louis de Broglie
- 36 1930 - Physics, Sir Venkata Raman
- 37 1932 - Physics, Werner Heisenberg
- 38 1933 - Physics, Paul A.M. Dirac
- 39 Physics, Erwin Schrödinger
- 40 1935 - Physics, James Chadwick
- 41 1936 - Physics, Carl D. Anderson
- 42 Physics, Victor F. Hess
- 43 1937 - Physics, Clinton Davisson
- 44 Physics, George Paget Thomson
- 45 1938 - Physics, Enrico Fermi
- 46 1939 - Physics, Ernest Lawrence
- 47 1943 - Physics, Otto Stern
- 48 1944 - Physics, Isidor Isaac Rabi
- 49 1945 - Physics, Wolfgang Pauli
- 50 1946 - Physics, Percy W. Bridgman
- 51 1947 - Physics, Edward V. Appleton
- 52 1948 - Physics, Patrick M.S. Blackett
- 53 1949 - Physics, Hideki Yukawa
- 54 1950 - Physics, Cecil Powell
- 55 1951 - Physics, John Cockcroft
- 56 Physics, Ernest T.S. Walton
- 57 1952 - Physics, Felix Bloch
- 58 Physics, E. M. Purcell
- 59 1953 - Physics, Frits Zernike
- 60 1954 - Physics, Max Born
- 61 Physics, Walther Bothe
- 62 1955 - Physics, Polykarp Kusch
- 63 Physics, Willis E. Lamb
- 64 1956 - Physics, John Bardeen
- 65 Physics, Walter H. Brattain
- 66 Physics, William B. Shockley
- 67 1957 - Physics, Tsung-Dao Lee
- 68 Physics, Chen Ning Yang
- 69 1958 - Physics, Pavel A. Cherenkov
- 70 Physics, Il'ja M. Frank
- 71 Physics, Igor Y. Tamm
- 72 1959 - Physics, Owen Chamberlain
- 73 Physics, Emilio Segrè

- 74 1960 - Physics, Donald A. Glaser
75 1961 - Physics, Robert Hofstadter
76 Physics, Rudolf Mössbauer
77 1962 - Physics, Lev Landau
78 1963 - Physics, Maria Goeppert-Mayer
79 Physics, J. Hans De. Jensen
80 Physics, Eugene Wigner
81 1964 - Physics, Nicolay G. Basov
82 Physics, Aleksandr M. Prokhorov
83 Physics, Charles H. Townes
84 1965 - Physics, Richard R Feynman
85 Physics, Julian Schwinger
86 Physics, Sin-Itiro Tomonaga
87 1966 - Physics, Alfred Kastler
88 1967 - Physics, Hans Bethe
89 1968 - Physics, Luis Alvarez
90 1969 - Physics, Murray Gell-Mann
91 1970 - Physics, Hannes Alfvén
92 Physics, Louis Néel
93 1971 - Physics, Dennis Gabor
94 1972 - Physics, John Bardeen
95 Physics, Leon N. Cooper
96 Physics, Robert Schrieffer
97 1973 - Physics, Leo Esaki
98 Physics, Ivar Giaever
99 Physics, Brian D. Josephson
100 1974 - Physics, Antony Newish
101 Physics, Martin Ryle
102 1975 - Physics, Aage N. Bohr
103 Physics, Ben R. Mottelson
104 Physics, James Rainwater
105 1976 - Physics, Burton Richter
106 Physics, Samuel C.C. Ting
107 1977 - Physics, Philip W. Anderson
108 Physics, Sir Nevill F. Mott
109 Physics, John H. van Vleck
110 1978 - Physics, Pyotr Kapitsa
111 Physics, Arno Penzias
112 Physics, Robert Woodrow Wilson
113 1979 - Physics, Sheldon Glashow

- 114 Physics, Abdus Salam
- 115 Physics, Steven Weinberg
- 116 1980 - Physics, James Cronin
- 117 Physics, Val Fitch
- 118 1981 - Physics, Nicolaas Bloembergen
- 119 Physics, Arthur L. Schawlow
- 120 Physics, Kai M. Siegbahn
- 121 1981 - Physics, Kenneth G. Wilson
- 122 1982 - Physics, Subramanyan Chandrasekhar
- 123 Physics, William A. Fowler
- 124 1984 - Physics, Carlo Rubbia
- 125 Physics, Simon van der Meer
- 126 1985 - Physics, Klaus von Klitzing
- 127 1986 - Physics, Gerd Binnig
- 128 Physics, Heinrich Rohrer
- 129 Physics, Ernst Ruska
- 130 1987 - Physics, J. Georg Bednorz
- 131 Physics, K. Alex Müller
- 132 1988 - Physics, Leon M. Lederman
- 133 Physics, Melvin Schwartz
- 134 Physics, Jack Steinberger
- 135 1989 - Physics, Hans G. Dehmelt
- 136 Physics, Wolfgang Paul
- 137 Physics, Norman F. Ramsey
- 138 1990 - Physics, Jerome I. Friedman
- 139 Physics, Henry W. Kendall
- 140 Physics, Richard E. Taylor
- 141 1991 - Physics, Pierre-Gilles de Gennes
- 142 1992 - Physics, Georges Charpak
- 143 1993 - Physics, Russell A. Hulse
- 144 Physics, Joseph H. Taylor, Jr.
- 145 1994 - Physics, Bertram N. Brockhouse
- 146 Physics, Clifford G. Shull
- 147 1995 - Physics, Martin L. Perl
- 148 Physics, Frederick Reines
- 149 1996 - Physics, David M. Lee
- 150 Physics, Douglas D. Osheroff
- 151 Physics, Robert C. Richardson
- 152 1997 - Physics, Steven Chu
- 153 Physics, Claude Cohen-Tannoudji

- 154 Physics, William D. Phillips
 155 1998 - Physics, Robert B. Laughlin
 156 Physics, Horst L. Störmer
 157 Physics, Daniel C. Tsui
 158 1999 - Physics, Gerardus't Hooft
 159 Physics, Martinus J.G. Veltman
 160 2000 - Physics, Zhores I. Alferov
 161 Physics, Jack S. Kilby
 162 Physics, Herbert Kroemer
 163 2001 - Physics, Eric A. Cornell
 164 Physics, Wolfgang Ketterle
 165 Physics, Carl E. Wieman
 166 2002 - Physics, Raymond Davis, Jr.
 167 Physics, Riccardo Giacconi
 168 Physics, Masatoshi Koshiba
 169 2003 - Physics, Alexei A. Abrikosov
 170 Physics, Vitaly L. Ginzburg
 171 Physics, Anthony J. Leggett
 172 2004 - Physics, David J. Gross
 173 Physics, H. David Politzer
 174 Physics, Frank Wilczek
 175 2005 - Physics, Roy J. Glauber
 176 Physics, John L. Hall
 177 Physics, Theodor W. Hänsch
 178 2006 - Physics, John C. Mather
 179 Physics, George F. Smoot
 180 2007 - Physics, Albert Fert
 181 Physics, Peter Grünberg
 182 2008 - Physics, Makoto Kobayashi
 183 Physics, Toshihide Maskawa
 184 Physics, Yoichiro Nambu

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Appendix B

Richard P. Feynman, Nobel Laureate in Physics, 1965, was requested to serve on the presidential Rogers commission (William P. Rogers), which was to investigate the Challenger space shuttle accident. Several other notables on the commission were Neil Armstrong, the first man to walk on the moon, Chuck Yeager retired Air Force general, the first person to break the sound barrier in level flight, and Sally K. Ride the First Woman in Space. President Ronald Reagan gave him a presidential citation for this work.

Volume 2: Appendix F - Personal Observations on Reliability of Shuttle by R. P. Feynman

Introduction

It appears that there are enormous differences of opinion as to the probability of a failure with loss of vehicle and of human life. The estimates range from roughly 1 in 100 to 1 in 100,000. The higher figures come from the working engineers, and the very low figures from management. What are the causes and consequences of this lack of agreement? Since 1 part in 100,000 would imply that one could put a Shuttle up each day for 300 years expecting to lose only one, we could properly ask, "What is the cause of management's fantastic faith in the machinery?"

We have also found that certification criteria used in Flight Readiness Reviews often develop a gradually decreasing strictness. The argument that the same risk was flown before without failure is often accepted as an argument for the safety of accepting it again. Because of this, obvious weaknesses are accepted again and again, sometimes without a sufficiently serious attempt to remedy them, or to delay a flight because of their continued presence.

There are several sources of information. There are published criteria for certification, including a history of modifications in the form of waivers and deviations. In addition, the records of the Flight Readiness Reviews for each flight document the arguments used to accept the risks of the flight. Information was obtained from the direct testimony and the reports of the range safety officer, Louis J. Ullian, with respect to the history of success of solid fuel rockets. There was a further study by him (as chairman of the launch abort safety panel (LASP) in an attempt to determine the risks involved in possible accidents leading to radioactive contamination from attempting to fly a plutonium power supply (RTG) for future planetary missions. The NASA

study of the same question is also available. For the History of the Space Shuttle Main Engines, interviews with management and engineers at Marshall, and informal interviews with engineers at Rocketdyne, were made. An independent (Cal Tech) mechanical engineer who consulted for NASA about engines was also interviewed informally. A visit to Johnson was made to gather information on the reliability of the avionics (computers, sensors, and effectors). Finally there is a report "A Review of Certification Practices, Potentially Applicable to Man-rated Reusable Rocket Engines," prepared at the Jet Propulsion Laboratory by N. Moore, et al., in February, 1986, for NASA Headquarters, Office of Space Flight. It deals with the methods used by the FAA and the military to certify their gas turbine and rocket engines. These authors were also interviewed informally.

Solid Rockets (SRB)

An estimate of the reliability of solid rockets was made by the range safety officer, by studying the experience of all previous rocket flights. Out of a total of nearly 2,900 flights, 121 failed (1 in 25). This includes, however, what may be called, early errors, rockets flown for the first few times in which design errors are discovered and fixed. A more reasonable figure for the mature rockets might be 1 in 50. With special care in the selection of parts and in inspection, a figure of below 1 in 100 might be achieved but 1 in 1,000 is probably not attainable with today's technology. (Since there are two rockets on the Shuttle, these rocket failure rates must be doubled to get Shuttle failure rates from Solid Rocket Booster failure.)

NASA officials argue that the figure is much lower. They point out that these figures are for unmanned rockets but since the Shuttle is a manned vehicle "the probability of mission success is necessarily very close to 1.0." It is not very clear what this phrase means. Does it mean it is close to 1 or that it ought to be close to 1? They go on to explain "Historically this extremely high degree of mission success has given rise to a difference in philosophy between manned space flight programs and unmanned programs; i.e., numerical probability usage versus engineering judgment." (These quotations are from "Space Shuttle Data for Planetary Mission RTG Safety Analysis, "Pages 3-1, 3-1, February 15, 1985, NASA, JSC.) It is true that if the probability of failure was as low as 1 in 100,000 it would take an inordinate number of tests to determine it (you would get nothing but a string of perfect flights from which no precise figure, other than that the probability is likely less than the number of such flights in the string so far). But, if the real probability is not so small, flights would show troubles, near failures, and possible actual failures with a

reasonable number of trials, and standard statistical methods could give a reasonable estimate. In fact, previous NASA experience had shown, on occasion, just such difficulties, near accidents, and accidents, all giving warning that the probability of flight failure was not so very small. The inconsistency of the argument not to determine reliability through historical experience, as the range safety officer did, is that NASA also appeals to history, beginning "Historically this high degree of mission success..."

Finally, if we are to replace standard numerical probability usage with engineering judgment, why do we find such an enormous disparity between the management estimate and the judgment of the engineers? It would appear that, for whatever purpose, be it for internal or external consumption, the management of NASA exaggerates the reliability of its product, to the point of fantasy.

The history of the certification and Flight Readiness Reviews will not be repeated here. (See other part of Commission reports.) The phenomenon of accepting for flight, seals that had shown erosion and blow-by in previous flights, is very clear. The Challenger flight is an excellent example. There are several references to flights that had gone before. The acceptance and success of these flights is taken as evidence of safety. But erosion and blow-by are not what the design expected. They are warnings that something is wrong. The equipment is not operating as expected, and therefore there is a danger that it can operate with even wider deviations in this unexpected and not thoroughly understood way. The fact that this danger did not lead to a catastrophe before is no guarantee that it will not the next time, unless it is completely understood. When playing Russian roulette the fact that the first shot got off safely is little comfort for the next. The origin and consequences of the erosion and blow-by were not understood. They did not occur equally on all flights and all joints; sometimes more, and sometimes less. Why not sometime, when whatever conditions determined it were right, still more leading to catastrophe?

In spite of these variations from case to case, officials behaved as if they understood it, giving apparently logical arguments to each other often depending on the "success" of previous flights. For example, in determining if flight 51-L was safe to fly in the face of ring erosion in flight 51-C, it was noted that the erosion depth was only one-third of the radius. It had been noted in an experiment cutting the ring that cutting it as deep as one radius was necessary before the ring failed. Instead of being very concerned that variations of poorly understood conditions might reasonably create a deeper erosion this

time, it was asserted, there was "a safety factor of three." This is a strange use of the engineer's term, "safety factor." If a bridge is built to withstand a certain load without the beams permanently deforming, cracking, or breaking, it may be designed for the materials used to actually stand up under three times the load. This "safety factor" is to allow for uncertain excesses of load, or unknown extra loads, or weaknesses in the material that might have unexpected flaws, etc. If now the expected load comes onto the new bridge and a crack appears in a beam, this is a failure of the design. There was no safety factor at all; even though the bridge did not actually collapse because the crack went only one-third of the way through the beam. The O-rings of the Solid Rocket Boosters were not designed to erode. Erosion was a clue that something was wrong. Erosion was not something from which safety can be inferred.

There was no way, without full understanding, that one could have confidence that conditions the next time might not produce erosion three times more severe than the time before. Nevertheless, officials fooled themselves into thinking they had such understanding and confidence, in spite of the peculiar variations from case to case. A mathematical model was made to calculate erosion. This was a model based not on physical understanding but on empirical curve fitting. To be more detailed, it was supposed a stream of hot gas impinged on the O-ring material, and the heat was determined at the point of stagnation (so far, with reasonable physical, thermodynamic laws). But to determine how much rubber eroded it was assumed this depended only on this heat by a formula suggested by data on a similar material. A logarithmic plot suggested a straight line, so it was supposed that the erosion varied as the .58 power of the heat, the .58 being determined by a nearest fit. At any rate, adjusting some other numbers, it was determined that the model agreed with the erosion (to depth of one-third the radius of the ring). There is nothing much so wrong with this as believing the answer! Uncertainties appear everywhere. How strong the gas stream might be was unpredictable, it depended on holes formed in the putty. Blow-by showed that the ring might fail even though not, or only partially eroded through. The empirical formula was known to be uncertain, for it did not go directly through the very data points by which it was determined. There were a cloud of points some twice above, and some twice below the fitted curve, so erosions twice predicted were reasonable from that cause alone. Similar uncertainties surrounded the other constants in the formula, etc., etc. When using a mathematical model careful attention must be given to uncertainties in the model.

Liquid Fuel Engine (SSME)

During the flight of 51-L the three Space Shuttle Main Engines all worked perfectly, even, at the last moment, beginning to shut down the engines as the fuel supply began to fail. The question arises, however, as to whether, had it failed, and we were to investigate it in as much detail as we did the Solid Rocket Booster, we would find a similar lack of attention to faults and a deteriorating reliability. In other words, were the organization weaknesses that contributed to the accident confined to the Solid Rocket Booster sector or were they a more general characteristic of NASA? To that end the Space Shuttle Main Engines and the avionics were both investigated. No similar study of the Orbiter, or the External Tank were made.

The engine is a much more complicated structure than the Solid Rocket Booster, and a great deal more detailed engineering goes into it. Generally, the engineering seems to be of high quality and apparently considerable attention is paid to deficiencies and faults found in operation.

The usual way that such engines are designed (for military or civilian aircraft) may be called the component system, or bottom-up design. First it is necessary to thoroughly understand the properties and limitations of the materials to be used (for turbine blades, for example), and tests are begun in experimental rigs to determine those. With this knowledge larger component parts (such as bearings) are designed and tested individually. As deficiencies and design errors are noted they are corrected and verified with further testing. Since one tests only parts at a time these tests and modifications are not overly expensive. Finally one works up to the final design of the entire engine, to the necessary specifications. There is a good chance, by this time that the engine will generally succeed, or that any failures are easily isolated and analyzed because the failure modes, limitations of materials, etc., are so well understood. There is a very good chance that the modifications to the engine to get around the final difficulties are not very hard to make, for most of the serious problems have already been discovered and dealt with in the earlier, less expensive, stages of the process.

The Space Shuttle Main Engine was handled in a different manner, top down, we might say. The engine was designed and put together all at once with relatively little detailed preliminary study of the material and components. Then when troubles are found in the bearings, turbine blades, coolant pipes, etc., it is more expensive and difficult to discover the causes and make changes. For example, cracks have been found in the turbine blades of the high pressure oxygen turbopump. Are they caused by flaws in the material, the effect of the

oxygen atmosphere on the properties of the material, the thermal stresses of startup or shutdown, the vibration and stresses of steady running, or mainly at some resonance at certain speeds, etc.? How long can we run from crack initiation to crack failure, and how does this depend on power level? Using the completed engine as a test bed to resolve such questions is extremely expensive. One does not wish to lose an entire engine in order to find out where and how failure occurs. Yet, an accurate knowledge of this information is essential to acquire a confidence in the engine reliability in use. Without detailed understanding, confidence can not be attained.

A further disadvantage of the top-down method is that, if an understanding of a fault is obtained, a simple fix, such as a new shape for the turbine housing, may be impossible to implement without a redesign of the entire engine.

The Space Shuttle Main Engine is a very remarkable machine. It has a greater ratio of thrust to weight than any previous engine. It is built at the edge of, or outside of, previous engineering experience. Therefore, as expected, many different kinds of flaws and difficulties have turned up. Because, unfortunately, it was built in the top-down manner, they are difficult to find and fix. The design aim of a lifetime of 55 missions equivalent firings (27,000 seconds of operation, either in a mission of 500 seconds, or on a test stand) has not been obtained. The engine now requires very frequent maintenance and replacement of important parts, such as turbopumps, bearings, sheet metal housings, etc. The high-pressure fuel turbopump had to be replaced every three or four mission equivalents (although that may have been fixed, now) and the high pressure oxygen turbopump every five or six. This is at most ten percent of the original specification. But our main concern here is the determination of reliability.

In a total of about 250,000 seconds of operation, the engines have failed seriously perhaps 16 times. Engineering pays close attention to these failings and tries to remedy them as quickly as possible. This it does by test studies on special rigs experimentally designed for the flaws in question, by careful inspection of the engine for suggestive clues (like cracks), and by considerable study and analysis. In this way, in spite of the difficulties of top-down design, through hard work, many of the problems have apparently been solved.

A list of some of the problems follows. Those followed by an asterisk (*) are probably solved:

1. Turbine blade cracks in high pressure fuel turbopumps (HPFTP). (May have been solved.)
2. Turbine blade cracks in high pressure oxygen turbopumps (HPOTP).
3. Augmented Spark Igniter (ASI) line rupture.*
4. Purge check valve failure.*
5. ASI chamber erosion.*
6. HPFTP turbine sheet metal cracking.
7. HPFTP coolant liner failure.*
8. Main combustion chamber outlet elbow failure.*
9. Main combustion chamber inlet elbow weld offset.*
10. HPOTP subsynchronous whirl.*
11. Flight acceleration safety cutoff system (partial failure in a redundant system).*
12. Bearing spalling (partially solved).
13. A vibration at 4,000 Hertz making some engines inoperable, etc.

Many of these solved problems are the early difficulties of a new design, for 13 of them occurred in the first 125,000 seconds and only three in the second 125,000 seconds. Naturally, one can never be sure that all the bugs are out, and, for some, the fix may not have addressed the true cause. Thus, it is not unreasonable to guess there may be at least one surprise in the next 250,000 seconds, a probability of $1/500$ per engine per mission. On a mission there are three engines, but some accidents would possibly be contained, and only affect one engine. The system can abort with only two engines. Therefore let us say that the unknown surprises do not, even of themselves, permit us to guess that the probability of mission failure due to the Space Shuttle Main Engine is less than $1/500$. To this we must add the chance of failure from known, but as yet unsolved, problems (those without the asterisk in the list above). These we discuss below. (Engineers at Rocketdyne, the manufacturer, estimate the total probability as $1/10,000$. Engineers at Marshall estimate it as $1/300$, while NASA management, to whom these engineers report, claims it is $1/100,000$. An independent engineer consulting for NASA thought 1 or 2 per 100 a reasonable estimate.)

The history of the certification principles for these engines is confusing and difficult to explain. Initially the rule seems to have been that two sample engines must each have had twice the time operating without failure as the operating time of the engine to be certified (rule of 2x). At least that is the FAA practice, and NASA seems to have adopted it, originally expecting the certified time to be 10 missions (hence 20 missions for each sample).

Obviously the best engines to use for comparison would be those of greatest total (flight plus test) operating time -- the so-called "fleet leaders." But what if a third sample and several others fail in a short time? Surely we will not be safe because two were unusual in lasting longer. The short time might be more representative of the real possibilities, and in the spirit of the safety factor of 2, we should only operate at half the time of the short-lived samples.

The slow shift toward decreasing safety factor can be seen in many examples. We take that of the HPFTP turbine blades. First of all the idea of testing an entire engine was abandoned. Each engine number has had many important parts (like the turbopumps themselves) replaced at frequent intervals, so that the rule must be shifted from engines to components. We accept an HPFTP for a certification time if two samples have each run successfully for twice that time (and of course, as a practical matter, no longer insisting that this time be as large as 10 missions). But what is "successfully?" The FAA calls a turbine blade crack a failure, in order, in practice, to really provide a safety factor greater than 2. There is some time that an engine can run between the time a crack originally starts until the time it has grown large enough to fracture. (The FAA is contemplating new rules that take this extra safety time into account, but only if it is very carefully analyzed through known models within a known range of experience and with materials thoroughly tested. None of these conditions apply to the Space Shuttle Main Engine.

Cracks were found in many second stage HPFTP turbine blades. In one case three were found after 1,900 seconds, while in another they were not found after 4,200 seconds, although usually these longer runs showed cracks. To follow this story further we shall have to realize that the stress depends a great deal on the power level. The Challenger flight was to be at, and previous flights had been at, a power level called 104% of rated power level during most of the time the engines were operating. Judging from some material data it is supposed that at the level 104% of rated power level, the time to crack is about twice that at 109% or full power level (FPL). Future flights were to be at this level because of heavier payloads, and many tests were made at this level. Therefore dividing time at 104% by 2, we obtain units called equivalent full power level (EFPL). (Obviously, some uncertainty is introduced by that, but it has not been studied.) The earliest cracks mentioned above occurred at 1,375 EFPL.

Now the certification rule becomes "limit all second stage blades to a maximum of 1,375 seconds EFPL." If one objects that the safety factor of 2

is lost it is pointed out that the one turbine ran for 3,800 seconds EFPL without cracks, and half of this is 1,900 so we are being more conservative. We have fooled ourselves in three ways. First we have only one sample, and it is not the fleet leader, for the other two samples of 3,800 or more seconds had 17 cracked blades between them. (There are 59 blades in the engine.) Next we have abandoned the 2x rule and substituted equal time. And finally, 1,375 is where we did see a crack. We can say that no crack had been found below 1,375, but the last time we looked and saw no cracks was 1,100 seconds EFPL. We do not know when the crack formed between these times, for example cracks may have formed at 1,150 seconds EFPL. (Approximately 2/3 of the blade sets tested in excess of 1,375 seconds EFPL had cracks. Some recent experiments have, indeed, shown cracks as early as 1,150 seconds.) It was important to keep the number high, for the Challenger was to fly an engine very close to the limit by the time the flight was over.

Finally it is claimed that the criteria are not abandoned, and the system is safe, by giving up the FAA convention that there should be no cracks, and considering only a completely fractured blade a failure. With this definition no engine has yet failed. The idea is that since there is sufficient time for a crack to grow to a fracture we can insure that all is safe by inspecting all blades for cracks. If they are found, replace them, and if none are found we have enough time for a safe mission. This makes the crack problem not a flight safety problem, but merely a maintenance problem.

This may in fact be true. But how well do we know that cracks always grow slowly enough that no fracture can occur in a mission? Three engines have run for long times with a few cracked blades (about 3,000 seconds EFPL) with no blades broken off.

But a fix for this cracking may have been found. By changing the blade shape, shot-peening the surface, and covering with insulation to exclude thermal shock, the blades have not cracked so far.

A very similar story appears in the history of certification of the HPOTP, but we shall not give the details here.

It is evident, in summary, that the Flight Readiness Reviews and certification rules show a deterioration for some of the problems of the Space Shuttle Main Engine that is closely analogous to the deterioration seen in the rules for the Solid Rocket Booster.

Avionics

By "avionics" is meant the computer system on the Orbiter as well as its input sensors and output actuators. At first we will restrict ourselves to the computers proper and not be concerned with the reliability of the input information from the sensors of temperature, pressure, etc., nor with whether the computer output is faithfully followed by the actuators of rocket firings, mechanical controls, displays to astronauts, etc.

The computer system is very elaborate, having over 250,000 lines of code. It is responsible, among many other things, for the automatic control of the entire ascent to orbit, and for the descent until well into the atmosphere (below Mach 1) once one button is pushed deciding the landing site desired. It would be possible to make the entire landing automatically (except that the landing gear lowering signal is expressly left out of computer control, and must be provided by the pilot, ostensibly for safety reasons) but such an entirely automatic landing is probably not as safe as a pilot controlled landing. During orbital flight it is used in the control of payloads, in displaying information to the astronauts, and the exchange of information to the ground. It is evident that the safety of flight requires guaranteed accuracy of this elaborate system of computer hardware and software.

In brief, the hardware reliability is ensured by having four essentially independent identical computer systems. Where possible each sensor also has multiple copies, usually four, and each copy feeds all four of the computer lines. If the inputs from the sensors disagree, depending on circumstances, certain averages, or a majority selection is used as the effective input. The algorithm used by each of the four computers is exactly the same, so their inputs (since each sees all copies of the sensors) are the same. Therefore at each step the results in each computer should be identical. From time to time they are compared, but because they might operate at slightly different speeds a system of stopping and waiting at specific times is instituted before each comparison is made. If one of the computers disagrees, or is too late in having its answer ready, the three which do agree are assumed to be correct and the errant computer is taken completely out of the system. If, now, another computer fails, as judged by the agreement of the other two, it is taken out of the system, and the rest of the flight canceled, and descent to the landing site is instituted, controlled by the two remaining computers. It is seen that this is a redundant system since the failure of only one computer does not affect the mission. Finally, as an extra feature of safety, there is a fifth independent

computer, whose memory is loaded with only the programs of ascent and descent, and which is capable of controlling the descent if there is a failure of more than two of the computers of the main line four.

There is not enough room in the memory of the main line computers for all the programs of ascent, descent, and payload programs in flight, so the memory is loaded about four times from tapes, by the astronauts.

Because of the enormous effort required to replace the software for such an elaborate system, and for checking a new system out, no change has been made to the hardware since the system began about fifteen years ago. The actual hardware is obsolete; for example, the memories are of the old ferrite core type. It is becoming more difficult to find manufacturers to supply such old-fashioned computers reliably and of high quality. Modern computers are very much more reliable, can run much faster, simplifying circuits, and allowing more to be done, and would not require so much loading of memory, for the memories are much larger.

The software is checked very carefully in a bottom-up fashion. First, each new line of code is checked, then sections of code or modules with special functions are verified. The scope is increased step by step until the new changes are incorporated into a complete system and checked. This complete output is considered the final product, newly released. But completely independently there is an independent verification group, that takes an adversary attitude to the software development group, and tests and verifies the software as if it were a customer of the delivered product. There is additional verification in using the new programs in simulators, etc. A discovery of an error during verification testing is considered very serious, and its origin studied very carefully to avoid such mistakes in the future. Such unexpected errors have been found only about six times in all the programming and program changing (for new or altered payloads) that has been done. The principle that is followed is that all the verification is not an aspect of program safety, it is merely a test of that safety, in a non-catastrophic verification. Flight safety is to be judged solely on how well the programs do in the verification tests. A failure here generates considerable concern.

To summarize then, the computer software checking system and attitude is of the highest quality. There appears to be no process of gradually fooling oneself while degrading standards so characteristic of the Solid Rocket Booster or Space Shuttle Main Engine safety systems. To be sure, there have been recent

suggestions by management to curtail such elaborate and expensive tests as being unnecessary at this late date in Shuttle history. This must be resisted for it does not appreciate the mutual subtle influences, and sources of error generated by even small changes of one part of a program on another. There are perpetual requests for changes as new payloads and new demands and modifications are suggested by the users. Changes are expensive because they require extensive testing. The proper way to save money is to curtail the number of requested changes, not the quality of testing for each.

One might add that the elaborate system could be very much improved by more modern hardware and programming techniques. Any outside competition would have all the advantages of starting over, and whether that is a good idea for NASA now should be carefully considered.

Finally, returning to the sensors and actuators of the avionics system, we find that the attitude to system failure and reliability is not nearly as good as for the computer system. For example, a difficulty was found with certain temperature sensors sometimes failing. Yet 18 months later the same sensors were still being used, still sometimes failing, until a launch had to be scrubbed because two of them failed at the same time. Even on a succeeding flight this unreliable sensor was used again. Again reaction control systems, the rocket jets used for reorienting and control in flight still are somewhat unreliable. There is considerable redundancy, but a long history of failures, none of which has yet been extensive enough to seriously affect flight. The action of the jets is checked by sensors, and, if they fail to fire the computers choose another jet to fire. But they are not designed to fail, and the problem should be solved.

Conclusions

If a reasonable launch schedule is to be maintained, engineering often cannot be done fast enough to keep up with the expectations of originally conservative certification criteria designed to guarantee a very safe vehicle. In these situations, subtly, and often with apparently logical arguments, the criteria are altered so that flights may still be certified in time. They therefore fly in a relatively unsafe condition, with a chance of failure of the order of a percent (it is difficult to be more accurate).

Official management, on the other hand, claims to believe the probability of failure is a thousand times less. One reason for this may be an attempt to assure the government of NASA perfection and success in order to ensure the supply of funds. The other may be that they sincerely believed it to be true,

demonstrating an almost incredible lack of communication between themselves and their working engineers.

In any event this has had very unfortunate consequences, the most serious of which is to encourage ordinary citizens to fly in such a dangerous machine, as if it had attained the safety of an ordinary airliner. The astronauts, like test pilots, should know their risks, and we honor them for their courage. Who can doubt that McAuliffe was equally a person of great courage, who was closer to an awareness of the true risk than NASA management would have us believe?

Let us make recommendations to ensure that NASA officials deal in a world of reality in understanding technological weaknesses and imperfections well enough to be actively trying to eliminate them. They must live in reality in comparing the costs and utility of the Shuttle to other methods of entering space. And they must be realistic in making contracts, in estimating costs, and the difficulty of the projects. Only realistic flight schedules should be proposed, schedules that have a reasonable chance of being met. If in this way the government would not support them, then so be it. NASA owes it to the citizens from whom it asks support to be frank, honest, and informative, so that these citizens can make the wisest decisions for the use of their limited resources.

For a successful technology, reality must take precedence over public relations, for nature cannot be fooled.

The end...



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