



# The Journal of Borderland Research

Volume XLVI, No. 2

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## FRONT PAGE NEWS

### *WHAT IS HAPPENING TO OUR PLANET???*

The following news should have been on the front pages of your regular newspapers. Instead it made a syndicated weekly column *EARTHWEEK: A Diary of the Planet* for the week of 9 Feb 1990. The front pages of the regular press were saved for more important stuff like politics.

#### *Missing Whales*

Environmentalists and tourist officials are wondering what happened to thousands of gray whales which normally swim to the warm waters off Mexico's Baja California coast to give birth at this time of year. Only 12 of the whales from Alaska have arrived at the Guerrero Negro area where 2,000 adults and 1,200 newborns were counted last year. The Mexican environmental "Group of 100" speculated that huge numbers of whales may have died on their migratory route which would have brought them through the area off the Alaskan coast where the Exxon tanker Valdez spilled 11 million gallons of oil last April.

#### *Silent Spring*

Scientists also can't explain what has caused the drastic decline in the number of some fish, sea birds and whales along Canada's British Columbia coast. "The steelhead are gone. There's a big hole in the river," said Joe Saysell, who has fished the Cowichan river for more than 30 years. The large sea-going trout has all but disappeared from some British Columbia rivers, and the population of nesting cormorants on the west coast of Vancouver Island is down 70 percent. Theories for the decline range from the Alaska oil spill and driftnet fishing, to changes in ocean currents and temperatures.

We also have reports of massive die-offs of amphibians (frogs and salamanders) around the world. The major increase in earthquake activity around the Pacific rim cannot go unnoticed. What about the mysterious British crop circles? Why doesn't the media carry on an intelligent overview of our planetary changes?

# *The Journal of Borderland Research*

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## **THE JOURNAL OF BORDERLAND RESEARCH**

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## **TABLE OF CONTENTS**

- \* **NEW CONCEPTS IN POWER GENERATION**  
Jim Murray 1-9
  - \* **DETECTION OF STATIONARY AND DYNAMIC SPACE SUBSTRATUM**  
Paramahansa Tewari 9
  - \* **DIELECTRICITY & CAPACITANCE**  
Eric P. Dollard 10-13
  - \* **FIZIX KORNER**  
Peter Lindemann 14
  - \* **EVOLUTION OF MATTER & EVOLUTION OF FORCES** by Gustave Le Bon  
Book Review by Gerry Vassilatos 15-17
  - \* **THE VEDAS: Mantras, Mandalas, The Krell Helmet** and John Keely  
Jerry W. Decker 18-20
  - \* **COSMIC WEATHER REPORT**  
Alison Davidson & Tom Brown 21
  - \* **BSRF BULLETIN BOARD**  
Letters, Reviews, Contacts 22-29
-



# New Concepts in Power Generation

by Jim Murray

## A TRIBUTE TO GENIUS

It is several years before the turn of the century in the city of Budapest, Hungary. A tall, gaunt man from Serbia struggles to regain his health. For months he has been in the grip of a strange and violent malady that has threatened to take his life. His convalescence is slow, but his will to live is indomitable. His name is Nikola Tesla.

As his strength returns, Tesla's thoughts turn with eagerness towards the resumption of his professional duties at the Budapest Telephone Exchange, and to the solution of a problem that has vexed his mind since his second year of engineering school – the harnessing of alternating currents.

Always having found great fortification of spirit in nature, the weakened Tesla retreats to the city park to enjoy a short outing. He is in the company of a former classmate, Szigeti. It is late afternoon in February. The year is 1881.

The dazzling colors in the prismatic sky announce the coming of sunset. The brilliant spectacle infuses life into Tesla's troubled soul. His being is seized by the contrast between this display of the cosmic wholeness and the integrated essence which he perceives as himself. The mysteries of the objective and the subjective realities seem to merge. Some great truth appears evident; nearly tangible. He is deeply moved. His sense of the aesthetic escalates to the point of spontaneous expression and he begins to recite a verse from Faust:

The glow retreats, done is the day of toil;  
It yonder hastens, new fields of life exploring;  
Oh, that no wing can lift me from the soil;  
Upon its track to follow, follow soaring...

Suddenly, Tesla is silent, staring at the orb of the setting sun. Szigeti is alarmed and tries to rouse him, but without success. Then as if from a dream, Tesla speaks. His voice is charged with emotion. "Watch me! Watch me reverse it!"

In a moment of unparalleled lucidity, the mind of a noble man has merged with the mental fabric of a Higher Consciousness and has captured a grain of truth to share with mankind. During these few seconds of inspiration, Nikola Tesla has discovered the principle of the rotating magnetic field, the foundation from which our entire polyphase electrical technology has evolved. Tesla is 25 years old!

I wrote those words in September of 1983 as part of the introduction to a lecture I delivered before the Second International Symposium on Non-Conventional Energy Technology. The paper was entitled "An Introduction to the Concepts of Energy Resonance."

The introduction continues:

These events marked the beginning of a career unsurpassed to this day by any individual in the electrical field.

In the remaining 62 years of his life, Tesla was awarded 36 patents for inventions pertaining to motors and generators, 9 major patents involving transmission of electrical power, 6 patents concerning lighting, 17 patents on the design of high frequency apparatus, 12 patents on radio, 7 patents on turbines and similar devices, and many other patents too numerous to mention.

What gift allowed Nikola Tesla to stand as a giant among men? How was his thinking different? What secrets permitted him to discover so many truths? Why has no one followed in his footsteps?

I began my lecture on Energy Resonance with an introduction

centering on the life of Nikola Tesla because I felt indebted to this exceptional man. Likewise, it would not be possible for me to discuss my research in power generation without again giving credit to Nikola Tesla. His life has had a great effect upon my own and, in some ways my investigations have been guided by his hands.

My first encounter with Tesla's work occurred in 1962, when I was a sophomore in high school. I read an article which debated the feasibility of Tesla's plans to light the 1903 International Exhibition in Paris with power generated at Niagara Falls and transmitted to Europe by wireless means. The story had first appeared in *Electrical World and Engineer*, March 5, 1904, where mention was made of Tesla's intention to combine the art of wireless communication with that of wireless transmission of power.

In the early sixties, my technical interests were completely directed toward the design of linear particle accelerators. Already I had received a first place award in the New England Science Talent Search and had my sights set on scholarships and grants. I had no time for ancient inventors! However, I remember thinking, "How does one transmit 10,000 horsepower across half the globe without wires?" The thought lingered in the back of my mind for many years and dwells there still.

In 1965, my father died suddenly, and with him, unfortunately, so did my plans to study physics at M.I.T. The following fall, instead of attending college I started work as an electrician in a small New Jersey shipyard. I was 18 years old.

The years which I spent around New York Harbor and the New Jersey waterfront were filled with incredible experiences. In those days there were still steam-powered tug boats in operation. Antique coal burning plants provided steam and electricity to many factories. Direct Current machinery over a century old saw daily operation. Old lighterage barges were still repaired by carpenters who had not forgotten how to hew beams by hand. Everywhere there was an atmosphere that resisted change. Constantly I encountered "old timers" with stories to tell, and I was always eager to listen.

One morning I boarded an old steam tug just to look over her propulsion system. Below the decks I found a beautiful old two stage marine engine, skirted with brass and hard wood and supported by a cast iron frame. The cross heads and journals were still shiny and lubricated as if the engine had only recently been stopped. The old machinery was beautiful. There was something artistic in its design and I longed for the standards of the past age which had produced it.

Slowly I ingested the complexity of the engine room. The piping, the brass steam gauges, the old slate control panel crowded with tarnished copper knife switches, racks of corroded batteries, steam valves, oil coolers and miles of ancient wiring all felt familiar. Suddenly I realized that I had seen no auxiliary engine, no generator. Knowing that there must be a power source, I traced the main cables from behind the switch board and to my surprise they terminated at a small generator in the upper engine room which was attached to a disk shaped device. I rubbed the brass name plate clean and was astonished to see "Moon Turbine Company."

Always having had a distinct interest in steam power, I looked up one of the oldest captains in the yard to ask him how long turbines had been used aboard steam vessels. His response really startled me.

"Since the early 1900's, about the time of the great turbine war!" Captain Allen went on to explain that early in the century, all the big power companies were struggling to produce a superior turbine and there was a great demand for such devices in the marketplace. General Electric, Westinghouse and Allis-Chalmers were all pouring resources into this kind of research, so naturally, many smaller industrial units like the Moon Turbine Co. followed suit.

The next time I was in Manhattan, I made a point to drop by the main branch of the New York Public Library where I did research into the development of the turbine. To my astonishment, I discovered that one of the great contender's in the turbine contest was none other than Nikola Tesla! There was that name again, the man who wanted to transmit power without wires.

With renewed interest, I redirected my investigation towards Nikola Tesla himself. I was surprised to find there were precious few books written about this man, but there seemed to be an endless supply of newspaper and magazine articles available on microfilm. So naturally, in a short time, I amassed a large file.

Later on I acquired and read numerous times the great classic "Prodigal Genius" by John O'Neill. However, my best source of information came from a book entitled "Lectures, Patents, and Articles" which I imported from Yugoslavia.

The more I studied Tesla's work and his accomplishments, the more I was convinced that something was wrong somewhere. Why have so few of his experiments been successfully duplicated in modern times? Why are his greatest claims regarded with such an air of skepticism by today's engineers? How could the same man who gave the world the polyphase electric motor, rotary transformers, robotics, the basis of radio and foundations of x-ray technology, suddenly be considered mad or senile when he spoke of wireless transmission of power or extracting usable energy from the environment?

Gradually I learned to "read between the lines" as I studied his lectures and patents. Slowly I realized that in many cases Tesla was speaking about very rare or very different scientific phenomena with an attitude of complacency as if he felt that "surely everyone understands this basic material."

But everyone did not understand. They were still struggling to digest Tesla's earlier concepts.

Tesla did not trust most of his contemporaries. He never bothered to adjust his use of semantics to comply with accepted definitions. If he was misunderstood he was unconcerned. As a result, after many years this attitude eventually led to multiple interpretations of the meaning and intent of Tesla's work. His statements were considered enigmatic and eventually meaningful communication between himself and the scientific community ceased altogether. But Tesla continued expounding his discoveries as usual, unaware that the wisdom in his words fell upon deaf ears.

Animated by the conviction that great knowledge had been lost, I set out to establish where Tesla had made his departure from recognized physics. Guiding myself by intuition, and by the implications hidden in various projects which he had proposed, I concluded the following:

A) There must be more than one kind of resonance and more than two kinds of induction supported by the laws of nature.

B) Tesla had discovered something very fundamental about the relationship between energy and power that still eludes the rest of the world.

C) Most of his later inventions, including the Magnifying Transmitter, probably made use of this "secret" knowledge, and therefore, still remain misunderstood by the scientific community as well as the general public.

## INITIAL RESEARCH

Early in 1971, I purchased some property in northern Michigan and set out to establish a research facility geared to rediscovering as much of Tesla's lost information as possible. Armed with only the energy of my youth and the irresistible force that comes from single-mindedness of purpose, I succeeded in raising nearly \$100,000 to fund my venture. I assembled a shop/laboratory combination and quickly went to work.

My plan was basically a simple one. I was looking for some anomaly in the laws of physics, and if my hunches were correct, I would find it in some forgotten or unknown aspect of Tesla's work. As guidelines for my efforts, I selected three Tesla projects which required uncommon knowledge to complete. They were:

- 1) A new type of D.C. motor which would operate without a commutator.
- 2) A new kind of D.C. generator capable of producing extremely high D.C. voltage.
- 3) A self acting engine that extracts power from the ambient medium.

A non-commutating D.C. motor would have commercial appeal and it sounded simpler and less expensive to investigate than the high voltage D.C. machine or the ambient engine, so I chose this as a place to start my research.

In order to find a path along which to proceed, I reviewed all the data in my possession concerning D.C. motors, bearing my goal in mind – the elimination of the commutator. Eventually the obvious broke into my conscious mind. The need for the commutation arises because the concept of polar attraction is used to generate the twisting force which drives a D.C. motor. This necessitates switching from one active pole to the next in order to maintain the angular motion. However, the only reason why polar forces are used is because the winding of a coil produces a powerful concentrated magnetic field which allows the designer to make use of the ampere-turn concept thereby obtaining the maximum amount of flux per ampere consumed. Suppose it was possible to utilize multiple ampere-turns to develop a field geometry which did not produce a di-pole when energized, but rather a circular resultant field which could imitate the concentration of magnetic energy surrounding a single conductor. In such a case, there would be no magnetic pole produced hence no need for switching, yet powerful forces could still be mustered to perform useful work.

The idea was exciting and novel, and it seemed like the sort of solution Tesla might have envisioned, so I invested the next few months trying to find an embodiment that would incorporate the idea in a practical fashion. What was required was the type of field generated within the confines of a torus or a Roland ring. However, it could not be surrounded by conductors, the conductors would somehow have to be internal to the field. The problem was acutely vexing, and no matter how I approached it, I made no progress.

Eventually I realized that I was attempting to navigate in uncharted waters! There was no data available concerning the behavior of magnetic fields within the interior of metallic structures. I would have to supply my own information. So I designed a simple device to allow me to visually inspect the movement of magnetic flux through various samples.

Basically, it consisted of an aluminum car on rails, which was situated between two poles of a powerful electromagnet. Samples were situated within a frame supported by the car and so aligned as to allow the flux to pass through them in a direction perpendicular to the motion of the car.

All samples were prepared by drilling holes in their surfaces into



which miniature compasses were placed. In this manner, when the flux was turned on, the tiny compass needles would align with it and produce a literal map of the internal magnetic pattern. It was with this primitive device that I made an intriguing discovery which I initially called the "window effect."

Having found the flux motion through various homogeneous samples to be completely uniform, I began to experiment further by machining holes of different shapes in various pieces of metal.

Upon boring a large round hole in a piece of mild steel, I noted that a spring-like force appeared in a direction which opposed the motion of the car. Simultaneously, the compasses indicated that the flux was producing a "bow wave" collecting just ahead of the hole in the direction of the car's motion. This action was most certainly due to the area of high reluctance which the hole presented to the normal flux path. However, if the motion persisted, the compasses surrounding the latter portion of the hole suddenly snapped back to a straight alignment! The further the car advanced, the more compass needles reacted in this manner indicating the presence of a magnetic "wake" created by the passage of the hole through lines of flux!

The snapping action of the force lines was intriguing to me so I studied the phenomena until its nature became clear. The advancing hole, an area of high resistance to magnetic flow, pushed the lines of flux ahead of it so that they collected in a bunch and behaved like stretched rubber bands. If the hole was advanced beyond a limiting point, then those lines of flux which were most stretched would snap back to the rear of the hole and assume an unstretched position.

The most interesting aspect of this phenomenon resided in the fact that the lines of flux which were "snapping" across the boundary of the hole would, of necessity, travel with a velocity greater than that of the car. Hence, it occurred to me that the proper placement of windings with respect to the hole might cause the induction of voltages with magnitudes proportional to the velocity of the flux rather than the velocity of the car!

Such a scheme would represent an amplification of sorts, and I could not resist the challenge to devise a practical method of implementing this unusual magnetic property. I yielded to temptation and suspended the motor project.

Many experiments were tried without success until I recalled an earlier observation. While experimenting with the effects of holes upon the flux, I had learned a curious fact. If a rectangular hole was machined in a piece of steel and fitted upon the test car, the flux did not produce the familiar "bow wave" effect. Instead, it would bunch together and slowly cross the rectangular hole by producing an "hypotenuse" which slowly increased in length until some maximum value was achieved. Then the flux would again snap to the rear. This suggested that the flux was "aware" that the hypotenuse was a shorter route across the reluctance than the path around the perimeter! This was the seed of a novel idea. Why not reverse the roles of permeable material and the area of high reluctance, thereby confining the flux to the hypotenuse path. This would allow the unmanageable elastic "action" of the flux to be replaced by a definite structure which could be manipulated in three dimensions relative to the pole pieces!

No doubt this idea had its roots in an earlier study I had done where the time axis of various periodic functions was replaced with an actual dimensional axis resulting in the generation of unusual geometric solids.

Applying these techniques to the control of magnetic flux resulted in a complex structure, part iron, part aluminum, which took many weeks to machine.

Ultimately, the finished rotor was pressed on a shaft, supported by bearings and situated between special field poles. Power windings

were formed and pressed into place. The finished device was mounted on a base and belted to a D.C. motor for testing. I had devised a completely novel form of A.C. generator!

A fully instrumented panel and the necessary transducers were then prepared; a surplus magnetron magnet was bolted into place to provide an excitation field and the drive motor was brought up to speed.

The A.C. volt meter climbed to approximately 100 volts RMS and held steady. I closed the circuit breaker and the circuit indicated 2 amps RMS! My load was resistive, and while there was a typical drop in the terminal voltage with application of load, there was no increase in current drawn by the D.C. motor, a curious result. I removed the leads from the power resistor and shorted them together. The output current rose to 6 amps, and the current drawn by the D.C. motor decreased nearly a full amp! An impossible result, and something I did not understand.

I spent many long months experimenting with and studying the machine I had created. It was perplexing. I learned a great deal about it, but I could not imagine what arrangement of physical law could account for such behavior.

Since I had first applied a load to the machine, I noticed a "purring" sound which only persisted as long as there was a current draw. It was a distinctly mechanical sound and all efforts to locate its source initially failed. However, I instinctively felt the source of this noise was a key to the secret of the device's performance.

Ultimately, I mounted strain transducers on the bearing assemblies and repeated the tests. Low and behold, the shaft was undergoing compressive loading in phase relation to the electric current! The answer was suddenly clear, I had ortho-rotated the Lenz reaction! Instead of the load current producing a negative torque upon the shaft, it was producing a thrust load upon the bearings. Incredible!

I continued my investigation into the nature of this unusual machine long enough to discover a major problem. Unlike an ordinary generation device, in which the power windings are distributed circumferentially about the stator or the armature in order to achieve the best power output per pound of material, the generator I was laboring to develop could only have two power windings located in special positions with respect to the overall magnetic circuit. The reason for this limitation has to do with properties which I choose not to discuss here because of their proprietary nature. However, the immediate and obvious ramifications were a reduction in available output voltage and power.

If the output coils were wound with a large number of turns, the resulting inductive reactance would limit the available current, keeping the power yield relatively low. If coils were wound for high current, the voltage was inherently low and again the power capabilities were restricted.

The possibility of resonating windings of many turns in order to obtain the highest voltage/current combination had occurred to me. However, my feeling at the time was that there had to be a simpler answer to the problem.

I sat hour after hour, studying the magnetic circuits and electric circuits and reviewing the theory of operation I had developed in hope of being blessed with an inspiration. What other way could there be of eliminating inductive reactance? There must be a method more suited to my application than the addition of capacitance to the circuits. Was there a magnetic solution?

Somewhere in the reaches of my subconscious mind, a realization began to stir. I felt the solution was near at hand. It had that "I should know the answer to this problem" feeling, and I was determined to wrestle it into awareness. All at once, I saw the answer with

clarity. It presented itself in the form of a vivid picture, partially literal, partially symbolic, in a manner particular to the collaboration of left and right brain activity.

Quickly, I sketched the mental image, lest I forget any detail after the passing of that instant of "super perception". Then I leaned back and surveyed the information before me. There are no words to describe the elation I felt when the magnitude of the solution struck me. I was overwhelmed.

There on the scrap of paper before me was the design for a hybrid machine that incorporated the best features of my earlier generator with certain characteristics of an ordinary transformer! The design made use of the properties of transformer coupling to eliminate the effects of inductive reactance.

The idea was complicated but elegant. I wondered if I could factor out the transformer-related concepts, and incorporate them into a simpler embodiment which would allow me to test their validity without having to design and construct the entire mechanism. The accomplishment of this task became my next challenge and propelled me into circumstances which I could have never foreseen.

### TRANSFORMING GENERATOR

The closing months of 1977 found a new prototype in my small laboratory. I called it the transforming generator. It was the result of many hours of meditation and experimentation and embodied those transformer "concepts" which had been presented to me as the solution to the impedance problem in my earlier A.C. machine. The new generator was constructed in such a manner that each coil saw its mirror image in the other. The result was that a coupling existed between windings which varied as a function of the load current. This resulted in a dynamic source impedance which gave the generator totally "alien" properties.

First, the machine was self-regulating. A change in the amount of current drawn by the load automatically increased or decreased the terminal voltage. This was not accomplished by varying the strength of the D.C. field, but rather by a change in source impedance provided by the magnetic coupling. No servo type of voltage regulator could compete with the speed and accuracy of this magnetic means. The load current signaled the generator directly regarding the voltage requirements of the external circuit. There was no time lag in response, and no over-correction to contend with. In fact, the regulation ability of this machine was so fast that an instantaneous 100% increase in load current prompted an immediate voltage increase from the generator, a virtual step function of potential with an infinite slope and no measurable rise time, a feat not possible with electronics!

Second, the transforming generator had surprising abilities with respect to its power transfer characteristics. If it was connected to a time-varying load, such as a mercury vapor lamp, it could track the impedance changes with such speed that no ballast was necessary! In addition, the machine delivered constant power to the load; the voltage and the current were both square waves!

How does a rotary machine produce square waves of power and what are the physical principles which make such a technology possible?

The answers to these questions were not completely understood by me in 1977; several more years would pass before such matters would make total sense to me. There was, however, one additional mystery which I uncovered in those years the significance of which would also have to wait.

Once I had completed construction of my largest transforming generator, a 750 watt unit, it was of great importance to investigate

the performance characteristics and the overall efficiency of that machine. To accomplish this, I coupled the generator to a 1 H.P. D.C. motor and I measured the D.C. power consumption with calibrated electrodynamic instruments. The test loads were resistive, and the elements used were non-inductive to assure greater accuracy of measurement.

When everything was in readiness, many curves were taken, and a segregated load analysis was performed. The results were most confusing. Taking into account all the known losses, friction, windage, iron and stray copper as well as the power dissipated in the resistors, I discovered that as the load was increased, the conversion efficiency decreased. This meant that with all the known losses accounted for, the power drawn from the D.C. motor was larger than the power dissipated in the load. The conversion was less than unity; power was disappearing! There was no mistake in measurement or calculation, the results were checked by qualified people all of whom drew the same conclusion: the generator was exhibiting a new form of inefficiency. It was measurable, but non-dissipating, and its nature was a mystery.

### CONFLICT WITH WASHINGTON

Despite the fact that everything was not yet understood about the transforming generator, its obvious industrial potential made it a prime candidate for commercialization. The notion was aired at a stockholders' meeting and it was decided to apply for patents.

As a first step, a patent search was performed by our attorney which had the surprising result of discovering no prior art. Much encouraged by these preliminary findings, I set about the arduous task of writing the patent.

Our goal was to achieve as broad a coverage as possible on this technology, so the formal disclosure became a lengthy and detailed document containing theory of operation, multiple embodiments, calculations, performance characteristics, graphs, etc. It took weeks to prepare the rough draft, and longer to edit it into acceptable legal format. Ultimately, the task was completed and the application submitted to the patent office.

After the first six months of waiting, a first action was received; it was a rejection accompanied by a collection of older patents which supposedly were relevant. I examined each in detail and found nothing which had a bearing on my machine. Accordingly, an amendment was prepared and resubmitted to Washington. Six months later a second rejection was received.

Disappointed and more than mildly angered, I took new steps. A second amendment was prepared, an election of species was made, our claims were narrowed, and detailed explanations were written explaining why the cited prior art did not apply to the transforming generator. This new application was submitted to Washington, but it too was eventually rejected.

None of the examiner's arguments seemed relevant but no matter how the concepts were reworded or explained, the reaction was always the same: "Rejection." This battle went on for three years, at a great cost to my little corporation, and at greater cost to my health.

In order to maintain my sanity during these times, I provided an outlet for my frustrations by returning to my original research on the Direct Current Motor.

By this time, I had acquired some unusual insights into the problem, as well as uncommon expertise in the management of magnetic forces. I concluded that the earlier discovery of the "window effect" was more applicable to the generation process than the motoring process. However, the basic notion of producing a non-



polarizing magnetic field structure was definitely correct. I had proven this in many independent experiments. What was actually needed was something which behaved like only "half" a winding, but was such a thing possible?

I tried various shielding arrangements. I tried engineering exotic windings which produced asymmetrically distributed magnetic fields. I attempted fantastic schemes in which there was an enormous difference in the relative torque production between each side of the same winding, hopefully resulting in a uni-directional net torque. Nothing worked.

Sometime during the closing months of 1981, a final rejection notice was received from Washington. According to the patent attorneys, I still had the option of a final appeal directly to the patent commissioner through the patent claims court. That was somewhat uplifting, but, between domestic and international patent applications, the numerous amendments, various fees, penalties and taxes, over \$60,000 dollars had been spent on legal costs, and there was nothing left to fight with. My stockholders were disenchanted and angry because they were not yet millionaires! I argued late into the night trying to convince them that we should not quit, but it was too late, the human fabric had frayed beyond repair. I retired, angry and exhausted.

Eventually, morning came, as it always does, and I became aware of a peculiar state of consciousness. I knew I was no longer sleeping, yet I was not exactly awake, either. In the depths of my mind an image was moving. I focused attention on it. It was an Indian man seated on a blanket. He was stacking golden disks upon a peg. The disks were of diminishing sizes, and they formed a tapering stack. I recognized the image. I had seen it in a book associated with a mathematical problem in which a number of disks are moved from one peg to another in a certain sequence. The solution is said to require more moves than can be accomplished in a lifetime. But what did this have to do with anything?

I stared at the stack of disks in my mind. They were gold in color, and that seemed important somehow. My mind moved like cold molasses. I could not see any connection or relevance between this image and my life. I rolled over desiring more sleep. "Maybe they're brass not gold," I thought. Suddenly, I sat up fuller alert, there was the answer! The tapered stacks were brass, not gold!

In no time I was down in my shop running the engine lathe. I watched the little shower of brass chips fly from the bar I was turning, and something rang in my mind. It was a comment that Tesla had made in 1933 regarding his new D.C. generator "a peculiar assembly of steel, brass and aluminum."

The little model took nearly all day to construct, but finally it sat on the bench before me, a peculiar assembly indeed. Nervously, I connected leads from a D.C. power supply. I flipped the switch and slowly increased the current, but nothing happened. I increased the current further and suddenly the little device leaped into action, spinning at a great rate of speed!

I was hypnotized, and elated as I watched the strange little motor spinning without commutating! I wondered if this was the same principle that Tesla had discovered.

Without warning, I was roused from my musings by the smell of smoke. I quickly glanced at the ammeter, it was registering in excess of 20 amps. "It needs additional armature sections," I thought as I shut down the supply. The little motor squeaked to a halt. The windings were already black, and the plastic portions of the rotor were warped. I began to disassemble the device. "It won't take long to repair," I figured, "and with this breakthrough surely the stockholders will regain their interest."

I worked late into the night, making new armature sections and winding the special coils. The last thing I did before I retired for the night was to lay out all the parts on the bench. "I'll assemble that little beauty first thing tomorrow," I muttered as I locked up the building. I drove home with renewed confidence and excitement.

The next morning I had an early breakfast at the local restaurant and wheeled to the shop. It only took a few seconds to grasp the meaning of the sheriff's notice and the padlock on the shop door. With a sinking heart, I stared through the window at all my equipment and the small collection of odd parts on the edge of the bench. I knew it was time to quit.

## ENERGY RESONANCE

I left Michigan not a moment too soon. My funds were gone, my hair was falling out, I had developed a bleeding ulcer, I was overweight and I couldn't sleep. I needed a complete overhaul.

The company I was working for was good enough to transfer me to a small mining community in Eastern Pennsylvania. Once I had gotten established, I promptly joined the Y.M.C.A. where I began working out on a regular basis, and I found myself a lovely girlfriend. The last thing I wanted to do was to think about electricity!

This attitude was short lived, however, for there were numerous electrical problems in the mind which I could not avoid and little by little I began thinking about my research again. The situation was completely different now though, because I had no shop and no equipment with which to experiment. Circumstances forced me to make my investigations mathematically.

It seemed as if there were a million questions to answer and each would require rigorous mathematical analysis. With no models for generating data, my options were indeed limited. What I needed was to discover some underlying principle which could tie together all the loose ends and give direction to my research. But where do you look for something which no one else has found?

Asking the questions seemed to prompt an answer "how about right under your nose?" True, the least obvious spot to hide something is right out in the open. Perhaps what I was looking for was so fundamental and so universal that no one suspected its existence. I began to ponder anew the most elementary of physical concepts: Force, Work, Velocity, Momentum, Newton's Laws and, of course, the Conservation of Energy.

I was not interested in simply reviewing problems in physics, but rather in achieving a fresh point of view on principles which I had long ago taken for granted, and which I used almost daily through habit rather than by reason. To accomplish this end I began to apply differential and integral calculus to very basic equations in order to better comprehend their origins and dimensionalities.

I rambled through hundred of calculations, and while I did greatly clarify many things in my own mind, I made no earth-shattering discoveries. However, eventually I came upon the basic relationship which links work to force and distance:

$$W = FS$$

This I differentiated with respect to time in order to develop an expression for power:

$$dW/dt = d(FS)/dt. \text{ Therefore,}$$

$$dW/dt = F d(S)/dt, \text{ and .....}$$

Here I suddenly paused when I realized that I was solving this derivative through habit and convenience. I had removed F from the parenthesis without thinking. How did I know that the force was constant? In many cases the force is actually a variable. So I started

over:

$$\begin{aligned}W &= FS \\dW/dt &= d(FS)/dt. \text{ Therefore} \\dW/dt &= F dS/dt + S dF/dt \text{ and} \\P &= Fv + S dF/dt.\end{aligned}$$

This equation states that if  $F$  is allowed to vary in time, then the power must consist of two components,  $Fv$ , the force times the velocity, and  $S dF/dt$ , the distance times the rate of change of the force with respect to time. In other words, not only must the agency supplying the power pay for moving the force through a minute distance,  $dS$  in some minute time  $dt$ , but it must also pick up the tab for the changing force  $dF/dt$  over the total distance  $S$ . I stared at the new relationship  $P = Fv + S dF/dt$  fully aware that something was going to happen. I kept thinking about the transforming generator, about the increased torque necessary to turn it and about the low conversion efficiency. But another part of my mind was trying to tell me something else. Something about non-linear rates of change, something about logarithmic functions, something about equation in the fourth quadrant, something about the derivative of decreasing functions! Yes, the derivative of a decreasing function is a negative quantity!

This means that if  $F$  were decreasing in time, then  $dF/dt$  would be negative, in which case:

$$\begin{aligned}P &= Fv + (-S dF/dt) \text{ or} \\P &= Fv - S dF/dt.\end{aligned}$$

So if  $F$  decreases fast enough, then theoretically,  $dF/dt$  could become a large enough negative quantity to effect the magnitude of the positive power component such that if

$$\begin{aligned}P_1 &= Fv \text{ and} \\P_2 &= Fv - S dF/dt, \text{ then} \\P_1 &> P_2,\end{aligned}$$

in which case, if  $P_2$  represents power entering a system and  $P_1$  represents power leaving the system, then the system would demonstrate a net power gain. But how could such a thing happen if energy must be conserved?

It required three more years of mathematical study before I managed to isolate and demonstrate a simple mechanical system in which such an effect is apparent. And I am both proud and relieved to say that conservation of energy is not only upheld, but utilized extensively in my proofs. What does develop in a totally new light, however, is conservation of work. It has always been assumed that the work done must equal the change in the available energy under all circumstances. However, this proves to be true only in traditional linear systems! In non-linear systems, two additional conditions can be demonstrated:

- I. The work done is greater than the change in available Energy.
- II. The work done is less than the change in available Energy.

Now, if we consider a non-linear electrical system which is specifically engineered such that its parameters vary in time so as to cause an alteration of the system between condition I and condition II, then the energy will truly oscillate! And if the components are properly designed so as to cause the movement of energy to become optimized rather than the current, then the system will demonstrate Energy Resonance!

With this deeper insight came the understanding that both earlier generating devices were exhibiting only half the total picture. I realized that a standard alternator is really a D.C. machine from the standpoint of power delivery. For although the voltage and current

both oscillate, the power merely pulsates in amplitude. Hence, there is a great fallacy in comparing present day generating equipment to the electric oscillator, particularly if the machine is driven by a thermal engine of any kind. This stands to reason when you consider the fact that heat engines are thermodynamically irreversible, and therefore, any power returned to the engine would be incapable of even a minute re-conversion into fuel. This means that thermal systems cannot support a bi-directional movement of energy, nor can they give rise to Energy Resonance phenomena of their own accord.

After many years of effort and contemplation, I began to see the light. I was absolutely certain that Tesla had ventured down a similar path, although his journey had been much more expedient than my own to be sure. Perhaps these humble foundations might again lead to the lost principles of the great Magnifying Transmitter, or other undisclosed secrets sleeping with the master.

In September of 1983, I delivered a paper before the Second International Symposium on Unconventional Energy Technology in Atlanta, Georgia. The work was entitled "An Introduction to the Concepts of Energy Resonance." With the time slot allotted to me, my delivery did not do justice to the subject matter. However, I did attempt in earnest to acquaint my audience with the basic principles of the non-linear work/energy relationships I had discovered and their importance as a potential non-nuclear power alternative. I doubt many people got the point. Perhaps my talk was too mathematical as the only comment I ever heard concerning it was, "What the hell did you say?"

Maybe my lecture in Atlanta was premature but I still left Georgia with a renewed sense of optimism. I felt for the first time that my goal was a visible glimmer on the horizon.

#### THE DYNA-FLUX ALTERNATOR

The fall of 1984 found me again in my native state of New Jersey. Thirteen years had passed since my departure, and while it was good to be home, in many ways it felt quite strange; a great deal had changed.

Slowly I re-established communications with old friends and relations. Human nature being what it is, most people had no idea where I had been or what I had been doing. However, a few of my good friends were genuinely curious.

Little by little I disclosed the nature of my research to those who were interested. One individual in particular was greatly excited. I will identify him as Mr. K. This gentleman became my first partner in a new endeavor: a practical demonstration of Energy Resonance.

There were quite a number of engineering problems to overcome before a design could be considered. Most of them centered around the non-linear nature of the technology itself and the large number of variables which had to be dealt with in designing a specific machine. To make matters worse, scaling factors were also non-linear, so it was virtually impossible to leap-frog from one successful design to another. All these complications suggested that it would be premature and financially dangerous to set up another shop. However, it was crystal clear to both of us that an investment in computer equipment would be economically sound and practical. Hundreds of mathematical models could easily be designed and tested for the cost of one mechanical model.

The next year or so saw a great deal of progress from the mathematical standpoint. Of course I cheated a bit. Some of the non-linear equations I solved by mentally anticipating the results, and some of the wave forms for the flux I approximated with complex harmonics or least square fits. Often it took dozens of printouts to tell me which way to "steer" the numbers.



One spring afternoon Mr. K. dropped by unexpectedly and found me in my office buried in printouts. "Well, where do you stand, professor?" I stared at my visitor over the rims of my glasses in silence. The last thing I wanted to feel like was a damn professor. I decided to ignore the remark. "I think we're ready to build one!" I exclaimed. "What the hell are we building?" Mr. K. wanted to know. "An Energy Resonant Generator; a Dyna-Flux Machine!" I replied.

With that remark the die was cast. By mid summer, the design was solidified, and a new order of business was at hand: fund raising. I approached another friend of mine, Mr. H. and divulged to him the nature of my research. He was impressed and agreed to finance the first prototype as well as the patent expenses for a piece of the action. The ball was rolling!

I took great pains to ensure each phase of the project was properly completed. The Dyna-Flux rotor was contour ground and dynamically balanced. The power coils were hand wound on special forms and then pressed into position. The field poles were carefully machined and mounted on special aluminium pedestals. The field windings were prepared by a professional motor shop, then compressed upon a steel suspension yoke. Piece by piece the idea was condensing into reality.

To facilitate testing, the generator D.C. field supply was manually adjustable at the main instrument panel, and the voltage and excitation current were accurately displayed on state of the art digital meters.

The Dyna-Flux machine was to be rotated by a 3/4 horse power D.C. motor. The motor, in turn, could be speed regulated by tachometer feedback via a solid state drive controller. Both the motor input voltage and the current were also monitored on the main panel.

The A.C. output power was to be directed into a power resistor decade box so that the optimal load point of the machine could be determined. The RMS voltage and RMS current delivered by the Dyna-Flux device would both be available on the console and back up measurement was to be supplied by a calibrated electrodynamic VAW meter.

Space angles would be detected and measured on a dual trace oscilloscope, where the input from a magnetic proximity switch could be simultaneously compared with the generator output current.

All the control features as well as the elaborate instrumentation were absolutely necessary. Thousands of data points would have to be taken, averaged and plotted with great precision if the operational characteristics of Dyna-Flux were to be accurately portrayed.

My intention was to follow as closely as possible the IEEE standards for the testing of magnetic machines. This would require open circuit voltage curves, field current saturation curves, short circuit current curves, iron loss curves, stray copper loss curves, friction and windage curves and a segregated load analysis. With this voluminous data, the overall system and conversion efficiency could be measured at any load level. This allowed the optimal load condition of the machine to be discovered.

It must be borne in mind also that for all this data to be meaningful, especially in the case of such an unorthodox device, it would have to be compared against similar data taken from a standard alternator. The test stand which I devised provided for this comparison by using electro-mechanical clutches to direct the mechanical power from the D.C. motor to either the Dyna-Flux Alternator, or the standard alternator. The calculating, designing, fabricating, calibrating and testing seemed an endless task, but at long last the entire system was completed and ready for operation.

Maybe it was the seven years I spent working alone in Michigan,

or maybe it was just fear of failure, but I insisted on doing the trial runs in absolute seclusion.

It took many hours of work to gather the data and to plot the performance characteristics of the standard alternator and the Dyna-Flux machine. Compound plots of six curves were prepared for each device, then scaled and plotted by computer. In both cases, the following parameters were graphed for comparison:

1. Load resistance in ohms
2. Total input power (watt AVG)
3. Actual input power (total input minus losses)
4. Load current (AMPS RMS)
5. Output power (watts AVG)
6. Efficiency (conversion efficiency)

The results were completely astounding!

The efficiency of the standard machine peaked out at the value of its optimal load resistance and dropped off sharply thereafter. The output power, the actual input power and the load current curves were nearly "parallel." These results were well within expected limits.

The efficiency of the Dyna-Flux machine remained nearly constant for all values of resistance until the optimal load was approached. Then the efficiency began to climb exponentially! The actual input power curve remained parallel to the output power curve and increased with it. At the optimal load point however, the actual input power dropped nearly vertically, dragging the total input power down with it. Simultaneously, the output power continued to climb, finally leveling off after the optimal load was reached. The output current rose exponentially over the entire load range, passing through the optimal point before leveling off to a constant value. What incredible results, despite the enormous increase in output current, the total input power dropped away to 75% of its previous value. The machine was compensating for its own losses and delivering anomalous efficiencies at the same time! Dyna-Flux was in Energy Resonance!

The time had come to compute the relative efficiencies of both devices at their optimal load levels. Here is a tabulation of the results:

<u>Alternator</u>	<u>Standard</u>	<u>Dyna-Flux</u>
Full load input power	357.35 watts	404.75 watts
No load input power	319.80 watts	381.94 watts
Actual input power	37.55 watts	22.81 watts
Full load output power	31.77 watts	33.06 watts
Conversion efficiency	84.61 %	144.93 %
System efficiency	8.82 %	8.16 %

Upon contrasting the results, the first obvious difference is the higher power consumption rate of the Dyna-Flux machine as compared to the standard machine. This result was anticipated because great physical differences exist between the two generators. The standard machine is laminated in its construction, has extremely small air gaps, contains six sets of power windings and has an efficiency designed magnetic circuit. The Dyna-Flux machine, on the other hand, only contains laminations in its rotor, has much larger air gaps, has two sets of power windings and utilizes an antiquated yoke-type magnetic circuit, a consequence of limited financial resources.

All things considered, the Dyna-Flux prototype does sustain higher losses. However, despite this handicap, note the incredible difference in actual input power rates once the losses have been segregated; not the higher yield in output power between the two contestants, and note the absolutely unheard of difference in conversion efficiencies, while the system efficiencies are nearly equal!

To really appreciate this anomalous conversion efficiency, it is necessary to understand the meaning of the term. The highest pos-

sible energy conversion for standard Electro-dynamic machinery is 100%. This means that after all losses have been accounted for and deducted, the actual input power should be equal to the load power if the circuits have been optimized.

In the case of the standard machine some number very close to the theoretical limit, say 98.5% or so, could probably have been achieved if conjugate impedance matching had been supplied. However, this would have made an already tedious task even more difficult. Conjugate compensation would have had to be calculated for each load level and then the necessary electrical components of appropriate value located and inserted into the circuit. This extra work seemed pointless when it was already evident that the conversion efficiency would never exceed 100%.

In the case of the Dyna-Flux, no conjugate compensation was provided either, although for totally different reasons. Nonetheless, the results certainly have the appearance of pure science fiction; how are such numbers possible?

Standard power systems imitate D.C. machinery in their ultimate functioning, that is, their power flow is uni-directional. To support this flow of power away from the source, an endless supply of energy must be available. Realization of this fact is embodied in the laws of thermodynamics as they apply to standard linear systems, i.e., you cannot get out more than you put in.

If Energy Resonance is to be achieved, then the system giving rise to this phenomenon must be capable of bi-directional energy flow; the energy must oscillate. As a result of oscillating the energy, the same energy is used over and over again until it is completely diminished. The prime mover need only supply enough to keep the overall volume constant.

Ramifications of oscillating the energy in a system include oscillating power, oscillating velocity, oscillating torque, as well as the standard oscillating voltage and current. Hence, the complexity of such a process is obvious; I seriously doubt if it could ever have been discovered by accident.

This article has been structured to achieve the greatest degree of openness possible without disclosing proprietary information. However, knowing human nature as I do, it is a safe guess to assume that many readers upon reaching this point will conclude one of the following:

- A) The device is a fraud.
- B) There is no room in natural law for the results described, the inventor is in error.

For those readers who align themselves with conclusion A, please be advised that the Dyna-Flux Alternator has been examined by the Electrical Engineering Dept. of the University of Pennsylvania. Preliminary investigations support author's findings. For those who tend towards conclusion B, please be informed of the following historical facts.

In the early 1900's when James Clerk Maxwell was formulating his theories of electro-magnetic waves, he stated emphatically, "It's of great importance to determine whether any portion of energy conveyed by an electric current can be attributed to matter possessing inertia; it is desirable, therefore, that experiments should be made on the subject with great care." He then showed that three types of experimental effects should occur if true momentum carriers actually comprise as electric current:

- A) If a circular coil is freely suspended by an axial thread with its axis vertical, any change in current flowing within it should produce a rotation of the coil.
- B) A coil carrying current should exhibit gyroscopic effects.
- C) When a rapidly rotating coil, part of an unenergized closed

circuit, is suddenly stopped, the inertia of the charge carriers should produce a current in the circuit.

Maxwell performed experiments to detect these effects and all his results were negative. Accordingly, he concluded, "since no evidence has yet been obtained to support the notion of current carrier momentum, I shall now proceed on the assumption that they do not exist, or at least that they produce no sensible effect."

Following the dictates of this line of reasoning, Maxwell went on to develop his theories of electro-magnetism in the belief that all energy associated with an electric current is conveyed solely by its electric and magnetic field structure.

Nevertheless, all three effects described by Maxwell have since been experimentally observed. Barnett successfully measured the gyroscopic effect in 1915. Effect C was observed by Einstein and deHaas in 1915 and 1916 respectively, and effect A was detected in 1930 again by Barnett.

It is interesting to note that no amendments have ever been made to basic magnetic wave theory to accommodate these findings. Therefore, it is certainly possible that our present day conceptions of efficiency and the energy of induction may be in error by as much as 50%! We need only identify the nature of this additional energy in order to avail ourselves of its benefits. Energy resonance appears to be one mechanism capable of achieving this end.

#### A GREATER MYSTERY

The successful testing of the Dyna-Flux caused great enthusiasm and activity among the partners. Mr. K. and Mr. H. began making plans to raise development capital, while I continued with the theoretical aspects and the preparation of patent applications. I suppose that I need not mention that I have grave apprehensions concerning the reactions of the patent office to this invention. The problems experienced with the transforming generator were insignificant in comparison to what I expected to encounter with Dyna-Flux. Therefore, I toned down my invention disclosure so that it reflected only the necessary information to show that the device was new and novel. I submitted my application and then dismissed all concerns from my mind. I absolutely refused to become emotionally involved with the bureaucratic processes which I knew would ensue. My previous experiences had been far too damaging. It will interest the reader to know that at the time of writing this, my application has already been rejected twice!

While I was attending to the complexities of the patent preparation, my partners had also been active. They were identifying and qualifying potential investors, preparing secrecy agreements and other legal documents and laying the strategy for demonstrating the device without jeopardizing our legal position in the eyes of the patent office.

Eventually, many prestigious individuals were exposed to the wonders of Dyna-Flux: corporate officers, physicists, engineers and investors of all descriptions. Some came out of curiosity, some had true interest, and some, no doubt, intended to scoff and discredit the invention. But, regardless of their motives and the differences in their professional viewpoints, everyone who viewed the presentation reacted in the same manner; they left in silence never to be heard from again.

The presentation program continued for nearly a year, and every participant, without exception, behaved the same way. It was incredible! Neither of my partners ventured an explanation, or even voiced any negative comment, but slowly, the enthusiasm began to dwindle, and gloom descended over our little group and its activities. If I were a paranoid individual, I might suspect that the government or some

*NEW CONCEPTS continued next page...*



# DETECTION OF STATIONARY AND DYNAMIC SPACE SUBSTRATUM

by Paramahansa Tewari

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Abstract of paper to be read at the 1<sup>ST</sup> Borderland Sciences Congress, June 14-17, 1990, Santa Barbara, California

The concepts of "stationary" and "dynamic space" have become outmoded in contemporary physics with the introduction of "emptiness" of space around the start of this century. However, recent experiments\* on the rotation of magnets have given positive proof that the "Law of conservation of electric charge" and also the "Law of conservation of energy" are both violated within the conducting body of the rotating magnet, though these laws are fully valid when the magnet is not in a rotating state, that is, if there is a relative motion between a magnet and a rotating conductor, and electric power is drawn from such a device, the above basic laws are not violated. Direct inference from these repeated experiments is that the space medium within the conducting body of the magnet when in dynamic state of rotation is the source of additional electrical power, and hence the concepts of "stationary" and "dynamic space" are revalidated through these tests.

\* Latest test results on a Space Power Generator indicate efficiency of power generation 339%. Currents larger than 2400 Amperes DC are produced at 2.4 Volts DC.

SPACE POWER GENERATOR TEST	I	II	III	
MAGNET POWER	OFF	ON	ON	
OUTPUT SWITCH	OPEN	OPEN	CLOSED	
SPEED	3500	3500	3415	RPM
MAGNET POWER	0	1090	1090	WATTS
MOTOR ARMATURE POWER	3875 (500V x 7.74A)	3875 (approx.)	5757.5 (11.75A x 490V)	WATTS
INCREMENT	—	1882.5		WATTS
MECHANICAL POWER INCREMENT to SPG with 83% motor efficiency	—	(1882.5 x 0.83) = 1562.5		WATTS
OUTPUT CURRENT	0	0	2426.7	AMPERES
GENERATED VOLTAGE	0	2.186	1990	VOLTS
GENERATED POWER	0	0	5303.8	WATTS
EFFICIENCY			(5303.8) x 100 / 1562.5 = 339%	

SPG is driven by direct current 5.5 KW variable speed D.C. motor of 83% efficiency.

The output from SPG is direct current in kiloamperes at low D.C. voltages.

## NEW CONCEPTS continued...

powerful cartel was interfering with our plans, but the more I pondered the situation, the more I began to suspect that some other mechanism was at work. Perhaps there is a mystery here far more intriguing than Energy Resonance, a factor which may greatly affect the pace at which the human race can evolve its consciousness. A factor which may explain why Nikola Tesla was not permitted to give his full complement of knowledge to mankind. A factor which may explain many forms of prejudice, scientific and otherwise. To elucidate on this matter, let me paraphrase from James Gleick's provocative book *Chaos*.

"The historian of science Thomas S. Kuhn describes a disturbing experiment conducted by a pair of psychologists in the 1940's. Subjects were given glimpses of playing cards one at a time, and asked to name them. There was a trick, of course. A few of the cards were freakish: for example, a red six of spades, or a black queen of diamonds.

"At high speed the volunteers moved smoothly along. Nothing could have been simpler. They didn't see the anomalies at all. But when the cards were shown for longer periods, the subjects began to hesitate. They sensed a problem, but were not aware of its nature. A subject might say that he had seen something strange, like a red border around a black heart.

"Eventually, as the pace slowed even more, most subjects would catch on, but not all of them. Some suffered a sense of disorientation that brought real pain. 'I can't make out the suit, whatever it is,' or 'it

didn't even look like a card that time,' or 'I don't know what color it is now,' or 'it's a spade of a heart,' or in an extreme case, 'My god, I can't even remember what a spade looks like!'

"Professional scientists, exposed to brief uncertain glimpses of nature's workings are no less vulnerable to anguish and confusion!"

Could such a psychological mechanism be at work in the case of Dyna-Flux and other discoveries? I am writing this article to find out. Since none of you have had a demonstration, you only have my written words on which to form your opinions. Will you be capable of greater open-mindedness on this subject if its validity is proven to you? Will your opinions change if you ever view the device? As you read these words, can you envision ways in which Energy Resonance technology could be applied for the betterment of man? Will you cry hoax if you see the machine in action or dismiss it from your conscious mind? There is no reason why these machines cannot be manufactured right now. A Dyna-Flux patent has recently been granted in Canada. Do you perceive Dyna-Flux as a non-nuclear alternative? Will you judge it as another perpetual motion machine? I would really like to know the answers to those questions. In fact, I would be greatly interested in any comments pertaining to this article. Please feel free to correspond with me. I cannot promise to answer all letters, but I will certainly try. Interested parties should write to:

M K H Partners - Mr. Murray

P. O. Box 8481

Piscataway, New Jersey 08855

# Introduction to DIELECTRICITY AND CAPACITANCE

by Eric P. Dollard

## CAPACITANCE

The phenomena of capacitance is a type of electrical energy storage in the form of a field in an enclosed space. This space is typically bounded by two parallel metallic plates or two metallic foils on an intervening insulator or dielectric. A nearly infinite variety of more complex structures can exhibit capacity, as long as a difference in electric potential exists between various areas of the structure. The oscillating coil represents one possibility as to a capacitor of more complex form, and will be presented here.

## CAPACITANCE INADEQUATELY EXPLAINED

The perception of capacitance as used today is wholly inadequate for the proper understanding of this effect. Steinmetz mentions this in his introductory book *ELECTRIC DISCHARGES, WAVES AND IMPULSES*. To quote, "Unfortunately, to a large extent in dealing with dielectric fields the prehistoric conception of the electrostatic charge (electron) on the conductor still exists, and by its use destroys the analogy between the two components of the electric field, the magnetic and the dielectric, and makes the consideration of dielectric fields unnecessarily complicated."

## LINES OF FORCE AS REPRESENTATION OF DIELECTRICITY

Steinmetz continues, "There is obviously no more sense in thinking of the capacity current as current which charges the conductor with a quantity of electricity, than there is of speaking of the inductance voltage as charging

the conductor with a quantity of magnetism. But the latter conception, together with the notion of a quantity of magnetism, etc., has vanished since Faraday's representation of the magnetic field by lines of force."

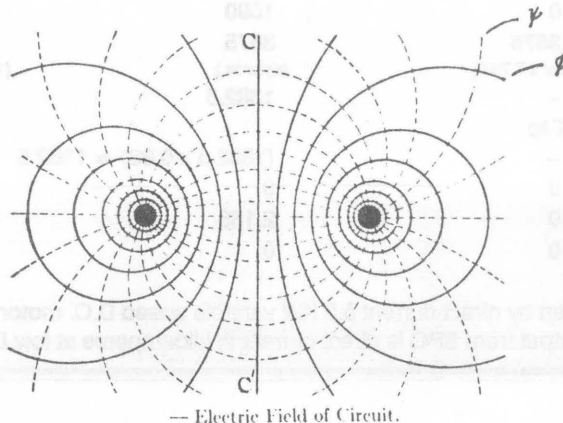
## THE LAWS OF LINES OF FORCE

All the lines of magnetic force are closed upon themselves, all dielectric lines of force terminate on conductors, but may form closed loops in electromagnetic radiation.

These represent the basic laws of lines of force. It can be seen from these laws that any line of force cannot just end in space.

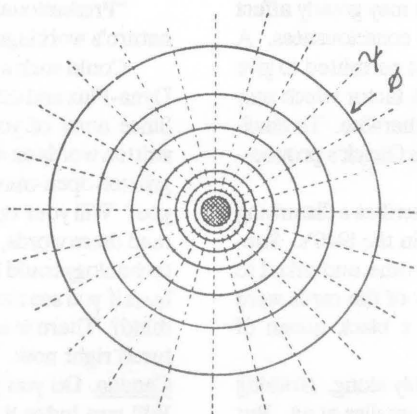
## FARADAY & LINES OF FORCE THEORY

Faraday felt strongly that action at a distance is not possible thru empty space, or in other words, "matter cannot act where it is not." He considered space pervaded with lines of force. Almost everyone is familiar with the patterns formed by iron filings around a magnet. These filings act as numerous tiny compasses and orientate themselves along the lines of force existing around the poles of the magnet. Experiment has indicated that a magnetic field does possess a fibrous construct. By passing a coil of wire thru a strong magnetic field and listening to the coil output in headphones, the experimenter will notice a scraping noise. J. J. Thompson performed further experiments involving the ionization of gases that indicate the field is



— Electric Field of Circuit.

Fig. 1a



— Electric Field of Conductor.

Fig. 1b

not continuous but fibrous (*ELECTRICITY AND MATTER*, 1906).



## PHYSICAL CHARACTERISTICS OF LINES OF FORCE

Consider the space between poles of a magnet or capacitor as full of lines of electric force. See Fig.1. These lines of force act as a quantity of stretched and mutually repellent springs. Anyone who has pushed together the like poles of two magnets has felt this springy mass. Observe Fig.2. Notice the lines of force are more dense along AB in between poles, and that more lines on A are facing B than are projecting outwards to infinity. Consider the effect of the lines of force on A. These lines are in a state of tension and pull on A. Because more are pulling on A towards B than those pulling on A away from B, we have the phenomena of physical attraction. Now observe Fig. 3. Notice now that the poles are like rather than unlike, more or all lines pull A away from B; the phenomena of physical repulsion.

## MASS ASSOCIATED WITH LINES OF FORCE IN MOTION

The line of force can be more clearly understood by representing it as a tube of force or a long thin cylinder. Maxwell presented the idea that the tension of a tube of force is representative of electric force (volts/inch), and in addition to this tension, there is a medium through which these tubes pass. There exists a hydrostatic pressure against this media or ether. The value of this pressure is one half the product of dielectric and magnetic density. Then there is a pressure at right angles to an electric tube of force. If through the growth of a field the tubes of force spread sideways or in width, the broadside drag through the medium represents the magnetic reaction to growth in intensity of an electric current. However, if a tube of force is caused to move endwise, it will glide through the medium with little or no drag as little surface is offered. This possibly explains why no magnetic field is associated with certain experiments performed by Tesla involving the movement of energy with no accompanying magnetic field.

## INDUCTANCE AS AN ANALOGY TO CAPACITY

Much of the mystery surrounding the workings of capacity can be cleared by close examination of inductance and how it can give rise to dielectric phenomena. Inductance represents energy storage in space as a magnetic field. The lines of force orientate themselves in close loops

surrounding the axis of current flow that has given rise to them. The larger the space between this current and its images or reflections, the more energy that can be stored in the resulting field.

## MECHANISM OF STORING ENERGY MAGNETICALLY

The process of pushing these lines or loops outward, causing them to stretch, represents storing energy as in a rubber band. A given current strength will hold a loop of force at a given distance from conductor passing current hence no energy movement. If the flow of current in-

creases, energy is absorbed by the field as the loops are then pushed outward at a corresponding velocity. Because energy is in motion an EMF must accompany the current flow in order for it to represent power. The magnitude of this EMF exactly corresponds to the velocity of the field. Then if the current ceases changing in magnitude thereby becoming constant, no EMF accompanies it, as no power is being absorbed. However, if the current decreases it represents then a negative velocity of field as the loops contract. Because the EMF corresponds exactly to velocity it reverses polarity and thereby reverses power so it now moves out of the field and into the current. Since no power is required to maintain a field, only current, the static or stationary field, represents stored energy.

## THE LIMITS OF ZERO AND INFINITY

Many interesting features of inductance manifest themselves in the two limiting cases of trapping the energy or releasing it instantly. Since the power supply driving the current has resistance, when it is switched off the inductance drains its energy into this resistance that converts it into the form of heat. We will assume a perfect inductor that has no self resistance. If we remove the current supply by shorting the terminals of the inductor we have isolated it without interrupting any current. Since the collapse of field produces EMF this EMF will tend to manifest. However, a short circuit will not allow an EMF to develop across it as it is zero resistance by definition. No EMF can combine with current to form power, therefore, the energy will remain in the field. Any attempt to collapse forces increased currents which pushes it right back out. This is one form of storage of energy.

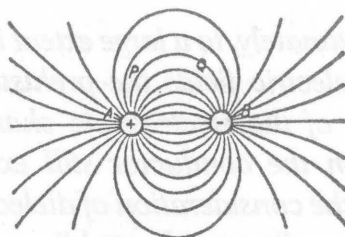


Fig. 2

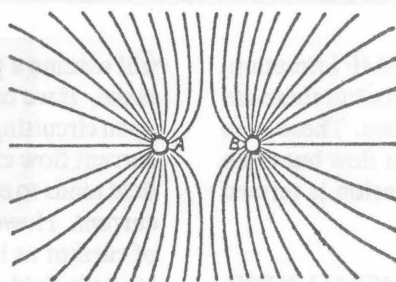


Fig. 3

### INSTANT ENERGY RELEASE AS INFINITY

Very interesting (and dangerous) phenomena manifest themselves when the current path is interrupted, thereby causing infinite resistance to appear. In this case resistance is best represented by its inverse, conductance. The conductance is then zero. Because the current vanishes instantly the field collapses at a velocity approaching that of light. As EMF is directly related to velocity of flux, it tends towards infinity. Very powerful effects are produced because the field is attempting to maintain current by producing whatever EMF is required. If a considerable amount of energy exists, say several kilowatt hours\* (250 KWH in a lightning stroke), the ensuing discharge can produce most profound effects and can completely destroy inadequately protected apparatus.

\* The energy utilized by an average household in the course of one day.

### ANOTHER FORM OF ENERGY APPEARS

Through the rapid discharge of inductance a new force field appears that reduces the rate of inductive EMF formation. This field is also represented by lines of force but these are of a different nature than those of magnetism. These lines of force are not a manifestation of current flow but of an electric compression or tension. This tension is termed voltage or potential difference.

### DIELECTRIC ENERGY STORAGE SPATIALLY DIFFERENT THAN MAGNETIC ENERGY STORAGE

Unlike magnetism the energy is forced or compressed inwards rather than outwards. Dielectric lines of force push inward into internal space and along axis, rather than pushed outward broadside to axis as in the magnetic field. Because the lines are mutually repellent certain amounts of broadside or transverse motion can be expected but the phenomena is basically longitudinal. This gives rise to an interesting paradox that will be noticed with capacity. This is that the smaller the space bounded by the conducting structure the more energy that can be stored. This is the exact opposite of magnetism. With magnetism, the unit volume of energy can be thought of as working in parallel but the unit volumes of energy in association with dielectric can be thought of as working in series.

### VOLTAGE IS TO DIELECTRICITY AS CURRENT IS TO MAGNETISM

With inductance the reaction to change of field is the production of voltage. The current is proportionate to the field strength only and not velocity of field. With capacity

the field is produced not by current but voltage. This voltage must be accompanied by current in order for power to exist. The reaction of capacitance to change of applied force is the production of current. The current is directly proportional to the velocity of field strength. When voltage increases a reaction current flows into capacitance and thereby energy accumulates. If voltage does not change no current flows and the capacitance stores the energy which produced the field. If the voltage decreases then the reaction current reverses and energy flows out of the dielectric field.

As the voltage is withdrawn the compression within the bounded space is relieved. When the energy is fully dissipated the lines of force vanish.

### AGAIN THE LIMITS ZERO AND INFINITY

Because the power supply which provided charging voltage has internal conductance, after it is switched off the current leaking through conductance drains the dielectric energy and converts it to heat. We

will assume a perfect capacitance having no leak conductance. If we completely disconnect the voltage supply by open circuiting the terminals of the capacitor, no path for current flow exists by definition of an open circuit. If the field tends to expand it will tend towards the production of current. However, an open circuit will not allow the flow of current as it has zero conductance. Then any attempt towards field expansion raises the voltage which pushes the field back inwards. Therefore, energy will remain stored in the field. This energy can be drawn for use at any time. This is another form of energy storage.

### INSTANT ENERGY RELEASE AS INFINITY

Phenomena of enormous magnitude manifest themselves when the criteria for voltage or potential difference is instantly disrupted, as with a short circuit. The effect is analogous with the open circuit of inductive current. Because the forcing voltage is instantly withdrawn the field explodes against the bounding conductors with a velocity that may exceed light. Because the current is directly related to the velocity of field it jumps to infinity in its attempt to produce finite voltage across zero resistance. If considerable energy had resided in the dielectric force field, again let us say several KWH, the resulting explosion has almost inconceivable violence and can vaporize a conductor of substantial thickness instantly. Dielectric discharges of great speed and energy represent one of the most unpleasant experiences the electrical engineer encounters in practice.

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*"Unfortunately, to a large extent in dealing with dielectric fields the prehistoric conception of the electrostatic charge (electron) on the conductor still exists....and makes the consideration of dielectric fields unnecessarily complicated."*

-- Charles Proteus Steinmetz

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## ENERGY RETURNS TO MAGNETIC FORM

The powerful currents produced by the sudden expansion of a dielectric field naturally give rise to magnetic energy. The inertia of the magnetic field limits the rise of current to a realistic value. The capacitance dumps all its energy back into the magnetic field and the whole process starts over again. The inverse of the product of magnetic storage capacity and dielectric storage capacity represents the frequency or pitch at which this energy interchange occurs. This pitch may or may not contain overtones depending on the extent of conductors bounding the energies.

## CHARACTERISTIC IMPEDANCE AS REPRESENTATION OF PULSATION OF ENERGY FIELD

The ratio of magnetic storage ability to that of the dielectric is called the characteristic impedance. This gives the ratio of maximum voltage to maximum current in the oscillatory structure. However, as the magnetic energy storage is outward and the dielectric storage is inward the total or double energy field pulsates in shape or size. The axis of this pulsation of force is the impedance of the system displaying oscillations and pulsation occurs at the frequency of oscillation.

## ENERGY INTO MATTER

As the voltage or impedance is increased the emphasis is on the inward flux. If the impedance is high and rate of change is fast enough (perfect overtone series), it would seem possible the compression of the energy would transform it into matter and the reconversion of this matter into energy may or may not synchronize with the cycle of oscillation. This is what may be considered supercapacitance, that is, stable long term conversion into matter.

## MISCONCEPTIONS OF PRESENT THEORY OF CAPACITANCE

The misconception that capacitance is the result of accumulating electrons has seriously distorted our view of dielectric phenomena. Also the theory of the velocity of light as a limit of energy flow, while adequate for magnetic force and material velocity, limits our ability to visualize or understand certain possibilities in electric phenomena. The true workings of free space capacitance can be best illustrated by the following example. It has been previously stated that dielectric lines of force must terminate on conductors. No line of force can end in space. If we take any conductor and remove it to the most remote portion of the universe, no lines of force can extend from this electrode to other conductors. It can have no free space

capacity, regardless of the size of the electrode, therefore it can store no energy. This indicates that the free space capacitance of an object is the sum mutual capacity of it to all the conducting objects of the universe.

## FREE SPACE INDUCTANCE IS INFINITE

Steinmetz in his book on the general or unified behavior of electricity *THE THEORY AND CALCULATION OF TRANSIENT ELECTRIC PHENOMENA AND OSCILLATION*, points out that the inductance of any unit length of an isolated filamentary conductor must be infinite. Because no image currents exist to contain the magnetic field it can grow to infinite size. This large quantity of energy cannot be quickly retrieved due to the finite velocity of propagation of the magnetic field. This gives a non reactive or energy component to the inductance which is called electromagnetic radiation.

## WORK OF TESLA, STEINMETZ AND FARADAY

In the aforementioned books of Steinmetz he develops some rather unique equations for capacity. Tesla devoted an enormous portion of his efforts to dielectric phenomena and made numerous remarkable discoveries in this area. Much of this work is yet to be fully uncovered. It is my contention that the phenomena of dielectricity is wide open for profound discovery. It is ironic that we have abandoned the lines of force concept associated with a phenomena measure in the units called farads after Faraday, whose insight into forces and fields has led to the possibility of visualization of the electrical phenomena.

## QUESTION AS TO THE VELOCITY OF DIELECTRIC FLUX

It has been stated that all magnetic lines of force must be closed upon themselves, and that all dielectric lines of force must terminate upon a conducting surface. It can be inferred from these two basic laws that no line of force can terminate in free space. This creates an interesting question as to the state of dielectric flux lines before the field has had time to propagate to the neutral conductor. During this time it would seem that the lines of force, not having reached the distant neutral conductor would end in space at their advancing wave front. It could be concluded that either the lines of force propagate instantly or always exists and are modified or conjugate space exists within the same boundaries as ordinary space. The properties of lines of force within this conjugate space may not obey the laws of normally conceived space.

## IMPORTANT REFERENCE MATERIAL

1. *ELECTRICITY AND MATTER*, J. J. Thompson, New York, 1906, Scribner's Sons, and 1904, Yale University.
2. *ELEMENTARY LECTURE ON ELECTRIC DISCHARGES, WAVES, AND IMPULSES AND OTHER TRANSIENTS*, C. P. Steinmetz, second edition, 1914, McGraw-Hill, reprinted 1989 by BSRF, Garberville CA 95440. (\$19.95 + \$2.50 P&H)
3. *THEORY AND CALCULATION OF TRANSIENT ELECTRIC PHENOMENA AND OSCILLATIONS*, C. P. Steinmetz, third edition, 1920, McGraw-Hill. Section III Transients in Space, Chapter VIII, Velocity of Propagation of Electric Field.

## fizix korner with Peter Lindemann

Before we can have any "Free Energy," we have to agree on what it is. Otherwise, we may settle for less or not recognize it when we see it.

Recent mail at BSRF has convinced Tom and I that most people in the so-called "Free Energy" movement in the USA are hopeless romantics. Most are not capable of assisting either in the development of equipment or in the proper education of the public.

In order to clear the air on all of this and to answer some questions that have appeared in recent mail, this article will begin at the very beginning of the "Free Energy" problem: LANGUAGE!

The term "Free Energy" is a very catchy phrase, but what does it mean? Literally it means: the capacity to do work at no cost. To the hopeless romantics, this may seem to be all we need, but let's look at this very closely so we understand what is being said. To do this, I'll use my electric bill as an example.

Southern California Edison Co. charges me 8.453 cents for every kilowatt hour of electricity I use. The kilowatt hour (KWH) is a unit of work and is directly convertible into money. So what is a kilowatt hour? "Kilo" means one thousand, and everyone knows what an hour is. So what is a "watt"? The watt is a unit of power in the MKS metric measurement system. (MKS means Meter, Kilogram, Second.) The watt is a Joule per second and the Joule is a unit of work equal to .7375 foot-pounds. Since feet and pounds are something most of us can understand, lets rebuild our understanding from here.

As I have said in many articles before,  $W = F \times D$ , or work equals force times distance. When our force is measured in pounds and our distance is measured in feet, the work accomplished may readily be measured in units called footpounds. One ftlb is the work done by lifting one pound of mass one foot in the air.

So to understand the KWH, we have:

1 watt = 1 Joule per second

1 Joule = .7375 ft.lbs

1 hour = 3600 seconds

Then, by substitution, we have:

$1 \text{ KWH} = (1000) \times (.7375 \text{ ft.lbs/sec-onds}) \times (3600 \text{ seconds})$

The time units of seconds cancel and we are left with:

$1 \text{ KWH} = 1000 \times .7375 \times 3600 \text{ ft.lbs}$   
or

$1 \text{ KWH} = 2,655,000 \text{ ft.lbs of work.}$

1 KWH is equivalent to lifting 2.6 million pounds one foot in the air or lifting one pound over 500 miles straight up, and the electric company sells me this for 8.453 cents! You can see why some people argue that energy is pretty cheap already. In spite of this current low cost of energy, the world-wide "Free Energy" movement has repeatedly demonstrated equipment that is capable of doing work at 1/10th or even 1/100th the monetary cost with no pollution or other environmental cost.

Most researchers are working with new designs of motors, generators or other electrical devices. For electro-mechanical devices like motors or generators, the conversion of mechanical power to electrical power is expressed as the idealized maximum of 746 watts electrical which is equivalent to 550 footpounds per second of mechanical torque. Since these machines have frictional and other losses, they cannot actually convert mechanical power to electrical power at this rate. Typically, motors and generators smaller than 5hp in size operate at or below 80% efficiency. This means that a motor that draws 746 watts of electrical power will only deliver 80% of 550 footpounds per second torque, that is 440 ft.lbs/sec actual motor torque. Likewise, a generator delivering 746 watts of electrical power will require a driving force of 687 ft.lbs/sec operating at 80% efficiency. Simple arithmetic shows that a motor and generator, both operating at 80% efficiency, would have a combined efficiency of 64%, not a good place to look for "Free Energy."

But what if a new design of generator could produce about 800 watts of electricity per horsepower. BSRF labs actually tested and videotaped such a device in 1987. The generator (known

as a variable reluctance or rotating parametric transformer) was rated at 108%, 8% more efficient than the theoretical maximum. Well calibrated wattmeters were used for the measurements, thus giving firm evidence that the theory is incorrect. Such a device is considered an OVER-EFFICIENCY generator.

Driven by a motor rated at 80% efficient, the combined efficiency of the motor-generator combination was 86%. No free kilowatt hours here, but a step in the right direction.

At this time in India, Paramahansa Tewari has a generator that produces over 2000 watts of electric power per horsepower motor torque. His system is the only OVER-UNITY device that I know of, as the total power input is less than the total power output of the motor-generator combination. With all losses overcome, the total machine efficiency is over 120%.

Technically, terms like "over-efficiency" and "over-unity" are nonsense. Herein lies the real problem. It is the belief that a certain amount of electrical work (KWH) is actually equal to a certain amount of mechanical work (ft.lbs) and that electro-mechanical devices (motors or generators) convert one to the other. Today, there is a growing body of evidence strongly suggesting that this basic assumption is not true, and that motors and generators are not converters. (If this is true, then the very concept of "efficiency" becomes meaningless, because nothing is being converted into anything else at any efficiency what-so-ever!)

The relationship between KWH's and ft.lbs must be explored and determined by experimental physicists and the actual behavior of experimental devices. The relationship between KWHs and dollars must be determined by economists and society-at-large. The physicist are perfecting their work. When they are done, it will be up to all of us to demand that the value derived from their work be integrated into the fabric of society by monetizing the KWH at a much lower price.



## BOOK REVIEW:

# THE EVOLUTION OF MATTER & THE EVOLUTION OF FORCES

2 texts by Gustav Le Bon  
Reviewed by Gerry Vassilatos

The work of Dr. Thomas Moray has been so thrilling to most of us over the years, and it is not without some sense of frustration that we often find ourselves grasping for straws in the face of our own ignorance as concerns his basic premises. In his writings and biographies we often hear the name Gustav Le Bon mentioned with some great degree of importance — as if to give us strong direction in our quest at reproducing his designs. Studying the writings of Dr. Moray, one does indeed find clues of every possible kind, and these are often multiple in meaning. I would like to point the serious student of radio-electric phenomena into the purchase of Prof. Gustav Le Bon's two texts: *The Evolution of Matter* and *The Evolution of Forces*; now made available to us by Borderland Sciences through the very gracious donation of photocopies obtained and safely kept by Mr. Dan Winter. Mr. Winter has been an invaluable friend and source of vital information concerning the Moray Devices, because of his own deep researches and contacts. As well, he has been a very good friend — although we have never met in person! My sincere hopes lean that way, however, and we thank you again Mr. Winter for your gift of these two vital copies.

The two texts were, at one time impossible to obtain, and even supposedly illegal to possess. In fact, Dr. Moray, on several occasions encountered great difficulty in obtaining ordinary library copies of the books — during the war. This indicates, as I indeed found, that Dr. Le Bon's texts contain secrets — very deep secrets as concerns radioactivity and the various means of releasing the intra-atomic energy of which he is the true discoverer. As has been validated, Dr. Moray often would study these texts of Le Bon in order to further pursue his various directions in the field of materials science and of vibratory dynamics. Presumably, these topics were advanced far beyond what we have been told, although we see very clear indications that Dr. Moray was learning the exact modes of applying techniques which Dr. Le Bon had begun to utilize in his Belgian laboratory.

There is, as we have subsequently been informed, a third text — virtually impossible to obtain, which Dr. Le Bon had printed and published privately. Le Bon's ideas were not received at all by the majority of his own contemporaries. Because of these pressures he had been forced to quit the publishing of his groundbreaking discoveries, resorting to the underground network of questors. This last text is in possession of another researcher, and we have been given permission by him to generate copies for the public. The text is printed under an assumed name, and deals with some of his more outlandish assumptions with proof. This text is entitled

*The Evolution of Matter And Energy* released under the name of "Girard Le Beau" — this done under great personal pressure. All records of Professor Le Bon have been stricken from the various bastions of our academic monuments. It is as if these persons, pathologically affected by any mention of presence of Life, instinctively purge out the Living! Either they are acting on their own, or they are being used by others who possess the truth and who make use of the pathological fears of the academicians against them. So close to the flame, yet unable to feel the warmth! Who to pity most, I do not know.

Both these books deal with Dr. Le Bon's own realizations and excellent experiments (described for all to reproduce) on the energy of the "intra-atomic" structure in matter. Both his basic premise and subsequent experimental evidences in the 1890's make him one of the planet's greatest minds. He encountered no end of difficulty in convincing others of his own ranks that intra-atomic energy was the future course of humankind, but to no avail. These very academicians, once having rid themselves of Le Bon, then went about reproducing the experiments in a perverted manner — limiting the research to uranium and the uranium series of metals in obtaining freed energy. While Le Bon spoke of these radioactive materials as intense evidences of universal radioactivity, he did not limit his discussion to them.

Le Bon makes strong, repeated statements concerning the truly universal nature of material dissociation into etheric fragments; this was his assertion before Becquerel and the Curies. What he maintained was that matter, ordinarily and naturally, spontaneously dissociated into etheric fragments. Some of the more energetic dissociations were termed "radioactive" by those researchers who had not taken sufficient time to notice the various means of which other materials were, in fact, dissociating. The majority of substances, he claimed, were equally "radioactive" — and this he both measured and proved in a marvelous series of demonstrations. What Le Bon managed to do was to bridge the ground between the radionics researchers and the inert sciences which have taken the lead in obtaining support of institutions and general acceptance. By stating that all materials are radioactive, and with such clear demonstrations, he showed the continuity along the line of thought which stems from the pre-1880's science. If inert science, with all its financial resources and rapping demands of respect and devotion, could ever bring the great fruitfulness which the early etheric sciences of the 1800's had given us, then we would have all been members of the club. What Le Bon's texts represent to us is but another basketful of light from that once openly accepted etheric science; one which

gave us such astounding discoveries that we have hardly begun to assimilate the implications of it.

There are several marvelous discoveries which Prof. Le Bon advances to us — demonstrations which totally alter what we have been told to believe about radiation, radioactivity, and related phenomena. The cardinal tenets of inert science as concerns radioactivity give us to accept the notion that not all substances are so energetic, radioactive materials are not capable of being neutralized or of being weakened. Le Bon shows how matter passes through a series of harmonic transformations, ultimately leading us into the very pure ether itself. His claim is this: that ether and matter, matter and ether are interchangeable by nature. He states clearly and emphatically that these transformations are spontaneous and normal for all material universally.

Dr. Le Bon tells of the similarity of the emanations from X-Ray tubes and radium alike. The analogy, he says, is too much more than coincidental. The prevalent belief of such notables as Nikola Tesla and Le Bon concerning the cause of radioactivity was due to the mysterious bombardment of certain nuclei by an effluvium-etheric — a particle bombardment so very fine as to be intercepted by certain dense nuclei with greater statistic cross-section than others. Thus, uranium with its dense nuclear structure, could intercept more of these mystery particles. The successful interception of these would, in fact, cause the explosion of the nuclei in question. The less dense a nucleus, the less frequently it would intercept such a particle, and thus exhibit radioactivity of such energetic levels as radium. An alternative school of thought, which included Wilhelm Reich much later, held that materials are generated "ex nihilo" and maintained by a natural sequence of transformations. In this process, certain fractions of the evolving material might spontaneously dissociate as evidence of the process itself (being due to instabilities within the core of activity). Both views are marvelous and thrilling in their transportative ability of placing us in higher mental frames.

Le Bon found that heating radium to red hot was sufficient to depress its radioactivity for a week. Thereafter, the activity began in a very feeble way to assert itself. He discovered that a mysterious effluvium — "emanation" he called it — was responsible for most of the radiation of any energetic material. He was able to artificially generate radiumlike materials by simply allowing the proper frequency of ultraviolet light to fall on certain materials. This last fact paved the road to true atomic science, for here was the very means of releasing vast amounts of reservoirs of power (directly as electrical effluves) by simple solar ultra-violet focussing. This fact makes the uranium investors very nervous, very anxious indeed! For here is a means of achieving resonant nuclear disintegration by fine tuned rays. This eliminated the fission market entirely. The waste from Le Bon's atomic is nil. The process is clean, cost efficient, and plentiful in abundance. It would clearly spell the defeat of all the energy barons, and requires extensive research and development. This we mention, not because the effect is questionable or dangerous, but because we need to learn the specifics of the reaction series and the subtleties thereof. Le Bon made the claim that such a reaction had, time

after time, produced far more energy than was involved in triggering the dissociation. This vast reservoir of energy was held in the intra-atomic structure of the material used as fuel. These assertions brought Dr. Le Bon into a great deal of harassment by the "scientismic" community who were spell-bound in asserting their pitiful dogmas of thermodynamics. The energy of intra-atomic structure is vast, yet requires but a small key to release it.

Dr. Le Bon investigated a phenomenon which had eluded many of his own contemporaries, and one which he classified along with radioactivity. The phosphorescence of materials under invisible light, lying in the infrared frequencies, made possible his assertions concerning a kind of radar which was surprising in its scope. This lightform, he discovered, was everywhere to be seen by the proper detectors, for this energy was capable of penetrating all materials, with relatively few (metals of a certain group and carbon) exceptions. In fact, this energy so saturated all things, that it was possible to take photographs of objects while inside a darkened room. While we suspected that the energy he discovered was not at all common infrared light (for a number of reasons had in studying these passages) we do believe strongly that he had again seen another bridge in the gap between the purely inert energies studied by accepted scientism and the living energies which we pursue.

What becomes fascinatingly apparent to us as we study these texts is the clear message that all materials are radioactive. Matter is becoming pure ether over varying time periods, after undergoing successive levels of natural dissociation into observable particles and energies. Also, we see clear indications that no separations existed in Dr. Le Bon's mind concerning phosphorescence and radioactivity. In fact, the actions of Crooke's tubes, Tesla coils, Oudin coils, and Roentgen tubes were all taken as equivalent actions with naturally occurring radium. To him they were all accomplishing the same results in dissociating matter into progressively finer particles until pure ether was reached.

Many of his noted experiments were made in order to determine just what materials would dissociate freely into specific particles. He performed and described many reproducible experiments whose aim was the triggered release of intra-atomic energy via high frequency bombardment. Thus several experiments pre-date Moray's transmutation experiments, and show us arrangements whereby points of specific materials are made to forcibly disintegrate into particles. In one such arrangement, particles were actually made to project through several "solid" screens of mica, ebonite, etc.. These experiments I found most instructive, as they reported so many dishonored and suppressed facts, that it was difficult at first to assimilate the new knowledge. Further reading cleared up the difficulties. It became obvious that a group consensus had been arrived at in those early days of research, and the more competitive person jammed all the free channels of discourse, arriving at hasty group conclusions. Most of these are replete with errors and half-truths concerning natural actions and phenomena. It is a wonder that we had not rebelled against their edicts much longer ago.



Le Bon managed to prove that transmutations can be made to improve materials by successive stages and suitable energies available. He particularly was making valid points as to the design and operation of atomic furnaces. The true atomic energy he was working with dealt with the dematerialization of fuel into pure ether, not the mere fission of uranium atoms with its hideous waste products. Had Le Bon persevered the cause beyond the laboratory, he would have rivalled all his competitors. Such beautiful visions summon all the older views of the Victorian Era in its quest for atomic energy sources. Theirs was the more idealistic and truer view which found its reply in Le Bon's real research findings. As is often the case in history, the desire anticipates the truth. The darker side of this fact is the fierce competition which clouds the truth and its reply to our heartfelt desires; and which floods our world over with false campaigns and false technologies based, not upon the vision-ideal, but upon the inert scientisms of a group consensus.

Whenever frustration is met with arrogance both often give way to any expedient which seems to work. Such strategies are never designed along visionary lines. The accumulation of these actions, over the last several centuries, has led us progressively into the ignorance of the inert worlds with their degenerated technologies. We must and will persevere against these powers with patience and vision. We must learn to wait for answers rather than implementing the vagaries of electrodynamics and thermodynamics as the power-elite would have us do. These has been left us such a plethora of wonders, not only reported but real – real in every aspect and awaiting implementation. Such an army of products would conquer the existing technology if sold at the grassroots level without benefit of patronship. Dr. Le Bon fought this fight all his life, and was at last utterly rejected by his associates. His name has

been stricken from the record, his books removed from all worthy libraries.

A scientist who discovered the means of altering the half-life of radium and measurably proved it should never have seen so vilely treated; unless what he had to say and prove were so threatening that the pathologic academia was repelled. What he had found so altered their fixed dogmatic notions that they were helpless before his assertions. Le Bon claimed that to remove "emanation" – a radioactive substance he had isolated – from radium, was to deplete its store of radiance almost to zero! What this represented was the true core of etheric interaction within any energetic material. Le Bon envisioned a world which would utilize Tesla coil-like engines, whose minor electrical bombardments would easily release more energy than that used in the trigger process. Intra-atomic energy results in the dissociation of materials into ether, with the subsequent release of huge amounts of stored energy. Neither would this energy be lost, claimed Le Bon, for the natural process which formed the condensed ether (matter) would again recreate and regenerate the released ether; man would simply harness the transformational stages on earth in the proper furnaces.

For those who are truly interested in discovering the sourcebooks of Moray and many others, we here present these valuable texts for the general fund of knowledge. We believe more good will come out of their release than the keeping of them among ourselves. Experimenters will love these texts, since they are filled with reproducible experiments of every kind, and which contain some generally unknown marvels which should have been shouted aloud from the rooftops. In truth, these facts together form the foundations of a new and better world. We should take their good advice and uncover their true implications.

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## BSRF RESEARCH TITLES:

### EVOLUTION OF MATTER

by Dr. Gustave Le Bon.

This is a photocopy of a rare and sought after manuscript from 1906. Le Bon was the first to deduce that all matter is continually in a state of dissociation and decay and that the atom is a great reservoir of energy, and itself the source of most of the forces in the universe. This is backed with scientific researches into invisible radiations, phosphorescence, and electro-magnetic waves and delves into the variability of emanations from "radio-active" elements after various treatments. Modern "nuclear" energy is nothing more than use of the waste heat from the atomic reaction to make steam and drive electrical generators. Le Bon provides an objective background on which to approach the electrical-atomic forces in such a way as to utilize them properly, for the betterment of humanity instead of the use of the grossest attributes of matter we see today. 1906, photocopy, stapled, 475 pages. \$39.95

### EVOLUTION OF FORCES

by Dr. Gustave Le Bon

A continuation of the original theories of Evolution of Matter, now extended to the forces of the universe. Covers the Transformation of Matter into Force: Magnetism, Magnetic Induction, different forms of Electricity, Electric Waves, Heat, Light, Black Light, Visible & Invisible Phosphorescence, Gravitation, Hidden Forces, Molecular & Intra-Atomic Forces, and, Forces Manifested in Living Beings. The basis for a new physics. 1908, photocopy, stapled, 400 pages \$29.95

US Postage & Handling: \$2.50 first book and 75¢/additional, parcel post.

Californians add 6.25% sales tax.

# THE VEDAS: *MANTRAS, MANDALAS, THE KRELL HELMET* AND JOHN KEELY

by Jerry W. Decker, Director  
Vangard Sciences

The Vedas contain many references to machines and devices which appear to use certain types of fire. This fire is said to consist of any of 49 varieties which included sound, electricity, magnetism, heat and other types which modern man has yet to rediscover.

For some mysterious reason, I have always been attracted to these Vedic stories, possibly due to a consuming interest in the work of John W. Keely stemming from the late 60's. Sound, as investigated by Keely has properties of which formal science is not yet aware.

The Vedas mention flying machines, known as Vimanas, which used the power of sound for the production of levitation and thrust.

On a recent (May 89) visit to the local Hare Krishna temple here in Dallas with two visiting friends, one from England and the other from Maine, we met an interesting young devotee.

This man was conversant in Sanskrit and was able to read the ancient Vedic documents. On discovering this, one of our party inquired what the young man knew of the ancient technologies of which the Vedas speak, including Vimanas.

He proceeded to tell us of the Disc of Rama, known as the Sudarshan Disc. It seems that the world is periodically infested with men who have lost their direction towards unification with the Godhood.

When this occurs, and the numbers of these men are such that they begin to drag down the rest of struggling humanity, Rama was said to release the Sudarshan Disc.

The Disc went forth to seek out these "miscreants" who had forsaken the path, to bring about their destruction. On the successful destruction of such people, the Disc returned to Rama to await its next call to action.

Apparently the Sudarshan Disc was capable of some type of signature analysis in that waveforms and/or frequencies associated with certain modes of thought or behavior would cause the weapon to seek out and destroy the offending target.

There is a story which we have been unable to verify which says that Tesla had come up with some type of weapon or technology which would vaporize any item which might be picked up with the intent to harm another.

Mr. Tesla was alleged to have presented this idea to Congress in an attempt to acquire funding for a weapon which would obviate all wars or hostile actions on the planet.

This device must have been capable of detecting certain "orders of vibration" (- Keely) which would be associated with such behavior. Of course, the offer was turned down.

The Krishna devotee told us that modern man was wasteful and negligent in the dispensation of his weapons of war and destruction when compared to the abilities of the masters of

Vedic technologies.

He said that modern weapons are sent forth without regard for innocent people who have nothing to do with the anger which brought about the problem in the first place. As a result, many innocent people are needlessly destroyed.

The Vedas however, speak of a technology which provided for specific and precise direction of those destructive energies towards a singular target.

As an example, the young devotee spoke of the "Fire Arrow". This was a specific mandala (a two-dimensional representation of a three-dimensional form) which could be mentally projected in conjunction with the mantra (the vocalization of the pattern encoded in the two-dimensional mandala).

The use of the Fire Arrow was to project an all-consuming fire toward the object of your anger.

It was done by mentally imaging the pattern of the mandala which represented the Fire. When the pattern was fixed in the mind, the sender was to physically carry out the action of shooting an arrow using an imaginary bow and arrow.

As the string on the imaginary bow was released, the sender would WILL the Fire Arrow Mandala to be sent toward the target as if riding on an invisible arrow. He must then visualize the Mandala actually striking and consuming the target.

At the same time, the vocalization of the Fire Arrow Mantra would also be directed at the target. This would effectively energize the mandala pattern, much like charging a capacitor or an inductor, to provide it with the energy required to unspin from a two-dimensional image into its time dependent three-dimensional image and thus consume the target.

When this process was carried out with a directed WILL, the target would be completely consumed. Nothing which was not included in the original target would be damaged. Thus, due to its specificity, the Vedic system was much to be preferred.

In one of the more exotic stories about Keely, he is said to have developed a belt which somehow allowed him to focus his WILL and direct it to achieve a decrease or an increase in gravity as desired.

The text of this miraculous experiment can be found in Chapter 3 of Dan A. Davidson's book "A Breakthrough to New Free Energy Sources". Dan has graciously allowed Vangard to provide this chapter on the KeelyNet computer BBS at (214) 324-3501 and listed as DANART1.ZIP or DANART1.ASC. Dale Pond also sells "A Breakthrough to New Free Energy Sources" for about \$20. Dale's address follows this article.

An interesting correlate to the Keely story is one from a friend who tells of an engineer acquaintance of his who, inspired by the sci-fi movie "The Forbidden Planet," decided to build the Krell Helmet.



The movie is based on the discovery of the Krell civilization, a race intellectually far in advance of mankind. The Krell Helmet was a device which was used to assist in the development of the powers of concentration and mentation in Krell children. It consisted of contacts which were touched to the head to somehow "pump" the brain.

This engineer decided that in reality, the brain could somehow be "pumped" to allow the expansion of consciousness into the other 94% of the brain in stages proportionate to the power level used.

Under the influence of this pumping field, the brain would be stimulated much like a tuning fork. Mental abilities including IQ and special "powers" involve the saturation of given areas of the brain with a profusion of synapses. Oxidation of the brain would also occur due to hydrolysis and an increased blood flow induced by the stimulation of the electrical potentials of the cells.

This pumped energy field would bring about a concentration of synapses which would serve as multiple parallel conduits. These would then not only allow for enhanced pattern recognition but also serve to stimulate the development of sensory abilities normally associated with the synergistic manifestation of so-called "paranormal abilities."

The engineer our friend spoke of is alleged to have the following abilities when under the influence of this Krell Helmet:

- 1) by concentrating on the face of anyone on the planet, he can mentally project his mind into the mind of his subject to read any thought or evoke any memory which the subject has stored
- 2) using a similar technique as above, the operator can project thoughts or patterns of action into the mind of the subject with the subject thinking them to be his own
- 3) "cerebellic fields" (Keely) can be so extended that mass can be brought under control for practical manipulation. This manipulation can take the form of genetic transmutation, levitation or any of a host of other-at this time unknown possibilities.

The Krell Helmet requires a radio transceiver with a frequency range into the high megahertz.

According to the work of Bentov, the body has 5 distinct vibrational patterns. One of these vibrational patterns is that of the brain which has an electrical oscillation in the area of 488 MHZ. There is an account of a CIA device which takes advantage of this frequency phenomenon to kill a specific target through cancellation of the electrical field of the brain.

The CIA device is simply inserted into the earpiece of a normal telephone. When the victim answers the phone and correctly identifies himself, the device is remotely triggered. It samples his current brain frequency, runs the signal through a unity gain amplifier, re-transmits at the same frequency and amplitude but with the signal shifted by 180 degrees. This creates a standing wave which cancels the electrical field of the target brain to cause instantaneous death.

Anyone "skilled in the art" can duplicate this effect if provided with the proper equipment, since it takes advantage of basic principles of frequency propagation and manipulation. The amplitude control must not only begin at a very low level but must also be highly stable.

The Krell Helmet and the Keely Belt both undoubtedly use the same phenomenon yet control the signal through phase locking. Therefore, to prevent phase shifting beyond a certain

acceptable limit, the fundamental frequency must be tracked with an accuracy approaching something on the order of 0 to possibly 90 degrees of the fundamental.

Keely achieved this through the "differentiation" of his vibrating devices and conduction cables as well as the judicious application of compound frequencies. Modern techniques would entail phase shifting circuits and oscillators "locked" to the natural resonant frequency of the mass under test.

We of Vanguard Sciences recommend that experiments in such areas be undertaken using **EXTREME SAFETY PRECAUTIONS**. Power levels must be kept at the lowest possible amplitude and **ONLY** increased when **ABSOLUTE STABILITY OF THE CIRCUIT** has been achieved and compensated for. Crawl before you fly is especially apropos in this case.

A partial failsafe technique might involve the inclusion of a phase detector above and beyond the phase locked loop which is intended to track the fundamental of 488 MHZ. This detector would immediately disable power in the event the phase angle exceeded a preset amount.

Obviously, the operator would begin to feel something at the time of the reversion, however, partial stunning might prevent movement aimed at disabling the power. Remember always that **SUSTAINED PATTERNS CAUSE THE MOST INTENSE EFFECT**.

The degree of phase shifting therefore determines whether the device stuns or kills while the amplitude determines the severity (or finality) of the effect.

Stories circulate about some of the disastrous effects brought about in the early days of experimentation with Cymatics as developed by Hans Jenny and Peter Guy Manners. Kidneys and livers were said to explode when subjected to certain frequencies.

A story in "The Secret Life of Plants" speaks of a piano tuner who found a certain combination of notes which caused the sphincter muscle to relax. A device which projected these frequencies was alleged to have been developed and tested by the Los Angeles Police Department for crowd and riot control.

This opens up startling possibilities for weapons, anti-terrorist devices, stunners for policeman and citizens, anaesthesia devices, sleep inducing devices, burglar systems, etc. In a word, **STAR TREK LIVES!**

Perhaps this is the technique used to carry out the "telepathic sleep jobs" as mentioned in the book *Alternative 3!* If the Russians are as advanced in PSI research as many believe, this is most certainly a technology they would not overlook as would any government interested in covert activities.

For those of us with a metaphysical background, we find in the Krell Helmet many parallels with the Siddhis, which were the occult powers acquired at certain levels of Yogic development.

A Yogi who had mastered these occult powers could :

- 1) plunge into the Earth as if it were mere water
- 2) enter a stone if he wishes
- 3) so influence water as to not wet him
- 4) control fire so that it does not burn him
- 5) make himself invisible
- 6) have knowledge of the past, present and future
- 7) have knowledge of all sounds of all living beings
- 8) have knowledge of other's minds
- 9) have knowledge of the time of one's own death

- 10) have knowledge of terrestrial or extraterrestrial events
- 11) possess the ability to go through space without harm
- 12) master hunger, thirst and bodily functions
- 13) master the senses
- 14) master the elements
- 15) make himself infinitely small or large
- 16) make himself extremely dense or extremely light thereby controlling gravity and mass

The full extent and nature of all the Siddhi powers have never been made clear to my knowledge beyond the work of Patanjali.

One is warned again and again, that these powers are obstacles on the road to the highest state and should not be desired for their own sakes. They are incidental and may give the student of Yoga a false confidence which provides little assistance toward the student's goal.

In regard to the viewpoint that Keely used EXCLUSIVELY MENTAL POWERS to operate his equipment, we of VANGARD do not share this view. In the very beginning, the original device which preceded his compound sonic investigations was based on thermodynamic principles, i.e. it took advantage of temperature differentials by using specific geometric arrangements of purely mechanical components.

Only in Keely's later researches did he come to understand the mind flows and how they could be related and coupled to the principle of the trinity as manifest in Nature.

Because of this somewhat limited view, we feel many will not succeed in duplicating Keely's work. As can be seen, one must develop an extraordinary will with the ability to sustain a thought or desire for prolonged periods as shown by the years of dedication to which a student of Yoga commits himself.

This is especially true when attempting to consciously manipulate the triple flows of force of which all matter and energy are comprised.

By taking a mechanistic approach from the beginning we should eventually be able to duplicate the compound frequency researches which led to practical devices for Keely.

VANGARD takes the approach that machines are simply tools that may also be used to assist in personal development through the use of biofeedback techniques. In order to learn to duplicate an effect such as Alpha and Theta control, you must first learn how to get to that level, what it feels like when there and how to successfully return. Once this has been accomplished and performed a number of times, accumulated experience will allow us to discard the equipment.

As confirmation of this attitude, it just so happens that we were recently informed that the engineer in possession of the Krell Helmet can now perform SOME FUNCTIONS WITHOUT THE USE OF THE HELMET! Of course, this is after years of use which has allowed his "mental muscles" to develop beyond the ordinary.

Is it possible Keely developed to this level? How about the story told by Dan Davidson regarding the appearance of Keely behind locked and guarded doors at the Pentagon?

The story loosely says that military scientists were investigating sound waves and their effects on matter. On achieving a certain "order of vibration" (- Keely) the laboratory where the experiment was held was destroyed.

A hurried super-secret conference was set up at the Penta-

gon to discuss the possibilities of this fantastic "new" weapon and was held behind closed and formidably guarded doors.

As the brass were licking their chops over the devastation this new force could produce, a man mysteriously materialized in the center of the room.

The startled generals were told :

"WE WILL NOT ALLOW YOU TO USE THESE PRINCIPLES TO DO HARM TO OTHERS. You are like children with nuclear toys and have no concept of what destruction you could produce. You could easily destroy your planet as well as your solar system."

"If you think I know not of what I speak," he drew a myriad of equations on a chalk board, "take these formulations into your lab and test them. You will see the powers which might be unleashed if you are allowed to continue."

"Be forewarned, WE ARE AWARE OF YOUR ACTIONS AND WILL PREVENT THE USE OF THIS FORCE FOR DESTRUCTION!"

Finally, one of the generals meekly asked, "Who are YOU?"

The mysterious man replied simply, "I AM JOHN ERNST WORRELL KEELY!", and vanished from their sight.

Badly shaken, the generals agreed to disband further research and adjourned the meeting.

If there is even one grain of truth to this story, we might indeed be watched and our actions (with their future consequences) monitored by superior intellects. Perhaps Keely advanced to that stage and was invited to join such an august body. Who knows??

Due to the nature of this paper, we debated the release of this information and decided that it must be openly and freely shared. This is what VANGARD and KeelyNet are all about, as is Borderland.

Responsibility for the use (or abuse) of knowledge is a sometimes awesome burden which must inevitably be undertaken by the user. An old Texan saying, is "What goes around, comes around". Based on our studies and efforts at integrating a wide range of knowledge, we find that "What goes around, comes around MULTIPLIED!"

We of Vanguard Sciences, working in conjunction with Dale Pond of Delta Spectrum, have been spreading the word on Keely as well as collecting a body of related information. Dale publishes the Keely newsletter (Journal of Sympathetic Vibratory Physics) and offers an extensive catalog while Vanguard sponsors the KeelyNet computer BBS at no charge to its users. Vanguard also publishes the Plenum newsletter.

KeelyNet offers text files which cover free energy, biology, ecology, UFO's and most especially Keely. We run up to 2400 Baud on an XT system. Files are available in .ZIP or .ASC(II) format for non-IBM users. KeelyNet is online at (214) 324-3501. There is no charge.

If we can be of service, please contact us at the following :

Vanguard Sciences, PO BOX 1031, Mesquite, TX 75150

(214) 324-8741, Plenum newsletter (\$25 yr.)

Jerry W. Decker, Dir, (214) 484-3189

Ron Barker, Bus. Manager, (214) 394-7155

Chuck Henderson, Secretary

Delta Spectrum Research, 1309 N. Chestnut, Colorado Springs, CO 80905, (719) 473-8852, Dale Pond, Keely newsletter (\$24 yr.)



## COSMIC WEATHER REPORT by Alison Davidson & Tom Brown

Solar Cycle 22 reached a peak in 1989 with the largest solar flare, a giant X20, recorded on August 16. The activity has been on the downturn since then, breaking the rapid climb of this cycle, though the cycle is certainly not over with yet. (It took a winter vacation?!). The last week of 1989 was fairly high in solar activity with 19 M class flares, and culminating with X class flares on the last two days of a turbulent year. Since then activity has decreased significantly – “by 11 February the solar flux had fallen to its lowest value (138 sfu) since September 1988.”

The large flares on December 28 (M9.7), 30 (X1), and 31 (X2) coincided with Jupiter conjunct the Earth to directly oppose Uranus on the other side of the Sun. The swift moving planet Mercury formed a precise triangle to this opposition on 28th, then moved on to form another cosmic triangle with Saturn (120 degrees), and a Pluto/Mars conjunction (60 degrees) on 30th (see charts 1 and 2).

Back on planet Earth... last year, and the first few weeks of 1990 have been, literally, earth-shaking. From Australia, which “never

gets earthquakes,” across the globe, earth movements have been felt with increasing frequency and intensity – particularly around the Pacific “ring of fire” – along with volcanic activity and record breaking droughts, blizzards, storms and flooding. According to Hopi Prophecy this is only a foretaste of what Nature has in store for us...

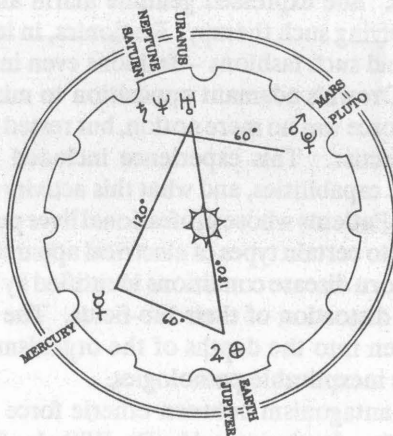
Although the San Francisco quake was the largest and most publicized, residents up and down the coast have been feeling Nature on the move. On January 16, Borderlands HQ was jolted by a quake (5.3) centred on the San Andreas faultline where it enters the Pacific ocean only a few miles west of us. This trembler hit as Uranus formed a hard T-square with Jupiter and the Moon (research has shown Uranus to be a factor in many earthquakes), and it was also interesting to note that Saturn and Pluto formed an exact sextile of  $17^{\circ}18''$ .

This same aspect was present during the biggest quake to strike Earth in 12 years, on May 23, 1989, with a magnitude of 8.2 on the Richter scale. More than 30 times as power-

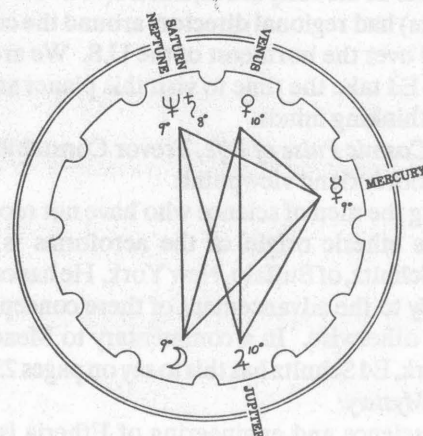
ful as the Bay Area quake it ripped the sea floor south of New Zealand, in the southern location of ancient Lemuria, startling penguins and a handful of biologists on the remote and rocky Macquarie Island. It may be worth watching for the next aspect between these two planets in 1993, a tense 90 degree angle in March, October and late December.

Traditionally Saturn is associated with form and structure, the bones of the body and rocks of the earth. Pluto, ruler of the underworld, is the force which transforms structure, breaks down blockages in the old forms, and eliminates tension. Its effects may seem to manifest with sudden explosiveness but like the volcano, its forces have been gathering momentum for a long time before they erupt.

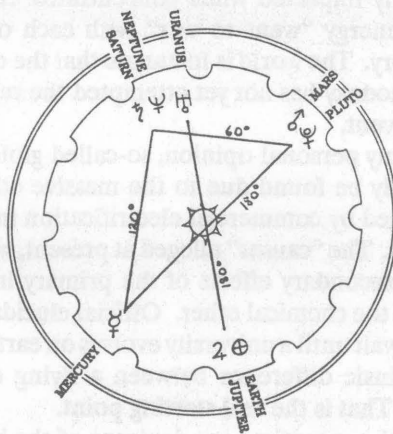
These two planets do not appear to be particularly significant in the geocentric chart we erected for the time of the San Francisco earthquake, but the overall planetary pattern here is so interesting in its symmetrical precision that we have included it for readers to see (chart 3).



1. December 28, 1989, M9.7

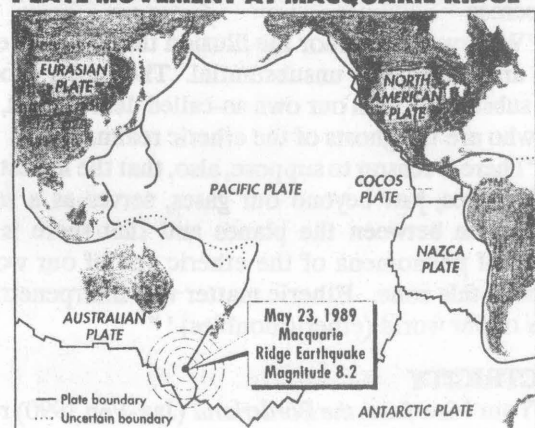


3. October 17, 1989, San Francisco Earthquake



2. December 30, 1989, X1

### PLATE MOVEMENT AT MACQUARIE RIDGE



# B.S.R.F. BULLETIN BOARD

The B.S.R.F. Bulletin Board is a section for Letters, Reviews, Events, Contacts & other useful information for Borderland Members to aid in their researches. We encourage BSRF Members to submit letters, contributions & information to B.S.R.F. Bulletin Board, PO Box 429, Garberville CA 95440.

## LETTERS

### TO THE HIGHER SPHERES

"Your friend, supporter, and subscriber, Edward S. Schultz, died in Buffalo on October 13, 1989 following a brief hospitalization. His wife, Libby, passed away in late July.

"Edward was 92 years and 3 days old at the time of his death.

"I know your work was of great interest to Edward and Libby, for they saved all the issues and even your occasional post cards. Thank you for your thoughtfulness to my late friends. It contributed to their lives in a positive way."

Very best wishes,  
Merritt F. Malvern  
Buffalo, New York

Edward S. Schultz was an associate of Borderland since the late 1940s. In the early 1950s, BSRA (as BSRF was known in those days) had regional directors around the country and Ed watched over the northeast of the U.S. We are glad that people like Ed take the time to visit this planet and interact with other thinking minds.

In *The Cosmic Pulse of Life*, Trevor Constable mentions Ed and his borderland viewpoint:

"Among the men of science who have not recoiled from the obvious etheric origin of the aeroforms is [the late] Edward S. Schultz, of Buffalo, New York. He has contributed considerably to the advancement of these concepts through BSRA and otherwise. In a commentary to Meade Layne's original work, Ed Schultz has this to say on pages 23-24 of *The Ether Ship Mystery*:

"The science and engineering of Etheria is doubtless subject to continued progress and improvement, but (we may conjecture) at a faster rate than ours, since they must long ago have evolved out of such nonsense as technological security and secrecy.

"We must not harbor the illusion that the four etheric states are ghostly and unsubstantial. They are a good deal more substantial than our own so-called dense world, and it is we who are the ghosts of the etheric realm..."

"There is reason to suppose, also, that the lowest of the etheric states, just beyond our gases, serves as a zone of demarcation between the planes and that there is some overlap of phenomena of the etheric and of our world of matter in this zone. Etheric matter will interpenetrate all things of our world (etheric doubles)."

### ELECTRICITY

"Your *View from the Borderland* (Jan-Feb 1990) regard-

ing electricity's unperceived status and connections in physical creation is one of the most cogent presentations I have ever read on the this most crucial subject. Let me add the following supporting comments, based on my experience with the most habile of all those yet to work technologically with etheric force -- Ruth Drown.

"The late Dr. Ruth B. Drown was an incredibly strong and calm person. She took in her stride the constant harassment and rubbing she endured from malignantly stupid contemporaries. She handled these vile attacks without personal rancor toward those retarded spirits who were the initiators. Only the dangerous idiocy of mixing etheric energy and electricity ever seemed capable of disturbing this serene soul. To all such developments she took vigorous exception.

"When learning of somebody using or designing radionic instruments that incorporated electric power, sometimes injecting electricity into the body, her exasperation was boundless. She expressed genuine alarm and concern for those receiving such therapy. Radionics, in its brief history, has also had such fashions -- fashions even in unorthodoxy.

"Dr. Drown's adamant opposition to mixing electricity and vital force was no mere notion, but rested upon the years of her practise. This experience included her unrivalled diagnostic capabilities, and what this activity compelled her to accept. Patients whose professional lives put them in close proximity to certain types of electrical apparatus, sometimes had stubborn disease conditions identified by RBD as due to this daily distortion of their life-fields. The baleful effects were driven into the depths of the organism, to emerge in otherwise inexplicable pathologies.

"The antagonism between etheric force and electricity was also abundantly proved by Dr. Wilhelm Reich's Oranur Experiment. In this case, a large region of rural Maine was drastically impacted when concentrated etheric force and atomic energy "went to war" with each other at Reich's laboratory. The world is fortunate that the current, destructive orthodoxy has not yet attempted the replication of this deadly event.

"In my personal opinion, so-called global warming will eventually be found due to the massive etheric expansion occasioned by commercial electrification in the earth environment. The "causes" alleged at present, will eventually be seen as secondary effects of the primary imbalance -- this being in the chemical ether. Official elucidation of this will have to wait until a university evolves on earth that can tell us the intrinsic difference between a living organism and a corpse. That is the real starting point.

"In the meantime, we denizens of the borderland must



continue to raise these questions which are evaded and obfuscated by orthodoxy. You perceive our tasks correctly."  
Trevor James Constable  
Hauula, Hawaii

It is good to hear of your experiences with Dr. Drown and corroboration of my insights. The electrification of the planet, a tremendous cultural and evolutionary sequence of events, is one of the major forces facing humanity -- but most people only deal with it unconsciously, they are not aware of the ramifications, even remotely. Your attribution of the "global warming" to this electrical force, an idea that may seem bizarre today, is something that will no doubt be accepted as a fact by a progressive Life-aware 21st century science. For those not familiar with Trevor's work his *COSMIC PULSE OF LIFE* deals extensively with the etheric forces and their relationship to UFOs, orgone energy, electricity and radionics. This body of knowledge, this whole line of insight, has been generally ignored by folks who want to build little boxes that squirt electricity into the human carcass. Not to belittle well-intentioned and progressive work, but to be aware of the larger picture which is much more important in our accelerated times. Ruth Drown's insights into electricity, radionics and the cosmic connections of the human body are even more timely today. But, will anybody listen?

#### RADIONIC QUESTIONS

"Enclosed is an article containing my response and answers to questions raised by you in your review of *Secrets of the Soil*. I am pleased that you decided to review this book; it reflects your concern for ecological issues and your interest in subtle energies for agriculture. I hope my article and supporting enclosures will be informative to you and your readers.

"Any exchange of opinions, impressions, views and experiences on energy research and applications is very stimulating and I thank you for providing a forum for doing so in the Journal of Borderland Research. Keep up the good work!"  
Sincerely,  
Sarah Hieronymus, Ph.D.

#### THE ANSWERS

##### A RESPONSE to TOM BROWN

from Dr. SARAH HIERONYMUS, Ph.D.

Tom Brown's review of *Secrets of the Soil* by Peter Tompkins and Christopher Bird which appeared in the January/February 1990 issue of the *Journal of Borderland Sciences*, made several statements and asked several questions which I feel compelled to answer in order to convey correct information to fellow Borderlanders regarding Genuine Hieronymus Instruments, The Hieronymus Cosmic Pipe, Cosmiculture, and Eloptic Energy Reagents.

I address the following statements taken from the review:

1. "...this device (the Cosmic Pipe) is based on Eric Powell's Autonormalizer which was based on L.E. Beman's substance circuit research."

Dr. Sarah Hieronymus replies: This statement is entirely

erroneous. The truth is that the Cosmic Pipe is based on Dr. T. Galen Hieronymus' experiment done in 1930 in which he proved that it is possible to bring the subtle energies of sunlight down a wire from outside into a dark basement, and grow plants containing chlorophyll. (See the attached.) Notes written in 1930 clearly show that the idea of the Cosmic Pipe originated from this experiment. This experience combined with further joint research done by Dr. Galen and his research partner and wife, Dr. Sarah Hieronymus, led to the development and manufacture of the Cosmic Pipe.

Dr. Galen Hieronymus' experiment has been repeated many times. It has even been done by Junior and Senior High School students for science projects and fairs. One student from Ft. Pierce, Florida won 3rd prize in a statewide competition several years ago.

The Cosmic Pipe is a self contained, free standing device and needs no power source. The Cosmic Pipe captures solar and cosmic energies, amplifies them, modulated them with our Eloptic Energy reagents and transfers these altered energies into the soil to be used by the roots of plants. Extensive testing of the Cosmic Pipe has been done for 12 years and our files contain numerous letters of appreciation and recommendation. (See enclosed Robert Dawson letter; original on file at ASR&D.)

The Cosmic Pipe is presently in use all across the U.S., Canada, Europe, and other areas of the world including Australia.

A sketch of The Eric Powell Autonormalizer is attached (from *BioCircuits* by Leslie Patten). Compare it to the Hieronymus solar energy experiment sketch. There is no similarity. The Cosmic Pipe has no relationship to the Autonormalizer.

Dr. Hieronymus was quite familiar with the work of L.E. Eeman and conducted tests on the effectiveness of his copper circuits. Dr. Hieronymus found that too much copper in the circuit would deplete the vitality of the person using it.

##### 2. "The overall quality of the soil"

Dr. Sarah Hieronymus replies: In our method of organic, energy farming called Cosmiculture, the goal is to alter the conditions of the soil which are a determinate of plant quality and resistance to insects and disease.

##### 3. "The BD 500 shows good vitality, the radionic copy none."

Dr. Sarah Hieronymus replies: A chromatograph does not indicate vitality. It indicates the presence of chemicals. Since there are no chemicals in Eloptic Energy Reagents, one should find no evidence of chemicals in the chromatograph. The person who made the chromatograph is a retired chemical engineer. A chromatograph cannot possibly measure any subtle energies like those found in Eloptic Energy Reagents. The chromatographs shown in the photograph on page 300 are incorrectly identified, reversed from the picture caption.

These comments have been made to the publisher of Secrets of the Soil, Harper and Row, and they have indicated to us that corrections will be made in future printings of the

book. (See attached letter.)

**4. "Do Sara's radionic [reagents] have any vitality left?"**

Dr. Sarah Hieronymus replies: First please correctly spell my name which is spelled S-a-r-a-h. Our radionic reagents, more properly called Eloptic Energy Reagents, use specimens but do not actually contain any specimens (ingredients). Eloptic Energy Reagents are specially prepared according to a precise methodology developed by Drs. Galen and Sarah Hieronymus. Each reagent is subject to strict quality control in its manufacture and each reagent is tested for vitality before use.

We have several ways of demonstrating the effectiveness of our reagents including real time monitoring of energy modulations of various reagents. This visual proof is presented in all our classes and workshops and has been recently presented publicly at Global Sciences and Acres Conferences. Several advanced laboratory techniques have indicated that Eloptic Energy Reagents do not lose any energy over time and do not attenuate with distance. At the present time a prototype non-human detector of eloptic energy is in the development stage and will be demonstrated publicly when it is completed.

**5. "Sara (sic) Hieronymus told me she has been broadcasting the same set of BD preps for years, thereby saving her the need to buy or make it regularly."**

Dr. Sarah Hieronymus replies: I use Eloptic Energy Reagents. I do not use BD preps. The substances used as ingredients in our Eloptic Energy Reagents are similar to those used in the BD preps. However, we modulate and intensify only the energies of these ingredients through our Genuine Hieronymus Instruments unlike BD preps which use the actual ingredients themselves. Our specially prepared Eloptic Energy Reagents are designed to be used in the Cosmic Pipe or other Genuine Hieronymus instruments. Our eloptic energy reagents are superior because they do not contain any physical substance which can lose vitality over time. Eloptic Energy Reagents do not attenuate with time or space. Eloptic Energy Reagents are pure energy. They do not contain any other energies. BD preps contain the energies of the preparer, the energies of the container, and residue energy of the processing.

Our reagents are the purest form of energy vitalizing forces yet developed. They are both efficient and long lasting.

**6. "Is her good intent psychotronically overriding the true radionic reaction?"**

Dr. Sarah Hieronymus replies: Dr. Galen Hieronymus used to say: "Genuine Hieronymus Instruments are not Ouija Boards." Hieronymus instruments do not work with intent, mind or psychic energies. The instrument is not dependent on the operator. Even the human operator as detector with the stick plate can be eliminated in the detection of eloptic energy. Modulating and altering energy conditions with the instruments is possible without any human involvement except for the initial setting of dials and determination of reagents and specimens.

The instrument is essentially automatic as it was designed and engineered by Dr. Hieronymus to be independent of operator intent, focus, psychic ability, or concentration.

Anyone with proper training can use Genuine Hieronymus Instruments, even those who think they can't or are very negative. The instrument is immune to negativity or lack of confidence since it is in no way a "psychic or mind" dependent device.

The energies found in Eloptic Energy Reagents are there as a result of proper and specific use of Genuine Hieronymus Instruments in their preparation and are not there in the reagent due to my good intent.

Any comments or further questions from fellow Borderlanders, please write: ADVANCED SCIENCES RESEARCH AND DEVELOPMENT CORP., P.O. Box 109, Lakemont, GA. 30552. or call: Monday thru Friday 9am to 5pm EST: 404 / 782-5347 or 782-2092.

Dear Tom:

"In response to a book review on *Secrets of the Soil* in issue Jan.-Feb. 1990.

"Do Sara[h]'s radionic witness have any vitality left?"

"BD preps run out of energy, BD preps as radionic reagents also run out of energy, unless you amplify it, this raises the energy levels many, many times, this way it will not run out of energy.

"But we would rather use the BD preps in its homeopathic strength, the way Steiner meant it to be used. We mix the BD preps according to instructions, but instead of spraying them, we broadcast with the same results, the big difference instead of using 1-unit of BD500 per acre, we found by using radionics we can use 1-unit per-farm 1 to 1000 acres.

"We also found by using radionics we can use all the BD preps, for elements that are missing:

- 502 potassium
- 503 sulfur
- 504 iron
- 505 calcium
- 507 phosphorus
- 508 instead of fungicide

"By using the BD preps through a radionic instrument a farmer can reduce his high input costs.

"If one doesn't have a radionic instrument, the above can also be applied with Etheric Forces (Devas), we have had good results using this method."

Sincerely,

Mark Moeller

Box 335, Exeter, MO 65647

I certainly appreciate the quick response from both Sarah and Mark concerning the questions that I raised about radionics in my review. Openness and interchange such as this shows that we have real researchers here capable of furthering the cause through intelligent discourse. I hope to get



some of the corroborating information that Sarah sent into future Journals with further comments, it is all on file here and corroborates what she says. My sincere apologies for spelling your name wrong, Sarah!

The Cosmic Pipe is obviously the outgrowth of Galen's early research, and my remarks concerning its relationship to the Autonormalizer come about for the following reason: The Cosmic Pipe connects the cosmic energies with the earth. Reagents are placed in the circuit between the two polarities. The Autonormalizer also allows the placing of substances in circuit between two polarities of the human body. I see an analogy, though perhaps not a direct relationship.

Chromatograms show soil quality. They definitely show more than just chemical composition as Lilly Kolisko's many decades of sensitive crystallization experiments show. They can indicate the presence (or absence) of etheric forces. The mislabeled pictures in the book led me to my incorrect statements concerning the vitality of the reagents.

I would like to illuminate Sarah's (and Galen's) point that the radionic instruments are not psychic! Those people who have copped to "psycho-tronic" explanations have really missed the point, though psychic energies will work in the instruments as a secondary effect. This point is also further elaborated in *Cosmic Pulse* in Trevor's overview of Ruth Drown's work. Dr. Drown trained her operators NOT to imprint their energies into the instruments in order to not interfere with the true radionic action. The Hieronymus group (A.S.R&D) seems to be the only active school in America teaching the original principles of radionic (eloptic) action, in contradistinction to the psycho-tronic method.

### FREE ENERGY

"Now I have been to the Swiss Energy Conference and I don't feel like writing any spiritual optimistic article with photos because reality is very delicate. There were a lot of machines and I took a lot of photos but there was nothing new really. There were Newman Machines (goofy material) and also a lot of N-Machines but nothing over-unity.

"Personally I doubt that Tewari and Trombly ever will get over the conventional 99.999% -- there is a psychological hoax behind it. Bruce DePalma, who got the idea tricked himself without knowing.

"Then there was Methanits (the Methernia group) from Bern, Switzerland who have the Testatika -- static electric machine of good repute. No hoax revealed so far -- They showed a homemade film -- nothing else!

"Then there was good old Searle on stage again -- hell of a talkshow -- no machine. He said that now he had found somebody in Switzerland to work together with. Let's hope!

"Then I met Mr. Ecklin and asked if he had ever experienced his own machines working over-unity -- oh, no -- never. I think that was an interesting bit of information -- it's just a question if you can print such a thing without hurting magazines like the *Journal of Borderland Research* or *Magnets in Your Future* and whatever?

"How could it come that so many tried, and you got the

image of the Ecklin machine as a free energy one? I don't know.

"Then somebody said that Howard Johnson is still alive and sits somewhere in a garage with his machine which doesn't really work yet -- I believe that!

"But there is a future! The Methanits are now working on a 2m diameter Testatika machine and I am working on a hydrogen-oxygen device because it is a good idea with some clean exhaust!"

Name withheld upon request

Thank you for your report on the European scene. We agree on a few points and beg to differ on a few. Searle, Ecklin, Johnson, Newman we agree with you. Their approach has yielded misunderstanding and lack of advancement.

As for the Testatika (aka the ML converter), video tape doesn't prove anything unless it shows how to reproduce the experiment. The person who has done the best independent work on developing and understanding of this unit, and who has witnessed several "working" units, Stefan Marinov, has no idea of how the thing works. The inventor refuses to disclose the method of operation because he says that humanity is not ready for it, thereby eliminating the possibility of scientific verification. No hoax has been revealed, but no validity has been revealed either. Another enigma.

On the other hand, DePalma published the operating principle of his machine over ten years ago, and independent tests of his first machine show a 7:1 gain (documented report by Stanford engineer, Robert Kinchloe). Tewari's latest test reports, published elsewhere in this Journal, show an operating efficiency of 339%. Whether or not that is over-unity is dealt with in Peter Lindemann's *fizix kornor* this issue. We also have reports that within the last month or so two n-machines were built in Japan, both demonstrating electricity generated from space. If you have something new bring it to the attention of the world and let humanity's development rest on inherent potential, rather than being decided by a single inventor. N-machines show either new laws of induction or new principles of the law of induction. I myself doubt that there will ever be a self-running machine, but there is much hope that technology can advance far beyond what we have today. New laws, new insights provide new thought and that type of action is truly the beginning of the "free energy" revolution. Maybe the Testatika machine will illustrate something, but we just don't know right now.

### MWO QUESTIONS

"Your comments re the MWO in the Nov-Dec 89 JBR are of much interest and raise the following questions in my mind:

"1. Will you be publishing any information by Dr. Norman McVea?

"2. How can the Kent units now in circulation be converted to produce a 1/2 wave? Perhaps Klark would be willing to publish an article on this or be willing to do the converting for a price.

"3. Has any member ever tried to obtain any information on the circumstances of Lakhovsky's death? About three years ago a reference librarian made a serious effort for me to obtain any information re Lakhovsky, with absolutely no success. Perhaps there was an obit in the NY Times at the time he died, assuming that is where he was at the time.

"4. Where in the world would we obtain copper spheres like Tesla used? Perhaps a member can suggest a source.

"I am enclosing a copy of a letter Trevor Constable addressed to Dr. George Yao dated Oct. 15, 1979 about Dr. Yao's "Pulsors". I would like to know if any other information might be available from Mr. Constable. I have seen no reference to these units in the Journal."

"Regarding the color controversy: there are references to Goethe's color theory in the works of the much maligned, if not ignored, Schopenhauer who himself wrote a work on the subject which was inspired by Goethe, his friend. Schopenhauer appears to have had almost the same amount of contempt for Newton's ideas on color as he had for the intellectual poison Hegel served to his students. Schopenhauer's work on color has never been translated into English, as far as I know.

"Also, here's a source for water containing lithium:

Lithia Springs Mineral Water

PO Box 713 - 2910 Bankhead Hwy

Lithia Springs, Georgia 30057

(404) 944-3880. Good tasting water! Not carbonated."

Best wishes

P. Vincent Petrosino

Oceanside, California

In answer to your questions:

1. Norman McVea has sent us in a bit of material (too late for this Journal) on his latest oxygen researches and is on the list as a standby speaker at our June Borderland Congress. We certainly plan on hearing more from Norman.

2. I don't know about converging of Kent's units to 1/2 wave, you should check with him on that. It will probably be easier to use it as it is -- they are good power supplies for experimentation -- and in the future engineer units with more refined outputs. After reading my column Klark added a rare gas tube assembly to his units. He has always listened to other people and has constantly worked to improve his units.

3. If any readers have info on Lakhovsky's death, or his life for that matter, these pages are open to pursue the matter.

4. Anybody know where to get copper spheres? Tesla also used copper plates coated with a heavy dielectric.

I've been aware of George Yao's Pulsars for years, but have never checked them out. I'd be glad to check out any information on them that members submit.

Schopenhauer's work further corroborates the color theories of Goethe. Glad to keep the Goethe-Newton controversy alive and in the consciousness of able-minded researchers. Modern physics feels that just because it can measure the wave-front of light it can describe it by the apparent number of waves. The horse is not the gallop.

## VARIABLE NON-VARIANTS

"I hope BSRF continues to publish the books & other information by T.E. Bearden. I have most of his publications, including his books, which to me are collector's items. He comes well recommended by military service, training, accomplishments, & the respect of the scientific community.

"He added a fourth law of logic to complement Aristotle's three laws of logic; discovered flaws in our mathematics & has numerous references to justify his conclusions. When Tom Bearden talks I listen. Let's keep the *Journal of Borderland Research* as open minded as it has always been. There is something there for everybody."

Bill Zwirn

Jersey City, NJ

Thank you for your input on this. Tom Bearden is no doubt one of the enigmas of the borderland field. His work is quite popular in some circles and he has many supporters. He apparently sees major errors in our present science and in his theoretical way tries to explain them, without the benefit of experimental verification. However, if what he says is true then we are faced with the possibility that evil communists who hate all Americans have used Tesla's fine work to create weapons that can kill us with no apparent cause where we stand, give us AIDS and Legionaire's disease, make earthquakes underfoot and storms overhead, and control our minds! On top of that UFOs, cattle mutilations and such are supposedly emanations from the deep subconscious of the planet caused because the Russians hate Americans. This facade is then used as a basis to claim working "free energy" machines that nobody can see. Feel free to believe it -- I don't.

His references in his books are actually a very good source of information. Those who have actually spent the time looking them up very often find a much different story than what is claimed for them.

His use of such information as the sightings of huge fireballs and such as evidence of commie weapons ignores the millennia of sightings of such phenomena in history, long before communism. The weather patterns he has blamed on communists can be directly linked to solar activity, nuclear explosions and massive deforestation.

If Mr. Bearden can provide some physical evidence of what he claims we would be happy to promote such evidence of potential breakthroughs. The pages of this Journal stand open to real evidence of borderland energies, but there is no place here for paranoia or propaganda about supposed communist weapons. We are interested in correcting errors in engineering math so that Tesla's work may progress properly. Correcting errors in the mathematics of theoretical physics is interesting, but not pertinent to Tesla's work at all. One finds many contradictions between Tesla and Bearden.

Through the BSRF videos *Transverse and Longitudinal Electric Waves* and *Tesla's Longitudinal Electricity* we showed Eric Dollard's simple, reproducible experiments on how the various energies in Tesla's apparatus really function. The various properties of the different types of electric waves



were shown, including Tesla's simple through-the-ground broadcast (which is how the "woodpecker" signal actually propagates). There is absolutely no need to translate this material into abstract theoretical physics, unless you are into purely intellectual pursuits with little connection to scientific experiment.

I'd also like to point out that as we revealed the experimental truth about Tesla's electricity we attracted very little attention from the general "borderland" community -- probably due to a total lack of the sensationalistic use of Tesla's name. Also, no Men-In-Black showed up, the CIA didn't kill us, no one has suppressed the work -- it all stands readily available for the able experimenter to pursue.

### REMEMBERING THE OLD DAYS

"Just reading the first 1990 Issue of Borderland Research and was thrilled to read Meade Layne's beginning article for the magazine 45 years ago. Altho I skip my 82nd birthday soon (Feb. 29), I was not connected with the Journal before Riley Crabb took it over [in 1959], and I attended and helped with lectures he gave in Fortuna thru the years. Dr. Sahr, who sponsored his stays here, has died.

"We would all like to have an article by Riley Crabb in the January bulletin next year or before. Many would appreciate knowing how he is faring in New Zealand and a brief resume of his activities since he moved and was remarried.

"I got out my copper bracelet after reading the article on copper for a joint on index finger and the set up with carbon rod [Vitic] to attune with natural vibrations.

"Thanks for the many informational articles. Sounds like Christ better rescue those interested in a better world than Ahriman plans -- and soon!?"

Sincerely,  
Gladys Domogalla  
Fortuna, CA.

Glad to hear from you. Riley is doing great in New Zealand, and is quite active in the Orewa (NZ) Theosophical Lodge there. He still lectures and writes. His address is 161A Centreway, Orewa, Hibiscus Coast, New Zealand. We hear from him that he may show up at our June Congress in Santa Barbara.

As for your comments concerning Christ saving those interested in a better world, the better world will never come while people wait for someone to save them. The orientation of internal activities will allow humanity to properly encounter the forces of materialization some term "Ahrimanic". Whoever shows up and is claimed to be the second coming of Christ is only here to mislead the unwary and those who haven't taken control of their own direction and destiny.

### CONTROL

"As usual the Jan-Feb Journal was great. In the interest of giving a little more food for thought on some of the areas touched on, let me comment a little: 1st, concerning the enrichment of soil. Prior to the ending of the dinosaurs, there

was a much wider spectrum of energies reaching Earth. The Van Allen belt was not blocking so many energies and life forms here were not so dependent on 'food' as we now think of it. With such small mouths in relations to their tonnage, some of the great beasts simply could not have shoveled in enough fauna...

"As things changed, the Earth needed a rejuvenation action, and the Pole shift rejuvenation cycles were speeded up. Since we were a species that had accidentally been contaminated with intelligence (a longer tale) it was decided that we would be given an alternative (choice) to the pole shift IF we could come up with the technology to pull it off.

"The rock dust and bio approached are fine, but by far the easiest method is the use of Humic acid. Huge humate deposits exist in NM and some infrequent articles cover the subject in publications like "ACRES, USA". Humates erode away fine rock particles making the trace elements available to plants. Earth worms use the same action or "erosion" principle. It's a lot simpler than breaking down rock mechanically.

"Science of the future will catch up to some extent regardless of the closed minds. Persons like Walter Russell were gifted but their foundations were in error & tables inaccurate due to the great changes hinted at previously. What the ancients had & present science is trying to gain, is superconductive metals. In my *Suppressed & Incredible Inventions* I told of this and how I had been a witness to superconductive or LIVE metals & crystals.

"In line with Alison's article on copper, I saw Copper Sulphate crystals grow fine wire brains and influence electrometers to prove they were alive.... just like plants. Such alchemy simply duplicates what we had on the planet before the present age of deterioration.

"In view of Constable's Ahrimanic or domination system control data, it becomes rather obvious that we are coming to a point in the near future when we will all take our exam. Life here is simply a complex classroom where our souls are playing in matter and trying to get back to the REALITY of our creator. The domination leaders of both dimensions are in the 'reflection' and if humanity embraces this path it will eventually lead to self destruction. So far the majority have needed lessons 1st hand. Only pain & denial seem to get across the futility of embracing domination. Persons who will not step aside from constant Materialism & balance themselves a little simply destroy themselves early. From a higher view, all is just as it should and must be. The domination system is being used itself & the only important thing is to hunt down and find the truth and deeper answers for ourselves. Toward this end I have been available & always welcome contact."

Al Fry, Box 2207-76,  
Garden Valley, ID. 83622

Thanks for your input Al. For those not on Al's "Incredible Inquiry" maillist, send him your address for a listing of incredible books.

## DISCLAIMER AND WARNING

TO: PURCHASERS OF E.F. SKILLING, INC. EQUIPMENT.

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"If you have any questions, will you please address them to E.F. Skilling, Inc., P.O. Box 61, Buhl, Idaho, 83316."

## OSCAR BRUNLER

About 35 years ago I met Mrs. Oscar Brunler in California. Her husband had just died. Had my radiation read by her. Please let me know if there is a Brunler Bio-Meter anywhere available -- this is very important.

W. Edwards  
Angers, France

If any of our members can supply any more information on the availability of Brunler Bio-Meters, and of current practitioners we will publish such when received.

## MAX LONG

"I have enclosed two worn circulars on the Mathian Electropsychometer unit and his ember tape system circa 1950s which I am trying to purchase. All the old addresses are dead ends. If you can give me any leads I would be most appreciative. I am an old subscriber from Meade Layne days of the Round Robin. In one of the last issues edited by Riley Crabb he stated that Max Freedom Long committed suicide. I would like to know if this is exactly true, because some of the Huna people deny it."

Frank Kotell  
PO Box 123, Denver CO 80201

If any readers know a source for the Mathian Electropsychometer or for information on it please submit it for future publication. Perhaps someone reading this knows the actual facts of Max Long's death and wouldn't mind providing them. Riley lived several blocks from Max at the time.

## RECEIVED

*This is a list of materials received for review. BSRF members who would like to do longer reviews of these can contact BSRF for more information.*

\* **UFO'S AND THE ALIEN PRESENCE** -- **Time for the Truth**, by Michael P. Lindemann, \$4.95 + \$1 P&H. The 2020 Group/VIP, 3463 State St. #264, Santa Barbara, Ca. 93105. "This is the first report in an ongoing inquiry concerning the presence of alien beings and UFOs on planet earth, and their implication for public life and national security..." An interesting report concerned not so much with whether or not the aliens have landed, but probing the fact that whether or not they have the subject is one of the most highly classified in the U.S. government. The suppression of UFO information has altered the function of the U.S. government. While I couldn't go along with some of the "factual" information concerning UFOs (much of the information in the present UFO research field has emanated from military "intelligence" sources), the basis of this booklet is right on.

\* **PARANORMAL RESEARCH '89 and '88 Supplement**, edited by M. Albertson, D. Ward, K. Freeman. \$60.00 for set. Rocky Mt. Research Institute, Rm. 203, Weber Building, Colorado State Univ., Ft. Collins, CO. 80523. Quite a collection of papers on serious research into psi phenomena ranging from Psychic Anthropology and Feng-Shui to After Death Phenomenon and UFO research. This group is doing a great job -- check them out.

\* **PARAPSYCHOLOGY ABSTRACTS INTERNATIONAL** - Dec. '88 and June '89, Ed. by Rhea A. White. \$20 single, \$35 year (2 issues). PSI Center, 2 Plane Tree Ln., Dix Hills, N.Y. 11746. I enjoy reading through this publication, which consists of abstracts of the many parapsychology papers and publications from worldwide. Incredible source of high-grade info.

\* **NATIONAL SIGHTING YEARBOOK 1986-1988** by Paul Ferrughelli & Bob Sylvester, from the National Sighting Research Center, PO Box 76, Emerson NJ 07630, paper \$10, IBM 5.25" DSDD or DSHD -- \$30. A compilation of anomalous sightings of UFOs and related activities. Full of charts and graphs. Good, straight research.

## CONTACTS

*This is the section where researchers may contact those of like mind or seek out sources of information. We also list various mailers received. Please be kind and considerate and send a buck or two when writing for information.*

\* **TESLA BULLETIN BOARD SERVICE**. A new Electronic Bulletin Board Service has been installed for those interested in the research, life and times of Nikola Tesla. The TESLA BBS has been installed on the Colorado Mountain College Timberline Campus BBS system. The TESLA BBS is open to the public and users who have access to personal computers or terminals with modems that support 300/1200/2400 baud transmission. The TESLA BBS can be reached at



(719) 486-2775. The system operates with 8 data bits, 1 stop bit, and not parity. (8,1,N)

The TESLA BBS was formed to encourage an open exchange between individuals and groups conducting research into the work and theories of Nikola Tesla. The BBS also hopes to be of service to those interested in coordinating activities and establishing joint programs for the advancement of the reputation and name of Nikola Tesla.

The initial text files which have been loaded onto the TESLA BBS relate to recent research, proposed projects, and the theory of the Wireless Transmission of Electrical Power. All files are available as ASCII text files and may be downloaded and read with the "type" and "browse" command on any MS-DOS or PC-DOS computer or used with any word processing software on other types of computers that will read ASCII text files. Further capabilities will include the use of the system for Computer Aided Design (CAD) and circuit simulation of Tesla Coils and other high voltage devices.

**\* TRANSLATIONS OF OLD ALCHEMICAL TRACTS AND TREATISES.** Write for available list: Hans Nintzel, 733 Melrose Drive, Richardson, TX. 75080. Inquire about Alchemy/Qabala classes and seminars.

**\* Charles Williamson**, PO Box 7177, Sacramento CA 95827, (916) 363-2395, is looking for information on the "Russian sleep machine." Any members who have more information (including what it is called) can send it to Mr. Williamson or BSRF. He is also looking for information on a "magnetic helmet" that he heard about on radio station KNX (L.A.). It was some type of computer controlled device that users report "refreshing" or "almost religious" experiences.

**\* COLORADO DOWSING SUPPLY**, 5729 West 26th Ave., Edgewater, CO 80214. Excellent source for low cost dowsing equipment. Send a S.A.S.E. for listing.

**\* METAFORMS**, PO Box 2262, Boulder CO 80306, (303) 449-5918. These folks manufacture and research the effects of "metaforms", geometric shapes for balancing energies, contacting higher forces (as antennae), and related fields. Don't miss this catalog!

**\* YE OLE ELECTRIC STORE** - The store specializing in old electrical apparatus & information. For the collector, dealer, experimenter, hobbyist, student, or just anyone who wants something unique or old: Electric radio & tech books; electronic surplus equipment, test instruments, tubes, meters, old electrical medical devices, Tesla coils; and much more. Two locations: Browning Antiques, 504 W. 6th St., Beaumont, CA 92223; and, The General Store, 2650 Alessandro, Riverside CA 92508; or call Hank (714) 849-7539 for more info. Hank will be providing a display of his antique electro-medical equipment and related coils and devices at the Borderland Sciences Congress, June 14-17 1990 in Santa Barbara. Some of this equipment will be for sale at the Congress.

**\* 3rd International Keely Symposium**, Philadelphia, May 25 - 27, 1990. Excellent list of speakers covering Vibratory Physics, Steiner's Four Ethers, Polarity & Music, Keely's Motor, Astronomical Harmonics, Oxygen Therapy, & more. Contact: Dale Pond, Delta Spectrum Research, 1309 N. Chestnut, Colorado Springs, CO 80905, (719) 473-8852

**\* 1990 INTERNATIONAL TESLA SYMPOSIUM** July 26-29, 1990, Hilton Inn, Colorado Springs. Contact: International Tesla Society, 330-A West Uintah, #215, Colorado Springs, CO 80905. Always a great time to exchange info on Tesla and related high frequency researches.

**\* Seven Continent Dowsters Convention**, June 21 (dowsing school), 22-24, 1990. Many speakers, from Dowsing to Huna at the Holidome in Matteson, Illinois (Chicago suburbs). Always get great reports from this one. Contact John Van Drie, Box 192, Lansing IL 60438, (708) 474-3208

**\* Global Sciences Congress**, August 15-20, 1990 in Denver, Colorado. Contact: Dean Stonier, (303) 542-9300 [FAX 457-8269], 373 E 119th Pl, Thornton CO 80233. Speaker list not in yet, but Dean always has a great show. See you there...

#### \*\*\* SPECIAL ANNOUNCEMENT \*\*\*

BSRF is no longer selling books from other publishers. Having become somewhat mired in the book merchandising business and losing grips on day-to-day BSRF business, we have decided to focus on our own materials. This will allow us to produce more publications from our files. We are compiling a list of the many sources we obtained books from and will issue that also. More info and a new catalog will be forthcoming soon. Thanks....

#### \*\*\* MARIA KINZELL HARDY \*\*\*

As we go to press we have just received word that our dear friend and longtime supporter Maria Hardy has just passed away. Maria was about 87 and when we last spoke with her a month ago she was looking forward her speaking engagement at the BSRF convention. Maria lived a very full life in service to others, through color therapy and spiritual healing. We'll miss you, Maria. Take care on your new travels....

1<sup>ST</sup> INTERNATIONAL BORDERLAND SCIENCES CONGRESS  
Miramar Hotel, Santa Barbara, California  
June 14-17, 1990

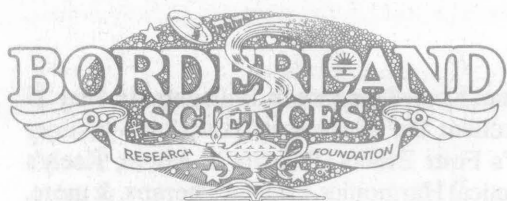
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## THE COSMIC PULSE OF LIFE

*THE REVOLUTIONARY BIOLOGICAL POWER BEHIND UFOs*

by Trevor James Constable

This is the borderland research manual for the 1990s and beyond. The author, a pioneer researcher who discovered invisible, living UFOs in earth's atmosphere, takes you on a journey that will change your view of the universe forever. Trevor's original and innovative photographic work is tied in with BSRF's early days under Meade Layne when the etheric explanation for UFO activity was being investigated. This knowledge is then placed against a backdrop of the work of some of the most gifted humans to visit this planet in our century -- Rudolf Steiner, Ruth Drown and Wilhelm Reich. The result is a world view you can build yourself -- a view that takes into an account the living, unseen energies of the cosmos, energies that the life-restricting science of today is incapable of grasping. The influence of higher and lower forces upon human evolution is shown in a clear light that will dispel many myths about our modern world. The UFO activity in our atmosphere will be understood in a new light, far beyond the carcass-in-a-tin can conceptions currently held in the field. This new edition also contains a photographic appendix on the work of the late Luciano Boccone who independently verified Trevor's UFO photography in Italy, as well as further corroborating evidence. A dynamic and invaluable book! 473pp, 40 pages of photos, index, paperback, 0-945685-07-6, \$24.95. Publication date June 21, 1990. BSRF members prepublication price (for an autographed edition) on all orders postmarked by June 1, 1990 is \$14.95

## GOLD RUSH GHOSTS

*STRANGE AND UNEXPLAINED PHENOMENA IN THE MOTHER LODGE*

by Nancy Bradley & Vincent Gaddis

There's ghosts in them thar hills! Of all the regions in our country in which history has been made, none has a greater background of upheaval, violence, elation, hardships and hope than the Mother Lode country of California. Here came men who left their homes, cities and farms to search for the elusive metal *GOLD*. And because of the impact of the emotions involved, the twisted lives and broken dreams, no area is more predominant in lingering ghosts, visions of yesteryear and psychic phenomena. The authors, an investigative reporter and a veteran researcher team up to take you on an enjoyable trip into the borderlands. Includes guide to sights of ghostly apparitions. 108pp, photos, map, 0-945685-06-8 \$9.95

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