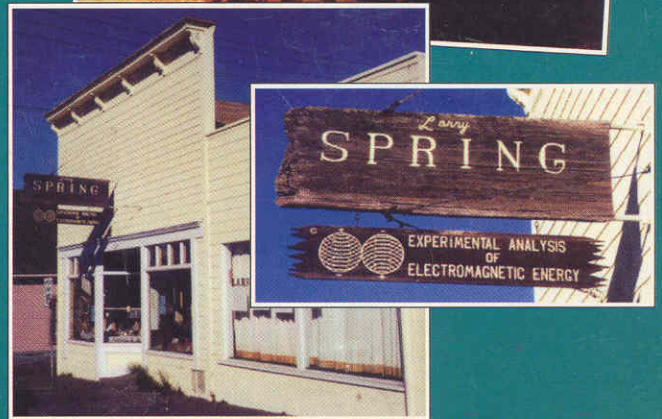
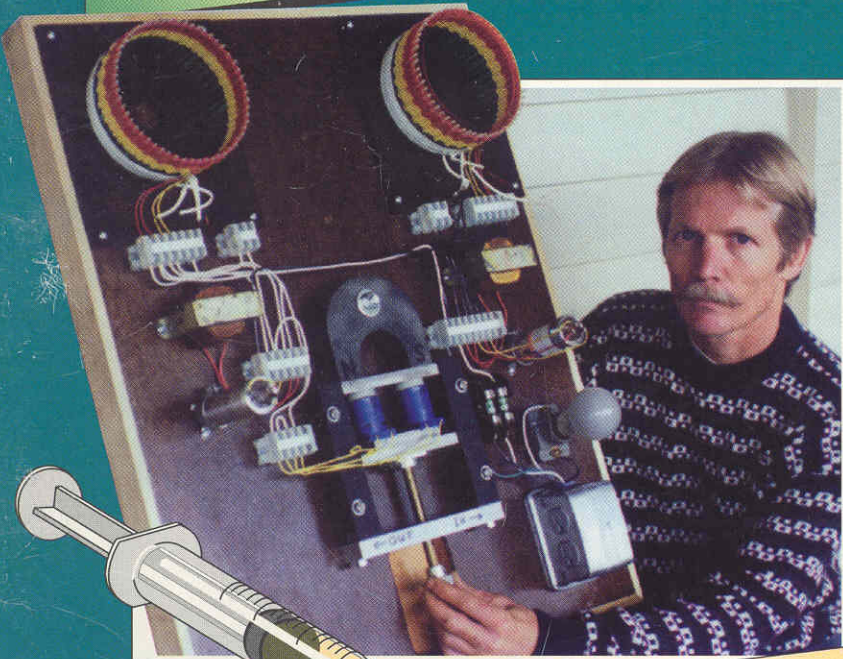
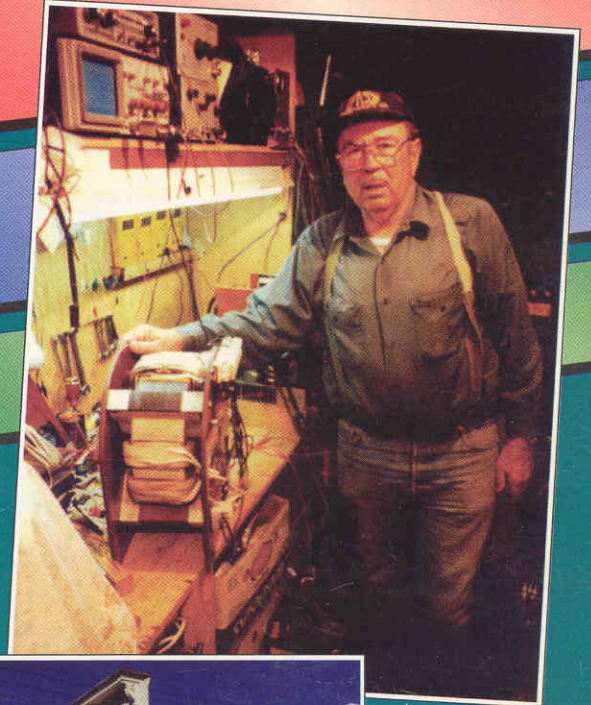


EXTRAORDINARY *Science*

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The Shot that Keeps on Shooting

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- FREE ENERGY
The power of gold ore is not easy
- FREE THINKERS!

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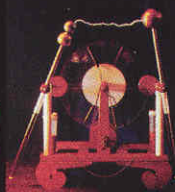
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EXTRAORDINARY SCIENCE (ISSN 1043-3716) is published quarterly in the United States by the International Tesla Society, Inc, PO Box 5636; Colorado Springs, CO 80931. Memberships: \$25.00 U.S., APOs; \$30.00 Canada, Mexico; \$50.00 All other countries. Memberships must be paid in US funds drawn on a US bank.

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MAIL CALL



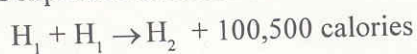
The Reader's Forum

Cold Fusion, Chemical Magic!

Excess power created by "cold fusion" experiments is produced by a special type of electrochemical process.

By spiking ordinary water with potassium or sodium salt, doped with aluminium or silicon, hydrogen ions are liberated by chemical reaction. By electrolyzing the water solution hydrogen ions are attracted to a catalytic cathode material. Platinum, palladium and porous nickel have been used as cathode material. I have used stainless steel wool for the cathode material with good results. The cost of cathode material is minimized by using a thin coating of platinum over a less costly metal, like stainless steel. Stainless steel wool (3% to 22% nickel) works well enough and is easy to come by.

Hydrogen combustion in the presence of certain catalysts (such as platinum or palladium) has been known for a long time now. This chemical reaction also applies to so called "cold fusion" experiments. In, normal hydrogen combustion, hydrogen molecules (H_2) burns with oxygen, forming water (H_2O). In our "cold fusion" reaction atomic hydrogen (H_1) burns with atomic hydrogen (H_1), forming molecular hydrogen (H_2). 100,500 calories are released during atomic hydrogen burn. The formula is expressed as follows:



Getting back to our "cold fusion" experiments. The temperature of the cathode material starts out at room temperature but, over time, the temperature increases due to accumulated heat. The rate of hydrogen ion (atomic hydrogen) generation, and the surface area in contact with the hydrogen combine to influence the temperature of the catalyst. To avoid being blown up by a "cold fusion" experiment, I advise you to keep your cathode temperature well below the autoignition temperature for hydrogen: 580°C ($1,085^\circ\text{F}$).

A similar process to "cold fusion" takes place in the atomic reactor. Scientists haven't figured this out yet either. In the atomic reactor atomic hydrogen is generated and reacts with a catalyst producing thermal energy. By putting the facts in their proper perspective I have designed energy sources which are safer and much more cost effective than so called "nuclear ener-

gy" schemes. Without going into too much detail, I will say that a new source of energy could be available to the consumer real soon.

Bruce A. Perreault
Campton, New Hampshire

About that Fluoride...

Dear Editor,

In past issues you've published findings about the bad effects of amalgams and Sodium Fluoride; which I appreciated and found interesting. I've done some research and would like to pass on what I'm doing for myself.

First, amalgams; remove them and replace them with inert material carefully following the recommendations by Thomas Levy in your Volume VI, Issue 2, 1994.

Second, Sodium Fluoride; stop using toothpaste with it in it and drinking water contaminated with it and/or Chlorine. I don't accept being used as a dumping medium for industrial waste. Water is better purified of germs by using Ozone, as is done in Europe. My water comes from a Canadian Rocky Mountain artesian spring. If I didn't have this water I'd definitely look into the Vortexian Mechanics of water as covered in various issues of ExtraOrdinary Science. I'd get de-ionized water, add my own minerals by running it through specially crushed rock and rejuvenate it with a proper vortex action.

To brush my teeth, I use a mixture of four parts baking soda and one part table salt. I use a toothbrush that can reach behind my back teeth. I understand that a rotary toothbrush is better at getting plaque. I gently brush and scrape my tongue and inner surfaces of my cheeks to get the bacteria and plaque formed there. I floss, brushing just can't reach between teeth. I massage my gums to enhance blood circulation. I brush after every meal, if I can. A couple of times a week, I rinse with a three percent solution of hydrogen peroxide; if you try this, be careful to take just a bit at first, because as the hydrogen peroxide kills bacteria, it foams like crazy.

George Wiseman
President, Eagle Research Inc.
Eastport, Idaho

WARNING - Voltages and currents present in Tesla Coils and other devices mentioned in this magazine are potentially **LETHAL!!** Remain a healthy and living reader by exercising extreme caution and common sense when handling such devices.

WHO'S ON FIRST!

Let's Get It Together!



by

Steven R. Elswick

Editor

Extraordinary Science

A Look in the Mirror

We have all seen it... A great new promising invention is unveiled for the world to see! Perhaps there's even a brilliant demonstration to prove its feasibility. Claims are made, and even a stock offering may be generated. Then... nothing!!! What happened?

In such instances, the first thing we hear are accusations of suppression or government intervention. Given the state of the Union and a slew of government bureaucracies running out of control, this is not that much of a stretch in believability. After all the *Randy Weaver case*, *Waco*, and the raid on *Writers and Research* are blatant exercises in the unconstitutional, illegal use of force on behalf of the whims of those in power.

It is not hard to imagine DEA, BATF, FBI, DOE, or even the DoD sweeping down on some hardworking inventor whose only crime is to free the American people from their dependence on oil! Never forget that *energy independence* equates to *economic freedom*! You can never really separate the two... and believe it or not, there are some people who like having other people subservient to them. So yes, suppression is alive and well in this country!

However, in most of the cases I have been involved with, the real problem lies with the inventor himself! In case after case, I have seen one inventor after another fizzle and burn because they cannot reconcile themselves with the realities of this world. Sadly, such inventors are relegated to the sideline of history — and are often denied even a footnote in the shifting sands of time.

The EDISON Syndrome

Perhaps the greatest stumbling block to the commercial development of a product occurs when an inventor tries to do everything himself — from product development to marketing to financial services. Although Thomas A. Edison was an inventor and a shrewd businessman and could do this, most inventors are not. In fact, Edison was shrewd enough to realize that he couldn't do it all either... after all, he was just one man... and hired a lot of inventors to come up with new inventions!

Most inventors are fairly independent people who have limited resources. This makes it tough for them to seek out the necessary assistance they may need. Because they hate being reliant on someone else or are reluctant to go into debt, they would rather attempt to do everything themselves. This causes problems when the tasks they are attempting to do are quite convoluted and involved.

Inventors who find themselves in this trap, should bite the bullet and diligently seek out the assistance necessary. They may soon find the short term pain is well worth the long term gain.

The LACK-OF-TRUST Syndrome

On the other hand, there seems to be no end to a steady stream of “carpetbaggers” who claim to have immense amounts of capital available. They tend to come in, screw up a good deal, then, when it comes time to write the check, they disappear! ... leaving the inventor high and dry! This has caused a lot of mistrust on both sides of the fence.

Similarly, big companies tend to come in, look at an invention, pick the inventor's brain, and then disappear. About six months later, a “new” product is on the shelf, and the inventor is left with but one recourse... the lawsuit. Due to the laxity in our government enforcement of patent laws, it is up to the inventor to defend his patents... a real David and Goliath battle! In most cases, the inventor does not have sufficient financial backing to pursue the suit.

Is it any wonder that many inventors have become extremely wary when dealing with the investment world? Unfortunately, when there are fortunes to be made, scruples seem to go out the window first... and CAUTION is the keyword!

The BETTER MOUSETRAP Syndrome

Many an inventor has found that the path to prosperity lies not in the marketing of a better mousetrap — rather it is the **search** for a better mousetrap that brings in the big bucks! Since the advent of government intervention in the form of grants, many of our brightest minds are tied down in the state of perpetual research. This has also crossed over into the private sector where entire industries have been formed to support research alone (i.e. cancer research, ms research, nuclear energy, space travel, etc).

As a result, anyone having a real solution is ruthlessly and unequivocally suppressed. Whenever possible, this suppression is generally under the auspices of the Imperial Scientists... our colleagues up in the Ivory Tower who resent being questioned... and get furious when contradicted by empirical evidence.

The TUCKER Syndrome

Everyone knows the story of Tucker... the upstart automobile manufacturer whose innovations were years ahead of the Big Three. When they couldn't buy him out, they took him out through the legal system. Although he was acquitted, the legal expenses and publicity virtually forced him out of the business after he had built 50 cars.

It is hard enough for an inventor to bring a product to the market under normal circumstances. When external forces are brought to bear against the introduction of a new idea, the results can be devastating. But worst of all, when the government and its legal system is being used in such a manner, it's a mockery of justice.

The Free Enterprise System

It is my deepest belief that the free enterprise system is the best economic model for prosperity known to mankind. In terms of providing creature comforts, we need only to look at the United States to see how the powerful functions of the free enterprise system work when unleashed... witness the explosion in computer technology which was mainly due to the fact that there were no governmental roadblocks set up to keep the market from expanding. Once the government begins to get involved with the computer industry expect to see stagnation occur in the development of new products. (That is one good

reason to oppose a government established information superhighway!!!!)

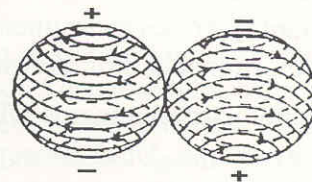
We need to help our inventors through stronger patent laws—GATT literally devastates patent protection. The government should prosecute the theft of ideas just as vigorously as they prosecute the theft of material items. Government should be protective of its citizens in nature, not an aggressive advocate of big business.

Where do we go from here?

We need to continue our search for alternatives in all fields. Just as important, we need to help support our inventors and innovators whenever possible. This can be something as simple as calling your Congressional representative whenever bills affecting the patent process comes up... calling the inventor up to encourage him in his work... or being a member of an organization such as the International Tesla Society which provides a platform through its symposiums and publications for inventors to present their ideas to the public. While the Society cannot endorse any ideas and still maintain its credibility as a neutral platform, all inventors are encouraged to continue their research and bring their inventions to market. **—SRE**

COMMON SENSE PHYSICS

by Larry Spring



Common Sense Physics is the result of 50+ years of experimentation and observations of radio waves. Larry's straight forward analysis is supported by personal observations and experiments — experiments that are easily reproducible by others. Larry establishes the concept of the magnetic sphere with his early experiments. Larry Spring boldly examines the laws of physics, energy in space, magnets, monopoles and describes his atomic theory in detail. Later heat and its properties as an electromagnetic phenomena is examined. Logical physics, lines of force, and gravity are discussed in depth. Concept of the eye's retina as an antenna array is introduced.

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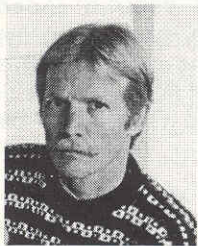


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An Inside View of **THE HENDERSHOT MOTOR MYSTERY**



by:

Mark M. Hendershot
16541 Redmond Way #160
Redmond, WA 98052

Lester J. Hendershot, my Father, was an inventor. In his many attempts at producing practical items, he was moderately successful a few times with electronic toys, and sold some of his ideas to small manufacturers. His biggest idea, however, was so revolutionary that it embarrassed the nation's top scientists because they couldn't explain it, and if it could be perfected, it would possibly eliminate the need for public electric utilities in many instances, and completely change most of our present concepts of motivation.

His first invention in this field was called a "motor" by the newspapers, but it was actually a generator which was powered by the magnetic field of the earth. His later models created enough electricity to simultaneously light a 120 volt light bulb and a table model radio. I witnessed it furnishing the power to run a television set and a sewing machine for hours at a time in our living room.

A Revolutionary Concept

It was in 1927 and 1928 that my Father began to think seriously about this "fuel-less" Generator. He had taken up flying in 1925 and he soon realized that the ultimate development of aviation would be greatly enhanced by the creation of an absolutely true and reliable compass. His first efforts were to produce such an instrument.

He theorized that the magnetic compass did not point to true north and varies from true north to a different extent at almost every point on the earth's surface. Also, the induction compass has to be set before each flight and at that time was not always reliable. He claimed that with a pre-magnetized core he could set up a magnetized field that would

indicate the true north, but he didn't know just how to utilize that in the compass he had set out to develop.

In continuing his experiments, he found that by cutting the same line of magnetic force north and south, he had an indicator of the true north and that by cutting the magnetic field east and west, he could develop a rotary motion.

The Hendershot Motor

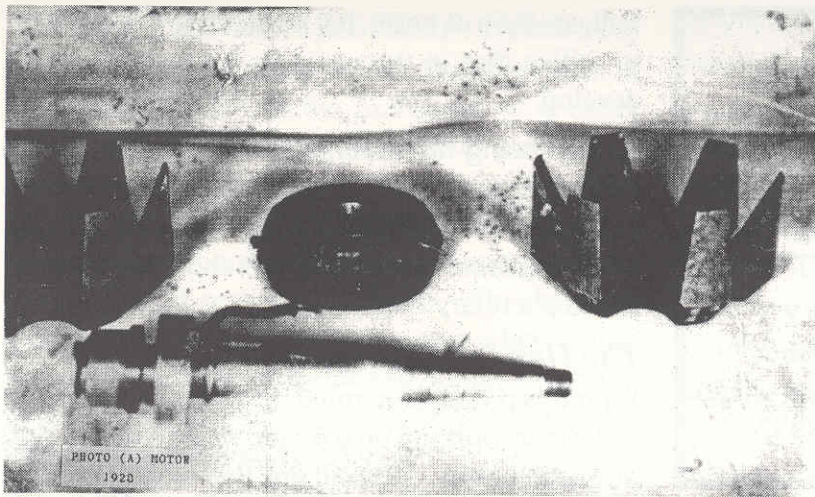
With this principle in mind, he switched his plans and began working on a motor which utilized this magnetic power. He built one that would rotate at a constant speed, a speed predetermined when the motor was built. It could be built for a desired speed, he said, and he felt that a reliable constant speed motor was one of the greatest needs in aviation at that time. The one he built developed 1,800 revolutions per minute.

In the following years, he realized that the idea of a magnetically-powered motor was not as practical as a magnetically-powered generator, so his later work was directed toward the generator. To avoid confusion, it should be pointed out that the early experiments began on a magnetically-powered MOTOR, and later a GENERATOR.

The first significant experiments on the motor version were held at Selfridge Field, Detroit, under the direction of Major Thomas G. Lanphier, commandant of the field and leader of the First Pursuit Group. The device demonstrated at Selfridge was a small model of what he hoped would be developed into an airplane engine. Quotes in the newspapers referred to top aeronautical brass of the day and their impressions of what they saw.

One such report was credited to William B. Stout, president of the Stout Air Service, Inc., and designer of the all-metal type plane used by the Ford Motor Company. Stout's comments were, "The demonstration was very impressive. It was actually uncanny. I would like very much to see a large model, designed to develop enough power to lift an airplane."

Major Lanphier's comments to reporters after the demonstrations were, "The whole thing is so mysterious and startling that it has the appearance of being a fake."



The First Hendershot Motor (1928). It could be built for a desired speed. Hendershot felt that a reliable constant speed motor was one of the greatest needs in aviation at that time. The one he built developed 1,800 revolutions per minute.

"I was extremely skeptical when I saw the first model", he continued, "but I helped to build the second one and witnessed the winding of the magnet. I am sure there was nothing phoney about it."

My Father had first shown the military brass how his model worked, then he supervised army technicians in building their own model, which worked perfectly. Major Lanphier said that the electrical men to whom they had shown the motor "...laughed at the way we wired it up and said it wouldn't work. Then it DID work."

It was the Selfridge Field experiment which touched off the series of stories in the national press. Stories with blaring headlines in such papers as the Detroit Free Press, Detroit News, Detroit Times, Pittsburgh papers, the New York Times, and many others. Most of them tagged the instrument demonstrated at Selfridge the "miracle motor," and there were pictures of Major Lanphier and Col. Lindbergh, my Father and the motor.

Anything in the news during that period which could be connected with Lindbergh was front page whether he had an active interest, or just happened to be in the area at the time. Headlines in the various papers read, "**Gasless Motor Tested for Lindy**", "**Lindy Inspects Fuelless Motor For Airplanes**", and "**Lindbergh Tries Motor That The Earth Runs.**" One story even stated that, at its request, Lindbergh and Lanphier were flying to New York to show the motor to the Guggenheim Foundation for the Promotion of Aeronautics.

Later reports, however, emphasized that Lindbergh actually had nothing whatsoever to do with the

experiments, and that he had just witnessed a couple of the demonstrations as the guest of his friend, Major Lanphier.

The Selfridge tests seemed to satisfy Lanphier and his associates, however, and during the period he was there, the model the technicians built obtained as high as 1,800 revolutions per minute and they announced its performance was entirely satisfactory. It was estimated these motors would run for 2,000 to 3,000 hours before the magnet center would have to be recharged.

Initial Skepticism and Ridicule

A man named Dr. F. W. Hochstetter, of the Hochstetter Research Laboratories in Pittsburgh, hastily called a news conference and displayed models of what he said were the "Hendershot Motor." He demonstrated them, and when they wouldn't work, he declared that Hendershot was a fake, and that the motors worked only because of power derived from concealed pencil batteries.

After he had exhibited his models of the motor, Dr. Hochstetter announced that they wouldn't generate enough electricity to "...light a 1-volt firefly" or to "...stitch a fairy's britches."

Noting the lavish lecture room in a New York hotel which had been rented by (or for) Dr. Hochstetter for the press conference, Dr. Hochstetter was asked why he was so interested in the Hendershot demonstrations and in trying to discredit them. He replied merely that he had "come to expose a fraud which would be capable of destroying faith in science for 1,000 years" and he claimed his only motive was that "pure science might shine forth

untarnished.” It was obvious to those who were pro-Hendershot that, in view of all the fuss and bother of such a noted scientist as Dr. Hochstetter, somewhere behind it all, someone was anxious for the innovation to be ridiculed.

When approached with the accusations, my Father smiled and told reporters, “Dr. Hochstetter is correct, to a degree. I HAVE concealed batteries in a model or two because I found that I could not trust some of my visitors, and I also had evidence that someone had tampered with my work. So, I put a couple of batteries in on occasion to lead the intruders away from what I was working on.”

He added that Major Lanphier and his army technicians were proof enough of his claims. “I didn’t build the motor that was demonstrated at Detroit,” he pointed out. “That was built by Army men under orders from Major Lanphier and under my direction. I didn’t even so much as wind the motor. They built the motor and it works. That’s my answer to all the critics — it works.

Dr. Hochstetter and his associates also claimed my Father had signed a contract and received \$25,000 for exploitation of the motor, but after a brief period of excitement, the matter was dropped — unproven. Not long after his demonstrations of the motor, Dr. Hochstetter died under unusual circumstances. He was in a Baltimore and Ohio train wreck, and he was the only passenger on the whole train who lost his life!

My Father was the butt of many jokes and comments at the time of the debates about his invention. An artist, drawing for one of the Pittsburgh papers, depicted him in a cartoon riding a propellerless airplane. The caption made fun of him. In later years my Father remarked, “Every time I see a jet plane go over now, I think of that cartoon and how everyone laughed at me for suggesting a plane could some day fly without a propeller. Twenty-five years ago I tried to tell them that.”

As suddenly as it all started, the publicity and sensationalism of the Hendershot motor stopped. The last news story to appear was on March 10, 1928, when a small article appeared in most papers saying that Lester Hendershot was a patient in Emergency Hospital in Washington.

The personal account my Father gave the family was much the same as the newspaper quote, with the minor exception that while he was demonstrating the motor in the patent office, he was hit by a bolt of 120 volts, not the jolting 2,000 volts the overeager reporter had written. The shock paralyzed his vocal chords, resulting in several weeks of recuperation before he completely recovered.

Continued Suppression Attempts

Something happened during this period that could explain the actions of Dr. Hochstetter and his associates. My Father said that while he was in the hospital, he was approached by a large corporation to stop his activity in connection with the motor or generator. Until the day he died, he would not reveal the name of the company, only that if he were successful with his generator, it would be a serious threat to their multimillion dollar industry. He named the sum he accepted as \$25,000, and the condition was that he was not to build another unit for 20 years. That’s when he dropped out of sight.

I’ve thought about the bizarre events connected with the generator, and feel it is possible that the “large corporation first tried to stop the activities through Dr. Hochstetter. When this failed, they approached my Father personally and bought him off. It’s interesting to note that one of the doctor’s charges was that he was paid \$25,000 to exploit his work. Isn’t it odd that this is the same figure actually paid, but to STOP his activities, but was quoted BEFORE he was approached with the offer?

My Father admitted that he and the family lived in constant fear, as we were being contacted every so often by crackpots who had delved into the records, discovered his creation, and had gone to the trouble of searching him out. Some of them, he suspected, were representatives of subversive groups and/or foreign powers.

This latter charge seems a little exaggerated, but, was supported by a series of letters he received from a fellow in Ohio in 1952. He had traced my Father by going back to his hometown in Pennsylvania and talking to my uncle — about the generator.

The first letter explained that fellow from Ohio was a part of a group of scientists who were privately financing their own research on the same phenomena

my Father discovered in 1928. He emphasized they would not allow backing by any organization or government since an invention such as the Hendershot Generator should be for "all the peoples and should not be controlled by national governments, but should be given gratis to the World Government when it is ready to assume World Responsibility." He was critical of my Father for allowing the military to look at it in 1928.

That letter was written in April, and in June a post card came with the following terse message:

Will shortly make public via radio and newspaper, connection your generator with 'Flying Saucer Propulsion.' Request Security Clearance from Security Chief your group within 48 hours. Have succeeded in duplication of your Generator.

Possible Earthquake Generator

In July my Father received a four-page handwritten epistle from the Ohio man. To my knowledge, it was the last letter the writer sent on the subject. He discussed information his intelligence had received on flying saucers, modestly admitting his sources were better than the CIA or the FBI, which he claimed had investigated him several times. He intimated that a Pasadena scientist had recently been kidnapped because he was working on an attempt to adapt the generator to aircraft.

Then he went into a long and rambling dissertation on how he got interested in what he called the "Ether Vortex Phenomena" and the generator. He explained that the magnetic field in the earth and volcanic action are related, according to his studies. He had spent two and one-half years in Japan working with Japanese volcanic scientists on the subject.

He mentioned one study he had made, and pointed out that the shift of the strata causing the volcano was due to a rotation of the Electromagnetic Field of the volcano at high speeds. He urged my Father to write a complete paper on his findings and publish them (preferably send them to the Earthquake Research Institute in Tokyo).

Referring to a particularly bad earthquake which had just occurred in the Los Angeles vicinity a few months before, the writer warned my Father not to operate his generator in the area near the San

Andreas (seismic) Fault which runs through the area. He said:

You may not believe it, but YOU CAN CAUSE EARTHQUAKE ACTIVITY TO INCREASE if you continue to operate your generator in that district. I am wondering if you were not directly responsible for the recent earthquake near Los Angeles?

Then he promised that he and his associates would keep the possibility of his involvement in the earthquake to themselves.

Letters such as these, plus occasional phone calls when the callers would not identify themselves, and a threat from an admitted Communist which was turned over to the FBI, caused my Father concern much of the time. If a large organization would take over the generator and its research, all he wanted out of it was enough money to take care of himself and his family in the future years.

A Mysterious Disappearance

One of the most encouraging offers came in September of 1956. My Father received word that officials of the Mexican government wanted to meet with him and discuss the possibility of using his generator for the rural development program in Mexico. Mexican government officials flew to Los Angeles and drove out to our house, where our family doctor who spoke Spanish acted as interpreter. Arrangements were made for the family to go to Mexico City, and for my Father to work with Mexican technicians on the generator.

We all flew to Mexico City and were housed in an apartment near the home of the Director of Electricity. My Father supervised the Mexicans in building a model. He had been working with them for several weeks, becoming more and more tense as time passed. He confessed to my mother that he was frightened because he understood no Spanish, and his fellow workers talked constantly in little groups by themselves, often glancing over at him. He couldn't understand a word they were saying, and it worried him considerably.

One morning in February of 1957, the laboratory called and asked where my Father was. My mother told them he had left for work in the morning, and if he wasn't there, she had no idea where he might

be. She became increasingly concerned as the day passed and there was no word from him.

That night he didn't come home, and we were on the verge of hysteria by next morning, then we received a telegram from Los Angeles. My Father's fear had worked itself into a nervous frenzy and he had rushed to the airport the day before and taken a plane for California. To the day of his death, it was a closed subject and he would never explain why he was compelled to leave us so suddenly under such strange circumstances, except that he feared for his life.

A Tragic Death

The final attempt to promote the generator came in the latter part of 1960 when a Dr. Lloyd E. Cannon convinced my Father that he had the facilities to present the project to the United States Navy for research and development. Cannon said he was the General Manager of his own company, Force Research of Los Angeles, Palm Springs and the Mojave Desert. Cannon explained that his group was made up of many dedicated scientists of various fields who contributed time and knowledge to Force Research projects. The range of experimentation covered electronics, astronautics, free energies, propulsion, and parapsychology.

Under my Father's supervision, two models were built and 100 copies of a 56-page "proposal" were printed for presentation to the various government

agencies and politicians who would have to review the project for its consideration. After the completion of the proposal and it had been sent to the government with no results, Cannon traveled the southwestern United States with the models trying to raise money for research. His visits were increasingly less frequent to our home until 1961, when a tragic climax to this story occurred.

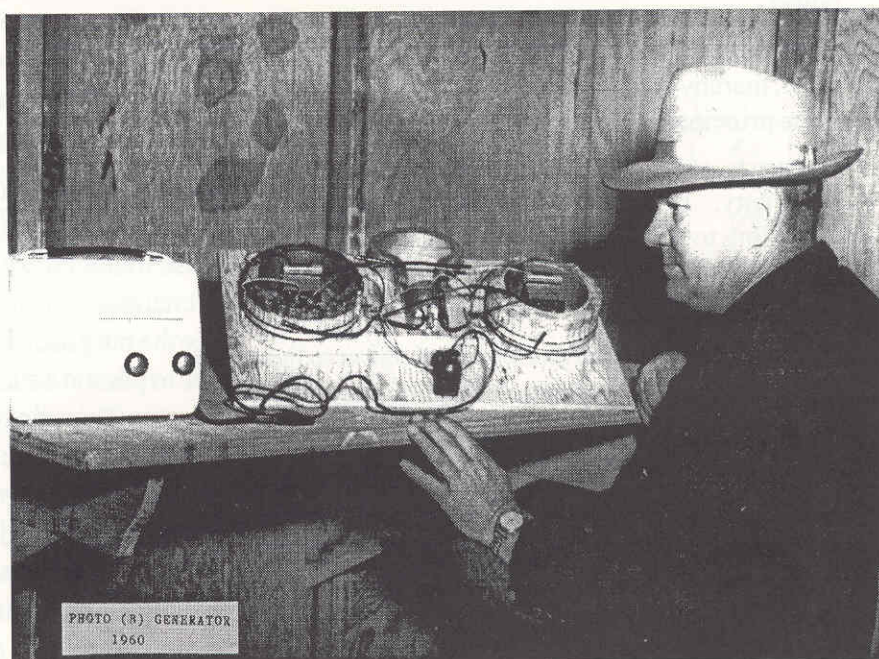
On April 19, 1961, upon returning home from school, I found my Father dead. It was recorded as a suicide without any further investigation.

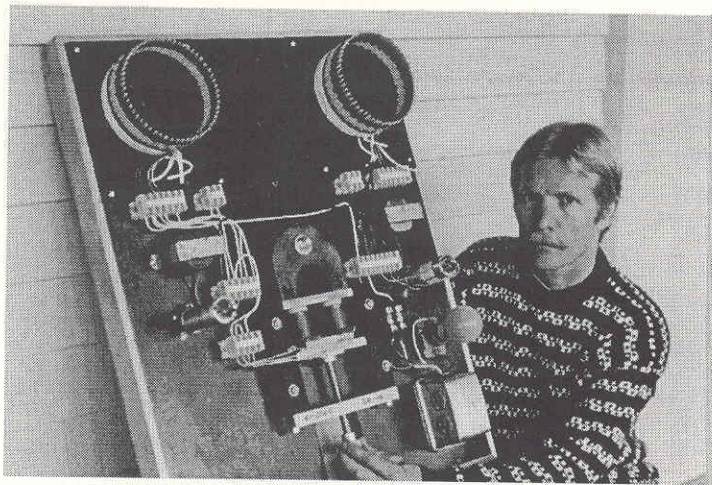
Basic Principles

For those who might be interested in my Father's analysis of how his Generator worked, the following are his theories on the subject:

- This field of magnetism surrounding the earth is similar to the field of magnetism in a man-made generator.
- The rotor of a Generator is revolved by some means of Power, cutting the lines of magnetism, creating electric power. The earth is turning inside of a field of magnetism. That, no one contradicts, yet it is claimed there is no power to be derived from it.
- Let's say we have a mechanism that will collect, polarize and create a positive and negative connection to this tremendous power that is ever-present on the earth."
- Take a survey compass. You can hold the needle east or west, and let go of it, and it immediately goes

The Hendershot Generator (1960). Lester realized that the idea of a magnetically-powered motor was not as practical as a magnetically-powered generator, so his later work was directed toward the generator.





Pursuing the Dream. Mark is currently working on the Hendershot Generator and hope to have it working for presentation at the Colorado Springs ExtraOrdinary Science Conference in July, 1995

north and south. This same power, when cut by the proper apparatus as the earth rotates inside this magnetism, will produce power, the amount of which is not calculated at this time.

- As long as the earth rotates around the sun, it will create electric power which some scientists claim does not exist. Yet, we dig into the mountains for material that costs us unbelievable sums, to create the same power.
- This magnetism surrounding the earth is in the same relation to electric power as uranium is to atomic power. Earth's magnetism is ever-present at any height or depth. It is equal to uranium as a by-product for power, namely electricity.
- Magnetism must be cut. The lines of force circling the earth are constant and if this force is broken up, and polarized, you have the equivalent of uranium broken up, which creates a heat and in turn creates power.
- Breaking up the forces of magnetism, polarizing them, thereby creating a resistance for power, is the same principal as atomic energy.
- Scientists claim it requires friction to generate electricity. I claim the earth rotating as it does, according to scientific theory, creates friction as a generator. The ever-present magnetism is the field, or stator.
- We have only to utilize this source of power to light every home, highway, bridge, airplane or any type of thing that cannot now be lighted because of inadequacy of present facilities.
- A very small unit composed of wire, a magnet, several especially designed coils, condensers, collector units, and a few other minor items, will cut this force. Another especially designed mechanism will polarize it, giving a positive and a negative

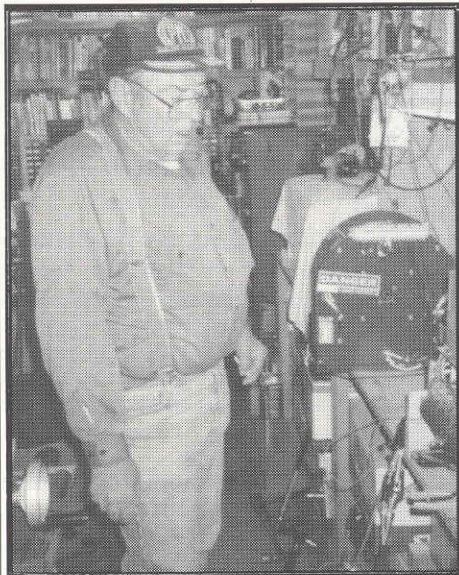
connection to any resistance and the result is the generation of electricity.

There you have the theory of how to create electricity from the magnetic force of the earth, written by a man with only a high school education. As years went by I've always wanted to continue with my Father's invention, but have worried about possibly running into the same problems my Father did.

It would not do my Father justice just to stop all work on it. Now I am ready to fulfill his dream. Since childhood I have been fascinated by electricity and have spent over 26 years in the electrical trade. Of his three sons, I alone have pursued this fascination and have applied my knowledge and experience to carry on my Father's work.

A lot of information has surfaced over the years, much of which is either backwards or just wrong according to my Father's notes kept stored away by the family. I am currently working on the Generator and hope to have it working at the ExtraOrdinary Science Conference in July, 1995.

I have compiled a packet of information containing corrections to plans that others have published. Also included are several photos of the Hendershot-Generator. I have decided to release this information for the purpose of raising sufficient funding to allow me to pursue a successful conclusion to my Father's dream. This packet is available for \$64.95 postpaid from myself or the Tesla Society's Museum Bookstore. The proceeds will help support my work. It is my hope that this new information will allow others to succeed and with enough successes, perhaps "big business" will not be able to stop it this time around! MMH



RON BRANDT'S PERM-MAG MOTOR

by

Bruce Meland
Editor/Publisher

Electrifying Times
63600 Deschutes Market Road
Bend, OR 97701

Ron Brandt began building motors and radios in the Third Grade. A few years later, he began making trips to the junk yards to collect all the cobalt magnets, coils, ball bearings, rotors, and steering columns from wrecked Model T's. His father called him "The Scavenger." This was back in the early 30's in Trout Lake, Washington, near the base of Mt. Adams. From these parts, he made even more sophisticated motors and many unusual electrical devices.

He joined the Navy at an early age and soon became an instructor in Math and Electronics. He taught students and co-mingled with Navy personnel who were involved with the Philadelphia Experiment. This experience really sparked his electronic curiosity. He spent 35 years working for the International Brotherhood of Electrical Workers, and on every new job site, he would bring along his 20' truck van with all his experimental motors, switching devices and controllers and work on them in the off hours.

With the advent of the gas wars of the early 70's, Ron built his first electric car, converting a '66 Dodge Dart to electric. The motor was a 24-volt, 32 HP starter generator off of a B52 bomber. He designed and built a 2-tank, 24-volt resonant circuit, each side, or tank, had 3 batteries. He drew sequential power off each tank with an oscillating resonant current using Navy surplus transistors and diodes. (See Diagram 1.) This circuit was presented to the International Tesla Conference in Colorado Springs by John Bedini, in 1984.

He drew positive power out of the negative posts of each side. By taking only 24 volts sequentially off the two a 36-volt battery tank by sequentially drawing power off each side, AC current was produced and hence converted back to DC with a Germanium rectifier. He stated, "If you can achieve resonance (about 900 Hz) with the controller and the metal alloy in the battery (which he did with his first set of batteries), it takes a long time to run the batteries down." He demonstrated this technology in the Dodge Dart at an Eastern Washington site by driving over 400 miles on a single charge. Some Allis Chalmers engineers observed the feat and said it was not possible, and that he was cheating. But

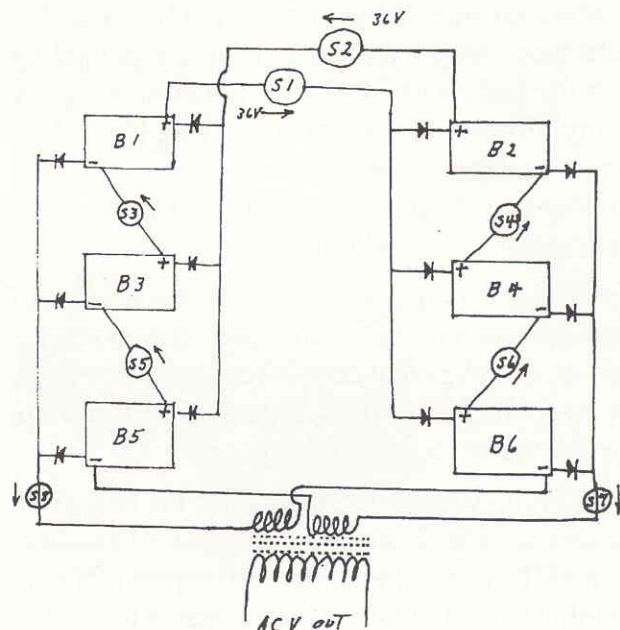


Figure 1. Brandt's 24-volt output resonant circuits.

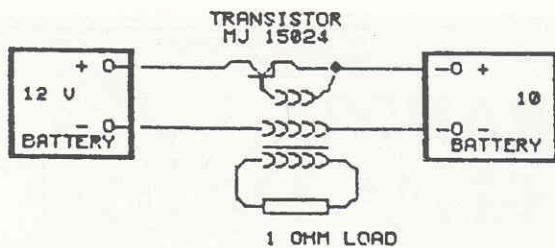


Figure 2. The Brandt-Tesla Switch Diagram BEFORE Resonance. To raise the voltage from 11.51 to 12.45V took 5 seconds. NOTE: 1-ohm resistor remained cold after 15 minutes of runtime! CREDIT: Experiments with Kromrey and Brandt-Tesla Converter

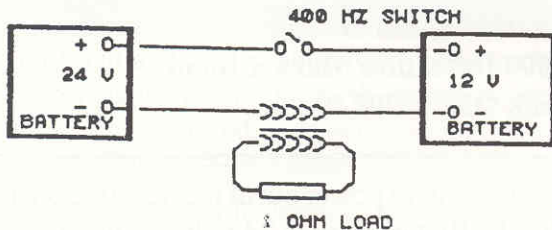


Figure 3. The Brandt-Tesla Switch AFTER Resonance is achieved. To raise the voltage from 1.7V to 10.24V took 1 minute 5 seconds. NOTE: 1-ohm resistor remained cold after 15 minutes of runtime! CREDIT: Experiments with Kromrey and Brandt-Tesla Converter

Ron knew better. A few years later, he tried the same technology in his car, only different batteries, but was unable to achieve resonance and hence got only twice the expected distance out of his car, about 100 miles. He thinks the batteries made later were not uniform to achieve resonance.

In the 1980's, Ron started perfecting an advanced magnetic motor and controller from the experience he obtained in constructing an (Ecklin) Variable Reluctance Motor Generator from the ground up with the assistance of Dr. John Jacobs, using the theory from Ecklin's Patent #4,567,407. This particular motor achieved overunity of about 105%, but Ron wasn't satisfied and thought a more efficient motor could be built.

He learned that in a magnetic field, the strength of the field *and* how fast it collapses determines the amount of energy that can be recovered. The faster the magnetic field collapses, (back EMF) the more energy can be recovered for reuse.

In the Perm-Mag Motor, he isolated the rotor from the magnetic field for a more efficient collection of back EMF. The multi-stator ring is supported by six non-magnetic mounting studs attached to the aluminum housing back plate. The stator is selectively

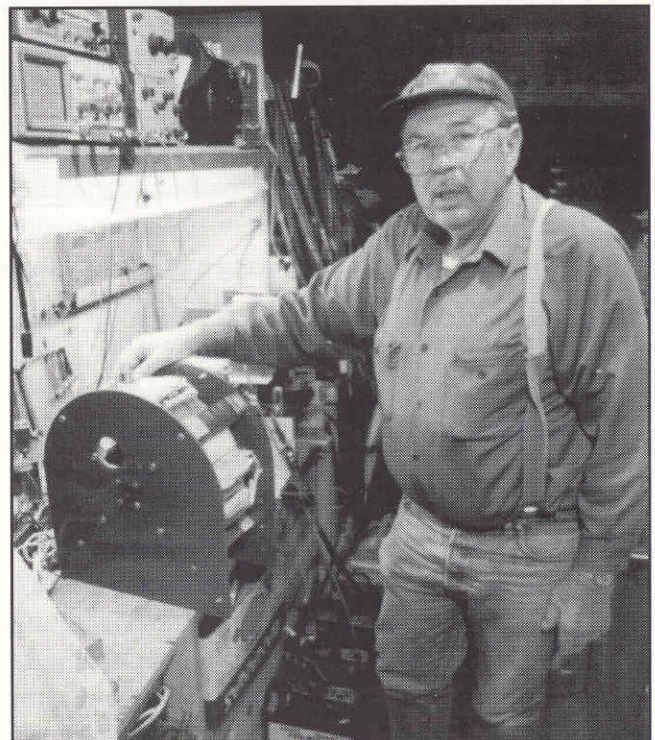
triggered by a peripheral coil activator to provide the proper magnetic phase relationship. With this unique design, there is no need for commutators or brushes which cause arcing and sparking, common in most electric motor designs. The magnetic flux path is reduced by the low iron mass of the stator, allowing faster switching times, guaranteeing the highest efficiency.

The Power Commutator has 3 elements:

1. The magnetic band supports neo-magnets which transmit their rotational power to the commutator plate.
2. The commutator plate serves as a mounting surface for Perm-mag actuators for "Hall Effects" triggering as well as a mounting surface for an air cooling system.
3. The insulated shaft drive collar is made of non conductive plastic.

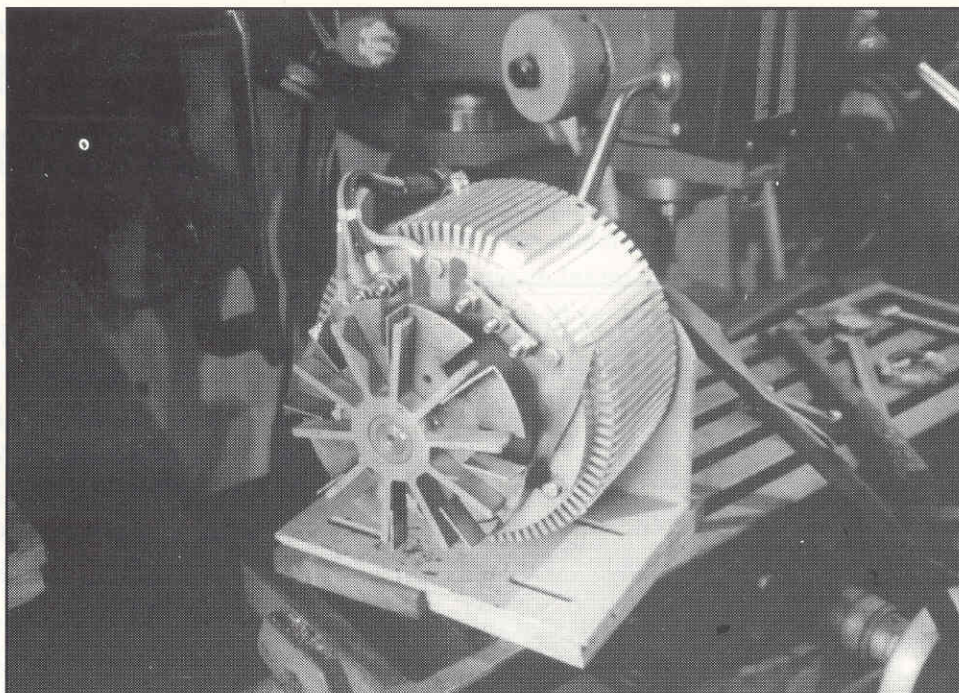
Most elements of the motor design are non-magnetic, which tends to shunt all the magnetic energy into the desired use of motion conversion. The exterior housing is made of materials of high magnetic resistance (high temperature aluminum or non-magnetic stainless steel).

The Perm-Mag motor is one of the most flexible electromotive devices developed, light in weight,



Ron Brandt and the main frame of his Ecklin Variable Reluctance Generator. Credit: Bruce Meland

10-HP Perm-Mag Motor Prototype. This miraculous machine only weighs 10lbs!
Credit: JW McGinnis

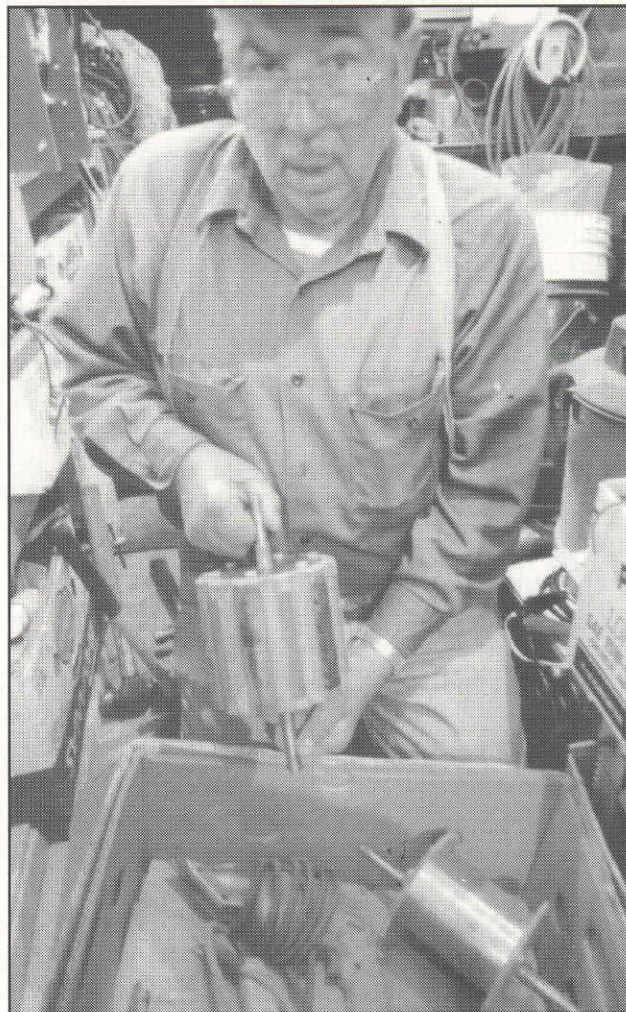


and small in size with wide ranges of power, speed, and direction which allows for easy construction, interchangeability, and repair.

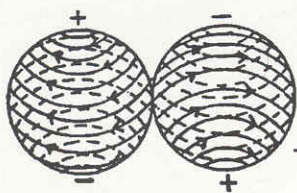
In conclusion, the high efficiency of the Per-Mag motor exhibits one of the most efficient watt per horse power unit conversion ratings in the industry. The fact that Ron Brandt's Perm-Mag Motor does not create torque with electricity, but instead allows the motor magnets to create the torque by efficiently directing the magnetic flux makes the following features possible:

1. Complete variable speed control at rated horsepower.
2. Complete variable horsepower output at rated speed.
3. Complete variable braking capability from a dead stop to slow retardation.
4. Complete variable reversing from instantaneous to a slow, gradual direction change.
5. A wide range of input DC Voltages: from .5v (small designs) to application as high as 4160v.
6. Either manual or computer control.
7. Local or remote operation.
8. Can be used in high-risk environments where other types spark.
9. Has small physical size per unit horsepower.

More specific details of the Perm-Mag Motor will be forthcoming when the patents and market negotiations are completed. Ron will be at the upcoming ExtraOrdinary Science Conference '95 in July. **__BM**



Ron Brandt holding a six-pole rotor of an Ecklin variable reluctance motor-generator. There's a two-pole rotor in the box. Credit: Bruce Meland



LARRY SPRING'S MAGNETIC SPHERES

by Steven R. Elswick

Over the past 40 years, Larry Spring has been on a lonely quest to determine the nature of electromagnetic energy. A diligent and logical thinker, Mr. Spring decided to determine the characteristics of the energy through experimentation. Throughout the course of his research, Larry devised experiments that demonstrated many of the basic tenets of electromagnetics... polarization, duality, verification of the speed of light, reflection, refraction and more! Had he lived in the last century, much of his work in basic physics would have been considered tremendous breakthroughs... Nobel prize material!

For instance, by using various wire screens, Larry learned the size of the energy units that are used by industry for broadcast of radio and satellite waves. When placing a screen with a wide mesh of 4" by 4" squares, Larry discovered that screen would not interfere with the signal strength being received by his satellite dish. After removing the screen, he would place another screen with a smaller mesh in front of the dish and record the signal strength. By repeating this process with screens of decreasing mesh sizes, he discovered that eventually the screens would start to decrease the signal strength... thus he would know the size of the energy and be able to derive its frequency! Simple, but effective.

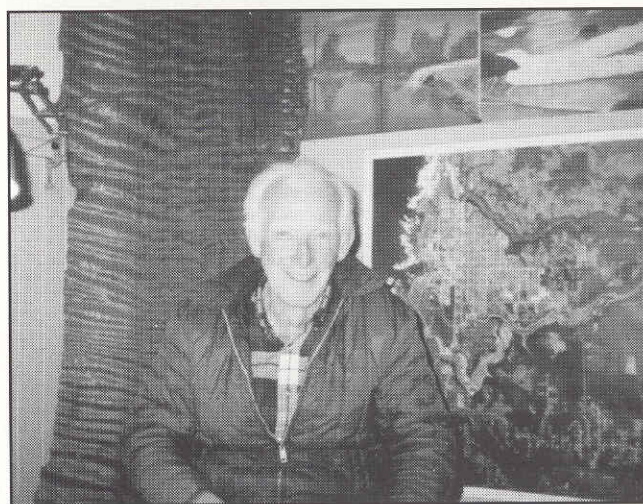
Larry soon learned that energy has a natural progression in the way that it reveals its secrets. Each experiment will answer some questions, but in turn will uncover a few more to be answered - usually with another experiment. Thus it is only natural that Larry found himself retracing the footsteps of some of the greatest scientists of all times!

Allowing the energy to be his "teacher," Larry soon came to a point in which he was at odds with today's conventional wisdom. Through close observation of reflections, Larry determined that the units of energy he was working with were spheres of mag-

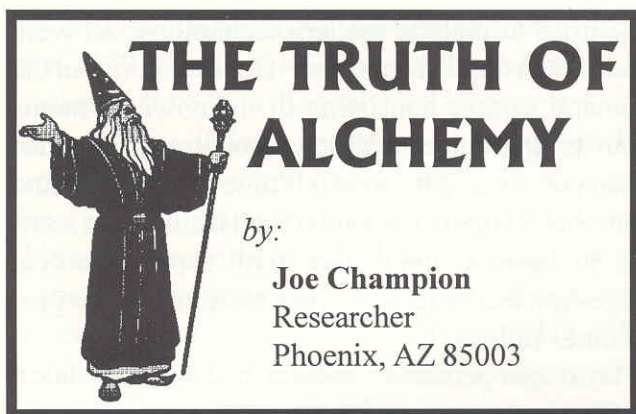
netic energy — not waves! It appears to me to be a reasonable concept. In the ocean, waves are composed of a large number of water molecules traveling together. Why couldn't what appears to be an electromagnetic wave be composed of a large number of spheres traveling outward from its source... similar to ways that the ripples move through water.

Larry's work demonstrates the feasibility of his theory and it stands on its own merits. To disprove his theory, the proper course would be to devise an experiment to demonstrate that the theory is wrong. Unfortunately, in many cases the academic world has closed its mind to independent thought. Physics is no exception.

Larry has kept a written record of his ideas and has released them in his book — *Common Sense Physics*. This could well be the electromagnetics textbook of the 21st century! His careful research tends to anticipate a number of questions that they raise. Larry's efforts proves beyond a doubt that one doesn't need a degree to be a scientist. To the contrary, the Larry's work epitomizes experimental science... and the scientific method. **SRE**



Larry Spring... An independent researcher is shown here in his Fort Bragg office/research center.



As man's intellect increased with the maturing of his species, so came his quest for knowledge... knowledge as to understand his beginning in an attempt to comprehend the present. — J.E.C.

Can man synthetically produce gold?

The answer is a simple—yes! Not only can he do so, but he is inadvertently doing it in such a way that cost people millions of dollars per year. At the same time, he is placing undue mental stress on what would be aspiring geologists and miners throughout our land. In this article, I will share the trials and tribulations of a changed technical segment of our modern society. This will be followed by a technical approach to the construction of the atom and how it interrelates with other forces to allow nuclear transmutation (alchemy) to occur. I will end with a thorough step-by-step procedure where those who have access to simple metallurgical tools can synthetically produce their own gold and silver. My goal is to provide sufficient factual data where you can decide for yourself if legitimacy exists to the alchemist's claims of yore. Of course, to hedge my position, I provided an experiment which has been replicated in universities during the past six years.

A Brief History

For years, man has heard that sorcerers were producing gold in their laboratories for the rulers of kingdoms. With the invention of modern day science, we consider such folklore to be poppycock. Although, unknown to many, hundreds of private laboratories are either practicing, or attempting to practice this art today within the United States alone. The only reason man has not accepted the reality of alchemy is solely from a lack of understanding. Without understanding, it becomes difficult for man to replicate his observations. Although,

there is one area of science where alchemy unknowingly has, and is creating havoc, costing unsuspecting investors tens of millions of dollars annually. This area is mineral assay by some of the analytical commercial laboratories.

You may lack an understanding of this statement, but if you have an interest in alchemy, please bear with me. You will be surprised at what you will hear. When a hobby geologist, weekend miner or sometimes an unsuspecting small mining company comes upon what appears to be a new mineralized zone, they are quick to take samples. These samples will soon be on a tray in an assayer's laboratory in the process of being chemically dissected to determine quantitative levels of silver, gold, platinum, palladium, iridium, osmium, rhodium and ruthenium. At completion, the discoverer of this new mineral zone, or cache, will gain his first insight into potential wealth.

Gold and silver have been known to exist for centuries. Although, in the mid-1700's there was a metal found more noble than gold. This metal, discovered throughout certain alluvial deposits of Columbia, South America, was named platinum. Within the next fifty years, five other metals were discovered which were always associated with platinum. Hence, they were categorized as members of the "Platinum Family." The family consists of iridium, osmium, palladium, rhodium and ruthenium. The Platinum Group Metals (PGMS) found no intrinsic industrial applications until the 1900's when they discovered that platinum and palladium have superb dehydrogenation properties. It is such characteristics which cause these metals to be used in catalytic convertors of engines operating on lead-free petroleum products. This includes every car and truck now being produced in the United States and many other upwardly mobile countries.

Having a specific application, these geographically rare metals were soon to become very valuable to industrial users. This meant that prospectors were returning to their mines and tailing piles (waste) to ascertain if they had reasonable levels of PGMs present. Up to this point, the story is well known. Prior to the quest for PGMs, a prospector only required a fire assay to determine the economic value of his mineral. The reason for this stemmed

from the fact he was only interested in gold and silver and the fire assay procedure was the "industrial standard." When the need arose to provide analytical services for the PGMS, assay houses had to change their procedures. This included the purchase of sophisticated equipment for those who could afford the high cost. This equipment came in the form of line emission analysis which includes:

- **Spectroscopes**
- **Atomic Absorption Spectroscopy (AAS)**
- **Direct Coupled Plasma (DCP)**
- **Inductive Coupled Plasma (ICP)**

The detailed operational characteristics of these instruments are not important for our purposes, but it is necessary to understand the general principles.

A spectroscope takes a sample of mineral and places it between the high intensity arc of two carbon electrodes. The light emission from this arc is carried through a prism where it becomes fragmented into the many spectrums of which the light is constructed. The spectrum emission from the sample is then compared with "known" spectra emissions of the elements so as to determine its constituents.

When AAS, DCP and ICP type analyses are utilized, however, the mineral sample must first be converted from a solid to a liquid state. This is accomplished by the application of various acid combinations, or alkaline solutions including cyanide. It takes an enormous amount of time and chemicals during this process for, as I mentioned, PGMs are more noble than gold. Thus, their digestion to a liquid state requires intense energies (chemical) and time. Upon completion of the digestive process, the now liquefied mineral sample is ingested into the various apparatuses through a nebulizer. The nebulized particles enter a flame of intense heat where they are volatilized. The wavelengths of energy generated by the various elements when volatilized are measured and recorded against "known standards." The procedures, even though overly simplified, are the standard parameters for the operation of such devices.

Now, here's the catch. For reasons which will be clarified at a later point, I will limit my immediate discussion to AAS, DCP and ICP types of analysis. When the metallurgical laboratories modified their

facilities to include modern technology, all were faced with the same problem. How does one put the mineral sample consisting of unknown elements into its liquid state in a timely, economical factor for their customers? It was at this time independent and national laboratory scientists and technicians started to become innovative with rapid chemical digestion techniques. A cross section of these procedures follow:

- **Hydrogen peroxide + sodium hydroxide chemical digestion.**
- **Microwave excitation of acid digestion.**
- **Acid bomb digestion techniques.**
- **Thermal burn techniques where the sample is mixed with carbon and sodium (or potassium) nitrate and ignited.**

Each laboratory maintained, and in many cases is still maintaining their digestive processes as a trade secret. Although, most will profess that they have more than adequate procedures which will provide a detailed analysis of gold and the PGMs in your mineral samples. Now, here is where things become somewhat interesting. Some laboratories state that they report the *true* levels of gold in your mineral. This level, sometimes, is ten to a hundred times *greater* than those witnessed when analyzing the same mineral by "fire assay" techniques!

Let me summarize all of this by stating: In an attempt to develop rapid analytical laboratory procedures in the analysis of probable gold and PGM laden mineral by sophisticated means, many laboratories have and are reporting the presence of large levels of precious metals. These levels are so great that you can calculate the value to be the unbelievable sum of, perhaps, \$50,000 per ton. Now this same ore would be valued at less than \$100 per ton if analyzed by standard fire assay! The question is, what is causing this dilemma? Prior to 1989, I categorized this phenomena of extravagant assays into one of the two following categories:

1. The technicians operating the equipment lacked proper training and were reporting erroneous numbers, *or*
2. The laboratory was reporting high values so they could entice customers to return for more analysis.

Of course, at that point in my life, I would have discounted any statements regarding alchemy, or specifically, alchemic events occurring in a modern

day analytical laboratory. Through the course of my post-1989 scientific investigation, the evidence was stacked in favor that the analytical laboratory technicians were indeed operating their equipment properly and the facility director/owners were indeed providing a factual report. However, I was able to prove, without a shadow of doubt, that on numerous occasions, the samples their laboratories were analyzing were totally void of gold and PGMS. Yet, the laboratory results after analysis showed the sample to be highly enriched with precious metals.

No, this is not a modern day paradox, but an example of real life nuclear transmutation. Taking it one step further, this is an example of nuclear transmutation occurring from energies no greater than those generated from a chemical/electro-chemical reaction. The exacting mechanisms behind such events are covered in a detailed format later in this article. First, I want you to grasp the full physiological and economic implications of everything to this point.

I am not suggesting, but *stating* that numerous laboratories are performing alchemic acts, that is, **synthetically producing precious metals during the esoteric digestive process prior to sample analysis.** I will further state that this event (nuclear transformation) is occurring without the equipment operator having any cardinal knowledge. And in a preliminary attempt to validate my findings, associates have sent samples of barren material such as loam to some of these laboratories only to have the results indicate that the garden dirt had thousands of dollars of precious metals per ton! Now, of course, the long and tedious chemical analysis process claims the same loam to be barren of any precious metals.

The Effects Upon Society

Let me begin by simplifying the sociological as well as physiological impact these "claims" have had to the mining industry. When the unsuspecting geologist took what appeared to be an aspiring sample to one of the many laboratories who analyze gold and PGMS only to have it returned with riches beyond his wildest imagination, he automatically starts to count his profits. Of course, with proper due diligence, he verifies his first findings with

numerous additional assays. With samples coming from the same mineral zone and analyzed by the same or similar type laboratory, results are repeated within an acceptable range. This confirms to the miner that he had indeed located the ultimate mother lode. However, during this discovery process, he observed that during normal fire assay tests for silver and gold, the results were nil, or, at least less, much less. Which test will he believe?

He addressed this problem with his PGM laboratory and they respond with, "The mineral sample you have is from a complex ore body and cannot be analyzed by standard techniques." Also, they will continue with a statement similar to, "Fire assay procedures are obsolete and are only used by the industry to cheat the miner." To the owner of the rock, these statements are logical for they are "psychologically pleasing."

The next phase is to take his documentation to an investment group where he will raise the necessary

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capital to open a legitimate mining company. This includes establishing an office, securing legal mineral deeds to the property, opening physical access (ingress and egress), complying with all local, state and federal regulations, physically opening access to the mineralized zone (vein), removing adequate tonnage for the initial sale, transporting this tonnage to the smelter/refiner, and then, sit back, drink champagne and wait for his first million dollar check.

This dream world is soon to come to an abrupt stop when the smelter asks you to come and remove your "worthless rock" from his facility. At this time, the world crumbles around the claim owner and the financier. In an attempt to regain dignity and salvage investment dollars, they rebound to the laboratory who "stands by their assay." The analysis was accomplished by a sophisticated machine costing tens of thousands of dollars and his operators (technicians) are beyond reproach, says the laboratory. Attempts to verify the original laboratory result using similar type facilities yield results with similar high precious metal content readings. At this time, the claim owner starts to develop a psychosis. It is apparent there exists a conspiracy. Obviously, the "Platinum Cartel" is behind all this! They are trying to take over his claim!

The truth of the matter is that the owner probably never had more than a mineralized zone of primarily iron oxide with secondary metal deposits of copper, nickel and cobalt. Further truth of the matter is that these metals, when properly excited, convert to gold, silver and all of the PGMS! This is a recurring tragedy throughout the United States.

For those trained in spectrographic principles, the first indication would be to find me in err. They would say that the erroneous readings were caused from improper sample preparation, background adjustments, or exterior interference from the chemical matrix. These possibilities exist; however, my claims are also exact.

If you would like additional information on a higher technical plane, I have prepared a paper, "Fundamental Flaws in Analysis by Spectrographic Techniques. This paper is available through the International Tesla Society's Museum Bookstore.

Transmutation In India

In 1990, the Bhabha Atomic Research Center (BARC) in Bombay, India replicated claims of Mishu Kushi wherein iron was produced during the arcing of two ultra pure carbon rods in distilled water. This process was replicated in 1992 by my associate Dr. Sundaresan during his assignment to Texas A&M University through a grant from the Philadelphia Project.

The findings were astonishing! By no more than the application of electricity to carbon, iron would form. Upon realizing the validity of such an event, I applied the principles to that of analytical instrumentation, which in this case is the spectroscope. To refresh you, the spectroscope is one of the analytical techniques introduced to laboratories to identify the qualitative and quantitative levels of gold and PGMS.

During the spectrographic process, the mineral sample is volatilized (vaporized) by being placed between the arc of two carbon electrodes. This is very similar to the techniques utilized in the *carbon + carbon = iron* arcing experiment. When the sample is vaporized, it emits a light. This light travels through a prism where it is observed either electronically or visually monitored. These observations are compared to known standard emission lines. From this the elements within the sample are identified. Certain sophisticated spectrographic equipment have the capability to measure the intensities of the specific emission lines. This allows for the instrument to report the quantitative levels of the element under investigation (observation).

The point being, by using ultra-pure carbon rods in a spectroscope, my associates were able to view and record the formation of iron. Or stating it another way, they were able to witness the actual birth of a new element, while Kushi, BARC and Texas A&M's confirmation of transmutation came hours later after chemical analysis had been performed on the detritus from the carbon + carbon arc.

This brought forth the following two hypotheses:

1. By the specific application of spectrographic instrumentation, one can observe the nuclear formation of elements foreign to those of the original sample.

2. The questions must now be placed to the operators of such equipment. Are they recording the elements present in the original sample under observation or are they recording the spectra of new elements being nuclear transformed by the combination of your sample and instrumentation?

This is a true scientific and technological paradox. At this point, one should raise the question, "Why hasn't this event been observed and recorded before?" The answer is, it has, but it has been frequently mislabeled as contamination (the electrodes and atmospheric). If one thinks about it, this is logical. The operators inadvertently views many elements when establishing his "background" conditions which are nullified to a zero state. This eliminates reporting false readings from influences outside of the sample under investigation. ("Background" is a term used throughout numerous laboratory experiments and technical observation devices. It simply means, point of origin or starting point after considering the immediate atmospheric and physical conditions.)

To ensure myself that what my associates were viewing wasn't contamination, I established a set of parameters where they constructed twenty-nine new metals via nuclear transmutation (alchemy), duly confirmed and recorded in a carbon arc spectroscopy.

A Scenario Forming

In review to this point, it is easy to ascertain that if my hypotheses are in order, mayhem would be rampant throughout the mining industry. Well, the disorder is widespread. You can find financiers void of capital, frustrated prospectors, assayers defending their honor and promoters and, in some cases, assayers being jailed for receiving money for "false" assay reports. Using these facts as support for my claims of alchemic events unknowingly occurring in certain assay laboratories has merit. However, as we continue, I will supply the necessary parameters which will solidify my position.

I want to ensure that there is no misunderstanding regarding these modern day apparatuses, e.g., AAS, ICP, etc. When properly operated, they are very exacting. What I have proposed is that transmutation is occurring during the sample preparation which is the laboratory procedure used prior to

spectrographic analysis. We have determined without a doubt that faulty presentations due to transmutation frequently occur with spectrographic equipment which utilizes carbon arc excitation techniques. Also, I think it fitting to add that my associates and I have compiled reams of data which solidifies the position of this paper.

The Mathematics of Alchemy

Alchemy, being a discipline of science, is governed by mathematical laws. These laws correspond in principle to many rules governing high energy physics. Now, when one develops a mathematical structure, they must do so by either theorizing an event, or by gaining the needed parameters from observation of a "physical occurrence."

I was fortunate to deal with physical observations in my research. This made my mathematical models more "absolute" than "assumptive." A generalization of this means I have recorded specifics of my experiments before I began so as to compare them with certain aspects observed after the process. This delta allowed for the physical observations which accounts for the mathematical models discussed in this text. This brings us to our first formula, which is universal:

$$\Delta \text{REALITY} = \text{AFTER-BEFORE.}$$

When dealing with hard facts from nuclear observations, abstractive applications of this formula are necessary.

Before continuing, I would like to disclose the fact that the basis for my mathematical models were first developed by using Mr. Jack Keller's computer within days of observing this phenomena at his facility in 1989. Mr. Keller was the gentleman who introduced me to alchemy. Other scientists who I was to meet at a later point in life were working on similar theories based on assumptive modes. All in all, the basic concept for all of our thoughts as to the actual mechanism of alchemy probably originated in 1936. The point being, the mathematics discussed within the embodiment are derived from physical, not theoretical models. Hence, one can physically prove or disprove my models in a laboratory instead of a theoretical "think tank."

All mathematical formulas have rules and here is no exception; although, here the mathematical model-

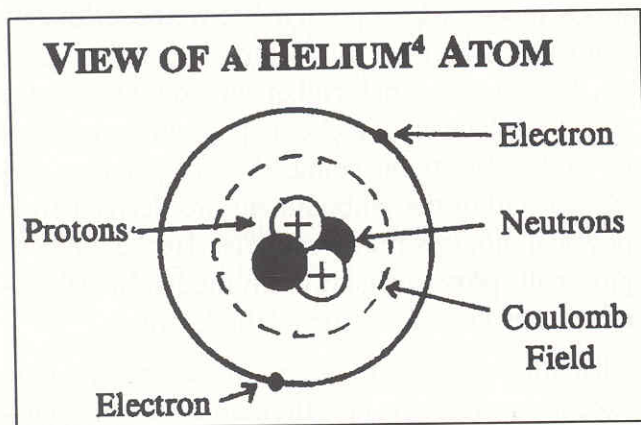
ing is based on physical properties. That is, the properties responsible for the construction of the atom. Since alchemy, in the truest sense, is the change of one element to another, such as mercury to gold, it is necessary to have an understanding of the atom.

At the turn of the century, science was able to ascertain that the atom consists of three major components: Protons, neutrons and electrons. Furthermore, they determined that the atom was constructed of two major sections: The *nucleus* and the *electron shell*. The nucleus is comprised of protons and neutrons, while the electron shell consisted solely of electrons. An example of a helium atom is shown below.

As scientists were determining the internal structure of the atom, they found that each particle inherited its own characteristics. For example, the proton and electron possess equal electrical charges with opposing polarity. The proton is positive with the electron having a negative charge. However, there exists a major difference in the two. The proton has a mass 1,837 times greater than that of the electron. This difference of mass plays an important role in the atom's structure.

The third particle, the neutron, has no charge, thus the name. The mass of a neutron is slightly greater than that of a proton. A neutron never exists free in nature for periods greater than 8 seconds. At the end of its life, it converts to becoming a proton. A proton, in its singular state, is elemental hydrogen, the most basic element in the universe.

The number of protons and neutrons in the nucleus determine the following two important characteristics of the atom.



The number of protons internal to the nucleus designates the atom's atomic number. An example would be if an atom had eight protons, it would have an atomic number of $<8>$. Atomic number $<8>$ is the designator for oxygen.

The number of neutrons internal to the nucleus designates the atom's atomic mass. The atomic mass is a number which equals the total of all protons and neutrons. An example to this would be if an atom had $<8>$ neutrons, it would have a mass of $<16>$. This distinction, that is the number of protons and neutrons per nucleus decides a very important trait other than just the name of the atom. It determines the element's stability factor.

Isotopes are divided into two categories, stable and unstable. A stable isotope is one that is simpatico with nature. That is to say, it will not change its atomic mass unless outside forces are applied. However, an unstable isotope is not compatible with nature and continuously undergoes change in its atomic mass until it reaches the closest stable condition. There are 280 known stable isotopes existing in nature which comprises 81 elements. This means that many elements host more than one isotope. In fact, there exists over 2,000 unstable isotopes, all undergoing nuclear decay via the many decay modes shown in the figure on the next page.

To summarize, an atom's construction consists of two primary bodies, the nucleus and electron shell. The nucleus, comprised of neutrons and protons, is electropositive, while the electron shell, consisting solely of electrons, is electronegative.

It has been necessary to regress to the point of understanding the basic atomic structure so that we can grasp the potential configuration of the atom's nucleus. During the past six years of research, I have come to the understanding that the nucleus consists of *nodules* of atomic groups. The two basic particles are: Alpha (2 protons and 2 neutrons) and alpha-not (4 neutrons). I have designated these particles as follows:

Alpha = α and alpha-not = α^0 .

In association with these primary particles, I have surmised that the following particles can exist within the nucleus:

<p>Neutrons (n)</p> <p>Deuterium (D) — $1p + 1n$</p>	<p>Protons (p)</p> <p>Tritium (T) — $1p + 2n$</p>
---	--

In combining these particles with the alpha and alpha-not particles, one can build any of the known 2,000 plus isotopes. It took a period of time to reach this point, but with this understanding, we can now address the crux of atomic construction, the alpha model. When one can grasp this concept, they can easily construct any element via low energy nuclear change.

In alchemic events, we have two types of transmutation: *transgressive* and *regressive*. Transgressive is when an isotope of lesser mass is increased to one of greater mass. Regressive is the reciprocal, a decreasing of the mass from the starting isotope. Since the mathematical principles vary greatly between the two, I will discuss each individually.

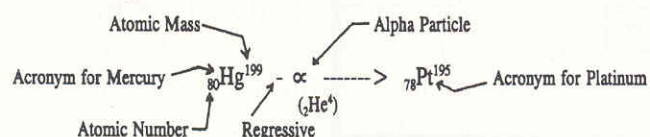
Transgressive transmutation is like having building blocks to build atoms. In these cases, I opted to maintain simplicity by restricting the building blocks to alpha (α) and alpha-not (α^0) particles. Remember, an α particle has a mass of $<4>$ and consists of two protons and two neutrons. Also, an α particle can exist free in nature as a helium atom. An α^0 particle also has a mass of $<4>$ consisting of four neutrons. An α^0 particle does not exist free in nature and if found outside of an atom's nucleus, will quickly decay to helium via two electron captures.

Regressive transmutation is the reciprocal to transgressive, for it decreases the mass of the starting isotopes. This decrease is typical of a mass reduction of 1, 2, 3, 4 or a mathematical constant of four (i.e., 4, 8, 12, 16). Regressive transmutation will normally cause the formation of:

*Hydrogen Isotopes

MASS	ISOTOPE
1	Hydrogen
2	*Deuterium
3	*Tritium
4	Helium

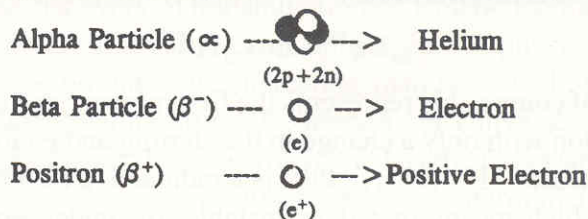
Stable isotopes equal to the delta mass (differential) will also form. An example of this would be when an isotope of mercury undergoes alpha decay due to regressive transmutation, it will form platinum. This is represented as follows:



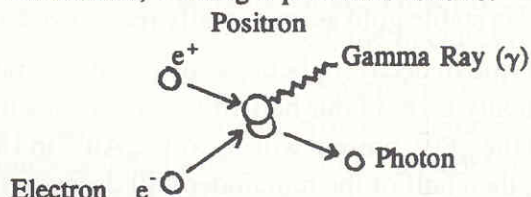
DECAY PARTICLE AND MODES OF UNSTABLE ISOTOPES

Decay Particle Types

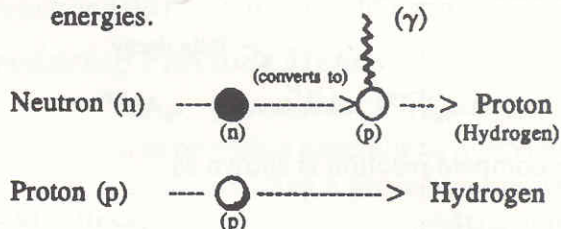
Ending Particles



Note: A positron does not exist free in nature. When it is produced, it immediately annihilates an electron, creating a photon as follows:



In the course of forming the photon, a gamma particle is created which accounts for recoil energies.



Alpha Particle Emission (α) \rightarrow Reduces the nucleus mass by 2 protons & 2 neutrons.

*Beta Emission (β^-) \rightarrow A neutron within the nucleus is converted to a proton.

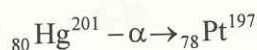
*Positron Emission (β^+) \rightarrow A proton in the nucleus is converted to a neutron.

*Orbital Electron Capture (E.C.) \rightarrow Is when a proton absorbs an electron, causing it to annihilate to a neutron (Remember: A proton and electron have equal yet opposing charges.)

Neutron Emission (n) \rightarrow Reduces the nucleus mass by a single neutron.

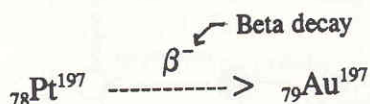
* In these decay modes, the atomic mass changes only slightly. The sum of the protons and neutrons is always the same before and after the reaction.

This is a real life presentation, although somewhat simplified, of how mercury regresses to platinum. Another example of mercury regression which has a greater appeal to mankind, but is somewhat more confusing, follows:

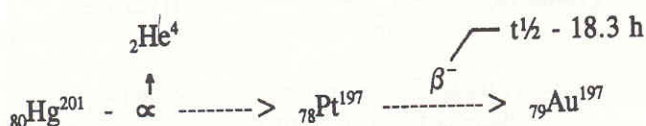


Of course, this represents the first mercury regression with only a change in the starting and ending masses. However, $_{78}\text{Pt}^{197}$ is a radioactive isotope, which means that it is unstable, or, undergoing decay to a "stable isotope." In this particular case, $_{78}\text{Pt}^{197}$ undergoes a beta decay to $_{79}\text{Au}^{197}$. (*Au* is the acronym for gold and the 197 atomic mass is stable. $_{79}\text{Au}^{197}$ is stable gold as universally recognized.)

The period of decay, or better known as decay rate, is typically a 18.3 hour half-life. This means that half of the $_{78}\text{Pt}^{197}$ present will decay to $_{79}\text{Au}^{197}$ in 18.3 hours, then half of the remainder will decay in the next 18.3 hours and so on until all radiation has dissipated. This is mathematically noted as:



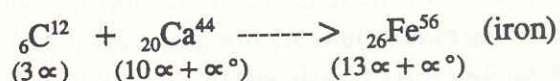
The complete reaction is shown as:



This is a single demonstration of how gold can be formed via mercury regression. Other procedures which are more complicated allow for faster decay models.

Returning to transgressive transmutation, I visualized the addition of alpha and alpha-not particles to form numerous elements. This is the prevalent drive of the spectrographic carbon arc observation. A basic illustration of an alpha model and how it relates to other alpha and alpha-not in a transgressive scheme is illustrated in the next figure.

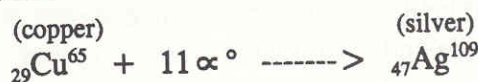
A mathematical example of an alpha adder would be:



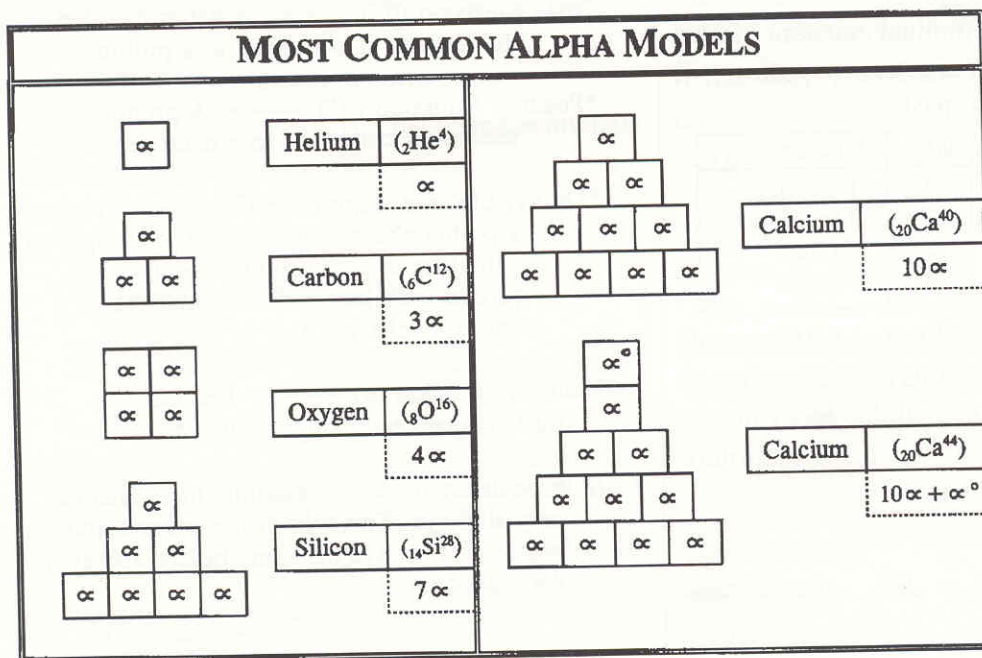
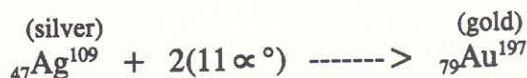
This is an over simplified approach as to how iron is formed in the carbon + carbon \rightarrow iron arc. In the actual reaction, carbon combines with alpha-not particles instead of alpha particles. This would appear as:



Other interesting formulas for transgressive transmutations are:



<and>



Key:

α = Alpha Particle
Equivalent to $_2\text{He}^4$

α° = Alpha-not
Equivalent to a
four neutron cluster

As one can see, gold can be made from copper in a transgressive mode, while gold is made from mercury in regression. Due only to the constraints of space, I have just lightly skimmed the surface regarding the mechanisms of alchemy. My intent was to supply a generalized explanation behind the event before proceeding forward with the physical parameters.

How To Initiate An Alchemic Event

Throughout my research, I have found that precious metals can be formed by the following excitation processes:

- Thermal Burn
- Thermal Melt
- Electro-Chemical
- Radio Frequency Excitation
- Kinetic Excitation

These processes vary in the quantity of new metals produced, yet each has their importance. A *Thermal Burn* relates to the parameters established in my first witnessed alchemic event at Mr. Keller's facility. The conditions are extremely simple. Dry chemicals are mixed together, placed in a suitable container, then ignited. They burn rapidly, similar to gunpowder, for 90 seconds or so. After the burn, the reaction is complete.

The *Thermal Melt* is a compatible process to the Thermal Burn. It differs from the fact that the chemicals are placed in a crucible inside a "vented" furnace. The temperature is increased until the chemicals ignite due to external temperatures.

The *Electro-Chemical* method is a process where elements are selectively forced together and held in proximity initially via electromagnetic forces (EMF). Under certain conditions, that is, the proper EMF applied to the proper elements in sequence, nuclear transmutation will occur.

Radio Frequency Excitation is an external driving force that I have successfully applied to stimulate the Electro-Chemical process into higher yields. The external force is in the form of electromagnetic radiation at frequencies ranging from 8.2 to 400.0 megahertz. These frequencies are extremely low in comparison to frequencies associated with actual nuclear events. An offshoot of my original RF excitation research can be seen in the many labora-

tories who use microwave digestion techniques. Unknowingly, these facilities are causing the transformation of base metals to precious metals by prolonged exposures to predetermined conditions.

The discovery of transmutation by *Kinetic Excitation* was a novelty. This application of physical forces provides an interesting insight as to how Mother Nature originally formed our Universe. I enjoy the process, for when one has the necessary equipment, the procedure is entirely "environmentally friendly." Kinetic Excitation is a fancy name for nuclear transmutation occurring in a sealed ball mill. Ball mills come in all shapes and sizes, although the type suitable for alchemic processes is one which is pressure sealed and operates dry.

To date, these methods have performed satisfactorily in the nuclear formation of new elements. Even though satisfied with the results, I am continuously considering other types of excitation forces, including lasers. The door has just opened to a new era of science and there is still much to learn.

Producing Precious Metals

from Black Sands

In an attempt to provide a generalized overview of the science, I felt including a procedure known to have a high replication rate of nuclear transmutation would be proper. The procedure resembles processes used by the earlier mentioned laboratories. For those who have access to the proper equipment, I highly suggest replication of this test. There are no omissions or trade secrets. Thus the process is represented in its entirety.

To synthetically produce precious metals, all one needs is the following:

- **Black Sands** - Almost any black sands that have been washed (gravity separated), consisting of Magnetite (Fe_3O_4), or Hematite (Fe_2O_3), or Chalcocite (Cu_2S), or Chalcopyrite (CuFeS_2), etc.
- **Lead Powder** (≤ 200 -mesh, reagent grade)
- **Charcoal**
- **Sodium Nitrate** (NaNO_3)
- **Grinder**
- **Scales**
- **Fire assay capability**
- **Inductive Coupled Plasma**, Atomic Absorption, or available commercial facilities for platinum and platinum group metals (PGMS) analysis.

Step One.

Individually pulverize the black sands, charcoal and sodium nitrate to a fineness of <200-mesh.

This equates to a particle size of 75 microns.

Use caution. A danger of pre-ignition exists from the friction of the grinder and iron associated with the mineral.

Step Two.

Before starting, take two samples for reference as follows:

1. 30 grams mineral before grinding.
2. 60 grams mineral after grinding (<200-mesh)

Step Three.

Next weigh out portions of the pulverized material as follows:

Black sands	100 grams
Lead Powder	50 grams
Charcoal	200 grams
Sodium Nitrate	<u>600 grams</u>
Total	950 grams

Step Four.

Combine the chemicals and material and mix thoroughly. I suggest using a large, clean plastic bag, tightly sealed. Shake thoroughly for no less than four to five minutes. A longer period of mixing is best. The homogeneity of the mixture is extremely important to the efficiency of the reaction.

Step Five.

When complete, place the material in a clean 2.5 pound metallic can. I used an empty coffee can in many of my tests. Next, and probably most important, place the can with the enclosed mixture on a flat surface in a well ventilated area. In a laboratory, a fume hood with sealing view glass and high speed exhaust fan is excellent for this phase. If a fume hood is not available, place the can outside away from all buildings, animals and people. After ignition, be sure to stay well away from the toxic smoke arising from the burning mixture.

Step Six.

By using a small torch, or equivalent, ignite the mixture by applying a flame to the surface of the chemicals. The mixture will ignite slowly within five to ten seconds. Within 20 seconds, the

average temperature will be approximately 700°C and within 100 seconds, the reaction should terminate. If the reaction does not meet this criteria, you need to check the following for the cause of failure:

1. Material was not uniformly pulverized to 200-mesh.
2. Material was not homogenous in mixture.
3. The chemicals contained moisture (humidity). Note: the sodium nitrate is slightly hygroscopic.
4. The container used to hold the reaction was of such material that it absorbed the energy (heat) from the reaction.

Step Seven.

Allow the reaction to cool. Carefully remove all material from the container, weigh and record the weight. This step is very important. Without it, you can not quantitatively determine the efficiency of the reaction.

Step Eight.

It is now necessary to pulverize the residue to a fineness of < 200-mesh. At this time, the experiment is complete. The next phase will provide the analytical knowledge of the transmutation results.

Determination of Reaction's Success

To determine the success, it is necessary to analyze the metals present after the reaction versus those that were present before the reaction. For silver and gold, this is normally accomplished by a fire assay. If you do not have fire assay capabilities, there are numerous laboratories who can supply this service for you. For additional information on this assay procedure, consult your local technical library.

Normal reporting of metal weight in a fire assay here in the United States is in troy ounces per ton. The U.S. industry refuses to accept the metric system; however, the rest of the world uses the metric system, so fire assay weights are listed in grams per ton. As previously stated, I will continue to use the metric system. There are several logical reasons for this. The industry's laboratories commonly report results in "parts per million" (ppm). In using the metric form, there are 1,000,000 grams in 1.0 metric ton. By using the metric system, you can directly convert ppms to grams per ton. An exam-

ple would be: 231 ppm = 231 grams per ton. For the purpose of this section, we are only concerned with ppm. This is due to the requirement to calculate actual weight of silver and gold before the reaction for comparison to the end results.

To perform a fire assay on this material, the following flux should be used for each 15.0 gram sample:

50.0 grams Lead Oxide (Litharge)
 40.0 grams Borax
 20.0 grams Soda Ash
 10.0 grams Silica
 3.0 grams Flour
 1.0 grams Fluorspar
 124.0 grams **Total**

Take 15 grams of the **pulverized** black sands from **before** the burn and 15 grams of the residue and separately mix each with the above flux. Be sure to use an identification system so you can readily identify which sample is which. Place each sample in a 1,000°C furnace for 2.5 to 3.0 hours. Remove from the furnace, pour the molten mixture into a conical mold and allow to cool.

Following solidification and complete cooling, use a hammer and wire brush to remove the lead button from the slag. Place the clean lead button in a cupel and return to the furnace at 1,000°C. Leave for 1.5 to 2.0 hours, or until the reaction is complete.

Remove the cupel from the furnace and allow to cool. Once cool, remove the beads from the cupels, clean, weigh and record the weight of each bead. The next step requires taking each bead and place them in separate 30% nitric acid (HNO_3) solutions to dissolve the silver. Be sure to positively mark which sample is which. Decant the solutions, wash and dry the residues. Then weigh the residues. If you are not already aware of these procedures, please refer to a metallurgical reference, or consult a qualified person.

Mathematical Determination of Results for Gold and Silver

The **AFTER** ignition calculations for gold and silver are:

$$\frac{\text{Bead wt in grams}}{15 \text{ grams sample wt}} \cdot 1 \times 10^{+6} \text{ g / ton} = \text{Ag g / ton (Unadjusted)}$$

PRODUCING PRECIOUS METALS AT HOME

by **Joe E. Champion**

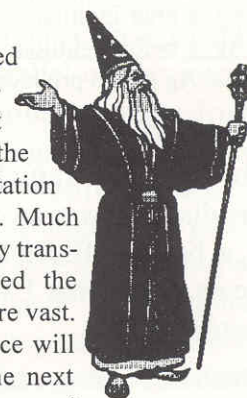
Make GOLD in your kitchen sink.... Create a fortune in DIAMONDS using your garage workshop ... well, maybe that's stretching it. However, transmutation of metals is today's physical reality — not just an old alchemist's dream!!!

Joe Champion, an independent researcher, has demonstrated practical transmutation time and time again!!! Despite his ability to demonstrate transmutation, the orthodox scientific community refuses to accept these concepts because they are contrary to traditional beliefs. However, you do not have to be constrained by the "experts"! You can see for yourself by performing the experiments yourself!!!

Joe reveals all in this incredible hardbound book. A reader should be able to replicate any process described. The reader is not required to possess a scientific background; in fact, many of the earlier purchasers of Mr. Champion's books — without special training or education — have successfully replicated these processes. The various processes are laid out in "Betty Crocker Cookbook" fashion, meaning that if one can bake a cake, one should be able to successfully achieve the transmutation of elements if due diligence in following the recipe and procedures are applied.

Learn about the production of rare earths by nuclear synthesis. Explore advanced analysis and collection techniques for transmuted precious metals. Discover a process for removing the oxides, the dissolution of kinetically transmuted metals and several rhodium recovery processes.

Joe Champion has been kidnapped and then jailed for having the audacity to investigate and report the truth of alchemy. Although the controversial science of transmutation is new, alchemy itself is very old. Much has to be learned about low energy transmutation. We have just cracked the surface. Potential applications are vast. There is no doubt that this science will soon become the "science of the next century." This book is the forerunner of the new science. **Get your copy TODAY!!!** (440-pp) **Producing Precious Metals** 69.95 + S/H



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$$\frac{\text{Parted wt in grams}}{15 \text{ grams sample wt}} \bullet 1 \times 10^6 \text{ g / ton} = \text{Au g / ton}$$

$$\begin{array}{l} \text{Ag g/ton unadjusted} \\ - \text{Au g/ton (or in ppm)} \\ \hline \text{Ag g/ton adjusted (or ppm)} \end{array}$$

To calculate the **AFTER** ignition weight of gold and silver in grams:

$$\frac{\text{Ag g / ton adjusted}}{1 \times 10^6 \text{ g / ton}} \bullet \text{after ignition residue wt} = \text{Total Ag grams}$$

$$\frac{\text{Au g / ton}}{1 \times 10^6 \text{ g / ton}} \bullet \text{after ignition residue wt} = \text{Total Au grams}$$

Now we will calculate the BEFORE ignition precious metal weights. Repeat the mathematics displayed above using the results from the **pulverized BEFORE** ignition black sands sample. The 100.0 grams shown below was the weight of the original black sands in the before ignition chemical matrix.

$$\frac{\text{Ag g / ton (adjusted)}}{1 \times 10^6 \text{ g / ton}} \bullet 100 \text{ grams} = \text{Total Ag grams before burn.}$$

$$\frac{\text{Au g / ton}}{1 \times 10^6 \text{ g / ton}} \bullet 100 \text{ grams} = \text{Total Au grams before burn.}$$

The final step in the calculations for gold and silver generation is to determine the efficiency of our reaction.

$\frac{\text{Ag g after ignition}}{- \text{Ag g before ignition}}$	$\frac{\text{Au g after ignition}}{- \text{Au g before ignition}}$
Total Ag grams produced	Total Au grams produced

Discussion

Throughout this article, I have attempted to present a realistic view to an obscure portion of science. It is, at best, a difficult task to perform. The problem stems from what I would call the "believability factor."

Much like history, science started with the recording of observations. From these observations, philosophers (thinkers) were able to apply their present day logic in an attempt to explain their observations. With the development of higher mathematics, the thinkers of the past started to record specific events in mathematical terms in lieu of philosophical jargon. Modern day science evolved from this trait.

Science made fundamental decisions during the 18th Century that one element could not be converted to another. This conclusion was based on a universal stability factor rather than the mathematics of nuclear science. It would be another 150 years before science would realize that the atom was constructed of protons, neutrons and electrons. However, science was able to make such a statement based on sound logic. The logic was that if one element could easily convert to another, the world around them would continuously be changing.

The thought that one element could not be changed to another during chemical reactions was strengthened with the coming of our nuclear age. The lost, or forbidden art of alchemy is considered to be no more than the dreams of madmen, or the hoaxes of hucksters. In challenge to historic claims, I present what I feel to be a good argument in favor of alchemy. Also, I present real situations of how alchemy is affecting mankind today. But the reality is that the truth will not be decided in my writings, but by replication of my work by others. JEC

For More Information

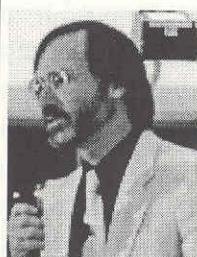
Joe's associates publish a monthly newsletter titled, "The Discovery News." This newsletter supports the new science explained in Joe Champion's book — *Producing Precious Metals at Home*. Experiments by these researchers are continually making strides in advancing the science and the newsletter is the quickest method of disseminating the latest information to readers.

Topics from recent issues include a detailed description of Dr. Troy Becker's 1970's commercial production plant for synthetic platinum and gold, converting black sands to cash, Dr. Stephen Emmens's alchemy of the late 1800s, producing scandium (rare earth) by kinetic excitation means and carbon-copper underwater arcing to produce synthetic precious metals.

Interested "ExtraOrdinary Science" readers may order a copy from Discovery Publishing, PO Box 67, Westboro, WI 54490 or by calling (800) 689-7780.

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VACCINATION—



The Shot That Keeps on Shooting

by

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Designed to Protect?

Upon superficial review, nothing could seem more appropriate than to protect the population from dread diseases with simple and presumably harmless inoculations. However, the issue is very complex, and it is best to address it appropriately informed, as the consequences of such shots can often be as dire as the very diseases themselves. As with other public health issues such as the artificial fluoridation of our water supplies or the ongoing assault on our immune systems with the continued placement of mercury fillings in our mouths, vaccination programs are characterized mainly by emotional and political support, with a decided paucity of scientific validation. Similar to the fluoride and mercury issues, vaccinations also hold the unswerving loyalty and support of numerous health professionals, most of whom, once imprinted in their early training, never allow new data or studies to sway their allegiances. If such data does not appear in the very limited realm of a few specific scientific journals, it is simply assumed that new and revolutionary information cannot exist.

The evidence to be presented here will support a number of disturbing findings, including:

- *Vaccines often fail in protecting from the targeted disease, or they may offer only a temporary immunity, in contrast to the permanence of a natural immunity.*
- *Vaccines can cause the very disease for which protection is sought.*
- *Vaccines often severely damage the immune system, causing any of many other diseases.*
- *Nearly all of the feared infectious diseases had largely disappeared when vaccines were introduced.*

- *Vaccines can implant latent or "slow viruses" that can manifest years later as degenerative diseases, often neurological.*
- *Vaccines appear to have significantly decreased the intellectual or cognitive abilities of several generations.*
- *Vaccines have been linked to learning and behavioral disorders of "unknown cause," such as autism, dyslexia, hyperactivity, and minimal brain dysfunction.*
- *Vaccines have likely facilitated the explosive growth of the criminal element in society.*
- *In spite of the above points, vaccinations are effectively mandated by law, representing ongoing massive monetary windfalls for the pharmaceutical companies. Parents objecting, even on religious grounds, can still face custody battles for their children with the American government and welfare agencies, often on the grounds of "child abuse."*

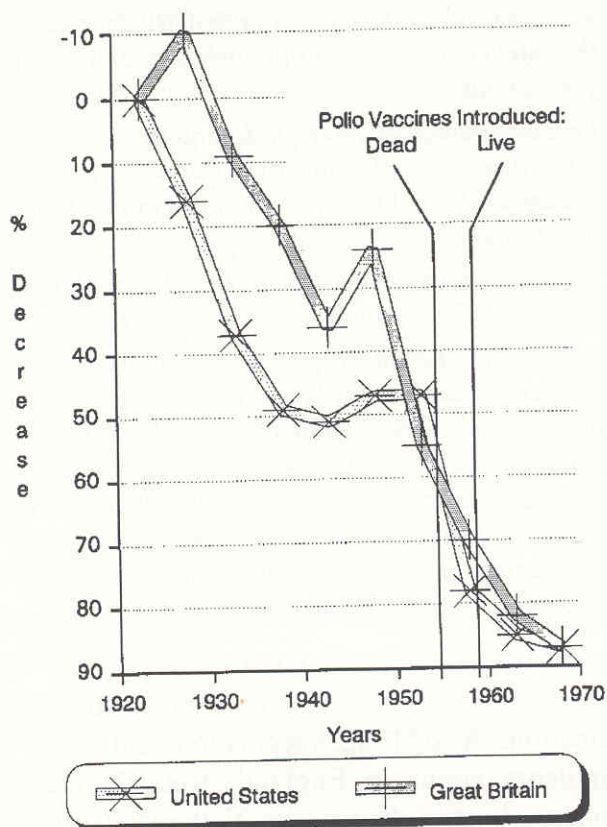
Freedom of Choice in Europe

Much of Europe is completely free from mandatory vaccination. As of 1982, vaccination held a non-compulsory status in England, Ireland, West Germany, Austria, Spain, the Netherlands, and most of Switzerland. However, Belgium, France, and Portugal follow America's rigid policy of maintaining compulsory vaccination as a requirement for children entering school.¹ (Many of America's relatively few unvaccinated children receive home schooling, thus escaping the highly effective public educational screen.) The parallel of vaccination policy to the involuntary fluoridation of the drinking water in America is striking, as no amount of solid scientific data, even in "mainstream" medical journals, seems able to keep the politicians, power brokers, and tunnel-visioned scientists from poisoning us (and often themselves). Bear in mind, however, that America has long ruled its science with politics, rather than vice-versa, as it should be.

Failure of the Primary Function

Certainly the primary purpose of a vaccine is to protect those injected from a specific disease. In fact, many vaccines have not only substantially failed in such protection, they have frequently caused the very diseases for which they were supposed to offer protection. America's own Centers for Dis-

THE POLIO DEATH RATE WAS DECREASING ON ITS OWN BEFORE THE VACCINE WAS INTRODUCED



A decreasing death rate was occurring prior to the advent of the polio vaccine! This diagram clearly shows that the death rate from polio was steadily decreasing before the advent of the vaccine. Credit: Neil Z. Miller; *Vaccines: Are They Really Safe and Effective?*

ease Control (CDC) in Atlanta admitted in 1992 that the polio live-virus vaccine had become the main cause of polio in the United States. Specifically, the CDC asserted that, from 1973 to 1983, 87% of all (non-imported) cases of polio resulted directly from vaccine administration. Even more amazingly, it was asserted that every non-imported case of polio in the United States from 1980 to 1989 was vaccine-induced.² Even Dr. Jonas Salk himself (the developer of the first polio vaccine in 1955, a killed-virus preparation) was quoted to say:

When you inoculate children with a polio vaccine you don't sleep well for two or three weeks.³

For those who may think much of the above is some sort of statistical manipulation, consider that the overall number of reported cases of polio in the United States following the large-scale usage of Dr.

Salk's killed-virus vaccine *increased* substantially. Nationwide, the incidence appeared to double, with some states reporting 400% to 600% increases. And although polio has largely disappeared from the United States today, the evidence does not support the polio vaccine as being the cause of this. Not only had the polio death rate already declined by roughly 50% from 1923 to 1953 (well before the introduction of the vaccine), polio incidence was also similarly declining in Europe as well, and it continued to decline there even without the mass inoculations that were implemented in the U. S.⁴ The vaccine supporters nevertheless give full credit for disease eradication to a vaccine that merely "jumped on the bandwagon" at the end of ride.

While the initial observations here have focused on the polio vaccines and their effects, similar patterns were present in the other infectious diseases and their vaccines. Smallpox, now considered to be an "eradicated" disease, was well on its way to extinction prior to the introduction of a vaccine for it. Furthermore, in the underdeveloped countries where the threat of rampant epidemics was felt to be greatest, less than 10% of the children ended up with inoculations.⁵ Yet the disease still eventually disappeared at the same rate in those areas as in the heavily vaccinated areas. From 1915 to 1958, the measles death rate had already declined by greater than 95%, prior to the introduction of any vaccines for it.⁶

Even the current traditional medicine textbook on vaccinations documents the above noted natural trend toward the extinction of smallpox. The 1994 edition of *Vaccines* by Plotkin and Mortimer states on page 29, regarding the declining smallpox incidence in the United States in the first half of this century:

This progress occurred in the absence of any nationally coordinated smallpox control effort, and little is known about the extent of vaccination immunity in the country during the 1940s or about the epidemiology of smallpox.

This would seem, then, to be a corroboration from traditional medicine that, at least in the case of smallpox, little real contribution to the demise of the disease was made by the smallpox vaccine.

Do No Harm?

It doesn't take an enormous amount of common sense to realize that any intervention to protect or restore health should do precisely that, and it should do that clearly more often than it compromises the very health it seeks to preserve. Unfortunately, vaccines appear to frequently fall far short of this desirable goal. Germany, typically a health leader in the world, initiated compulsory diphtheria vaccinations in 1939. Although it was a relatively rare disease, 150,000 cases were then seen in Germany. France, not wanting to undergo a similar mistake, opted for no such vaccinations, but the subsequent military occupation by the Germans resulted ultimately in a similar mandatory vaccination program, and the diphtheria case count in France soared to greater than 45,000 by 1943. As a stark comparison, unvaccinated Norway recorded only a mere 50 cases at this same time.⁷

Viewed from a slightly different perspective, the inadequacy of many vaccinations becomes even more apparent when one reviews the vaccination status of all who eventually manifest disease. One would like to think that even if much disease was caused by the vaccine, far more was prevented by the intervention. Here, too, the news is unsettling: 58% of all the reported measles cases in American schoolchildren in 1984 occurred in spite of vaccinations.⁸ Obviously, the unvaccinated children had the best "protection" against measles that year. Outbreaks of such disease continue to occur even in populations that have been virtually 100% vaccinated.⁹

Rubella, typically an extremely benign disease in children, usually runs its course in two to three days. The main concern with this disease arises when pregnant women contract it. If the virus is present during the first trimester, there is an increased incidence of birth defects. However, a natural immunity to rubella resulting from contracting the disease as a child generally confers lifelong protection. Rubella vaccine, however, consistently fails to provide permanent protection. Ironically, and even tragically, then, many women of childbearing age do not have a natural, permanent immunity to rubella, and the assumption of being protected by an

earlier inoculation is often wrong. An earlier shot might have only served to deprive a given woman of the opportunity to acquire a natural immunity from a natural, mild infection. In one Australian study, 80% of all the army recruits vaccinated only four months earlier with the rubella vaccine still came down with the illness.¹⁰ Such a poor efficacy, combined with the possible lost opportunity at obtaining a natural, permanent immunity, hardly warrants widespread vaccination for this disease, even if the intended goal of less birth defects is a noble one.

Even among the physicians who are the biggest purveyors and promoters of vaccination, it would appear that when the needle is turned around, the inoculation mania subsides. In a study published in the *Journal of the American Medical Association*, 90% of obstetricians and about 70% of pediatricians *refused* to take the rubella vaccine. The possibility of "unforeseen vaccine reactions" seemed to have their concern.¹¹ Apparently, what's good for the goose is not always what's good for the gander. If these vaccines were truly all they were purported to be, these good doctors should have been pushing each other aside to be first in line to get stuck.

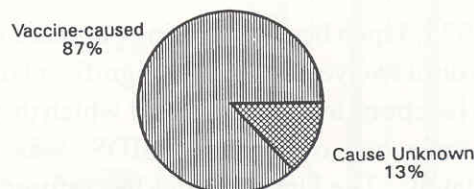
Pertussis Vaccine

— An Immune System Sledgehammer

Arguably the worst of the vaccines is the pertussis vaccine. It's often given in concert with the diphtheria and tetanus vaccines (DPT). In addition to sharing a similar ineffectiveness with many of the

87% OF ALL POLIO CASES WERE CAUSED BY THE POLIO VACCINE

CDC FIGURES (USA): 1973 TO 1983



In 1992, the CDC admitted that the polio live-virus vaccine had become the largest cause of polio in the United States. Specifically, the CDC asserted that, from 1973 to 1983, 87% of all (non-imported) cases of polio resulted directly from vaccine administration. Furthermore, it was also asserted that every non-imported case of polio in the U.S. from 1980 to 1989 was vaccine-induced. Credit: Neil Z. Miller; *Vaccines: Are They Really Safe and Effective?*

other vaccines, it also seems to be somewhat uniquely vicious in its assault on the immune system, causing or facilitating a host of different syndromes, predominantly neurological. Infants are virtually the sole recipients of this vaccine, and they are the least prepared to handle it. The immune system in a six-to eight-week old infant is still quite immature, requiring yet the direct support of maternal antibodies and other immune factors passed along in mother's milk. This infantile immune system is often no match for the crude, toxic potion called the DPT shot. Aside from the bacterial portions of the vaccine, formaldehyde is also present as a "stabilizer," and it is a known carcinogen. Mercury and aluminum compounds are also present, both of which (especially mercury) are known toxins. Mercury (as thimerosal) acts as a preservative, but it can ultimately wreak as much havoc with the body as can the vaccinating microbes.

Statistically speaking, the data regarding DPT-vaccinated infants is absolutely frightening. The death rate is eight times greater than normal within only three days of receiving a DPT shot.¹² The dreaded Sudden Infant Death Syndrome (SIDS) clusters very strongly around the typical time frame of DPT shot administration.

DPT vaccinations are usually given at ages two months, four months, and six months. SIDS occurs mostly during the same time frame (85% from one to six months), with the largest incidence occurring at two and four months, in a *bimodal* fashion. This means that most of the SIDS cases actually cluster directly after the injections, and not in smooth fashion over the entire time period. One study showed that of 103 infants who died of SIDS, 70% had received the DPT vaccine within three weeks.

As of 1975, Japan began deferring pertussis vaccinations until two years of age. A significant drop in serious reactions to the vaccine (of which there are many, the worst of which is SIDS) was noted immediately. The United States has refused to be deterred by such data, however, and some DPT shots are administered here as early as six weeks of age. Often this earlier injection occurs only because it better meshes with the pediatrician's schedule for a "well-baby" check-up.

SIDS—The Unnecessary Plague

An Australian physician, Dr. Archie Kalokerinos, had the opportunity to spend a number of years practicing family medicine among the Aborigines, beginning in the 1950's. He wrote an extraordinarily compelling book about his experiences, entitled *Every Second Child*.

At the time he arrived there, he learned that the Aboriginal infant mortality rate was in excess of 100 per 1,000 even though the European death rate in the same area was about 20 per 1,000. He also found that sudden death would most consistently occur in those infants that had been vaccinated recently. He soon discovered that nearly the entire Aboriginal population with which he worked suffered from severe vitamin deficiencies, most notably vitamin C. He noted an enormous amount of monotony in their diet, typically consisting of such foods as bread, jam, sugar, and sausage. Fresh fruits and vegetables were not to be had.

When he first arrived, SIDS was literally at epidemic proportions, but by the time he had finished his work there, SIDS was *virtually abolished* in his patient population. By merely instituting a better balanced diet and specifically supplementing generous doses of vitamin C, Dr. Kalokerinos was able to eliminate this disease, even if vaccinations were still given. The overwhelming implications, then, were that even though SIDS could occur just in malnourished and sickly infants, marginally healthy but vitamin C deficient infants were absolute set-ups for succumbing to the huge immune assault of their vaccinations. Furthermore, it then becomes apparent that the heavily processed food in the average American diet, while perhaps better than the average Aboriginal diet, is nevertheless dramatically vitamin deficient. Remember, too, that if a nursing mother eats little or no vitamin C in her diet, the infant will be similarly depleted.

Dr. Frederick R. Klenner of Reidsville, North Carolina had independently reached the same conclusions as Dr. Kalokerinos. He also dramatically demonstrated that infantile scurvy (severe vitamin C deficiency) was a common killer of babies and the main cause of SIDS. Dr. Klenner *totally eliminated* this disease in his patient population by giving

women five to fifteen grams of vitamin C daily throughout pregnancy and lactation (the period of active breast-feeding). This resolved any subclinical scurvy the mother might have had and offered the fetus the chance to develop without the burden of vitamin C deficiency. As might be expected, Dr. Klenner's infants not only avoided SIDS, even with the continued administration of intrusive vaccines of questionable benefit, they were markedly robust and healthy, avoiding many of the repeated and recurrent viral and infectious syndromes that we seem to simply accept as part of the normal health patterns in our babies.

After weaning, he would continue to supplement the infants with up to one gram daily of vitamin C during the first year, after which he would increase the daily dose by one gram for each year of life, plateauing at ten grams daily for age ten and older.¹³ Artificially fluoridated water, also strongly statistically associated with an increased SIDS rate, meshes nicely with the above reasoning, as fluoride is known to accelerate the depletion of the body's minimal stores of vitamin C. For that matter, any toxin will have a vitamin C-depleting effect.

Allow me to emphasize the above point succinctly:

Proper administration of vitamin C causes virtually complete elimination of sudden infant death (SIDS), even when immune-compromising vaccines have been administered.

Dietary Determinants

Lest the reader think that vitamin C cures all evils, be aware that nothing can neutralize an inadequate diet. Consider the work done by Dr. Benjamin Sandler in North Carolina in the late 1940's. He compiled an impressive review of data from other countries that had the greatest incidence of polio at the time, and he showed that those same countries also had the highest consumption levels of sugar.

Aware as well that polio also seemed to occur most commonly during the summer months, he then realized that this was also the time when children consumed the most sugar (e.g., ice cream, candy, and soda pop). He subsequently waged an active campaign against the evils of refined sugar on the radio and the newspapers, and, most amazingly, actually effected a 90% reduction of sugar in North

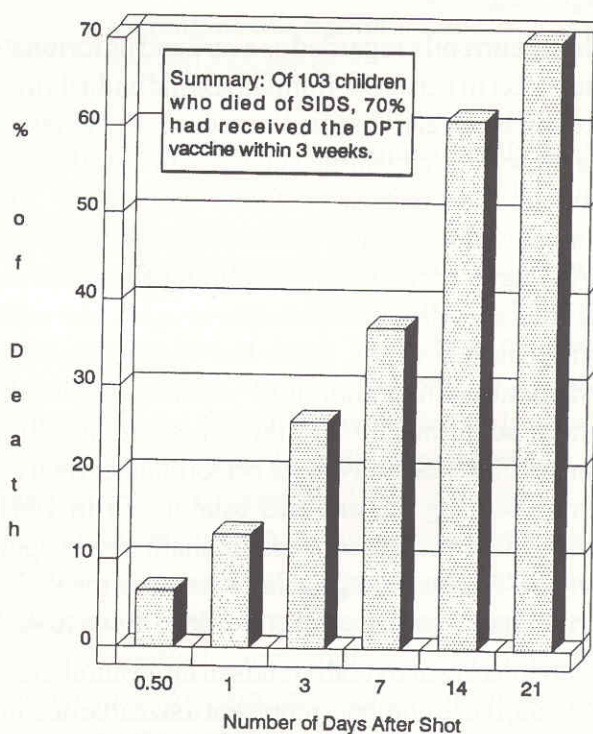
Carolina in 1949. The cases of polio were *reduced* that summer by the *same amount*. The Health Department in that state reported 2,498 cases of polio in 1948 and only 229 in 1949.

But give American capitalism credit. Sugar-related industries underwent an active disinformation campaign to undermine Dr. Sandler's credibility, which was quite successful. Sugar product-related sales rose back in 1950 to that of earlier years, and polio also stormed back to its earlier level of attack.¹⁴ Considering the world's love affair/addiction to refined sugar, it probably didn't take too strenuous a defamation campaign against Dr. Sandler to allow the public to once again accept sweets as nontoxic and harmless.

The Great Brain Drain

Harris L. Coulter wrote a most disturbing and well-researched book entitled: *Vaccination, Social Violence, and Criminality: The Medical Assault on the American Brain*. It would appear that "developmental disabilities" are almost always an

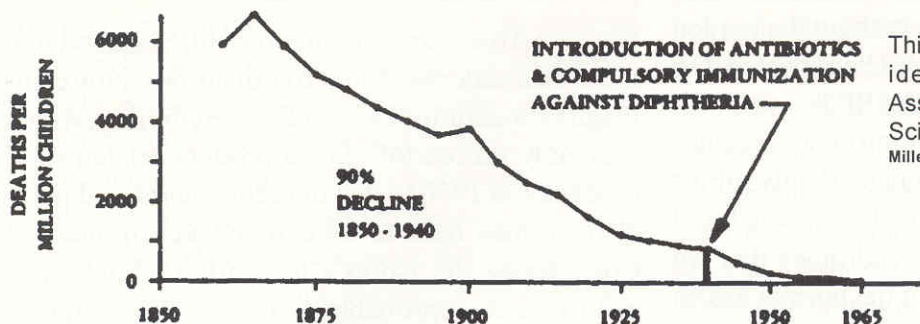
PERTUSSIS VACCINE & SUDDEN INFANT DEATH SYNDROME (SIDS) (A CORRELATION STUDY)



A Devastating Study... It shows that of 103 infants who died of SIDS, 70% had received the DPT vaccine within three weeks. Credit: Neil Z. Miller; *Vaccines: Are They Really Safe and Effective?*

THE IMMUNIZATION MYTH?

England & Wales: Deaths of children under 15 years attributed to scarlet fever, diphtheria, whooping cough and measles (Porter, 1971).



This figure was presented at the Presidential Address of the British Association for the Advancement of Sciences (Porter, 1971). Credit: Neil Z. Miller; *Vaccines: Are They Really Safe and Effective?*

end-product of encephalitis (an inflammation of the brain and its associated tissues). A compelling case is then made for early immunizations as the primary cause of encephalitis in the world today. In fact, the very toxic pertussis vaccine mentioned earlier is probably the most reliably neurotoxic of the vaccines. It is actually used in animals to *deliberately* cause anaphylactic shock and a picture of acute encephalitis.¹⁵ Considering that researchers generally don't use experimental agents that work only a small amount of the time, the implications as to the breadth of harm that can be done by this vaccine are staggering.

What is currently regarded as a rare and unfortunate side-effect in pertussis-immunized individuals may actually be a very common outcome when viewed in a more subtle fashion, such as with intelligence quotient (IQ) tests as patients get older. The average scores on the Scholastic Aptitude Test (SAT) have been steadily declining for about the last four decades, which is also roughly the same period during which there has been the widest systematic administration of vaccines. With the bottom score at 200 and the top score at 800, a score of 500 was the average performance when the current scoring system was established in 1941. Today the average score on the mathematics portion is 478. The average achievement on the verbal portion has plummeted even further, down to 424.

When looking at overall trends in large numbers of students, these numbers represent a sizeable decline in cognitive ability. Some researchers have also observed that a critical review of the tests reveals that they have become substantially easier. When

this is weighed along with the still-declining scores, it's then apparent that even a greater real drop in our collective IQ has taken place. When these declining figures were released to the public earlier this year, the College Board administering the test simply announced that the two average scores just mentioned would be "recentered" back to 500.¹⁶

Obviously, just making the test easier didn't result in an adequate "adjustment" of the scores. This may help the collective ego of today's generation, but it does nothing for it's ability to think and reason. Isn't anybody alarmed that our nation's brain power is receding? Attempting to remedy the causes for such a decline makes far more sense than to just "recenter" the whole issue into oblivion.

Lest the reader think that the SAT test is only an isolated example of deteriorating brain power, the American College Testing (ACT) Program, which is akin to the SAT Program, has also shown declining scores. As well, military testing of recruits in the 1970s revealed clearly lower intellectual capacities compared to recruits tested in the early 1940s.

Autism, a tragic affliction in which the victim loses nearly all ability, and/or desire, to relate to others either emotionally or physically, was first described in 1943 by Dr. Leo Kanner, a child psychiatrist. This paralleled very closely with the burgeoning onslaught of pertussis vaccinations in the United States.¹⁷ France, Chile, Austria, Holland, and the Scandinavian countries didn't initiate pertussis vaccinations until the 1950s, and autism wasn't noted in these countries until the 1950s as well. Many horrified parents have actually described similar abrupt losses of attention and affection of their

infants within a few short days of the shots. To have a truly new disease without a clearly defined and plausible cause with the above temporal relationship to vaccination just "pop up" is almost incomprehensible. Today, over 4,500 cases of autism occur annually in the United States. Medicine is so "treatment-oriented" that most health care professionals are just content to have the business and are unconcerned about how a given illness came to be or how to prevent it in the future.

While avoidance of the pertussis vaccine would arguably reap the greatest benefits as preventative medicine, the incidence of devastating side effects appears to clearly relate to the timing of the injection. Both England and Japan have less autism than the United States, and both inject their babies later in life, allowing some additional maturation of those delicate immune systems. (England will vaccinate at six months, Japan at two years.) Not only will United States pediatricians often vaccinate babies at only six weeks, little attention is paid to the overall wellness of the infant at the time or to any history of previous vaccination reactions (if an older infant).

Many of the ultimately worst vaccination outcomes were clearly predated by significant but lesser reactions on an earlier shot, such as seizures, persistent crying, vomiting, and limited responsiveness. If an infant must be given an injection, it is *absolutely mandatory* that no acute infective syndromes of any kind be present. Nearly as important, the baby should be allowed an adequate recovery period for its immune system following recently resolved infections. Immune systems must be hardy and "well-rested" to avoid sustaining the worst of the vaccine reactions. It's very debatable, however, that any infantile immune system can completely rebuff all of the negative impact of vaccinations.

However, all of the data already cited seems to be completely lost on America and its legions of vaccinators, as the Clinton administration has recently launched (September 1994) its **Vaccines for Children Program**. This aims to *complete* eleven different vaccinations by the ripe old age of two years, including measles, pertussis, diphtheria, tetanus, mumps, rubella, polio, hepatitis B, and Haemophilus influenza B.¹⁸ The real "beauty" of

such a program is that the multibillion dollar drug companies get assured of 100% governmental reimbursement on vaccine administration to nearly all American babies, regardless of financial status. Certainly the richest of the rich can't be expected to compromise their incomes while pandering their poisons.

In the textbook, *Vaccines*, Plotkin and Mortimer make the following comments (pp. 116-117):

DTP is customarily administered at a time in life when a variety of neurological disorders occur and, even more important, when congenital or neonatally acquired neurological diseases become manifest with the appearance of seizures, the recognition of developmental retardation, and the like.

One can only wonder how many "neonatally acquired neurological diseases" would really be around without our saturation vaccination programs. As for ever finding the answers Plotkin and Mortimer address this tersely:

Further, a definitive study would require withholding pertussis vaccine from a randomized control group, which is ethically unacceptable.

Of course, thousands of brain damaged victims and a steady sapping of our nation's collective mind power is perfectly acceptable.

Heather Whitestone, Miss America 1995, is another DPT victim. She became almost totally deaf at age 18 months after a reaction to a DPT shot, retaining only 5% hearing in her left ear. Six years of speech therapy were required for her to learn how to say her last name.¹⁹ Obviously no victim of brain damage herself, Miss Whitestone overcame enormous hurdles to attain her present achievement, but is the tragedy here any less? Ironically enough, our unflappable Plotkin and Mortimer use this "diversity" of possible DPT side-effects as a main argument against it causing problems at all:

*...there is no characteristic syndrome that has been ascribed to pertussis vaccine. ...there is no characteristic pathological picture. ...no plausible mechanism for vaccine-induced encephalopathy has been uncovered.*²⁰

Any objective and honest practicing clinical physician will tell you that few disease processes present

consistently and reliably in the same fashion from one patient to the next. Also, there are numerous examples of modern medicine having no knowledge at all of disease mechanisms or the reasons that certain empiric therapies are effective.

Penicillin was used for a long time in treating previously fatal illnesses before its "mechanism" was understood. And in the case of vaccine reactions, the main reason for the great diversity of reactions rests in the fact that the vaccine is attacking the immune system directly, and when something as basic as this is assaulted, diversity rather than monotony is the rule in such reactions. Only a disease process that is precisely focal, like a bacterial pneumonia, can be expected to consistently display reproducible syndromes.

Long Term Results

— Crime and Violence

In his above-cited book, Harris Coulter goes on to point out some additional compelling data. Western Europe and Japan, consistently less and/or later vaccinated countries than America, have clearly less violence in their societies. Those who would want to immediately blame poverty and a chronically poor economy should realize that violence in the United States is now approximately six times higher than in the 1940s. We have three times more violence now than in 1933, which was the depth of the Depression. So much for poverty having the primary effect.

A direct consequence of having such a large population of children and young adults with autism, dyslexia, minimal brain dysfunction, hyperactivity and various other neurological disorders is the regular usage of drugs, prescription or otherwise. Approximately a million United States children today are taking a drug for hyperactivity, which is often a form of amphetamine, a powerful stimulant. Is the child's body and brain, upon maturation, going to magically know what is or isn't a prescription drug? Unlikely. The only significant information to that individual will be whether or not a given drug, however obtained, will cause a level of stimulation to which that person has become accustomed. It is not hard to see, then, that neurologically impaired victims that have been chronically drugged

from an early age will follow what is almost a natural path to chemical dependence of all varieties. Children with minimal brain dysfunction and uncontrollable tempers are given amphetamines for calming. Since even the treating pediatricians would acknowledge such a drug is not really addressing or curing the underlying problem, how can those young bodies keep from becoming drug-dependent? Coulter, who feels that vaccination programs are the root cause of our ongoing epidemic of social violence, summarizes quite nicely the wide-ranging scope of the post-encephalitic syndrome often following vaccination:

For this syndrome, now into its second generation, makes its own notable contribution to poverty (hyperactive adolescents cannot keep jobs), illiteracy (dyslexic children cannot study), child abuse (hyperactive young adults have little tolerance for hyperactivity in their children), broken families (the stresses and strains of minimal brain damage lead to marital breakdowns), social violence (uneducated youth without jobs have nothing else to do), racial tension (black children may be affected disproportionately by vaccination), alcoholism, and drug addiction (adolescents and adults with neurologic disorders must find escape somewhere).²¹

A Final Common Pathway

As alluded to earlier, any process that primarily insults and compromises anything as basic as the immune system can have a wide-ranging scope of effects. Similarly, many diseases that share varying degrees of impaired immune function have been noted to arise following vaccinations. Multiple sclerosis (MS) has been repeatedly observed to first arise following a wide range of different vaccinations, including smallpox, typhoid fever, paratyphoid fever, tetanus, polio, tuberculosis, and influenza. Even non-vaccinating injections such as gamma globulin have served as MS-initiating events. Antirabies vaccinations have also been repeatedly implicated as an etiology for MS.²²

The swine flu vaccine, initially foisted upon an unsuspecting public by then-President Gerald Ford, was little more than a toxin looking for a disease to which it could claim a beneficial effect. According to investigative reporter, Eustace Mullins, drug

manufacturers looked to pig raisers for 80 million dollars for a vaccine of dubious benefit to their livestock. Watching several pigs collapse and die after the shot was administered was all the pig breeders needed to see. Then the drug companies, not to be shortchanged or deterred, decided that the public needed to be protected against swine flu, even though there was not a single known case of it in the United States, and the price tag would now be 135 million dollars. Almost magically, the CDC in Atlanta then emerged with a plan for a national immunization program against this phantom plague. One brave soul, Dr. Anthony Morris, who was then director of the Virus Bureau at the Food and Drug Administration (FDA), asserted that the whole concept of a swine flu vaccine had to be essentially fraudulent, since there had never been any cases of swine flu, making proper testing impossible. Not only was he promptly fired, but his laboratory animals and research records of three years duration were destroyed.

As the program then gained momentum, fully funded by the taxpayer through Congress on April 15, 1976, so that vaccinations could be administered nationwide "free of charge," some insurance companies actually aired their concerns about the vaccine. They asserted that they would not insure drug companies against possible suits resulting from side effects, because no studies had been carried out in this regard. Leave it to an insurance company to objectively know the real financial risks in any endeavor. After the vaccine had been administered for only a few months, 1.3 billion dollars worth of claims had been filed by the victims, many of them paralyzed with a neurological disorder called "Guillain-Barre Syndrome." This syndrome has also been seen after other vaccinations, indicating a nonspecific association with certain forms of immune system damage, but the swine flu vaccine seemed especially adept at eliciting it.²³ In fact, much of the time this syndrome is still considered as having an unknown cause, even when a vaccination has recently been administered.

Many researchers have also voiced concern over the potential seeding of many people with largely inactive, "slow viruses," which can remain dormant for even decades before manifesting relatively sud-

denly as such diseases like lupus, MS, Lou Gehrig's disease, Parkinson's disease, and Alzheimer's disease. Such diseases, as well as many others, have already been independently shown to often have such viruses present when those diseases finally become manifest.

Cancer, an epidemic of rapidly escalating magnitude, demonstrated a 40% increase in incidence from 1947 to 1984. Nearly all of its known causes share the common thread of compromising or harming the immune system. Widespread vaccinations have likely made the last few generations all the more sensitive to the many and diverse ways that can further lower immune strength, largely helping to explain cancer's recent near-exponential rate of growth. In 1900, only one person in thirty died of cancer. Today, that number is closer to one in four.

Big Brother WILL Help You

Until recently, our nation appeared to be finally softening its Gestapo-like stance on mandatory vaccinations. While still largely required in order to gain admission to the public school system, many informed and motivated individuals were able to sidestep the shots through home schooling, or just by expressing official opposition from either a religious or an academic perspective. Such a "lux-

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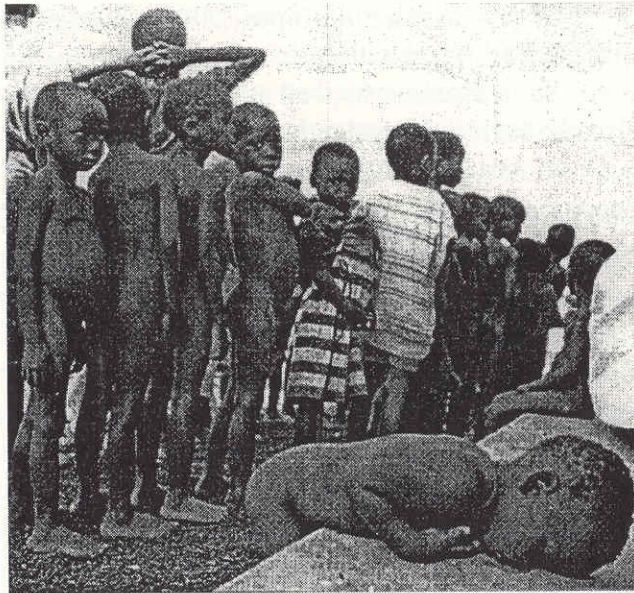


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Too weak to stand... A Rwandan boy too weak to stand in line for vaccination rests his head. In many cases like these, vaccination will introduce viruses that the weakened immune system cannot resist. Credit: Associated Press

ury” appears on the brink of extinction. Congress presently has before it a proposed law requiring universally mandated immunizations. It will not provide for any religious exemptions, and parents who refuse the vaccines for their babies will be subject to charges of child abuse, and they could well face the prospect of losing custody to government specified foster homes.²⁴

According to William Campbell Douglass, MD, the Clinton administration has plans to even further increase the insanity. Proposed legislation wants to authorize assaulting infants on the *day of birth* with multiple vaccines, *even if the newborn is ill*. It also specifies that shots may be given without a physical examination or a medical history. Informed consent in this arena would be abolished, as vaccinators would not be obliged to inform parents of possible vaccination dangers, and they would even be free to *lie if necessary*. President Clinton even went so far as to directly misinform the American people when he told them:

*It is unacceptable that the United States is the only country in the world that does not guarantee childhood vaccination for all children.*²⁵

Even if Mr. Clinton truly believed that ridiculously false statement, it doesn’t lessen the magnitude of the damage that will be wrought if Congress does enact such laws.

The Money Trail

Discovering who profits from what is not always a simple task, but vaccination profits are easy to locate. Vaccinations represent one of the biggest gravy trains for the multibillion dollar pharmaceutical industry. One can only wonder if their blind greed keeps them from realizing that blanket, mandatory vaccination programs will undermine the health of their own babies’ minds and bodies. Reason has been known to disappear before when billions beckon,

The Right to Know

It is hoped that this accumulation of information on vaccines will stimulate the reader to think, go to the original references, and then make an educated evaluation of the whole issue. Blind faith in our health professionals is about as warranted as blind faith in our political officials. When you’re sick or you’re concerned about your child’s health, it’s natural to want to assume that your health care professional knows everything and has the purest of motivations in tending to your health needs. Sadly, such a completely educated individual would be the exception rather than the rule.

Demand, at the very least, that your own health provider is totally receptive to answering any and all questions that you may have regarding your treatment. Arrogance, with its “master-pet” mentality, has no place in the relationship between you and your health care provider. Simply hearing your doctor occasionally acknowledge not knowing everything, with an implied openness to reviewing outside information that you may have, is probably your best indication of a healthy doctor-patient relationship.

But regardless of whether or not a doctor really respects his patients, nothing can excuse deliberately administered toxins. Perhaps vaccinations do have a legitimate place in medicine. Certainly this writer seriously doubts it, and, if so, the place has to be a small one. However, the reader, and his doctor, are invited and encouraged to review the mountains of data on the negative impacts of vaccinations, of which only a very small amount has been cited. A conscientious physician should do no less. It’s high time the medical profession stops being the willing

pawn in the pharmaceutical industry's great chess game with our nation's health and future. **TEL**

Give no deadly medicine to anyone.

Hippocrates

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CHARACTERIZATION of ELECTROMAGNETIC FIELDS for HEALTH HAZARD EVALUATION PURPOSES

by Marjorie Lundquist, Ph.D., C.I.H.
Milwaukee, Wisconsin

This is the first in a series of articles on electro-magnetic fields and the potential health hazards associated with exposure to them. The author is a Ph.D. physicist and a Certified Industrial Hygienist who has studied this issue for a number of years. Industrial hygiene is a 70-year-old profession devoted to the prevention of diseases resulting from exposure to hazardous environmental agents — originally, agents in the workplace.

Although preventing disease in people exposed to electromagnetic fields is an industrial hygiene problem, no qualified industrial hygiene professional has ever been asked to solve this problem! Indeed, of the many organizations sponsoring evaluation of the data and reviews of the scientific literature, none has ever commissioned a qualified industrial hygiene professional to perform such a task! Dr. Lundquist's articles therefore is the first time that a specialist in the prevention of environmental disease has addressed this issue.

Electromagnetic fields can be classified as localized or radiated fields. When appreciable amounts of energy are radiated away from the field source, an electromagnetic wave is generated. Whether or not an electromagnetic wave is generated, though, a localized field will be present in the vicinity of the source.

In reality, *all* electromagnetic fields extend throughout *all space* (subject only to their finite speed of travel). But because the intensity of such a field is highest close to its source, as a practical matter one need only consider the field in the vicinity of its source — unless it is a radiated field. Hence all sources of electromagnetic fields produce localized fields, and some produce radiated fields as well.

Fields can also be classified as confined or unconfined. These classifications have implications for the public health.

In the case of a confined field, such as that inside a wave-guide, the hazard to the public is low, simply because the field is essentially zero outside the enclosure and the public normally has no opportunity to get *inside* the enclosure that serves as the waveguide. (Workers do sometimes have the opportunity to be exposed to confined fields, so the potential for an *occupational* exposure hazard does exist.) Unconfined localized fields — those around electric power lines and electrical appliances, for example — *do* have the potential to harm the public, because the public has access to the regions of space

close to the field source where such fields are relatively high.

Distinct from the localized field is the radiated field. This term refers to that part of the electromagnetic field that “breaks away” from its source and travels through space as an electromagnetic wave.

In technical texts the terms “near field” and “far field” are used. The near field is simply the field near a source — that is, closer than one wavelength — while the far field lies at least several wavelengths away from the source. This terminology is usually applied to radiating sources, because the far field is *always* a radiated field. The near field of a radiating source includes both the localized field and the radiated field. If the source is *not* radiating, as is the case for electric power lines, then the far field is zero and the near field consists solely of the localized field.

As a rule of thumb, there will be no radiation from an electrical circuit so long as its largest dimension is much smaller than the wavelength of the radiation. Because the product of frequency and wavelength is equal to the speed of the electromagnetic wave in the medium of interest, which is a constant for any given medium, high frequencies have small wavelengths and low frequencies have large wavelengths.

Whether an electromagnetic field *actually* causes harm to anyone is determined by the characteristics of the particular field, together with the duration of that individual's exposure to it. In general, four

parameters characterize an alternating-current electromagnetic field: **frequency**, **amplitude** (which is related to field strength or intensity), **polarization** and **coherence**. All these parameters except the amplitude (and therefore the field strength) are independent of the distance from the field source.

The time-variation of an alternating-current electromagnetic field is sinusoidal. The amplitude of a sine wave is the peak height of the wave; its frequency is the reciprocal of the shortest time required for the wave to reproduce itself identically in space.

In an amplitude-modulated wave (AM), the amplitude of the sine wave is not constant, but varies with time; AM radio is an example of this. There is another kind of modulation — frequency modulation (FM) — which is employed for FM radio and television signals; here the amplitude remains constant but the signal frequency varies with time.

Frequency and amplitude are parameters known to be related to the degree of hazard posed by an electromagnetic field. It is generally considered that higher frequencies, and higher amplitudes, are associated with a greater hazard to health. Coherence is likewise known to pose a hazard; laser light is coherent light, and stringent precautions are taken with lasers because the coherent nature of the light makes it especially hazardous to the eyes.

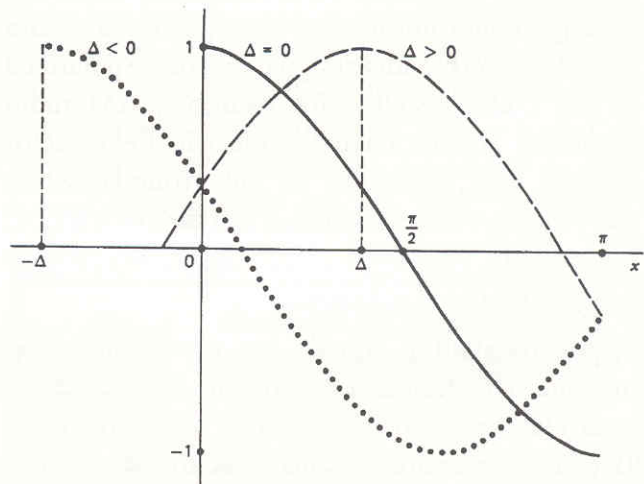
Coherence occurs when *different elemental sources* have the *same phase angle*, so that the peaks of different waves are superimposed upon one another; that is, they are “in phase” with one another. (A closely related condition which may be termed “substantial coherence” exists when there is a *spatially fixed phase relationship* between the different elemental sources.) In cases of either substantial or true coherence, the whole set of sources is acting “in concert” as a single entity. The amplitude of the radiation from all the sources combined is the sum of their individual amplitudes for true coherence; usually, this is very nearly true for substantial coherence, as well.

Coherence does not normally occur in nature. Sunlight is incoherent, for example. In an incoherent source, the various different elemental sources act

independently, meaning that they all have *randomly differing* phase angles. Because the waves from some sources will be out of phase with those from other sources, the amplitude of all the sources combined is *considerably less* than the sum of the individual amplitudes. Thus incoherent sources are much less hazardous than coherent sources, when all other factors are equal.

Polarization refers to the way the electric and magnetic field vectors change direction with time at a fixed point in space. There are two extremes of polarization: linear or plane polarization, in which each field vector remains confined to a fixed plane as it oscillates; and circular polarization, in which the magnitude of each field vector remains constant but its direction steadily rotates about the direction of propagation. A mixture of the two — elliptical polarization — is also possible.

It is known that polarization can be an important parameter with respect to health effects when the wavelength is approximately the same as the dimensions of the irradiated creature, because resonant absorption takes place under these circumstances. Aside from this phenomenon, little attention has been paid to polarization as a field parameter affecting the hazard to health, though there are theoretical grounds for believing that



Three sinusoidal waves with the same amplitude (maximum height) but, with different phases. If all three waves coincided — that is, were in phase — they would be coherent, and their sum would be a sinusoidal wave with the same period and phase as the individual waves, but an amplitude three times as great. As illustrated here, the waves are not coherent, because they do not all have the same phase; in general, their sum would not be a pure sinusoidal waveform.

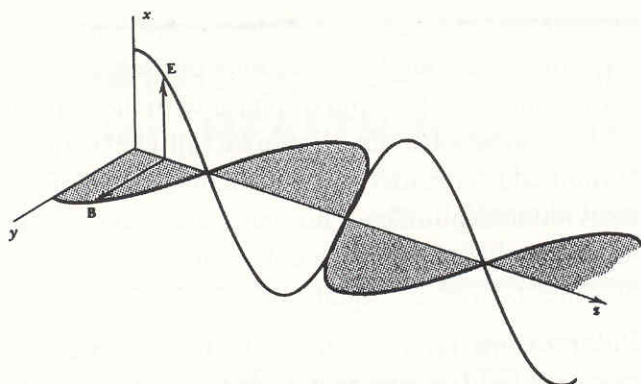


Illustration of the three-dimensional characteristics of a linearly polarized (plane-polarized) sinusoidal plane electromagnetic wave in a perfect dielectric such as free space at a given instant, showing both the electric (E) and magnetic (B) fields. Notice that the E and B fields are perpendicular to each other and that both are in phase, meaning that both peak at the same value of z , and both become zero at the same value of z . [If the z axis in this illustration is relabelled to become a time axis, then this diagram illustrates the temporal behavior of a linearly polarized plane wave at a fixed point in space.] If the dielectric is not perfect, but slightly lossy, the two field vectors will remain in phase, but their amplitudes will diminish as the wave progresses deeper into the medium; thus the z axis here would then measure depth of penetration of the medium, and the amplitude of both waves would become progressively smaller at higher values of z in the manner of a negative exponential.

circularly polarized electromagnetic waves may be the least hazardous to health, and plane polarized waves the most hazardous.

Artificially generated electromagnetic fields are usually (though not always) plane polarized. Radio and television broadcast signals are plane polarized in the United States; for example, AM radio broadcast signals have the electric field vector vertical (perpendicular to the ground), while television broadcast signals orient the electric field horizontally. FM radio broadcasts generally produce a circularly polarized signal.

Radio-frequency signals are generated by an antenna. The design of the antenna determines the polarization of the field from the transmitter. Because the entire antenna is acting as a single entity, the radiation it produces is substantially coherent: there is a fixed phase relationship between the various portions of the antenna. If the antenna is a straight-wire type with a length much shorter than one wavelength, then the radiation from it will be truly coherent; that is, all portions of the antenna will produce radiation having the same phase angle.

Thus AM radio and television signals rank as high-hazard electromagnetic waves with respect to polarization (they are plane polarized) and coherence (they are substantially coherent) and as moderately-high-hazard with respect to frequency. Close to the transmitter, where the amplitude (field strength) is high, one would therefore expect these electromagnetic fields to be quite hazardous, comparatively speaking.

Because the same statements are true about microwaves, except that the frequency is higher, microwaves can be expected to be even *more* hazardous, close to the transmitter, than other radio-frequency sources. This implies that hand-held traffic radar guns, which emit a continuous microwave beam when in operation, are potentially very hazardous to the person operating them.

This the law enforcement community has already learned through years of unhappy experience! At a Senate subcommittee hearing August 10, 1992, it was reported by a representative of the Fraternal Order of Police that 164 law enforcement officers had developed cancer at a body site that had been

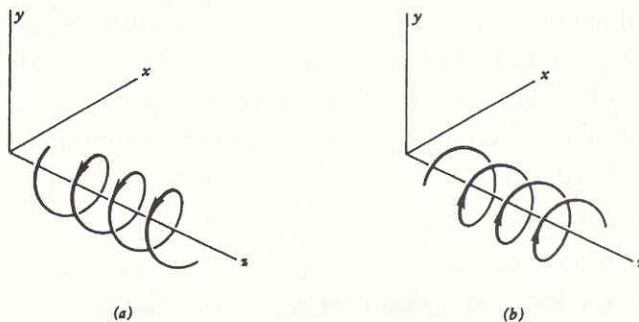


Illustration of the three-dimensional helical path of the tip of the electric (magnetic) field vector of a circularly polarized plane sinusoidal electromagnetic wave at a given instant. This path lies on the surface of a circular cylinder, the projection of which onto the x,y plane is a circle. [If the tip of the field vector lies on the surface of an elliptical cylinder, then a similar illustration would show an elliptically polarized plane wave, and the projection on the x,y plane would be an ellipse.] The illustration shows two different helices of opposite sense; one (a) is positive, the other (b) is negative. [If the z axis in this illustration is relabelled to become a time axis, then these diagrams illustrate the temporal behavior of the field vector of a circularly polarized plane wave at a fixed point in space; (b) would then show the temporal behavior of a spatially positive helix, while (a) would show the temporal behavior of a spatially negative helix.] For any given circularly polarized plane wave there are two different circular cylinders, upon one of which lies the path of the electric (E) field vector and upon the other of which lies the path of the magnetic (B) field vector.

irradiated by the traffic radar gun they used, and most had subsequently died of their cancer.

The Electromagnetic Energy Policy Alliance, a tax-exempt industry-financed organization based in Washington, DC, which ostensibly supports the application of "good science" to the issue of possible health hazards arising from exposure to electromagnetic fields, had apparently made no attempt at all to perform a scientific evaluation of the cancer data reported in law enforcement officers! Instead, it distributed packets of information at the hearing that publicized the many pronouncements of "no hazard" with respect to traffic radar guns that have been issued over the years!

It seemed most curious to this hearing attendee that an organization publicly advocating a scientific approach to this issue should in fact disregard standard scientific methods of data analysis in favor of appeals to authority. After all, appeal to authority has been considered unscientific since the time of Galileo, who died in 1642 — over 350 years ago!

The primary basis for thinking that traffic radar guns are safe is that they have been designed to comply with the one existing consensus standard for exposure to non-ionizing electromagnetic radiation: ANSI C95. This was first established by the Institute of Electrical and Electronics Engineers (IEEE) in 1966. It was originally designed to prevent damage to biological tissues as a result of the heating effects of radiation, and it has accomplished this quite successfully.

Cancer is *not* caused by the heating of biological tissue; indeed, such heating is a method of *treating* cancer! Cancer is caused by a different mechanism altogether, and there is therefore *no reason* to expect the ANSI C95 standard to protect against cancer!

No party testifying at or attending the hearing had attempted a scientific evaluation of the alarming data on law enforcement officers, not even the government agencies responsible for protecting the public health and the health of workers! This omission was so curious that I undertook to estimate how likely it was that the apparent association between cancer and irradiation of body tissues by microwaves could have occurred by chance, which

was the assertion being made by a number of people at the hearing. My calculations show that this probability was less than .000001, a *very* small value indeed!

This number is given meaning when one realizes that in most scientific studies made to determine whether there are real differences between two populations (as in the comparison between two different medical therapies, for example), a finding that an observed difference had a probability of occurrence by chance of less than .05 is considered grounds for assuming that the observation represents a real difference, not a chance occurrence. Such a difference is said to be statistically significant, implying that it probably did not occur by chance! The lower the probability that an observation could have occurred by chance, the more highly statistically significant it is.

My calculation of a value less than .000001 is therefore *so very highly* statistically significant that there is *virtually no likelihood at all* that these cancer cases in law enforcement officers could have occurred by chance at the sites where their bodies had been exposed to microwave radiation from the traffic radar gun that they used! This means that it is *virtually certain* that there *is* an association between the use by these officers of traffic radar guns, and their subsequent development of cancer at the irradiated body site! Indeed, this one set of data, by itself, constitutes to date the *strongest evidence in human beings* that there is indeed an association between chronic exposure to low-intensity, supposedly safe electromagnetic fields and the subsequent development of cancer! ML



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STRUCTURAL STEEL FRAMING "SHIELDS" OCCUPANTS FROM POWERLINE EM FIELDS



by

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My awareness of improved health during three years residency at less than 0.1 milligauss 60 Hz exposure during two flu epidemics, etc. prompted this study. The study consists of a series of gauss meter measurements which were mostly at waist and second floor deck heights except in the building's interior. The measurements support the suggested field loop contour scenario shown in Figure 1. The following presents theory and techniques to reduce individual exposure to 60 Hz fields in home and work environments.

Gauss meter measurements indicate that steel framing members in a steel frame house greatly reduce the ambient magnetic fields from power distribution lines both inside and outside near the building. This characteristic becomes important from a "people protection" perspective as much research¹ in many countries around the world reports adverse effects on health from exposure to Extremely Low Frequency (ELF) electromagnetic powerline fields.

Shielding Theory

Electric fields (volts/meter) are proportional to the powerline voltage and are attenuated to varying degrees by roofing and siding building materials; whereas, magnetic fields (milligauss) are proportional to powerline load currents. Although magnetic fields penetrate wood and glass as if they were not there, the attraction to magnetically grounded steel enables some very effective "shielding" applications. The two foot spaced steel elements in this structure look like a close-meshed grid to a 3100-mile long wavelength at 60 Hz (see Figure 1). In comparison, finer Faraday screening is used for

shorter wavelengths at higher frequencies. The shaded regions in Figure 1 indicate "people protection" areas with 60 Hz magnetic field levels below 0.1 milligauss.

The otherwise circular magnetic field line loops around the current carrying conductors in this powerline are distorted considerably in the vicinity of the steel framed house. It is noted that because of transformers at each end of the property (one feeding underground power to this unit), there are no low voltage secondary wires (with stronger step-up current fields) in front of the property. The correspondingly lower current field from the overhead 6900-volt single phase primary service down this dead-end street is insufficient to produce interior measurement levels, or to better define exterior proximity pattern details.

We could have taken advantage of much stronger powerline fields elsewhere in town. But after careful consideration.. ha.. ha., it was decided to leave the building where it is and interpret the measurements to the extent possible. It is noted, however, that a next door neighbor invited me to measure levels (1 to 2 milligauss) in his wood-framed home if his flu didn't pose a problem.

The waist high gauss meter measurements in Figure 1 approach zero within 25 feet of the house as the field distorts to seek the steel roof/wall route as more attractive than the intervening airspace. This compares to typical open field contour levels to the right of the pole line down a street with no power distribution system of its own to distort the pattern.

Magnetic field pattern ratios

for structure "shielding" rating

An amplitude versus distance comparison in Figure 1 between the open terrain and "steel attracted" sides of the magnetic field patterns indicate ratios of 1.7:1, 3:1, and 28:1 at 40, 45, and 50 foot distances, respectively. This sudden ratio increase as the level approaches zero occurs where the field abruptly "jumps" through about 45 feet of space to the more attractive loop route (shorter air/longer steel) above.

The EYM 131 AC/EFM 140 Gauss meter prints out zero for fields less than 0.1 milligauss inside and out near the wall to yield a—high (but undefined) "people protection" ratio from a shielding stand-

point. It is noted that a similar measurement on a wood building would yield a 1:1 inside/outside ratio indicating no protection from a magnetic 60 Hz field. This rating would fall on the opposite end of a "people protection" factor scale from the maximum (steel) end. Simple protection ratio measurements for rating different steel frame configurations would require sufficiently strong powerline fields to create readable interior levels for comparison with open terrain values.

The shielding effect might be better described in terms of relative attraction to the steel compared to open air-ground route, rather than by an obstacle in the path (analogous to a dam holding back water), because the latter effect suggests an increased field buildup instead of the vacuum effect existing adjacent to the building. The "people protection" mG ratio provides a means to rate building types for use in various powerline field magnitude categories.

This presents a different acceptance/compliance problem than snow load, wind, and earthquake building codes, because if the problem can't be

seen, felt immediately, heard, or smelled how can it be of concern? Surely we would have heard about it before if there was any problem ... wouldn't we?

Material description

The steel must have enough mass to attract the field and adequate cross-sectional area to avoid magnetic saturation. Too little steel would be saturated and the rest of the field would pass by unattracted. The materials in this Tri-Steel Structures prefabricated house included 27 foot long double "C" 8" 12-gauge cold rolled steel columns spaced at 8 foot load-bearing intervals, as well as 18/20 gauge 8" non-load bearing exterior wall studs. Wall columns, roof trusses, and interconnecting horizontal beams (all 12-gauge, 8") are assembled with over 950 3/4" diameter steel bolts to couple production line welded butt-joints together. Roof trusses are bridged with steel purlins sized and spaced for a 40-lb/ft² snow load. The floor systems have 16" spaced "C" channel steel joists. The ceiling drywall is hung on steel "hat" channels. The interior non-load-bearing 4- and 6-inch walls are of lighter gauge steel

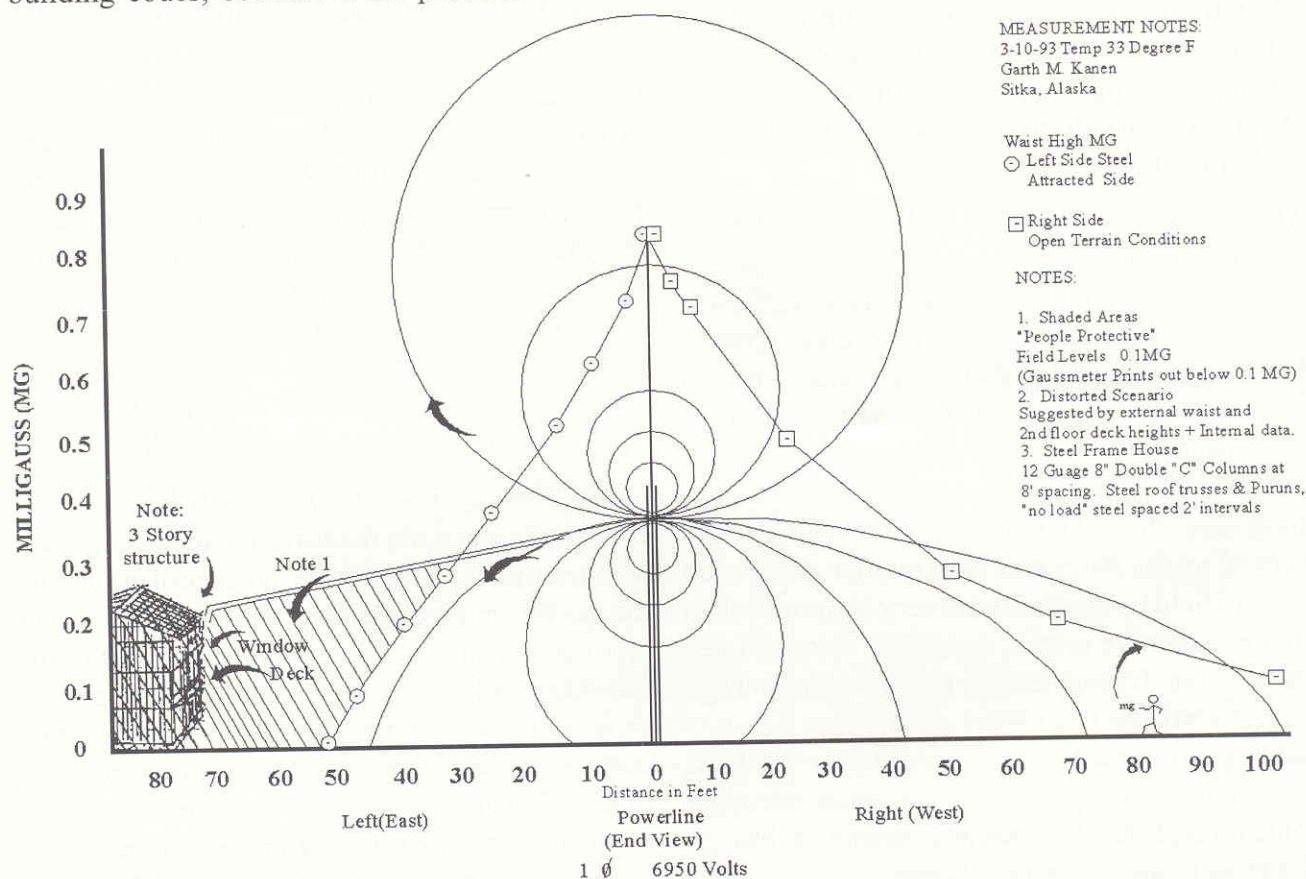


Figure 1. Steel Distorted vs Natural Powerline Field (mg). Gauss meter measurements indicate that steel framing members in a steel frame house greatly reduce the ambient magnetic fields from power distribution lines inside and out.

studs magnetically grounded through the upper/lower track system to the structure frame.

Magnetic grounding of the steel is essential to transfer field lines into the earth portion of the loop. To accomplish this steel-earth field transfer, the vertical columns are anchored to the 10-inch concrete stemwall with 96 3/4-inch diameter, 12-inch long "J" bolts with a 3 inch hook. This provides good steel cross-section and area contact with concrete. The stemwall reinforcing steel is connected to that in the concrete foundation footing to complete the contact with the earth.

The importance of this magnetic grounding is emphasized by my recent measurements in and near other wood framed buildings covered with 29/26 gauge steel roofing and siding without adequate magnetic connection path between sheet steel elements and to ground. The presence of steel may have reoriented the magnetic pattern somewhat. However, the gauss meter interior/exterior magnitudes were essentially the same at the respective distances. These 1:1 ratios indicate no shielding effect from powerline exposure. An attempt to improve the "people protection" factor for these existing buildings suggests magnetic bonding be added between exterior steel parts and to multiple steel ground rods.

Attraction of magnetic fields to people

Because of iron in the blood, biological mass, and height above ground, a person standing near a powerline attracts a stronger field concentration than the surrounding air route to ground. A person standing near an interior wall is subjected to the same magnetic field with or without wood wall stud framing. If magnetically grounded steel stud framing is used, the field diverts from the person to the steel. If, on the other hand, aluminum studs are used the wall field is repelled and diverts to the person as a more attractive route... especially if bare-footed on concrete. It is noted that gauss meter readings are zero on the third floor of this test building looking through a 4 x 6 foot window level with the powerline, as the field takes the more attractive route around the steel framing instead of through the glass to the person of choice.

Internally generated EM fields originate from a

number of sources. Interior fields from electric appliances, clocks, electric blankets, etc. are often limited to distances of 3 to 5 feet. People aware of these fields can minimize exposure by "traffic pattern" habits in these areas. However, "through-the-wall" exposure of a person sleeping behind a TV or computer display is of sustained duration. This exposure is less when through a magnetically grounded steel framed wall, but bed-TV spacing should be increased if possible.

The electric field (volts/meter) is experienced on switch leg wiring when the switch is open, whereas, the magnetic field is of more concern when the switch is closed because of load current. Internal house wiring fields in a wood framed structure are widely distributed, compared to grounded steel frame building where the fields are more confined to ceiling, wall, and floor. The "people protection" areas in steel structures vary with building height, proximity, steel gauge, dimension, mass, cross-section, spacing, configuration, other materials in the steel, joint bonding techniques (welded, bolted, screwed), and magnetic grounding details, for example.

Grounded steel configurations could be used to provide "shielding" modifications to an existing wooden structure when EM fields are a concern. Much "people protection" advantage is gained by placing new structures beyond the rapid loss (50-60 feet) transition distance on the open terrain loss side (right) in Figure 1. In existing structures within this rapid loss region exposure can be reduced markedly by rearranging long term use activities (sleeping, office desk, etc.) to the far end of building.

Waterline Ground Current Fields

Composite magnetic fields from underground water line currents (caused by the practice of grounding the power entrance service neutral to the water pipe) are a concern. Gauss meter readings in the crawl space where the copper pipe leaves the ground show abrupt variations not easily accounted for by in-house electric operation. Use of an AM receiver tuned off-channel (for lack of a spectrum analyzer) at this location indicates the presence of multifrequency components in addition to 60 Hz. Here again, attraction to the steel floor joist system

overhead offers "people protection" shielding for those above not provided in a wood system or concrete slab floor.

Steel to Confine EM Fields at the Source

The foregoing has presented shielding from the existing field perspective. It is appropriate to consider the ability of steel encasement to confine fields at the power service line source.

Measurements over a buried *unshielded* powerline downtown produce waist high 8-mG levels, compared to 2-mG after the service transfers overhead (4:1 reduction!). Another underground power feed to a hotel measures 60 and 345 mG at waist and ground levels, respectively, probably indicating shallow burial.

However, experiments² show waist high 1 mG magnitude above a *steel encased* high voltage powerline buried 5-feet deep. The expense of underground steel encased powerlines initially should be much cheaper than retrofit later when the health factor becomes common knowledge.

ELF-EM Field Impacts on Health

Why are 60 Hz EM fields a cause for concern? The earth's natural magnetic field and accompanying earth/space 7.83 Hz fluctuation are important to operation of the body's biological system. These

are sufficiently stable to provide amplitude and frequency comparison references as well as power for internal biological fields and signals. These enable coordination of otherwise drifting body signals into an orderly presentation to the brain. This normal processing produces proper corrective output information to nerves, muscles, immune system, etc. essential for a healthy life.

Motion perpendicular to the earth's magnetic field induces currents into body parts containing iron such as blood pulsing in arteries or more steadily in veins, for example. Additional currents are generated by heart beating and lung breathing motion relative to internal and/or external fields.

The earth's magnetic field orientation at a location has attraction/repulsion effects on different body parts exhibiting north-south polarity characteristics.³ The resulting comparison signals from particular relative positions coupled with gravitational information would assist coordination through a somersault, for example, so one would always know "which end is up."

Chemical and metal nobility potential differences produce small voltage gradients between cells capable of passing impulses along the signal chains. It is noted that while the intercellular voltage may be

Just like a regular house... finished steel frame houses look just like regular wood-frame houses upon completion.



worse. Similarly, levels lower than included in the statistics might appear better for the short term, but present problems with extended exposure.

The 60 Hz straw is only one of many on the "camel's immune system back." If the system is near overload from hereditary, mercury, fluoride, chlorine, root canals, etc. straws, then the addition of the 60 Hz straw swings the balance more than if the other straws weren't so heavy.

An executive summary⁴ recognizes that exposure to 60 Hz fields reduces melatonin in the brain and affects bone growth. Another publication⁵ associates low melatonin levels from the brains' pineal neuroendocrine transducer with hormone levels, jet lag, insomnia, growth of tumors, breast cancer, Alzheimer's, seasonal affective disorder (SAD), schizophrenia, manic-depression, etc. Melatonin capsules at bedtime were suggested to supplement the lower body levels. This approach appears more enlightened than taking drugs to cover up the migraine headaches and other symptoms. However, exposure to the 60 Hz fields should be reduced to the extent reasonable, in the first place.

Potential Solutions

The regulatory corrective process to reduce 60 Hz fields appears to be slowed down by concerns over what should be done?... by whom?... at what cost? Action by this route may come too slowly to benefit many people. In the meantime, the multitude of studies should report biological effects clearly in a form to assist public awareness and exposure reduction efforts.

Steel framing can assist individual exposure limiting efforts. Utility companies should consider steel encasement of underground power services.

Footnotes...

1. Electric Power Research Institute (EPRI), Palo Alto, CA.
2. Work coordinated by Empire State Electric Energy Research Corp.
3. Albert Roy Davis & Walter C. Rawls, Jr., *Magnetism and its Effects on the Living System*
4. "Health Effects of Low-Frequency Electric and Magnetic Fields" Prepared by An Oak Ridge Associated Universities Panel for The Committee on Interagency Radiation Research and Policy Coordination.
5. Dr. David G. Williams "Alternatives" vol. 5, No. 1, July 1993

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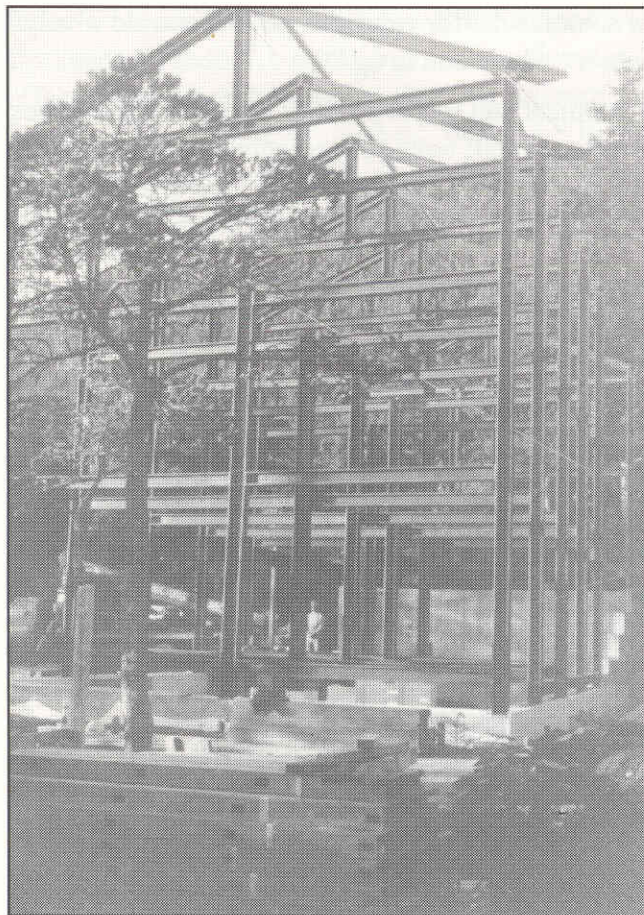
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small, the electric field (volts/meter) can be quite high because the cell walls are extremely thin. Combining of electric and magnetic fields could enable EM waves, transients, or some form of scalar format within and without the body.

This suggests how anger, well-being, or depression conditions in one person are sensed by another. A combination of signals could contribute excess energy in the 7.83 Hz vicinity to resonate a component harmonically. If the dynamic range of the processing system is diminished by age or other effect to the extent that the signal overdrives the linear response range sufficiently to flatten the extremes then higher order harmonics may result. The leading edge of the signal has the steeper rise time characteristic of higher frequencies and overdamped waveforms. These steeper inputs could prompt excitement, anger, or "punch 'em out" behavior. Conversely, a sub-harmonic, etc. frequency in the 4 Hz range or lower with slower rise



All in a frame... steel Framed houses are economical alternatives to wood frame houses, and they do have some unanticipated health benefits due to the reduced influence of magnetic and electric fields!!!

time may slow the system down to some depression state. It is assumed, that a sustained component other than 7.83 Hz, for example, might be unhealthy.

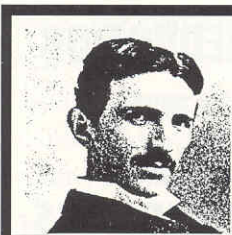
ELF EM man-made fields from powerlines, radio transmissions, appliances, TV and computer displays, ad infinitum, impose confusing signals on the processing system which in turn produces outputs disruptive to normal body system performance.

Powerline 60 Hz Field Effects

Sympathetic resonance of body parts to 60 Hz sub-harmonics could develop 30, 15, 7.5, 3.75... Hz responses. The foreign subharmonics or beat components may override or take priority over normal body signals. The frequency combination may alter the desired modulation index for a desired FM detection mode from a Bessel function point of view, and thus require a higher desired signal to interference ratio than required for normal body noise fields. From an amplitude point of view, the sub-harmonics may overdrive the detection/amplification elements into nonlinear operation so that higher desired signals are required to produce results than when normal body noise levels are present.

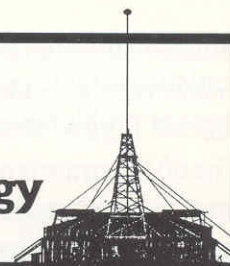
Stress in biological systems can be created by these foreign frequency/amplitude signals. In an immune system scenario, body signal chains report the presence of cancer and flu viruses to the brain's analog computer. The presence of powerline field components confuse the information processing to the extent that less than clear corrective instructions are sent to the immune system. Instead of the viruses getting zapped the results produce a cancer patient that caught the flu.

What levels of 60 Hz fields present health problems? Studies show that cancer statistics are generated by 1 mG fields and may triple when the field is doubled to 2 mG. However, the rates of statistical increase are less with further field magnitude increases as the linear dynamic handling limit is approached. It seems likely that signal distortion components which are generated as the system is overdriven would create other deleterious effects of their own which do not present characteristics being reported in the studies which could lead to an erroneous conclusion that more is not necessarily



TESLA BRIEFS

A News Roundup of Tesla Technology



1995 EXTRAORDINARY SCIENCE PREREGISTRATION TO START SOON!

The *1995 ExtraOrdinary Science Conference* will be held July 20-23, 1995 at the Sheraton Hotel in Colorado Springs, Colorado. Preregistration has started. Those planning to attend the "Event of the Year" should register early for the best discounts—which are quite significant. Family discounts will be offered again this year to family members. Although speaker selection will take place in February 1995, attendees can anticipate a better slate of speakers than our last conference! **—SRE**

RADIO FACILITIES UPGRADED AT THE TESLA MUSEUM

A two-antenna system has been constructed and installed at the Nikola Tesla Museum of Science and Industry in Colorado Springs. Both are of the inverted "V" type. One is a G5RV type with a 51-ft long wire for the dipole section, 30-ft of 400Z ladder line, and 75-ft of RG213 coax. The other is 20-meter with 1/4 wavelength wires and ladder line, and 100-ft of RG213 coax. They are both located on a 30-ft pole on top of the museum's two story building. The antenna system was constructed from donated parts and works extremely well.

A local HAM, Andy N0QMF, has loaned the museum a HF radio (ICOM 751). This has enabled the museum station to be in operation since November 5, 1994. The Society is now able to hop on the Saturday 20-meter net from its homebase. It has also served as an impetus for the volunteers at the museum to get their HAM licenses.

A Novice and Technician class for those persons wishing to obtain or upgrade an Amateur Radio License will be conducted at the Tesla Society, 2220 East Bijou St., in Colorado Springs. The classes are free to the general public; however, each class attendee should be prepared to purchase textbooks and pay for licenses.

The Novice class starts Monday, January 11, 1995 at 6PM and will run through Wednesday, February 8th, 1995. The Technician class will be held each Monday and Wednesday evening beginning on Monday, February 13th; and ending on Wednesday, March 8th, 1995. Details can be found in the Oct/Nov/Dec issue of *After Hours!* **—SJ**

WARDENCLYFFE ENDANGERED!!!

TESLA SOCIETY MEMBER LEADS EFFORT TO SAVE HISTORICAL SITE

Ellen A. Sherman, a member of the International Tesla Society, is spearheading the effort to save the Wardenclyffe site for future generations. It appears that AGFA (the current owners) would like to tear the sole remaining vestige of Tesla's legacy down. The only sure way to prevent this is to have Wardenclyffe designated as a historic building. Ms. Sherman has taken the first steps in accomplishing this and has submitted an application. She has done considerable research into the site and its history as part of her efforts to have the site included in the New York State Registry of Historic Places. Complete story is featured in the Oct/Nov/Dec issue of *After Hours!*

ARS SERVICES DIRECTORY

The following HAM services are conducted by the Society's volunteer HAM operators:

ITS/NET 14.297Mhz

Saturday, 20:00z
KC2Q - Mike
WWHF Communications

440/NET 446.900Mhz

Tuesday 9:00pEST
N2VLT/WA2FWM-Chas/Brian
UHF Educational/Forum

ITS/PKT 145.630

24hrs.
WA2FWM - Brian
PKT Mail-Box/INFO line

Address:

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ADDRESS CHANGE

You can contact the International Tesla Society by E-mail to the following Internet address:

tesla@usa.net

Or you can send your email to other ITS members that use the Internet through the Tesla "list" at:

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FOR THOSE WHO MISSED THE EVENT OF THE YEAR...



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