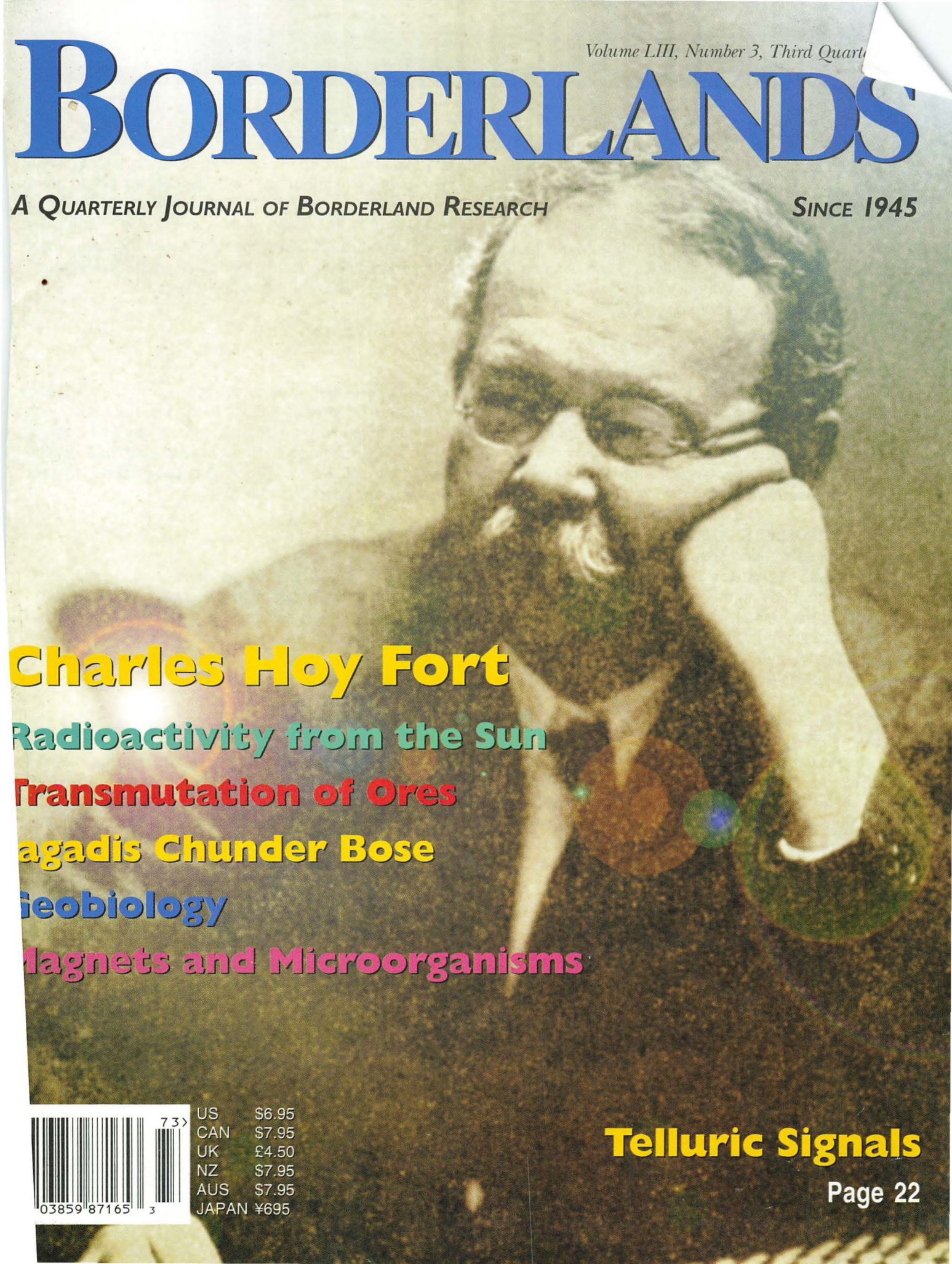
Volume LIII, Number 3, Third Quarter

BORDERLANDS

A QUARTERLY JOURNAL OF BORDERLAND RESEARCH

SINCE 1945



Charles Hoy Fort

Radioactivity from the Sun

Transmutation of Ores

Jagadis Chunder Bose

Geobiology

Magnets and Microorganisms

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Telluric Signals

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Michael H. Salzman with a foreword by Aldous Huxley.
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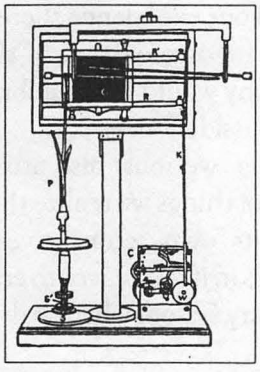
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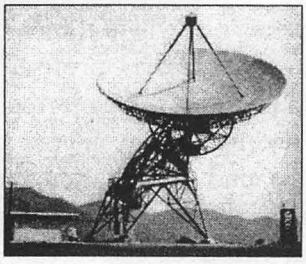
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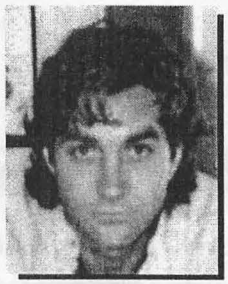
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VIEW FROM THE BORDERLANDS

Editorial

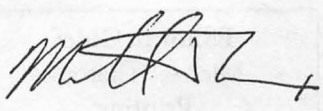
"...all attempts to find Truth in the special are attempts to find the universal in the local."

— Charles Hoy Fort, *The Book of the Damned*

THIS opening quote is one of my favorites from Charles Fort. That all in Nature is really attempting to be; that all biological phenomena are distinguishable from the inertial by acting to adjust toward "attaining equilibrium." Fort says, "Equilibrium is the Universal, or that which has nothing to derange it." This is what gives special meaning to our qualitative themes — that vital force is not Equilibrium, but of equilibrating, or the constant striving toward the attainment of such Equilibrium. The great composer, Messiaen, would approve..."in our experience there is only intermediateness to harmony and discord." The organization of things is only an attempt to harmonize, but pure harmony would be Equilibrium, or that besides which there are no reactions to outside forces.

As the vital force is a part of our very being, we must also attempt to organize, but in our qualitative understanding of things we realize there can be no absolutes. Quantitative science, on its own terms, gives to us absolutes; a version which satisfies completeness in its endeavor to eradicate the vital, but never acknowledging their arbitrary system which is driven by its own illusions.

When Nature attains Equilibrium, it decays and dies, bereft of the vital and the expression of becoming. This expression of becoming is a part of the "arbitrarily excluded" or "data of the damned" of Charles Fort. In our 53 years of publishing, some 300 issues of the journal, one will find such topics of the "damned". We have most often labored to behold the Universal in the local, upon which a manifestation of vitality; of living motion or "attempting to be" governs our researches. Radionic Science, Sacred Geometry, Living Astrology, Free Energy, Living Water...these and all other qualitative sciences are ruled by a state of becoming due to the vital temperament of Nature. Our quest is, and has always been, to introduce and elevate these "damned facts" in an effectual and accessible manner. We hope we have done service to the legacy of Charles Hoy Fort.



Michael Theroux
Editor

Clips, Quotes, & Comments

COLLOIDAL SILVER

Peter Lindemann's article, "Colloidal Silver: A Closer Look" in the 2nd Quarter of *Borderlands* was extremely well done from a technical point of coverage of material, and yet written plainly enough for any student of the subject to follow. He is the first person I've seen cover such a wide range of aspects of this subject and get such things as the technical details of colloidal chemistry (such as colors observed) correct!

— *Dr. Edwin M. Young,*
Editor-in-Chief, CONTACT Newspaper

BIODYNAMIC SIGNALS

I read your article on Biodynamic Signals. The experience of your project LUCAS group seemed sincerely rendered. But I think there is no real way to ascertain whether the 10 seconds of signal you recorded came from a distant star or was simply a response by an interdimensional intelligence to your efforts to work with the "patterning" energy you describe.

In an early article I wrote for *PURSUIT* magazine, entitled "Fluidice" I described a transduction process between the "etheric" and the "electromagnetic" energy continua. This transduction process is similar to the action of stress (mechanical torque) in a piezoelectric crystal, when a torque on the crystal produces an electrical signal. Persinger cites this effect often, by the way, in his studies of atmospheric electrical discharge before and after earthquakes.

But the "'etheric transduction" I describe is not the same as piezoelectric transduction. Rather, the torque/electrical transduction process is an analogy for the transmutation of "shape" (the patterning to which you refer in your article) into a form of structural etheric coding which we do not yet fully understand.

I also see the action of interdimensional 'Intelligences" in the use of this patterning energy. Indeed, "synchronicity" often seems to involve the telepathic action of interdimensional Intelligence for good or ill.

— *Eugenia Macer-Story*

Quite possible. A couple things to consider though. First, the biosensors are "tuned" to be receptive to specific "patterns" only. For instance, we need to use different biosensors if we are doing a wireless comm experiment with plants. When we point these at most plants, the response comes through. If they are pointed skyward or simply away from the plant target, we get nothing of the sort. On the other hand, the biosensors used in our biodynamic version of SETI incorporate tuning substances which have not displayed instantaneous reactivity to terrestrial etheric impulses. Our scanning of the sky produced response in only one section of sky (Ursa Major). Of course, this could be location dependant intelligences coming through, and based on the "Gigeresque" nature of some of the biograms obtained, could certainly qualify it as a correspondence from some interdimensional entity rather than of extraterrestrial origin. One really can't be certain.

Gerry Vassilatos and Eric Dollard are both using our biosensors in research projects. They have both confirmed that the biosensors seem to be responsive to etheric "tides" which precede specific weather events. But, in this case, the patterns emerge over a very long time cycle compared with the immediate and spontaneous reactions observed in skyward scanning operations. These etheric effects that the biosensors are responding to may lead to more important discoveries with respect to the qualitative sciences. We are building some new very sensitive diagnostic equipment which may help us to distinguish and clearly define the nature of what we are receiving. MT

FIVE RITES

I was very surprised to see that there is a web site for the five rites. I purchased the book about seven years ago, but was never really able to get into the habit of doing them until 1996. I have been doing 21 a day six days a week for over a year and a half. I have never known anyone who has even ever herd of the five rites. Since I started doing them I have told a lot of people about them, but they just think it's crazy. When I first started doing the rites I will admit I was sceptical weather it would really do anything.

Well I turned 38 in July and I don't think I look a day over 28. So I am going to stick with it, to me it's as much of a habit as brushing my teeth. I enjoyed your site and it is nice to know I am not the only one spinning around every morning.

— *Jerry Mc Kenna, Beverly Hills, CA*

BORDERLANDS

I recently saw an ad for a book called "Borderlands" in a popular magazine (*Fortean Times 102*) and wondered if you were involved in the publication of this book. If not, it would seem to be one that you would be interested in carrying in your catalog, as the content appears to be within your scope.

— *Donald McCloud, Baltimore, MD*

No, we had nothing to do with the publication of this book. Actually the use (or misuse) of our name "Borderlands" is starting to pop up all over. We have found numerous examples of this on the Internet lately, most of which are overseas. We find it interesting, with regard to the book you mention, that the magazine Fortean Times published a rather unfavorable review of our magazine in FT 88 (we exchange magazines with them), and shortly thereafter published advertisements for the book entitled "Borderlands" in FT 101 (the author of the book, Mike Dash, is the publisher of Fortean Times). We would have to review the book first before placing it in our catalog, and I see no reason to exclude it, if it is up to Borderlands' standards.

PATENT MODEL REQUIRED?

As you know, I admire Mr. Vassilatos' writings. Because of this it distressed me when I found statements on the first page of his recent article ("Drawing Usable Electrical Power From The Aurora Borealis", 2nd Quarter 1997, *Borderlands*) which are contrary to my knowledge of the US Patent Law. It seems obvious that he must have run

across some statements about the procedures of the US Patent Office which are wrong.

Since an utterance like this contradicting one of *Borderland's* established, respected authors is apt to make some question my qualifications in making it, I believe that I am reasonably qualified to attack his assertions both on the basis of my training and experience. Since March 15, 1949, I have been occupied on a full time basis in the field of patents and related or associated topics, first as an assistant examiner for two years and thereafter as an attorney until my retirement a few years ago.

To the best of my knowledge and belief neither the current US Patent Law as set forth in Title 35 of the United States Code nor any of its predecessors have ever made any specific requirements relative to an invention being "successful" or "tested" in any manner as indicated in Mr. Vassilatos' article.

I have not bothered to look up various US patent laws in the US prior to the present Title 35 on this matter. It is my belief that it would be a waste of time to do this. While US patent law has changed several times during the history of the US I can recall absolutely nothing relative to the subject of an invention being "successful" as a condition for the grant of a patent in any US patent statute.

Perhaps the objectionable statements relative to the US Patent Law are the result of confusion between the successful character of an invention and the operative character of an invention. In the US the requirement that an invention "work" or be "operative" to be patentable is based on the precise language of 35 USC 101. It states:

§ 101. Inventions Patentable

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter , or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The key to the distinction between a patentable and an unpatentable invention is be found in the word "useful".

Something can be useful without being either a practical or commercial success. The critical thing is the operative character of the invention - i.e., can the invention be used to achieve a useful purpose or result. This is a separate issue from how good or bad the invention may be in accomplishing such a purpose or result.

The initial decision as to whether or not an invention set forth and claimed in a US patent application does or does not possess the requisite usefulness or utility to be patented is up to the senior examiner in charge of examining an application. If such an individual thinks that an application adequately meets the requirements for a patent covering an invention which meets the statutory requirement of being "useful" the application can be and normally will be issued more or less as a matter of routine.

If the examiner thinks that an application does not meet this requirement usually he or she will object to the content of the specification in the application and concurrently reject the claims of the application on this ground. From this point on a successful application for a US patent has to convince the examiner of the error of his or her ways.

If an application clearly does set forth a utilitarian invention this can be accomplished by a good technical argument. Preferably such an argument should be embodied within a declaration having the effect of a traditional affidavit or such an affidavit. Care must be taken to avoid any incorrect statement or inference because of possible future consequences.

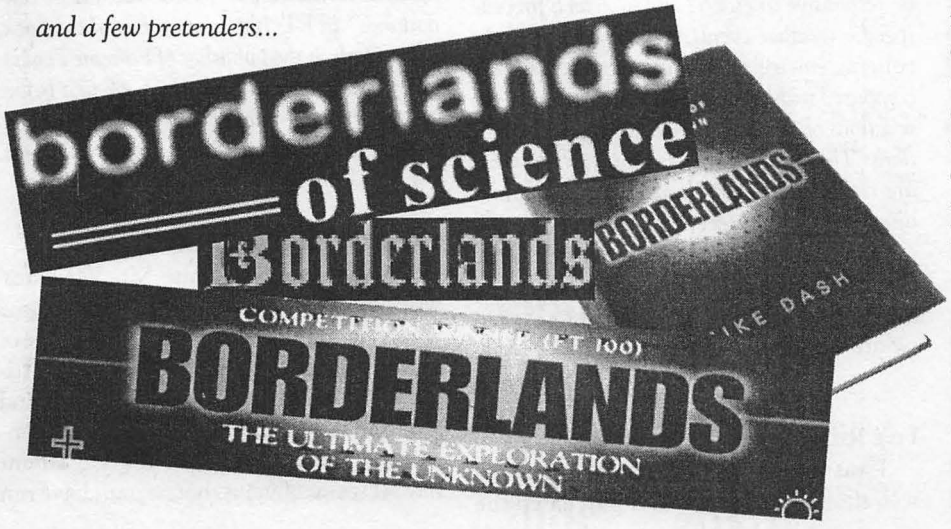
The operative character of an invention can also be achieved by showing the examiner at an interview that in fact what is claimed does work. A demonstration of a tangible structure can be quite helpful in connection with such an interview. It seems to be a corollary of Murphy's law that demonstrations at interviews don't go as they should. In such cases the applicant may have demonstrated why no patent should issue on an application.

Such a demonstration is at an applicant's option. It is not to be confused with the Patent Office requiring a model. Although under 35 USC 114 it may still require the submission of a model, neither I nor anyone else I know can recall of a model being required in a patent application since the

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and a few pretenders...



late 1800's. The Office will, however, accept physical exhibits or models in the file of an application. This practice is usually limited to models or exhibits that present no storage problems, for example, by fitting into an application file.

As a practical matter the often somewhat different policies of the individual examining groups in the Patent Office differ from one another and vary from the precise wording of the Patent Law and the rules enacted under it in comparatively minor manners. In general the high tech examining units dealing with the exotic future tend to be tougher in requiring proof of utility than those groups handling work of a lower technical level such as fish lures.

In combatting a well reasoned rejection on the ground of the inoperative character of an electronic device, it was possible to reverse the rejection by filing an affidavit giving all details of the circuit of a commercial embodiment of a device along with a statement by the manufacturer that several hundred thousand of the devices had been sold without one unit being returned as inoperative.

In the past devices deemed as being against an undefined "public policy" were denied patent protection on the ground that they did not possess the utility required for patent protection. Fortunately this ground of rejection seems to have gradually faded into history. I can still recall a professor in law school lecturing that the way to get around a rejection of claims drawn to a gambling machine was to label the latter a "device for demonstrating the laws of probability".

Occasionally one hears of a device or model being submitted for testing under the order of a court in connection with a proceeding to obtain a patent. It is understood that a rather famous or infamous Mr. Neuman (perphaps misspelled) was required to submit a working unit of what the Patent Office considered an inoperative device in connection with court proceedings against the Commissioner of Patents seeking to obtain a patent.

Such a requirement by a court is inherently different from a requirement by the Patent Office.

A further discussion of Mr. Neuman's failures with the Patent Office would be too involved to discuss in other than a long, detailed article. Any discussion of what constitutes an invention that is "useful" or has utility is best left to a good text on patent law. An extension of this topic into the requirements for patent protection in countries out side of the US requires far more than is needed to complain about what is considred to be an obvious error in the article by Mr. Vassilatos.

— *Ed O'Brian, Portland, OR*

Gerry Replies:

I greatly enjoy speaking with Ed O'Brian, not only because of his enormous expertise, but because he is a rare and delightful personality. We do differ in our opinions concerning this "patent models" issue, but I believe we came to an agreement on the telephone. I have chosen to summarize the historical record, since only the most salient facts in our little debate will then emerge on behalf of each party.

The difference in our opinions is a difference entirely resolved by considering the time reference to which we each refer. The modern dismissal of the working model is only indicative of a relatively recent (1925) interpretation of Patents and of the Patent Bureau. Perhaps this too brief chronological record will encourage our more susceptible readers.

In 1836, Congress passes two new Patent Acts. Congress establishes a rigorous "examination" process for the granting of patents, and legally requires models with all patent applications. The Law stipulates that "the patentee will furnish a model of his invention in all cases which admit of a representation by model". The Patent Bureau is placed under the jurisdiction of the Department of The Interior (resource management bureau) in 1849. Congress passes an Act in 1870, which rescinds requirement of working models with applications, but permits the Commissioner of Patents to demand models in certain cases. Serious inventors ignore the order, and continue to send models, a fact which is proven only by studying fire damage reports in the Archives.

By 1871, the number of newly examined models reaches 200,000. The Commissioner of Patents demands that storage space be supplied, but is not heeded. Some 76,000 of these are destroyed by extensive fire in 1877, a sad and suspicious legacy which left 124,000 new models in storage. By 1880, the number of additional new models now reaches 250,000, a numerical count which indicates that 126,000 models have been demanded by examiners throughout the intervening 10 years since the Act of 1870. Here is proof positive that models were being demanded for inventions at least until 1880.

In 1881, the Patent Commissioner (not Congress) divides the application process into two parts: a formally composed *patent specification*, and a *working model* which may be demanded at any time in the patent granting process. Despite the new liberty, applicants continue to submit working models.

Patent Commissioner Mitchell reports to Congress in 1890. His displeasure in the

Contined on page 37

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Charles Hoy Fort

Bibliomancer Extraordinaire

By Franklin Ellsworth Clarke

CONVENTIONAL thinkers too often express the desire for "new science perspectives". In this theme, they lift up their voices in the midst of a present scientific vacuum, and profess their plea for a more complete scientific embrace of the world. But the persons from whom we hear these expressions are more frequently pandering to a more personal motive, where self gain is the theme. The narcissistic echoes of those who only wish to distinguish themselves amid the science vacuum are the ones who cry out for the "new science".

There are those professionals who cannot forge their way sufficiently in the scientific community, either by lack of talent or advantage, and who therefore choose a spotlight path in the mass media. Such personalities have always taken the role of spokespersons for the world of scientific intellectuals, champions of "the method". There are, of course, those who listen to these hollow voices. There will always be a following for every voice which speaks, and the science showpersons are no exception.

MEDIA SCIENCE

Those who follow the media science performers acquire some hopeful ideal, while gradually cultivating an emotional investment. The promise of a new science and a new world is the compelling aria from which sensitive hearts draw warmth in the vacuum. The sensitive followers find their heroic media speakers losing credibility when, after betraying their true prejudices and predispositions, fall short of their own promise. Young minds know that, while voicing the need for new science, the media science personalities remain completely ensnared in a deteriorating and failed scientific method. And they instinctively know that the method is the problem.

The modern scientific "big lie" is that it is forging new frontiers in our worldview. Nothing could be further from the truth. This perverse perspective is only a clever promotions attempt to stave off the extreme criticism harbored by science grant committees. The promise of a "new" science refers potential patrons to a possible "new world". This new world will be theirs if the monies are given. We who are consigned to watch the science show from the shadows take notice of the repetitive pattern. We note, with bored familiarity, the recalcitrant scientific advocates. Those who maintain their theatrical poise, who cry out the most for "new perspectives", are always the very ones whose power policies destroy every opportunity toward that professed goal. And so we observe the sad plight of science professionals who are locked in a prisonhouse of perceptions, ruled by the highly enforced dictates and well policed precepts of a few science hierarchs.

This decadent closure very fortunately does not apply to all who think and seek. There are scientific mavericks whose lives seem turbulent and wild by comparison, but whose thoughts remain unfettered by obligation and free of concern for loss of privilege. Harassed and beleaguered by the perpetual demands of a non-funded scholarly life, these impassioned persons live in the purity of a loving devotion to know. This is scholarship, this is science.

SACRED FIRES

There are those science mavericks to whom the profession never held an iota of attraction, who likewise owe the profession not a single shred of respect. And it is in these persons that the greatest of scientific revelations often emerge as whole. There are highly qualified researchers who have foregone the respectable dignities of profession for more pressing demands of honor and of responsibility. There are luxuries gained only through the abdications of personal integrity, an often required first rule when entering the science profession. But, the revolutions which so many profess to seek are never gained in becoming party with the problem. And the professionals do not seem to be yielding the gems of genius which so many patrons await.

In these fiery vectors, one requires passion, love, devotion — that urgency which drives persons of passion forward. A few drive headlong, and without concern, directly into these regions. In the heat of discovery, of new revelation, one is never concerned with the paltry dictates of parochial requirement. The lives of professionals rarely know the fires of love, of mystery, or of urgency. Passion is the principle element of this scientific flame. The urgent inner fire which fuels these lives leap out at the windows, burning the heart and pouring forth at the eyes. There is no advantage like the passionate love of learning. Money cannot buy it. Education cannot confer it. Applause cannot increase it. And neither professions nor

honorariums can cover its absence.

Only the fire of passion grants her seekers the creative intensity which is never seen among the professionals. The heart burns, the mind sees, the eyes penetrate, and the hands labor. These are the ones who forge the new science which professionals claim as their own, the purity which they wish to touch and cannot. Of the few such individuals, with whose work we are completely occupied, one produced a new revolution in thought which has never yet been equalled.

THE OBSCURE

In keeping with the rules of professions and professional denials, this precious scholar was never crowned with either honorariums or accolades. He was never lifted with an award, was never granted a single entitlement, and was never offered a drop of subsidy. Yet his works remain unique, original, and pure in their devotions. He was one who effectively achieved that "new scientific perspective" which the prating contemporaries merely mouth. He belongs in the lineage of Goethe and Steiner, a genius of science in the metacognitive tradition. And his words burn, but do so with wonderful softness:

"In the topography of intellection, I should say that what we call knowledge is ignorance...surrounded by laughter."

This marvelous quote, by Charles Hoy Fort, forms the frame on which my essay will now begin. It is to this wonderful little man, his great ideas, the false intellection of those who call themselves "Forteans", and the cosmic laughter which derides those who have misunderstood his words that this article is dedicated.

From where do new ideas come? How do they emerge in the midst of a ruling thought structure, like bright and curious blooms in a lifeless desert? Where do we find the connective points from which human intellect might receive an enlightening signal? How do we escape the tautological prisonhouses which a closed scientific worldview seems habitually to produce? The answers to many of these questions are found in the writings of Charles Hoy Fort.

In the cognitive requirements of true scholarship, one must be possessed of superlative insight, sensitive intuition, and an uncommon openness to the world of experience. But cognitive ability is not the sole qualifying agent of personal transformation. It is certainly not the source of revelations. We find the single most important element of change in a peculiar openness and willingness to embrace completely new and apparently illogical revelation. Not one professional will stoop that deeply in the pool of truth. Those who do are completely ostracized and evacuated into our world.

There are those whose years of study brings only great familiarity with facts. These are the ones whose personal concerns do not extend beyond the collection and collation of factual knowledge. But, an unlikely few manage to absorb facts, learn the greater scope, and suddenly glimpse a whole new vision of the world. And, the scientific world, which stands only to benefit from such visions, often prefers to keep such persons unnoticed, unrecognized, and unremembered.

POCKETS

There was once such an unnoticed man. He loved everything magical and wondrous, and odd. And, he was himself not a little bit odd too! Out of the luminiferous atmosphere which surrounded the last decade of Sir William's life, there was round little Charles Hoy Fort wearing a green eyeshade and trundling through the aisles of bracket chairs in the Municipal Library. His large eyes burned through the shining pince-nez glasses with a peculiar twinkle, highly reminiscent of that elvin smile exuded by Sir William Crookes.

There went the unnoticed Charles Fort, with pockets full of index cards, pencils, and magic. Perhaps he was thought to be a card dealer. If anything of that sort, he was indeed a gambler in the world of science and philosophy. What he later would have to say would eventually find response among a very small group of sensitive souls. His fame would reach out well beyond the confines of his modest perimeter of activity, an immense wave for such a small stone.

Fort was somewhat of a comic figure, and he enjoyed his simple scholarly life immensely. His modest apartment was graced by a caring wife, a cozy kitchen, several full rooms, and an overstuffed office which remained the principle focus of his intellectual delights. Riding the trolley uptown from the Municipal Library, into the forest which once was the Bronx (where also, years before, Edgar Allan Poe had his cottage), there disembarked Mr. Fort.

Fording through white snows, through honey-warm sunny afternoons, and through grey rains alike, the quiet Mr. Fort travelled home. He probably sang Methodist hymns as he went in a rich baritone voice. He climbed the stairs. Home to hearth, wife, and wonders. His files. Here he emptied the treasuries of strange facts which filled his day, his heart, and his pockets. Pencils, index cards, pince-nez glasses, two dozen strange facts, and a grand walrus mustache. Each day was like hunting in a free forest where the most prized and beautifully plumed exotic birds lingered to be caught and caged.

In his younger years Fort was a journalist by trade, and his income was a modest one. How had he afforded this relatively luxurious life at so young an age? On the passing of both his parents, Mr. Fort was left a small fortune. And it was with this that he managed to live, he and his wife, in their apartment north of Manhattan.

Just before dinner, just before the gas lamplights were turned down in his office, Mr. Fort stared out of the window and dreamed.

"All seeming things are not things at all, if all things are intercontinuous...only a projection from something else." Again and again, day after day, he found evidence...but evidence of what? What did it all mean? How did his strange facts fit into the world at all? Oh, he did not deny the existence of these reports. No one could. Mr. Fort sought accounts and eyewitness reports by only the most credible persons; sea captains and professional people having affiliations with The Royal Society and the like. These reports with which he was most amazed came from these highly credible sources. But it was the nature of these "events" and "anomalies" which most disturbed his then traditional sense of order in the world.

Frog falls, fish falls, lightning out of a blue sky, inscriptions on meteorites, circular markings on the mountains of different continents, black snow, green sun, red rain, blue moon, yellow wheels of light in the ocean, petrified giants, manmade artifacts embedded in archaeozoic rock, soaring sky saucers, white islands in a dark blue sea. It all seemed to be a world such as that found in the stories of Baron von Munchausen. But it was real!

Perhaps strange events were some kind of secret language, one

whose whole meaning required a new perspective. A new way of knowing or of perceiving. Of this he was sure. Obscure and puzzling manifestations presented the sensitive observer with a never ending creative cavalcade, whose fabulous beauty seemed to hold reservoirs of deeper metaphors. He sighed, and rose, but not before jotting down his final thoughts on this matter. "Let everything be reported...then one day we may have a revelation," so he wrote in a note to a friend, and went in to dinner.

DAMNED FACTS

Fort learned of every strange and anomalous phenomenon in which natural lore is so very prolific. He knew where to look. He learned how to use the Library to his own curious advantages. His collection exceeded 25,000 separate index cards, a file of formidable volume. On these cards there rang 40,000 separate notes on rains of different kinds! The file collection grew in leaps and bounds after that first accounting — a well categorized register of the impossible, of the obscure, and of the unnoticed. One would think that Mr. Fort was expressing something of himself in his meticulous searches — the sense and savor of the obscure. But, of these friends, these obscurities and reports of the strange, he was chief expert in the world. A menagerie of wild facts, and a gallery of curios and mysteries. A connoisseur of the improbable, as unlikely a Marco Polo as one would ever find. Mr. Fort became a broker of wild talents!

With each perusal, with each accounting, his whole perspective shifted. He changed completely in his approach, reaching around and behind his every consideration of thought, perception, fact, and fancy. What was real and what unreal? Looking into his overstuffed office one day, Mr. Fort was smitten with a singular irritation. All these scattered facts, and no context. Their once sweet taste of mystery had lost the sheer delight which drove him each morning to strive with winds, rains, trolleys, bracket chairs, and critical librarians with tight lips and pince-nez glasses!

He had, after all, caught all the most beautiful birds in the forest, of plumage incredible and exotic. And now what? Would he simply display them in their cages? Was he to simply "play cards" with his collection? Vexed at his "viceful waste of time", he carted the lot of files to the fireplace...and burned them en masse. Watching the curling flames mingle with thick white smoke, he destroyed the work of years, countless days of searching, of writing, of pencil notes, of frazzled thoughts, of books and tomes and piles of dusty magazines. His mind turned, and he suddenly caught a glimpse of a new world. He peered through the fire and saw.

LONDON

After the heat of this furnace had cooled, Mr. Fort proposed, of all things, that both he and Anna sail for England. Charles was finally out of his fires.

Fort's intention to publish his works was not a small bit encouraging. The force behind the new move evoked portents of excitation. All things were arranged for the journey, including their return to New York. The couple was to take lodging in London, as close to the British Museum as could possibly be arranged. There was adequate money for the trip, and the usual bureaucratic problems worked themselves out with a unusual and seamless ease, normally the characteristic sign of good fortune.

They took up lodging at 39 Marchmount Street, in a section called Bloomsbury. In the Fortean tradition, no other two could have formed more auspicious (and humorous) names. Proximity to the Library gave him wonderful access to the most original documents from which his best New York entries had always been derived. A variety of English scholarly journals filled his eyes, mind, and heart once again. It was a much needed nutrition. After all, the world was stranger than most knew. Here was the proof of it, the countless pages and index cards of proof.

His new collection of facts was now far more resplendent than the one which he committed to the flames in his Bronx apartment. Obscure facts, like smoke, choke the vision. Seen in their proper perspective, facts are like windows through which the light and heat of a deeper world might be seen. How curious! That an act of desperation could result in so noble and transcendent an exaltation! He now knew what had to be done. To connect the facts, to associate them, to correlate and discover lines of connection. This would be the new task at hand. And, off he went, transformed. The eyes of the man now engulfed a grand and spacious vision of the metaphysical world process.

It was in London that Charles Fort took a huge and frightening leap into a larger perspective. To indulge his new notions no longer frightened him. What he first feared was now quite obviously the product of an overwrought imagination, the mere figment of shadow and intellectual restriction. The new reality which he indulged was no more dangerous to his sanity than the myriad other indulgences which seemed to be rocking the world. He had already become fused with the ideas.

Throughout all of this time period, he found a wonderful comfort in humour. This aspect of the cosmic drama was an unexplored facet. Where most chose beauty, even the aspects of somber gravity, Charles chose the humor of the cosmos by which to define world process. In this aspect, what he discovered shows him to be a true adventurer of the mind, a navigator of the mindscapes. Fort discovered that illogical schemes, improbable connections, and implausible correlations could be reasonably connected. No better place to learn this but in England, where mad Hamlet was to be exiled. For (in the words of their greatest poet) "they all be mad who live there". Indeed!

"The time has come", the Walrus said, "to talk of many things, of shoes and ships and sealing wax, of cabbages and kings."

— L. Carroll

PUZZLEBOX

Of "cabbages and kings"! Two more dissociate items, one cannot imagine. And yet, Charles Fort showed a means in which any of the two (under the proper circumstances) would demand the necessary existence of the other! The preliminary concepts which he received evoked the writing of "New Lands" in 1923. Here was the first instance in which a nonlinear logic was being espoused in the western world, and the western world was scarcely ready for the accelerating change. He and Anna moved back to New York. Back to the New World, where they resumed their quiet lives.

When Fort began to write and publish, the reading public was taken aback. It was difficult to gain the cooperation of publishers for the printing of these curious new works. They were more like fragmented homours, and less like science. The now laughing eyes

could not be hidden. The walrus mustache could not hide the laughter, the sheer derision. Of course, few would know how to categorize his work. His ideas frightened the minds of thinkers everywhere. Their fear was drowned in his laughter.

Theodore Dreiser, a friend, managed this feat against weighty refusals by acrid publishers. But Fort's remarkable book *Lo!* was published in 1931, being followed by *Wild Talents* in 1932. In his modest pamphlets and pocketbooks, we find the writings of a true and original genius. Goethe, ever the mystical and sensitive naturalist did not choose to handle the plethora of strange events which flooded his world. This work fell to Charles Hoy Fort.

The now restored "catalog of the anomalous" grew and grew again. It suddenly became transformed into a massive puzzlebox, which when examined along distinct lines and angles, granted a sustained vision of a deeper world. A metaphysical world, where the stuff of which dreams are made very obviously pour into the physical world. Did some vast and coherent vision, some cosmic dream generate material reality? It was not the collection of individual facts which remained important. Oh, the individual facts were important enough. Yes, they were fascinating, alluring. But in the grand scheme of knowledge, they were but clues to a larger whole. One which he had discovered in his dark period.

"There is probably a connection between a rose and a hippopotamus." The connecting links, the associations, the view which considered the creativity in each of these strange manifestations; these were the important messages. Fort now realized that there were patterns in the chaos of his scattered records. Order, sequence, patterns, and hierarchies of awareness. There was meaning in the world. His recognition of connective links between events, and the manner in which they arrived in our world, unannounced and unexpected, now demanded much more than even associations could produce. And here is where Fort differs from all of his modern counterparts.

"I am a collector of notes upon subjects which have diversity...but my liveliest interest is not so much in things, as in relations of things."

"Sometimes I am a collector of data, and only a collector, and am likely to be gross and miserly, piling up notes, pleased with merely numerically adding to my stores...But always there is present a feeling of unexplained relations of events that I note, and it is this far-away, haunting, or often taunt ing, awareness, or suspicion, that keeps me piling on." — Charles Fort, *Wild Talents*

STRUCTURES

Charles Fort considered the ultimate scope of his work to be "experiments with the structure of knowledge". He had the credentials of the epistemologist, a pursuit which few modernists consider. In the vacuous world of contemporary science, the greatest population of its adherents cleave to a doctrine of proofs and apparent facts. But, while fewer and fewer value the wisdom of the arcane, the philosophical principles exceed the experimenter's art, and rule experimental results. Fort knew this well, and saw that metaphysical realities govern every natural and experimental arrangement. After all, how were scientists going to approach a phenomenon as provoking as a fishfall?

In speaking of the transformation of scientific thought from linearity to holism, Fort declared that "no image can be too fanciful, no hypothesis too extreme; anything can be used to storm the fortress." The fortress of rigid thought. That had to go. He strove to open the minds of his readers, those who would abide his notions for awhile. When the gentle approach failed, he became threatening. "I'll send you reeling against the doors that open onto 'something other'."

When this attack failed to achieve its intended effect, he became bawdy, even raucous: "I am afraid that we shall have to give to civilization on Earth some new worlds...with white frogs in them".

This worked. He indulged his hilarious and comical side. Appealing to a deeper response, humor usually melted the intellectual defenses. "I cannot quite define my motive either, because to this day it has not been decided whether I am a scientist...or a humorist".

What Fort reveals is the folly of linear thought in a world where creative wholeness is perpetually acting, a world whose apprehension requires familiarity with a language of the metaphysical. Imagine a report of a new lake which forms in a desert area. And suddenly, on an auspicious day unexpected...the sky claps in a massive roll of thunder...and down unfolds a miraculous plume of fresh water fish, frogs, and green water plants simultaneously! "I have spent much time thinking about the alleged pseudo-relations that are called coincidences. What if some of them should not be coincidences?" His extreme delight in these numerous impossible circumstances, events reported by the humble and the credible, convinced him that divine creative works were yet very much in force throughout the world.

METAPHYSICAL WORLDS

Fort urged humanity to peer beyond the facts — those "damned" by science. Fort is the herald of a new way of seeing the world. More than that. He directed us to see through the most outlandish medleys of world events. He did not make trite those spontaneous creations *ex nihilo*. In such miraculous spewings forth of fish and frogs, Fort called us to behold a process of creation. His view was more befitting a vitalistic approach, requiring a vital environment. Charles Hoy Fort used the facts, and the anomalies, as indicators of a world-permeating intent. He saw the message in the connections — an augury of natural wonders. The slithering spawn which fell in full sight of day, was obviously directed by a divine agency.

That the physical things are the material artifacts of a creative and living metaphysical space, is a contradiction which professional science cannot abide. Enjoying the comic incongruity of linear scientific thought, Mr. Fort wrote amazing statements on his conception of world reality. "We conceive of all things as occupying gradations, or steps in a series between realness and unrealness." In these considerations, the conceptions of Fort merge rather completely with those of Goethe, of Crookes, and of Steiner.

Fort never spoke of solid realities, never of fixedness in existence. All things were somehow plasmic, or more precisely "protoplasmic." The latter term invited the strong suggestion that all things were inherently possessed of a living characteristic. This is why his concept of beauty, of wholeness, and of individuality is important.

"Every attempt to achieve beauty is an attempt to give to that which is local the attribute of the universal." He repeatedly stated that the world was a finished product only in its ability to receive

creative impulses. The world was a constantly created stageworks — an "intermediate stage." The accuracy of this concept was exemplified in the innumerable strange events which constantly occurred on Earth.

"All phenomena, in our intermediary or quasi-state of being, represent a movement toward organization, harmonization, and individualization...in other words, an attempt toward reality." There! *In toto.* An analysis of why it was possible for outrageous and unthinkable events to occur in our world. An explanation for true "strangeness", made obscure only by those who were fearful of its deific implications. The Fortean world received creative applications from a pre-existential stage. Creative ordinations called forth sudden manifestations, *ex nihilo.* Therefore — fishfalls, turtlefalls, seedfalls, and frogfalls!

Besides these thrilling creative acts, the world also was witness to countless destructive effects. Fort also saw that there was resistance to the act of becoming, resistance to the expression of seeking reality. There were those disintegrative waves which came from another direction. In this negative influence, created things lost their integrity, being forced down the rung of existence, back through our world into the place of yet-becoming, and held there by a pressure of decreative force. Ours was a world where "things becoming" and "things unbecoming" passed through our opened gaze. Only the truly honest could report everything, every event, which occurred on earth. This is why it was possible for sea captains of the Royal Fleet to report most of these strange and unexplainable phenomena.

The crawling, flying, foaming, surging, wriggling, creeping protoplasmic world reality! Here was the "world process" of Goethe once again! "Will it be admitted that there are vast viscous and gelatinous regions floating about in infinite space?" Metaphysical influences effected the intermediate existence of the world in which we were situated. For Mr. Fort, the present world was fixed only in its position on a gantry of worlds. With reality now understood as a spectrum of possible existences, there were also thrilling new explanations for the strange occurrences which seemed to "flow up or down" from some other dimension. When he spoke of "other worlds" he referred not simply to "other planets", but to whole world-stages which lay either "above" or "below" in order of reality.

"Intermediateness is quasi-existence. Neither real nor unreal. But expression of attempt to become real, or to generate for, or recruit a real existence." I was rather taken aback when reading these lines. How succinct a description of the Borderlands! A vision of such parallel worlds would explain the myths, the heroes, lands, nations, and events of old! The explanation of parallel worlds seemed especially poignant and vital to the English writers. Those who especially come to preserve and cherish the writings of Charles Fort in this respect included H. P. Lovecraft, J. R. R. Tolkien, and C. S. Lewis.

The extrication of mythos from the frozen ice of a growing materialist worldview was all-important to the Europeans. Their deep love of mythos betrayed an inherent world reality otherwise unexplained. What an idea! What a powerful thought! Events were "slipping through" our world from various metaphysical directions. There were "countless worlds", evidenced sometimes by the wild strangeness of certain bizarre happenings. And these included a greater variety of parallel worlds than astronomers could count. To Fort, the cosmos was not the apparent display which senses brought daily to experience. There were larger spaces contained in the metaphysical regions.

The apprehension of these metaphysical regions barred the foolish and insensitive from venturing toward their borders. But where were their borders? What borderlands opened the portals to their worlds? How were they able to slip in and out of our world, and we could not? The knowledge of their existence preceded any scientific explorations. Entrance into these "other worlds" first required sensitive understanding. In speaking more directly of these portals, Fort stated that "we have a sense of a stationary region overhead, in which this Earth's gravitational and meteorological forces are relatively inert; or a region that receives products like this Earth's products, but from 'external' sources."

The communications between such parallel worlds would be quite natural occurrences, though possessed of a distinct "strangeness". These events would be reasonably quite repetitive, and as bizarre as the worlds from which the "messages" hail. Since the compositions, realities, and creative expressions in those worlds were completely unfamiliar, one would require special understanding of the natural world in order to discern that which could not be construed as "of this Earth." Mr. Fort suggested that "beyond this Earth are other lands, from which come things, as from America, floating things to Europe..." This might explain the unintentional driftings between world realities, especially from their world to ours.

But the opposite drifting had also to occur, did it not? To this possibility, Mr. Fort added that "objects caught up by hurricanes or whirlwinds may be deposited in a region of suspension over this Earth," but he is not speaking of physical space, not of physical suspensions. These are regions where several worlds meet; as the doorways of apartments meet in vestibules, terraces, or plazas...however great in prominence each such world may be. What were the potentials which triggered these happenings of strangeness?

In the Fortean view, everything on our world might be from "elsewhere", and therefore has more than scientific significance, more than a linear potential, and not being capable of finding lineage in the world alone. The categorization of objects, such as rocks and living things, must now include their parent worlds. Charles Fort was a bold developer of extraordinary concepts. Assuming his premises of near worlds to be true, and assuming the accidental occurrence of "driftings" between such worlds, he then engaged the concept of deliberate signalling between metaphysical worlds. Messages from one metaworld to another! This was the riveting theme discussed in the great unfinished work of C. S. Lewis entitled, *The Dark Tower.* In speaking of "communications from other worlds" he means the sudden and unexpected occurrence of "events, messages, and visitors."

Fort makes clear the fact that the observation of such messages is simply missed by most scientific observers because of their notion that Earth manifestations are products of this world reality. To Fort, anything found in this world may hail from another dimension. A better description of eidetic interchange I have not seen expressed. "Other worlds are in communication with the Earth. Proofs of this exist...some external force has marked the rocks of Earth from a distance." Fort, the pure visionary, speaks when saying that "somewhere on earth there is a an especial rocky surface or receptor or

Polar construction, or a steep conical hill upon which for ages have been received messages from some other world; but that at times messages go astray and mark substances perhaps thousands of miles from this receptor."

BORDERLANDS

All of these wonders proceeded from the excited mind of a round, little, unnoticed man in pince-nez glasses, who lived in the Bronx. Unlikely? Strange? An event? Fort asked magnificent child-like questions. "Where to the whirlwinds go...of what do they consist? A supersea of Sargasso, derelicts, rubbish, old cargoes from interplanetary wrecks, things cast out into what is called Space by convulsions of other planets; things from the times of the Alexanders, Caesars, and Napoleons, of Mars, of Jupiter, or Neptune...things raised by this world's cyclones...accumulations of centuries, cyclones of Egypt, Greece and Assyria.." On and on!

His writing and private publications now drew a small gathering. Charles was finally getting a little recognition for all the years of study. The original Charles Fort Society was founded on January 26, 1931. Its function was to serve Mr. Fort in matters of academic defense, and in the proliferation of his works, and consisted of ten founding members.

The Society published a review called *Doubt!* in which strange facts and their relevance in a larger scope were shared. In writing of himself on behalf of these few friends, Mr. Fort stated that "we are not Realists. We are not Idealists. We are Intermediatists."

Charles Hoy Fort passed from this earth in 1932, as quietly and unnoticed as he had lived. Except for the original writings, which were bequeathed to the Society, he remains unknown in both the worlds of professional science and philosophy. The volume of his epistemology, his worldview, is contained in 1000-odd pages.

The Fortean masterpieces offer certain physical proofs for both the Goethean world process and the more metaphysical musings of Sir William Crookes.

The Fortean notion of "intermediate worlds" seems best to support certain concepts expressed by Crookes in the late Nineteenth Century. I am sure that Sir William conceived of a world in which dreams gradually merged with physical reality. Being a scientific researcher however, he was hard pressed to explain such transitions in light of physical process. He was therefore inclined to examine and describe the workings of these transitions in terms of space plasma, by that meaning "ectoplasm". The phrase which he coined, some two decades before Charles Fort began his work, referred to that region of reality which lies between the dreamlike metaphysical worlds and the hard physicality of our own. He called it the "Borderlands".

The very use of the term "Borderland" in the world of science has a special place and meaning for some of us who look beyond apparent reality. Those who do not see evidence of horizons beyond the physical merely mock the notion of a Borderland. But this mystifying term has special import for those who have peered into the meaning of physical reality, and have realized a metaphysical world.

It is also the very phrase from which our original foundation's name is taken. It remains an apt title for our consortium, who search the "Borderlands" in order to discover and secure those connection points which permit energetic, material, and communicative exchanges. In our study of each research realm, we are closely examining the processes which manifest during "metaworld transitions".

SIMILARS

There are scholarly contemporaries who have taken the first steps toward acquiring personal experience of the Fort revelation. Of the possible many (we cannot now be sure how many unnoticed there may be), I know of two or three who are presently being published. One of the most notable scholars in the Fortean tradition, William Corliss, must be mentioned. His prolific "Sourcebook Project" is a true bibliomantic treasurehouse. As enormous a labor of love as that exhibited in the young Charles Fort, Mr. Corliss has devoted decades to the acquisition of natural anomalies and unusual phenomena. The Corliss collection includes a series of bound editions. These are collections, collations, and correlations of strange natural phenomena.

Urgent and intense in their presentation, Mr. Corliss has given back perhaps the single most valued gift to our contemporary community of natural philosophers. I know that Mr. Corliss has a specific goal in mind, and that he scans the old literature for "evidence" of his essential worldview. I have never read what that view might be, but I am sure it is much more than a mere collection of forgotten facts. The true work of Charles Fort exceeds the mere collecting of strange facts. Fort, you will remember, burned his formidable collection more than once.

Where then do we find the essence of Fortean revelation? How is he singled out against the scores of others who have simply followed these pedantic early steps? Fort became a visionary, the result of intensive and devoted preoccupation with the most bizarre forms of information. One might say that the information itself contained the messages of transformation. Fort did not rest in his facts. He used them to realize a larger, more stunning reality beyond a consideration of the physical. He was more an alchemist than most suppose, preserving the belief that worlds were actively being transmuted from one form to another, and that these transmutations also signalled their messages throughout the gantry of reality. Experience was the gate, the mind was the sense.

Several moderns put forth the pretense that they follow Charles Fort, and of those I can identify perhaps only one or two who are genuine, but realize that they are merely retracing the work of Fort. Fort remains, with Goethe and Steiner, a true original.

But any similarity between Fort and the new plethora of self-proclaimed Forteans loses all credence on closer examination. Less experts than frogfalls!

To equate Fort with anomalies only, is a complete misrepresentation. We have reviewed the fact that Fort was no mere collector of strange facts. He used facts as indicators of metaworld transitions, of messages between the mythic worlds. And, while this first step is the necessary one in following the Fort footsteps, strange facts alone do not complete the qualifying requirement. No indeed. The path toward achieving the kinds of higher expressions gendered by Charles Fort require much more extensive revelations. But, this knowledge demands a personal transformation, so much more than mere ownership of the Fortean titles and bibliographies. This is a strange fact which certain "dashing" publishing houses fail to recognize.

Fort would even now scoff at his modern day adherents, especially those who seek to make a small living from the exploitation of his labors. Perhaps he would categorize them along with his other unnatural freaks of nature.

FORTEAN SLIME

With the arrival of flying saucer events and the social focalizing interest in that aerial phenomenon, the Charles Fort Society gradually lost its original direction and theme. Occupying themselves, not with the larger implications, but with very singular focal points, the Fortean Society began to lose its vision. Just as did Mr. Fort when he remained preoccupied with singular facts of strangeness. The transition in his life came when he stopped looking at the facts and their "strangeness", and began to realize that bizarre events were actually quite commonplace. The importance of this fact more nearly directed his vision toward his ultimate estimations and conclusions.

Those who have entered into an experience of the good world of Charles Hoy Fort, who have delved somewhat into his mind and heart, become pained to hear of the sheer idiocy which proceeds from the groups which now sling his name about like some trite little bauble. It never fails to amaze me that those who so closely cleave to the work of great minds are too often completely unprepared to assume the role which they so boast themselves worthy.

I now find that an increasing number of unscrupulous persons have undertaken the theft of our title, one in which we have priority under Law. Moreover, it seems that this disorganized conspiracy of greed has seized on a method by which they each hope to gain some quick and easy fame or fortune on our coattails. I have not been a small bit disgruntled and irritated by the very obvious and recent petty assault which has been waged against *Borderlands*. Among those who search the internet for signs of life, not a few persons have brought to our attention the fact that other publishers have begun a truculent infringement campaign. If you are a world wide web browsing aficionado (which I am not) you must have, no doubt, recently found an increasing number of "new science" brokers with the "Borderlands" title attached to their credit line. Very apparently our good name, thematic continuity, and sound experimental legacy has been espied and coveted by a few dilettantes overseas.

It is through the vulnerable climate of our times that these repugnant individuals have employed the mere "buzzword jargon" of conspiracy fanatics to make some fast and easy money. From its inception as an entity in 1945, Borderland Sciences Research Foundation has had a long and illustrious history. We do not intend to remain neutral about these recent assaults on our character, the relevance of our scientific approach, our methods, or our format.

FAREWELL

Finally, we must bid adieu to Mr. Charles Fort, his pince-nez glasses, his menagerie of the odd, his hurtling fishfalls and regions of outer darkness. And it is indeed with a very dear and deep sadness that we relegate his life and life's work to the other monuments of greatness. How thoroughly poignant. That he and his wife were childless, and that they lived out the whole of their lives in so quaint and so warm a little spot in the Bronx forever touches the heart. He rests his glasses down on a rolltop desk, flooded with pages, new index cards, fountain pens and pencil scrapings.

Of his like, there has been no equal. Charles Fort was an original. A true bibliomantic discoverer, whose ability to saturate the available literature of his day was given the gift of a new doorway, opening on a new and liberating dimension. It was in Charles Fort that humanity was offered a grand and connective view of the world process, that to which Goethe pointed.

New consciousness has its devotees, those who comprehend the essential Fortean message and meaning. There are those however who, without the least speck of understanding, have recently taken it upon themselves to become spokesmen of the great Charles Fort. Those persons who also, I may add, reveal their frail and spurious grasp of the Fortean theme, have not taken the humility and sweet humour of their namesake much to heart. Unable to pluck themselves out of the highly lucrative information complex enough, they insist on printing excessive copy on the trees rather than the forest! Oh, some are quite secure in applying the lacquer with a thick brush, their hands and works dripping with the pungent aroma. Scholars proclaim their worth in the sincerity of an ethical quietude, and do not seek to scully their colleagues across the sea.

Since there are now those publishers, whose weak grasp on the theme has let fall the glowing torch, we have decided to publish ongoing research to extend the work of Charles Fort. This effort, this labor of love, will soon take the form of a column "in memoriam perpetuum". Land Ho! ❐

With my many thanks to Louis Pauwels and Jaque Bergier!

And thank you again my dear Eirene, who knows my thoughts and often speaks them aloud before I do.

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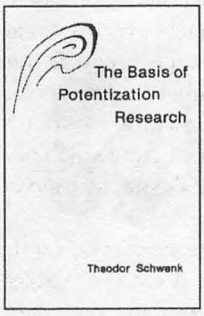
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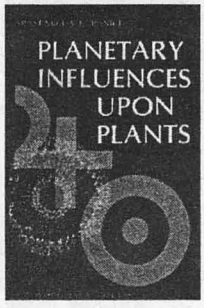
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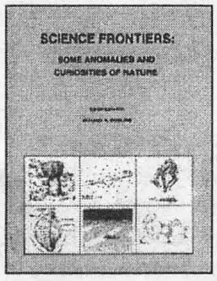
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Believe It or Not, Plants Are Conscious Beings



by Robert Goodman

First published in the Spanish magazine,
Mas Alla Dela Ciencia, No. 89, July, 1996.

INTRODUCTION

Several years ago, the book, *The Secret Life of Plants*, by Christopher Byrd and Peter Tompkins, attracted the attention of researchers from all over the world, fascinated by the possible existence of a consciousness not only in plants, but also in inert substances like metals. However, this book did not provoke the same interest in the scientific community, most of which rejects this possibility, as it also does with all those other discoveries questioning the established or official truth.

It is not strange then, that this same scientific community rejects what are known as the Vedic Sciences -age-old wisdom of India- which speak about the existence of a field of vital energy-prana- that impregnates everything existing, visible or invisible, in the Universe. For readers not conversant in these matters, the Vedas consider that this vital energy or prana is intelligent, comparable to Cosmic Consciousness or the essence of God. For this reason many Hindu scientists accept that everything in Nature has consciousness and therefore has the capacity of enjoying or suffering.

JAGADIS CHUNDER BOSE: A CENTURY AHEAD OF HIS TIMES

Probably, most people who read this article are unaware that the reactions of plants and metals to different kinds of aggression were studied and demonstrated by an Indian scientist at the beginning of this century. This scientist was Sir Jagadis Chunder Bose, a tireless researcher who defended his theories before the forums of the scientific community of the epoch and who, inevitably, was doomed to fall into oblivion, so much so that his name is rarely remembered beyond his native West Bengal.

This biologist and physicist dedicated his entire life to investigate the relations between plants, metals and animal tissues, discovering the link between them. Among his inventions, we find the crescograph, twenty years before the electronic microscope (being its precursor) as well as, according to his biographer, the radio, designed by Bose years before Marconi. Most of his research was carried out in the institute founded by him and thanks to well-earned merit, this "Temple of Science" gained international prestige in the last years of its founder's life.

MY JOURNEY BACK TO THE PAST

Last January (1996) when on a lightning trip to Calcutta, I had the opportunity of visiting the Bose Institute and interviewing the current Director, Dr. Biswas, the author of a book reporting all the conferences given by Bose, both in India and abroad. My first surprise came when I saw the main building, called Hindu Temple of Science whose entrance bears an inscription in English saying: "This temple is dedicated to God, for the honour of India and the happiness of the world". Once inside, I was led through different rooms flanked by large glass cases containing miscellaneous instruments invented by Bose, including the crescograph.

As Dr. Biswas stressed later on, a mere glance at these rooms and all the documentation collected by Bose during his life time, was more than enough to demonstrate the unfairness with which he had been treated by the scientific community, especially regarding plant life, something which now, on the threshold of the 21st century was being timidly accepted. In fact, fifty years had to pass after Bose's death, before the Encyclopaedia Britannica mentioned his research on vegetable physiology, dedicating him a minimum of space.

Dr. Biswas' office was the epitome of solemnity and tradition. Dozens of books were piled on his desk and the window ledge preventing the light from entering and giving the entire atmosphere a sepia tone, typical of photographs taken at the beginning of the century. After the normal introductions I started my interviewing Dr. Biswas.

Robert Goodman (R.G.): Going back to Bose's childhood, why did his father decide not to send him to an English school?

Dr. Biswas (D.B.): When J.C. Bose was only four years old, his father decided to send him to a village school, as he felt that the British system had a negative effect on Hindu children, obliged to learn values foreign to their own tradition and way of life. His rural school allowed him to spend the first years of his life in close contact with Nature, awakening an appreciation for plant life that would last until his death.

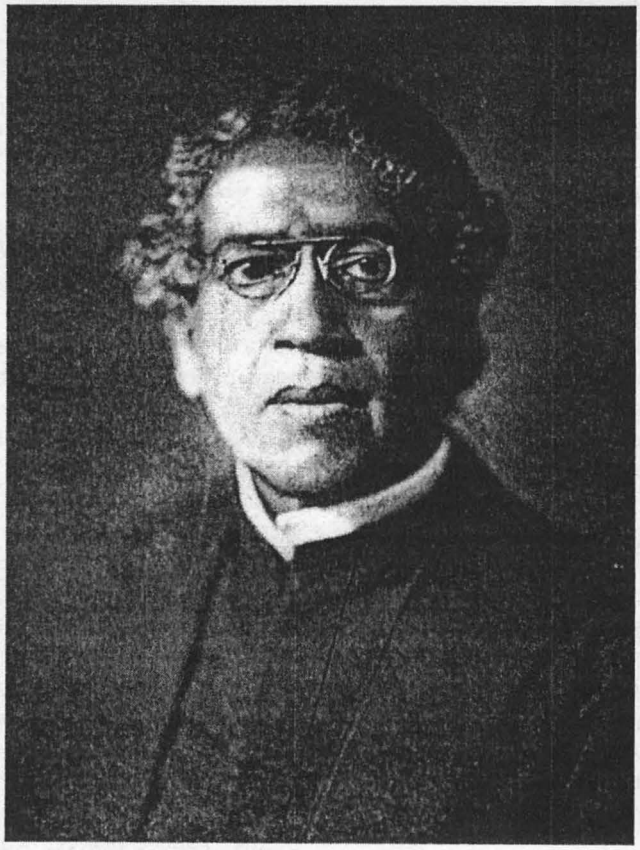
R.G.: Bose's name is associated to the world of plants. But one of his biographers mentions that he invented the radio and not Marconi.

D.B.: This is a fact. Way back in 1895, a year before Marconi patented the radio, Bose managed to transmit electrical waves from the Conference Hall of Calcutta Town Hall to a room more than 20 metres away. Moreover, between 1894 and 1899, he invented several instruments based on electro-magnetic waves and wrote a paper about the determination of the wavelength of electric radiation which earned him the recognition of the English physicist, Lord Rayleigh and the award of a Doctorate in Science (D.Sc.) from the London University.

PLANT FATIGUE

R.G.: When did Bose start to consider the dividing line between inert metals and living organisms?

D.B.: In 1899, after observing that a mechanical radio-conductor, used to receive radio waves, lost its sensitivity when continuously used, but recovered its efficiency after a period of rest. It was then that he thought that perhaps metals could recover their "fatigue" in the same way as tired animals or people, hence eventually verifying that the dividing line between "lifeless" metals and so-called living organisms was very fine. Later on, from Physics he passed to Physiology comparing curves of molecular reaction in inorganic substances and the tissues of live animals. To his surprise, he observed that the curves corresponding to magnetic iron oxide (slightly heated) were very similar to those traced by muscles. In both cases, both reaction and recovery decrease due to an excess of work but the resulting fatigue may disappear thanks to a massage or a hot bath.



R.G.: When did Bose incorporate plants into his research on fatigue and recovery?

D.B.: A little after discovering the similarity between metal and muscle fatigue. For this purpose, he ripped off several leaves from a chestnut tree and after submitting them to the same process employed with metals and muscles, he observed that the leaves reacted to abrupt change, much in the same way as muscles and metals.

DRUNKEN PLANTS

R.G.: How did botanists react to Bose's work?

D.B.: Similar to renowned physiologists like Sir John Burdon-Sanderson, botanists were not willing to give Bose any credit since in their opinion physicists should not investigate beyond their own field. At the time, they could not accept that plants had a nervous system similar to that of animals or that they reacted to poisonous substances or physical shocks in a similar way. Bose discovered that even though plants need unlimited amounts of carbon dioxide, an excess volume of this gas could suffocate them but, in this case, they could be resuscitated with oxygen, just like animals. Similar to human beings, plants "get drunk" when injected with whisky or gin -staggering like drunkards in a pub, fainting and after a time recovering but remaining with a hangover. These discoveries and hundreds of other observations were published in two thick volumes between 1906 and 1907, provoking the protest of botanists since Bose's conclusions clashed head-on with established doctrines.

R.G.: How did Bose react to this narrow-mindedness?

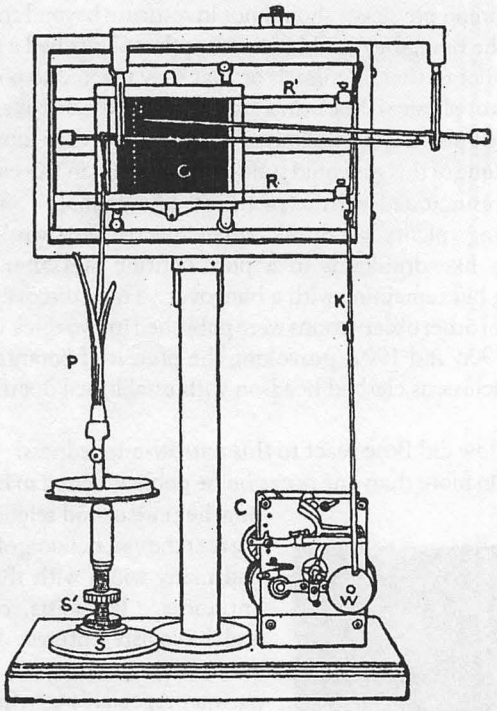
D.B.: On more than one occasion he publicly stated to his rivals how he understood science, stating that the vast building of Nature had many wings with their own entrances. Physicists, chemists and biologists entered different doors corresponding to the department specializing in their own discipline, all of them thinking that their specific subject had nothing to do with others. This segregation of the sciences had led to the then current division of natural phenomena into inert, vegetable and animal. In Bose's opinion this philosophical attitude of mind was erroneous since it should always be evident that all research has the common target of conquering knowledge in its entirety.

R.G.: Did such reactions of the establishment lead Bose to create this Institute?

D.B.: Certainly. He founded it in 1916 following his disappointment of the way he had been treated in the West, deciding that it would be solely integrated by Indian nationals. This was significant, because at that time, India was still under British dominion and he had to search for private sponsorship obtaining among others, a donation of two million rupees from the Maharaja of Barods. Even today, the institute continues being mainly financed by the private sector.

THE CRESCOGRAPH

R.G.: When I entered the building I saw different instruments exhibited in glass cases, observing that considerable importance is given to the crescograph. What is this instrument and what does it do?



The Crescograph

D.B.: All the instruments are inventions developed by Bose. A year after founding the institute, he presented a completely new instrument which not only reached a mangification between ten and a thousand times the movement of plants, beyond the limit of the most powerful microscope, but could automatically record their growth rate and changes. Thanks to this apparatus he could demonstrate that the growth of many plants is due to rhythmic pulsations, each one of which is represented by a fast spurt upwards followed by a slower, partial retreat of about a quarter of the distance gained. When observing the progress of movement, he discovered that the growth of some plants could be delayed or stopped by just touching them and that in others, growth could be stimulated by rudely treating them, especially if they were lethargic. To determine growth acceleration or delay, on applying a stimulant, Bose developed a "balanced crescograph". This instrument was so sensitive that a variation in growth rate of only 1/1500 millionths of an inch/second could be detected. Moreover, it had several practical applications including the study of the effects of fertilizers, currents of electricity, stimulants, etc. on growth.

CAN PLANTS HEAR?

R.G.: Among the stimulants studied by Bose, did he also include pieces of music?

D.B.: There is nothing in the archives of the institute confirming this, but we do know that he experimented with radio waves. In the case of some plants, at certain frequencies and under controlled conditions, it is possible to accelerate their growth.

R.G.: Dan Carlson, an American inventor, has developed a plant growth acceleration system called, Sonic Bloom which basically consists of spraying young plants with a growth stimulant whilst they "listen" to radio signals imitating the chirping of a robin in Spring. It would appear that this invention accelerates vegetable growth by a factor greater than 2-3 in the majority of cases. What is your opinion of this?

D.B.: This same type of work was being developed by J.C. Bose in this institute more than 80 years ago and never earned the merit it deserved. Unfortunately, we do not have sufficient means to disclose much about the work that has been carried out here in last fifty years but I feel sure that Bose was working along the same lines as Dan Carlson.

R.G.: What special qualities do you expect from the researchers coming to work at this institute?

D.B.: Basically, that they verify their findings with due precision and that they have a solid training in sciences. It must be remembered that Bose shunned speculative thinking, being a scientist who tried to demonstrate, through scientific experimentation, what he considered to be a thread joining all the manifestations of creation.

FINAL COMMENT

Once again, we are before one of humanity's geniuses who fell into disgrace because his ideas were too advanced for the establishment. J.C. Bose, in spite of not having received the credit he undoubtedly deserved, was a "total scientist" undoubtedly in touch with what all this Universe is about.

SONIC BLOOM: GROWTH THERAPY FOR PLANTS

Even though J.C. Bose was the first person to experiment the effect of radio waves on plants it is an American engineer called Dan Carlson who has developed a system, Sonic Bloom, combining high frequency radio signals with the spraying of plants with a solution of more than 55 trace elements, amino-acids and an acid extracted from algas, and probably not knowing it, paying homage to the Hindu pioneer.

Carlson affirms that his method accelerates plant ripening, increasing production, improving flavour and nutritional value, as well as extending useful life.

His secret lies in a high frequency, electromagnetic wave, imitating natural sounds, such as those emitted by different species of birds. According to Carlson, these sounds open small orifices on leaf surfaces allowing the plant to absorb nutrients more easily.

On the other hand, professor Michael Dickson, of the Department of Plant Science of the University of Guilph, Ontario, has carried out experiments with the Sonic Bloom method and has concluded that according to the results obtained, the technique positively affects plant growth. Dickson's opinion is similar to that of J.C. Bose in that, the influence of sound frequencies may be felt at the cellular membrane level of plants, producing an increase in osmotic pressure (absorption and movement of water and nutrients) and a greater extension of the cells, resulting in growth increase. Dickson carried out his tests with soya beans, reporting double plant growth with half the normal water consumption.

Dan Carlson hopes that these experiments, performed by independent laboratories, help farmers and smallholders in many areas, especially those suffering from drought. Experiments have also been performed, at laboratory level, with different agricultural products, native to the United States, confirming greater growth rates - between 20-100%. Also, in Israel, experiments have been performed

with 450 varieties of shrubs and fruit trees coming from North Africa and in danger of extinction. The results have also been completely satisfactory.

The scope of Carlson's work is enormous, opening new horizons for small scale farmers who wish to increase production at a very low cost, allowing them to become independent from large scale agricultural monopolies. Carlson has refused to sell his patent to American companies because he suspects that their true intention is to file it, without developing its many applications. Nevertheless, the governments of some developing countries have already shown an enormous interest. ❐

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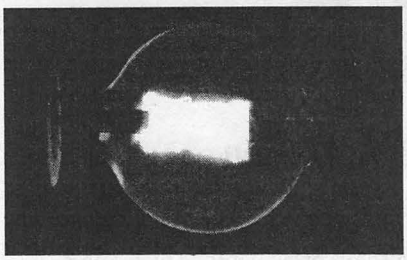
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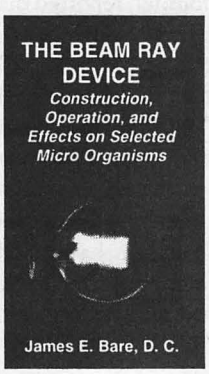
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Transmutations of Ores

by Robert A. Nelson

THE synthesis of elements by high-energy bombardment of other elements is common knowledge and practice among nuclear physicists. In their fashion, modern physicists also have accomplished one of the goals of alchemy: the production of artificial gold. However, the yields are low and the product is unstable and very expensive. Such nuclides find only limited use in medicine and chemistry.

For example, R. Sherr, et al., reported the "Transmutation of Mercury by Fast Neutrons" of lithium and deuterium. These formed three radioactive isotopes of gold by the n-p reaction, and three isotopes of platinum.[1]

In 1980, a group of researchers at Lawrence Berkeley Laboratory (Glen T. Seaborg, et al.) reported the production of a few billion atoms of gold as the "trivial result" of an experiment with a Bevalac accelerator. A bismuth target was bombarded with a "relativistic projectile" that chipped some protons from the Bi nuclei, forming gold. The experiment produced less than one-billionth of a cent worth of gold.

In 1980, Andrew Melchanov, a Chicago publisher, reported that Soviet "physicists at a nuclear research facility near Lake Baikal in Siberia accidentally discovered a fusion reaction for turning lead into gold [in 1972] when they found the lead shielding of one of their experimental reactors had changed to gold." At that time, it was expected that Russia would be able to mass-produce gold for about $600/oz.

Several researchers in the 20th century have reported their methods of producing profitable amounts of values from base metals and low-grade ores without the use of nuclear reactors. Some of the methods are genuine low-energy alchemical transmutations.

T. H. Moray

The Moray process is a prime example of what is possible. In 1950, Thomas H. Moray was approached with a request to investigate the possibility of improving the extraction of uranium ores. As a matter of course, the Moray Research Institute (MRI) proceeded by bombarding the ore in an "environment" with x-rays as high as 24 MeV before attempting to extract the values. The average ore contained 0.23% uranium oxide. After irradiation, the ore yielded from 7-75% uranium oxide!

In 1953 the MRI proposed that the Atomic Energy Commission (AEC) investigate such a project for the "aging" of atomic ores by a "breeding type reaction with high-energy particles or x-rays in the presence of a proper environment." The AEC declined to grant a contract.[6]



In 1958 MRI adapted its process to the augmentation of precious metal ores. The Moray process uses three main categories of ores, containing traces to a few hundredth of an ounce of gold and silver per ton: 1) low-grade unprocessed gold ore; 2) mill tailings — especially advantageous; this material costs very little, is ground already, and yields excellent results. Higher grade ores seem to be less adaptable to this process; they yield much less of an increase in values than do low grade ores.

"Early tests gave yields of 50-100 oz. gold/ton ore. While virtually no gold or silver values can be determined in the raw ore, after irradiation and drying the gold and silver can be identified by standard fire assay or any other normal determination methods...

"Metals not otherwise detected are freed for a separation by normal separating processes. This process does not purport to be a separation process in any way in that upon completion of irradiation the samples will have to be disposed of expediently."[6]

The Moray process utilizes an "environmental solution, developed in 1949. Aging became a problem as chemical reactions continued to take place due to hydration and temperature changes.

By 1961, the MRI had refined several formulas of solutions, one or more of which work well with most ore types and do not require any aging. They can be used immediately after mixing and can be stored without adverse effects. Their cost is approximately $50/100 gallons (the volume of solution required to process one ton of ore). The solution is heated to an "elevated temperature" during irradiation.

In a telephone interview with John Moray (Ken Jones, September 1981), he said: "The environmental material consists of a combination of chemicals whose atomic numbers add up to the atomic number of silver or gold and yield silver and gold upon irradiation." The formulas include arseno- and iron-pyrites in alkaline solution. Moray adds, "Antimony has peculiar properties — it has floating electrons which come in very handy. It is believed that this environment furnishes particles similar to the cosmic ray reaction on the atmosphere. Research work indicates that the radiation must be composed of both high-speed electrons and x-rays. Consistent results under controlled methods were obtained with the addition of a catalyst (a flux or reduction agent, an environment) combined with bombardment of the material... by an energy bombardment tube developed for the Research Institute."

The "bombardment tube" may be a preferred embodiment of Dr. T.H. Moray's "Electro-Therapeutic Apparatus" (US Patent #2,460,707, Cl. 128-421; Feb. 1, 1949) In abstract, the invention is described as an "apparatus for applying radiant energy therapeutically, comprising means for producing high potential, high frequency electricity; a high capacity sparking condenser; and a treatment electrode connected in circuit with the foregoing..."

The patent states that, "The invention has been described in the foregoing with sole reference to its use for therapeutic purposes. It should be noted, however, that inorganic matter may also be treated to advantage pursuant to the methods and with the apparatus... it has been found that metals, for example, lead, have changed physical properties after treatment in accordance with the above..."

According to an article by T.R. Dolph, published in *Fate* magazine, "Dr. Moray engaged my father-in-law, attorney Victor G. Sagers, Midvale, Utah, to represent him in offering the device to the US Government... Transmutation of metals (yes, turning lead into gold) was demonstrated several times; the government supplied the lead and kept the gold."[9]

John Moray responded (Jan. 18, 1982 to Ken Jones): "The article by T.R. Dolph, Garland, TX, is one of those articles written by a crackpot that has in fact mixed together a number of unrelated facts. There is no such device as described in *Fate* magazine... The bombardment tube does exist. However, this has nothing to do with the recovery of minerals from low grade ore. The bombardment tube is a part of the therapy device.

"The story of gold and lead supplied by the US Government is a complete fabrication. My father and I always detested liars, and this man Dolph is a compulsive liar. His father-in-law, Vick Sagers, would never have said anything similar to what this man has said.

In a later letter to Ken Jones (Feb. 11, 1982), John Moray added: "The bombardment tube is electrotherapy and does not apply to the mining or mineral recovery process, regardless of how you interpret the patent.

"The patent application is speaking of a 'method' and has to do with an individual trained in the art of that 'method' which is all the law requires, and therefore, changing the physical properties of lead, i.e., making it possible to be alloyed with copper or developing a lead semiconductor has nothing to do with the mineral process again."

The services of the late eminent physicist W.J. Hooper (Prof. Emeritus, Principia College) and other scientists were solicited in an effort to discover what was producing such results. It appeared to be caused by "a rapid buildup of atoms of relatively low atomic weights to those of much higher atomic weights" such as silver, gold, and platinum.

In a progress report at the 68th National Western Mining Conference (Denver, CO; Feb. 4, 1965), Dr. Hooper announced:

"First of all, I will cite one of several tests carried out in an effort to ascertain whether the modus operandi was actually one of transmutation from elements of low atomic weights to those of the noble metals. A solution was prepared — made up of Baker's reagent — quality chemicals of the highest purity and water, distilled by boiling. These bottled chemicals list the trace materials which might be existent in them. Gold did not appear on any of these lists even in trace amounts. No atoms of higher atomic number than 19 (K) were present in quantity in this solution. Silver has the atomic number of 47, and gold 79. This prepared solution of pure chemicals in glass containers is irradiated by high energy photons for about one minute and then by evaporation the residue was dried and sent to an independent assayer for analysis. It reads 939.76 oz. gold/ton and 113.04 oz. silver per ton.

A point of great interest in the experimental test I have described is that the specks of gold found in the residue of the solutions reveal a marked crystal structure under microscopic examination. It is a coincidence that Miethe, back around 1925, found his formation of gold to be in small crystals also. The process we have described is in reality a crystal growing bath activated by irradiation. As the gold atoms come into being by transmutation, they become gregarious, which results in the crystal formation.

"From this observation there is every reason to suspect that low grade ores and mining tailings provide, not only the seed for crystal growth, but also a nuclei environment which is well advanced or uniquely favorable, for the formation of the precious metals by transmutation."

Dr. Hooper contended that the process is one of nuclear reaction. Dr. Hans Frauenfelde (Univ. Illinois) opined that the energy levels were too much of a departure from the accepted standards to verify this point. Another theory proposes that colloidal gold, lost in the dilution of ore in the environmental solution, is concentrated by the bombardment. The MRI insists that is not the case.

In 1963, MRI conducted experiments with a linear accelerator at the Electronized Chemicals Corporation (Rockford, IL) at energy levels of 11.4-20 meV with doses of 1 megarad. The average yields were 8-9% gold! It was estimated that a production rate of 5 tons ore/day was possible with the available equipment. Computerized risk analysis indicated that yields over 11.5 oz. gold/ton ore could be expected with 99.5% certainty. A higher average (15 oz. Au/ton) could be expected in mass production under optimum conditions. Other experiments showed even more promise, yielding 100-200 oz. Au/ton (128 oz. Au/ton average). "The standard deviation of yields was rather high due to the constant modification of experimental conditions."

MRI rented time on the Varian Associates 8 MeV LINAC in order to test parameters such as dose, dose rate, slurry depth, shield

material, electron volt setting, shield height, and the distance of the target from the irradiation source. The shield was a thin sheet of unspecified material placed over the sample while irradiating it.

"In main effects, only electron-voltage setting showed up as significant, with high-voltage setting being better than the low. In addition, several interactions between variables showed up as being significant. An interaction between two variables means that when either variable is changed singly, a significant difference results. Some interactions between three variables, or perhaps even more may be present. The following interactions seemed to be significant ones and seem to indicate that a higher voltage would give much better results: 1) Shield height/Voltage; 2) Dose rate/Voltage; 3) Dose/Voltage; 4) Distance of sample from radiation source/Shield height; 5) Solution depth/Shield material; 6) Slurry depth/Voltage.

"X-rays perform photo-disintegration, and the electrons furnish the energy and amperage to the reaction. It is suspected that because the escaping electrons have a certain amount of energy, a certain amount of x-rays will be produced in the material by the electrons' reactions (Compton Effect). The ideal reaction, it is indicated, is for the x-ray to be produced at a target located somewhere outside the accelerator tube where losses of energy would be minimal. This reaction is dependent on the following factors:

"1) The isomers of the isotopes reacted upon must be present in the ore before the ore will react to the reaction; 2) These reactions are dependent upon the type target in order to control the frequency of the quantum energy level; 3) High-energy electrons must be present in the ore as well as x-rays; 4) The composition of the environmental solution furnishes other particles that are freed by the action of the resonant frequency of the x-rays and the electrons produced by the particle accelerator; 5) The reaction is a dose-rate reaction and not dependent upon velocity. The velocity of the original particles will determine the depth and time of the reaction only. Over-radiation gives a deterioration rate and loss of values reported...

"As the size of the sample varies, the reaction varies on an inverse lineal level wherein doubling the size of the sample would cut the total reaction in half."

Radiation dosages of 0.16, 0.5, and 2.0 Megarads/minute gave peaks on the dosage curve. Four Megarads/minute gives the highest yield. Irradiation lasted one minute.

The reaction also is wattage-dependent. The minimum wattage required is 200 watt-seconds per gram of ore.

"The process has to be adjusted to the characteristics of different ores. The chemical formulas and the resonant energy levels must be established for each ore.

"Consistency was achieved in 1970 by adding to the process a control resonant chamber (Magnetic Undulator) which acts to bring all variables into phase, or into a resonant relationship, with the radiation source, to a point where a consistency was obtained higher than any obtained prior to that time. There are definite peaks at which each ore that is of value with this process, releases the metals found within it. There are peaks for each metal ion within the ore."

The Magnetic Undulator establishes non-propagating, resonant standing waves with the x-ray diffraction wavelength of gold (2.042 Angstroms) in the environmental solution. The chemicals (in copper pans) were bombarded from above. Each bombardment increased the amount of gold 9-fold, but the yield later diminished to only three times the original amount. Consistently high, stable yields were obtained by first irradiating the trays from below and then applying x-rays from overhead. The yields increased 9-fold and remained at that level without deteriorating. The process as developed produces little increase in platinum values, probably due to: a) the energy level of the irradiation source; b) the chemical composition of the environmental solution; c) target type. The silver produced in this process assayed as high as 426 oz./ton.

"The reaction is sensitive to interference from nearly every material other than glass or porcelain. Plastics cannot be used, nor stainless steel, and most varieties of rubber or brass. Copper can be used if it is in one continuous piece. Indications are that interference is due to electrostatic charge or particle position in the solution."

Better results also would be obtained with suction pumping of the slurry in an all-glass system, rather than the makeshift conveyer belt/copper pan system used by MRI.

Dunikovski

In 1931, a Polish engineer named Dunikovski announced that he could produce artificial gold by the action of "Z-rays" on a mixture of silica and felspar melted in bronze crucibles under the influence of 110 kilovolts. Dunikovski claimed to have perfected a process he inherited from his father and grandfather who had developed it. Dunikovski theorized that all minerals contain "embryonal atoms" or "mineralites" that can be artificially matured in minutes.

Several French investors syndicated and subscribed 2,000,000 francs which Dunikovski used to build a laboratory in Paris. But no gold was produced, and he was charged with fraud. He demonstrated his process to the court, but the results were ambiguous and insufficient to prove his innocence. Dunikovski was sentenced to four years imprisonment, but his attorney secured his release after two years. Dunikovski relocated to San Remo and renewed his experiments. He improved the process, gaining significant increases in yields.

His attorney (Jean Legrand) visited Dunikovski with the eminent chemist Albert Bonn to investigate the new situation. M. Bonn witnessed and replicated the process. One type of sand, which contained 11 grams Au/ton before treatment, assayed 859 grams/ton after treatment with the improved apparatus.

Subsequently, Dunikovski founded "Metallex, Societe Anonyme" with Belgian stockholders and established a factory on Lake Neuchatel. Nothing more is known about the affair, because all subsequent proceedings were kept secret.[10]

Adalbert Klobasa

About 1937, an Austrian chemist named Adalbert Klobasa claimed to have produced gold using an electromagnet and induction coil with which he treated a mixture of titanium-potassium-oxalate (36 gr.), ferrous sulfate (84 gr.), copper sulfate (50 gr.), sodium sulfide (50 gr.), ammonium chloride (100 gr.), ammonia (250 ml.), sodium silicate (20 cc.) and silica (440 gr.). The reaction was catalyzed with 100 mg. of silver. Two hours of treatment afforded a 1% yield of gold which appeared as brown-red scales. Klobasa claimed that gold is built up from iron, titanium, and sodium. He declined to enter into business with his synthesis

because, he said, "I am too old, and not fit enough to worry myself chasing around after capitalists."[10]

Arnold Conrad

Another simple method which "ripens green ores" (volcanic sulfides, pyrites, or tellurides) was perfected by Arnold Conrad (Chico, CA). Conrad learned the process from a German scientist. The technique balances the ore's electropositive charge with 10-150 volts DC. The enhanced values are removed by electroplate refining (or in vacuo for Rh, Os, and Ir).[11]

"As all ores are different I may use from one to three additives... to assist in rejuvenating the chemicals and acids in ores. But any material eroded... by water is not amenable to this process."

Another similar method of transmutative enrichment was developed by some California alchemists in the 1970s:

Smelt 2 lb. lead with soda ash and/or soda-borax. Use this as the anode, and a stainless steel or carbon rod as the cathode. The reaction with the ore is contained in a carbon crucible with 10% nitric acid as the electrolyte. Add extra flux as needed. The process is repeated from 7-21 times. ❐

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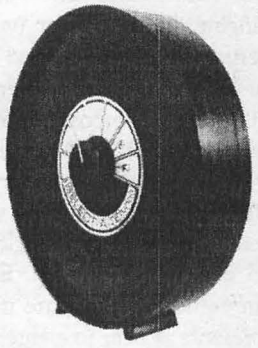
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EXPERIMENT 1

It has been a contention of a few researchers that electrical meters do not measure earth currents directly. This is problematic to electricians, who see all of these "earthed metal" effects as electrical activities. But we have evidence that earth currents are *biodynamic* in nature, and manage a "transformation" of their essential character into a weak electrostatic effect. This is our view, and here are some experiments you may try to gain insight into these contentions and controversies.

In order to illustrate this "transformation effect", you will need several different electrical measuring devices. Obtain (if you can) a swinging dial voltmeter (with a millivolt scale), a swinging dial microammeter, and a good digital voltmeter. For this experiment you will also require two identical iron rods. One way to insure their uniformity in composition and size is to buy a thin yard long rod from the hardware store ($2 or less).

Wearing gloves to prevent fingerprints, abrade the rod very well with fine emery paper. This will insure that all of the outer oxide has been taken off. Keep your gloves on. Wipe the rod with a clean cloth and cut the rod in half. Each rod is now identical in size and composition. While pure iron is difficult to obtain, the steel rod represents as near to elemental state as can be obtained.

Now find some dry ground. This can be discerned by digging down a little into the soil. Moisture will confuse your readings, not destroy the effect. Moisture introduces electrolytic effects which require some hours to "burn off". When the voltages finally reach their steady state, you will be observing the true earth current effect. So, for the sake of strengthening your confidence, drive your iron rods well above the moisture line. It was because of moisture factors that electricians equated the effects, which you will shortly observe, with "earth electricity".

Make sure the iron rods are at least 1 foot apart. Make your connections to the rods firm. Use well-stripped wire ends and electrical tape. Connect your meter to the free ends of these connecting wires. Please be careful not to trip over the wires! Bring along a notebook and pen, because you are sure to forget the many values we are going to observe. Take measurements with the analog meters first. Try the analog millivolt scale. Now, the analog microammeter. Write each of these values down. Now take measurements with the digital meter. Take millivoltage and then microamperage readings. Write these values down. See any difference between the two sets of values? You do? What in the world is going on here?

It is very interesting to notice the differences we obtain when alternating our readings between jewel-movement galvanometers and digital meters. In my experiment with double iron rods (1 foot apart), I obtained digital readings of 28.9 millivolts at 15.9 microamps. Using the same wire leads, the very same rods gave 25 millivolts on an expensive swinging dial millivolt meter. I obtained 28.9 microamps on a very accurate military swinging dial microammeter, one given to me by Michael Theroux. The differences between the obtained values are significant. One learns much by noticing both the slightly diminished voltage readings of galvanometers, and the relatively large differences in microamperage between each meter. The numerical differences are always significant and surprising.

TRANSFORMATIONS

Is it that the new digital meters are "far more accurate" than the older analog swinging dials? No, certainly not. Do not fall into that contemporary ritual. Whenever you see such unexpected divergences, you are witness to an important piece of information. Divergent measurements are always the most important data. They represent the unknown rather directly. Always look for these kinds of divergences.

But what in fact is happening in this case? If we allow place for our thesis, we would understand that biodynamic earth currents will always actively interact with ground-connected apparatus. They were historically found to interact with the various components and materials of telegraphy, telephony, and early wireless. They will interact with any ground-connected external circuit: the very basis of grounded radionic instrumentation as developed by George Starr White. In the case of our experiment, each meter is reading a certain value which is the result of a strange "transformation effect", a "conversion" of biodynamic energy into some electrostatic fraction. The differences in readings between meters are derived from energy transformations. We will then also understand why we are observing

those differences.

The transformation takes place in the material components of galvanometers and digital meters, whose geometric disposition also plays an important role. In jewel-bearing galvanometers, the transformation occurs across a series of very fine coil windings. Most researchers imagine that this transformation is magnetic in nature. They somehow think that earth currents, however weak, manage to stimulate magnetic inductions with subsequent motor forces.

In our view, biodynamic earth currents enter the galvanometer frame, spreading over the fine wire coils. This spreading effect does not alter the biocurrent itself, but allows a transformation in which the metal windings become a "concentration medium". In the metal wires, electrostatic charges are produced between the stator and moving coil. This produces a subsequent torsional force which appears to be magnetic in action. The transfer is not efficient. It is in the nature of the energetic transfer that the diminished readings are obtained.

Strong biocurrents, those capable of modifying human experience, rarely register any significant reading on the meters. One always obtains diminished biocurrent readings with swinging dial microammeters, a fact known to Tesla and rediscovered by Wilhelm Reich. These diminished readings are not obtained because the meters are antiquated. For this reason, many professionals throw out the notion of biodynamic energy.

Measuring the very same earth circuit with a digital voltmeter always gives an elevated reading. This occurs because, in digital meters, the transfer occurs through conduction, and not through induction. Passing directly through a variety of semiconductors, the biodynamic energy is little retarded. The passage of current occurs in a more "radionic" (and more efficient) manner. The transformation of bioenergy occurs more mysteriously into a variety of electrostatic charges. When used to measure earth currents, the well-calibrated digital meter will therefore always measure a much higher set of voltage and amperage values.

What these comparisons teach us is that the transformation of biodynamic current into electrical products occurs differently within each kind of meter, a process which illustrates the behavior of biodynamic energy in electrical components. The transformation is obviously best effected in semiconductors. The earth currents are biological in essence, and are much stronger than what the electrical meters ever can show.

EXPERIMENT 2

We have just seen then that electrical components, especially meters of various kinds, actively convert or transform input currents of biodynamic energy into electrostatic potential. You can try this experiment with different galvanometric meters, for each uses a distinct coil arrangement. You should obtain different readings with each meter. Try using older digital voltmeters, and see what readings you then obtain.

The "transformation" effect teaches us much about the efficient design of systems made to implement biodynamic energy, and early telegraph systems engineers apparently knew much about it. Writer, Gerry Vassilatos describes the way the old longline systems required empirical adjustments which made no electrical sense.

He suggests that they were dealing with line saturations of biodynamic earth currents; and the rheostats, inductors, capacitors, and other junctions were required for the efficient exchange of signals in a radionic manner. He states that telegraphic circuits were extensive radionic systems, using electrical components in radionic functions. We do notice the early electrical parts which George Starr White and Albert Abrams used in their development of radionic systems. Each part came from telephonic circuits, others from the diagnostic apparatus made for that industry. Later designs developed along empirical lines of thought.

All of the historical literature teaches that veins and arteries of primary earth currents are everywhere beneath the surface of the earth. The first task of the experimenter is to attract some of these primary currents up from their deep haunts to the surface. The manner in which they are obtained on the surface seems to be far too simple. Driving a metal rod down into the ground is the most direct way to obtain a strongly focussed earth current. Ancient geomancers relied on natural rock formations, and even engaged the process of placing "standing stones" over points of high energetic potential.

But metal rods more powerfully focus the earth currents than standing stones, and permit us the luxury of producing powerful results in most any location. Therefore, observing certain safety rules, we are able to perform experiments which will not appreciably or permanently modify the local energy structure. One way in which this can be accomplished , without going into too much detail right now, is to conduct our experiments with ground rods which are identical in composition. The results, I think, have been dramatic.

Let us examine the surface of earth, paying close attention to the distribution of earth currents and the zones or points of "high potential". That certain spots in your experimental ground location will give better and stronger readings than others has little to do with local mineral or water concentrations. What you will observe in this experiment is a small example of the distribution of earth current springs across the whole surface of earth.

Take one of the iron rods out of the ground and lay it down. To the upper end of this, connect a long single wire. Firmly connect this wire to your digital meter. Try not to get this tangled! We are now going to move this free rod over the ground, touching the earth for an instant at specific points. You must only touch the ground, not penetrate it. Touch the ground for a fraction of a second and write down the instantaneous voltages which appear on the meter.

Watch the meter now as you "touch" the ground with the free rod at a new spot. Do this at several points. Note that each point touched never produces the very same "contact" voltage. Certain spots are able to produce very high millivoltages. Others cannot even raise the value beyond (0.0001) volts. This simple demonstration proves that the earth has "points of energy" everywhere. But now notice the spots which gave you the highest values. You might want to sketch a small map of the touchpoints on some graph paper. Do these points fit into the fixed form of a symmetrical "grid"? Of course not.

This very simple proof is by far not the best means for showing the principle of "dendritic" topography, but it teaches us that the "energy grid" idea needs a simple revision. The earth energy is not spread out across the face of the ground in perfect orthogonal symmetry, certainly not in perfect "squares" or "triangles" with a regular crystalline form. Good dowsers can tell you this. The energy points you measure, though microscopic when compared to the whole earth surface, are always "off center". The skewed distribu-

tion in which we find earth currents more nearly resembles the shape which creeks and small rivers take when traversing a meadow. The natural energy currents meander all over the ground in twisting paths.

EARTH DISCHARGES

Obviously, the most amazing natural locations you will find are those from which the most potent earth currents radiate. These are the sites which emanate powerful earth currents, whose energetic traces may even be seen flashing in directions skyward. These are the curious "searchlight" manifestations, which some have equated with geoelectric discharges. But, observations of sudden, streaklike lights toward the night sky, occur in the complete absence of electrostatic discharges. What is the energy responsible for these high potential signatures?

In the light of what we have been discussing, the dynamics of these phenomena are not too difficult to comprehend. The fact that these discharges may be perceived but not measured is the first evidence toward an explanation. Perception can exist in the absence of physical measurement. The perceived display affects sensation, but represents an energy not having electromagnetic transformations. Biodynamic currents exist as a separate energy matrix. It is a transformation whose detection requires special transducers. Until we can develop a biological transducer, we will remain completely incapable of proving that perceptible (biodynamic) currents can exist without any other side effect.

If you have a sensitivity for dowsing, you will recognize a powerful force coming out of any rod or pole in the earth. This force can be so strong that dowsers have often gotten the "kicks" from it. Worse. Sometimes their sensitive neurology has caused them to pass out and fall down! Compare these strong biological sensations which may be felt, with the electrical millivolts and microamps which we have measured. It is clear that very wide gap exists between these two experiences.

The earth currents are biodynamic energies at "high potential". They seem to jump, or spring, out of grounded iron rods in a radiant fashion. These radiant emissions are projected outward with a high natural potential which cannot be read through ordinary (bipolar) electrical meters. The next experiment is intended to show that earth currents are fully capable of springing out of the ground at a high natural potential.

PRE-ELECTROSTATIC

One skeptic has consistently asserted that the potential differences which we have been obtaining are entirely due to geoelectrostatic fields. I pointed out that if the phenomenon were electrostatic in nature, the meter (as a short circuit between both grounds) would have constantly drained the charges to zero value. Furthermore, the likelihood of a double ground system intercepting an electrostatic field differential, while at first appearing not to be an impossibility, is also difficult to resolve.

Such a condition would infer a field structure having tremendous surface detail — one where appreciably differing points of geoelectrostatic potential coexisted between mere inches of ground. But electrostatic fields do not possess this kind of fixed surface detail, since the enormous charges from which they would spring would be relatively mobile. Rising to the surface, they would instantly self neutralize.

There would be no exception to the rule. The mobile "image charges" which are formed beneath adjacent thunderhead cells also self-neutralize. Electrostatic ground potentials never show any degree of detail, becoming instantly amorphous with their initial appearance. And since these charges are mobile enough to self-neutralize, they would move in any direction to achieve neutrality.

If highly mobile electrostatic charges are responsible for the effects we are observing, then no fixed earth current would ever be measured in our meters. At best, we would be observing a fluctuating current having a wide range. But, we do not see this.

Therefore, we are finding progressive evidence that a detailed structure does exist in the ground, but that structure is not electrostatic in nature. We are compelled to peer into the invisible, looking into vectors which precede electrostatic earth charges. But where, and how far down should we now look?

EARTH TONES

We have yet to find a "transformation effect" in which these high biological potentials cause responses in electrical meters. We might try using a sensitive electrometer, since it is designed to operate in monopolar mode. Methods such as these were freely discussed in a Radionics symposium which was held in England in 1950 (*Proceedings of the Scientific and Technical Congress*, BSRF). In it, a good number of working biodetectors and biodetection systems were outlined. Our search for a real biodetector has recently been accelerated, especially in the work of Michael Theroux with biocommunications systems.

We know that there are many more methods than galvanometers or digital meters by which we can obtain and transform biocurrents into meaningful signals. The discussion of these facts has been of major import to those of us affiliated with the Research Foundation. One such transformation effect was discovered and reported a few years ago in *Borderlands* Magazine. Gerry Vassilatos managed to obtain audio signals from buried metals and minerals. An audio tape followed the article (*Earth Tones*, BSRF 1992). Both sides of this audio tape gave clarified evidence that buried minerals, metals, crystals, and organic matter each emit a unique audio sound.

These signals were called "tone signatures". These "elemental songs" were all derived from a monopolar connection to ground. There are significant biodynamic effects which take place from monopoles placed in the earth. These are capable of stimulating unlikely electrical effects in ordinary electrical equipment. On closer examination, the fact that different elements might produce characteristically different waveforms in the ground would not then be explained by electrostatics. It is in the peculiarities of these effects that we begin to recognize the existence of the biodynamic domain.

I know that anyone can try this last experiment to satisfaction, although it is a bit more advanced in its requirements. Substances seem to become "sound radiant" only when buried in the earth. This infers that the biological source energy is concentrated below us. It also helps explain why certain spots on earth are extremely vitalizing and therapeutic. The high biological potentials must leave their trace in some form of electrostatic signature.

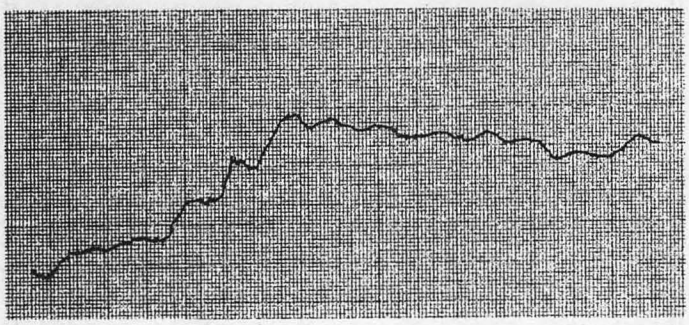
In the *Earth Tones* tape transcript, the author states that the discovery of elemental tones was accidental. He drew in signals through the center wire of a long electric guitar cable. It only took

a few seconds of reading to realize that these strong audio signals had entered a single line connection, and this represents an enormous discovery in and of itself. What kinds of audio influence would jump up out of the ground from a monopolar line?

I first thought in the language of my detractors, that is, in the unlikely electrical model. Any buried monopolar line might be explained by thinking of the wire as a conductor which is directly connected to an electrostatic generator — the earth itself. If the single point earth connection was charged, then any applied audio modulation would be amplified. This is the principle of expensive capacitor microphones. The "frying sounds" would then be explained by a subsequent static discharge into the audio mixer. But any potential that high in charge would also wreak havoc in the audio equipment through which it passes.

Components would be destroyed with each signal. Also, the kind of audio signals which were recorded for hours were not modified in any way by the presence of thunderclouds or impending lightning storms. In fact, the sharp cracking discharges heard during lightning storms actually interrupted the elemental tones. The tones remained constant throughout the day, and unaltered despite the electrical condition of the ground.

The author defended his discovery very well, also showing that the effects could not be due to "corrosion noises". Glass chemical

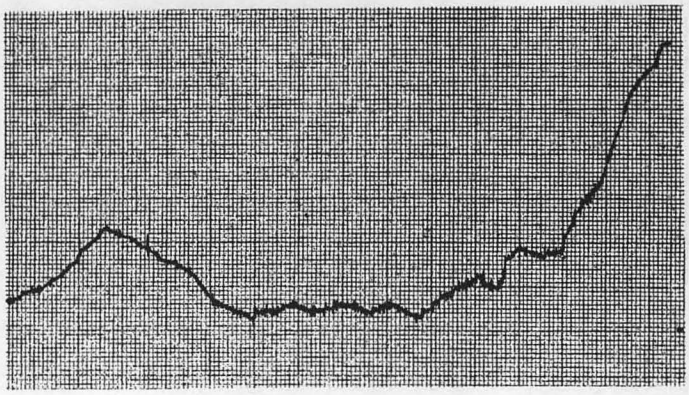


Carbon

sample tubes were used in each to produced their own elemental tones. Therefore, the complete difference of sounds produced by different buried elements must have an explanation all its own.

It was surprising to read that these elemental audio signals were able to make analog meters on an audio mixer "dance". Two experimenters, Dan Winter and Leroy Chambers, who obtained the tape, noticed certain strange amplitude pulsations taking place in meters . Their study produced a graphic analysis of one particular track on the *Earth Tones* tape — one taken up through ground rods during an earthquake event recorded by Michael Theroux. Recognizing several different pulsations, they converted certain of the tones into strip chart recordings. The results of these experiments were so intriguing that I thought it might be interesting to try a few graphic readings straight from the ground.

Since these audio signals were intense enough to make their mark on a tape recorder, why wouldn't they trigger a strip chart recorder directly from ground? I decided that I would attempt a direct examination of these waveforms, with a view toward using a graphic recording method. Chart recordings from a group of different grounded elements should reveal a great many new pieces of information.



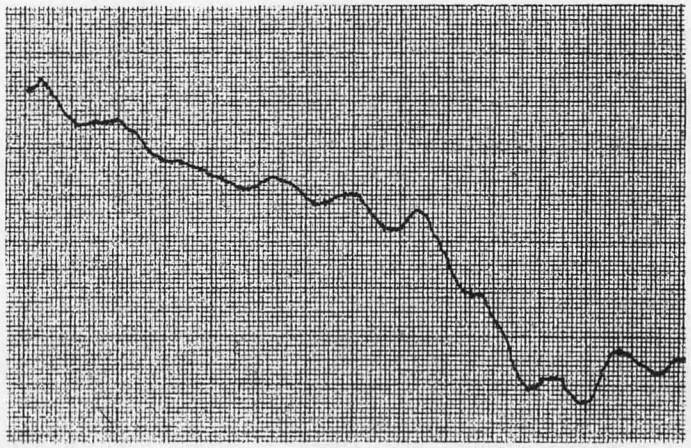
Iron

EXPERIMENT 3

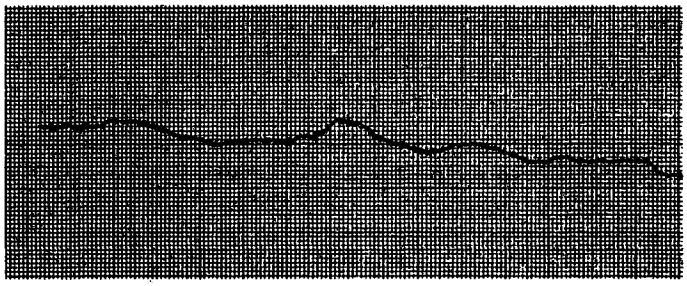
In our quest for new knowledge, the experimenter is often led to extreme measures. I obtained a strip chart recorder and a tunable 60 cycle filter from a technician friend. I took the precaution of filtering the input line, using a professional tunable bandpass filter to eliminate the 60 cycle ground noise and its harmonics. This filter did not diminish the intensity or character of the elemental signals.

I was struck by the fact that the adjustments of the bandpass filter were an identical process as performed in radionic tuning, though inverted in function. The filter "rates" are designed to neutralize electrical noise, while radionic rates are found to enhance biocurrents. I noted that the 60 cycle tones were eliminated by the filter, and were quite insignificant when compared to the energetic earth currents. The buzzing noises were eliminated, but the dominant audio fluctuations remained unchanged. I was also quite surprised to find that the quality of 60 cycle current fluctuated so much, that a constant fine adjustment (0.10 Hz) was necessary.

My results are shown as a series of strip charts. The experiment took the signals of various grounded elements (silver, copper, iron, carbon, zinc), eliminated the local 60 cycle noise (band-pass filter), and produced graphic traces of audio tones. The charts were each taken through a single channel. These signals were received from



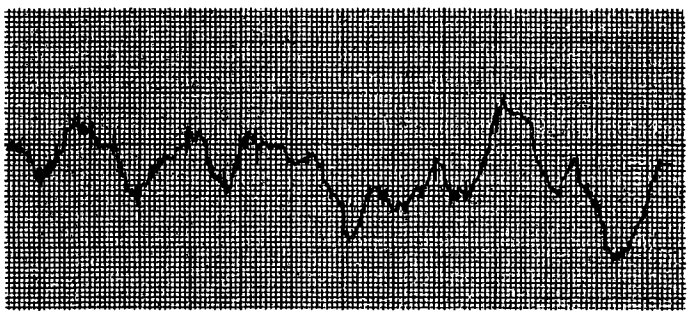
Copper



Zinc

the earth between the hours of 8 and 9 PM on 31 July 1997. Channel sensitivity was set to 5 millivolts. Chart speed was 5 centimeters per minute. I allowed a full three minutes to pass for each sample. Count 5 squares, and that represents one full minute.

Please note the differences between each graph. What you are seeing is the *voiceprint* of each "tone signature". It is obvious to the eyes that each element produced its own special trace. Please observe that the character of each element seems to come right



Silver

through the traces. These graphs give objective credence to the qualities reported by subjective personal examinations. It is again important to realize that these signals are the powerful and penetrating effects of biocurrents. After a transformation into weak electrical products, the strip chart amplifiers manage to record the strong biocurrents. This experiment shows that earth potentials are biologically intense, but also can stimulate electrical audio systems. ❐

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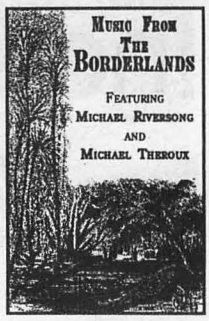
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PLANT TONES *Music from the World of Plants*



Michael Theroux

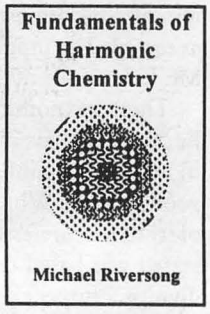
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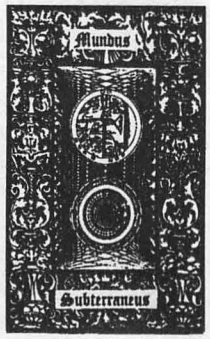
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Induced Radioactivity by Solar Light

by Gerry Vassilatos

The active pursuit of strange natural phenomena is born of a rare love for the mysterious, a love which begins in childhood. The lure and desire for mysterious phenomena becomes the passionate devotion of certain equally precious individuals. An exceptional awareness concerning the world teaches us that our natural environment is absolutely permeated with a creative and dynamic persona, an awareness which should form the exciting central theme of our lives. One of my dearest friends, the late W. G. Lehr, was one such person. Borne of a rare love for the mysterious, his was an unshaken faith in the mysterious creative love which drives the world into its more sublime directions.

SPONTANEOUS RADIOACTIVITY

During one of our last telephone conversations, we exchanged several extraordinary facts and anecdotes concerning the phenomenon of radioactivity; facts which I will share in a great number of forthcoming essays. His conversation, on one particular occasion, was punctuated by a series of statements on the spontaneous generation of natural radioactivity, a theme which at once sparked my extreme interest. Prompted to allay several concerns of my own as regarded an unintentional overexposure to a radioactive source, Mr. Lehr spoke of the "radioactive world".

There was nothing to worry about with certain kinds of radiation, he said, since "everything in the world is radioactive". He also added in very severe confidence that "certain radiations are known to be good for you". While strictly warning me not to take this statement of truth for carelessness license, he strongly intimated that what he stated was based on classified knowledge which he would never divulge. I suspect very deeply that his familiarity with such matters intensified his authority in these regards.

While I listened in startled silence, Mr. Lehr began to speak extemporaneously on a most remarkable phenomenon of natural radioactivity. He told of several instances which revealed the "spontaneous generation of radioactivity" in the environment, a surprising phenomenon which is not generally known or appreciated. The manner in which Mr. Lehr introduced the topic added an especially new fascination, and the historical records suddenly acquired a new and comprehensive meaning.

Mr. Lehr reported that rooftop sheet copper, after decades of direct exposure to sunlight, was literally transformed into a radioactive isotope. He told that this transformative process yielded sometimes excessively radioactive copper. This immediately suggested a thought stream which brought the conversation to a perfect closure. That natural radioactivity appears in the environment, often very suddenly and spontaneously, is not a fact generally mentioned in any scientific circles. Yet, I was aware there were numerous references which spoke of this remarkable natural process throughout the Victorian Bibliography.

RADIOACTIVE SUN

The academic world was divided into quantitative and qualitative oppositions many times during the years when X-Rays were discovered. On one occasion during 1896, the schism engaged an experimental discovery which challenged the quantitative model of Optics and Light too thoroughly for comfort. Constituting yet another fascinating lost chapter in the Victorian legacy, it all began when several experimenters discovered certain strange actions of focussed sunlight on photographic emulsions.

These experimenters plainly demonstrated that sunlight contained species of radiant energy which were capable of duplicating, in every attribute, those rays of Roentgen. An intriguing collection of "solarigraphs" were taken by Hammer, Morton, Rittenhouse, Schmidt, Case, Robertson, Ker, d'Infreville, G. Thompson, and Nikola Tesla.

Tesla may have been the first to achieve this experimental wonder. He certainly was first to make a public statement of his theoretical views concerning the effect:

"When radioactive phenomena were discovered, I was prepared to view them as merely the secondary effects of an external radiation, and as no trace of such a disturbance could be detected on earth, I concluded that the primary activating rays were of cosmic origin and most likely to emanate from Suns closely resembling our luminary.

"As the first step in clearing up this mystery, I undertook to ascertain whether the Sun was charged to a potential sufficiently high to produce the tremendous electrostatic repulsion, which I had found to be the only force in Nature capable of accounting for that phenomenon.

"I finally ascertained...that the Sun was at a constant positive potential of about 216 Billion Volts. Owing to its immense charge, the Sun imparts to minute positively electrified particles prodigious velocities...some attaining a speed exceeding 50 times the velocity of Light".

In the Tesla lexicon, the Sun was "positive" in charge. This was

a term referring, not to the conventional positive charge used in electrophysics, but to one connoting potentials in the Aether. The high positive potential represented the "supply potential" by which the Sun expelled an enormous flood of rays. It was reasonable to suppose that the Sun could expose well-shielded photographic plates as easily as could artificially produced X-Rays. Indeed, there were researchers who showed that, after short exposures to full sunlight, the fogging of photosensitive plates could occur directly through thick wrappers of metal foil.

Soon, the several transformative effects of sunlight on metals and minerals were discovered. After interposing opaque objects between their plates and the Sun, many other experimenters proved it possible to produced clarified images. Solarigraphic images were produced even when the photoplates were sealed in thick foil wrappers. In certain of these experiments, solar light seemed able to pass through coins and keys, producing images with softened edges. These images were often surrounded with aureoles of dark starlike "discharge lines". Such radiating patterns served only to heighten the mystery. That the Sun itself was a "radioactive body" was not questioned after this episode of discoveries.

The concept that an unknown component in sunlight was causing the phenomenon of radioactivity stood as completely plausible, but utterly "unacceptable". Experimental evidence rendered very believable the fact that the Sun was indeed a source of special radiations. But these gradual vindications of the Tesla model proved too decisive for academic comfort, and insurgent theoretical reprisals sought only to topple Tesla from his well-deserved place. Most important was the fact that, in these early simple proofs, the early Teslian view was verified. In subsequent exceptional instances, largely accidental in their observation, numerous Victorian researchers found special applications for the Tesla Aether Model.

LE BON

It was while considering all of these theoretical possibilities that Dr. Le Bon discovered a strange corollary of the Hertz photoelectric effect. It was an effect whose intensity of yield and technological potential astounded the scientific world of his time. In the course of exposing certain light metals (magnesium, aluminum, tin) to focussed sunlight, Dr. Le Bon was able to produce a "radioactive" expulsion of charges. These first experiments were simple inquiries into the spontaneous appearance of radioactivity in the natural environment.

The modified experiment which Le Bon conducted was imminently simple: a simple magnesium plate on which sunlight was focussed by a lens. Measurements were made by his modified gold leaf electroscope. Nothing could be more basic. The radioactive yield of this arrangement succeeded in producing an enormous and unexpected electrostatic charge. According to Dr. Le Bon, this yield measured intensities "surpassing the radioactivity of Radium".

With cessation of the focussed sunlight, the radioactivities which Le Bon reported very slowly withdrew. The radiant outputs settled to a nearly neutral value after each exposure, but a residual radioactivity always remained. The residual, or "artificial" radioactivity, appeared after successive exposures. These were features which had never been induced through the focussed use of solar ultraviolet light. Such highly expulsive reactions, especially with its residual results, could not easily be explained without resorting to the aether model.

Here was no simple corollary of the Hertz photoelectric effect. What this data indicated was the presence of a radiant component in sunlight which was nothing like ordinary photons. Le Bon reviewed the basic components of the Tesla aether theory for his readers. He also taught that external aetheric bombardments produced the apparent auto-radioactivity of dense elements, which behaved as "targets" for the aetheric particles. It was not then difficult to comprehend the strange effects in his simple experimental arrangement, which produced extraordinary radioactive yields directly from sunlight.

PHOTONUCLEAR EFFECTS

Tesla had independently recognized the extraordinary potentials which were released when sunlight was properly utilized. It is clear that Tesla also recognized the special character of reactions evolved by exposing light metals to intense sunlight. Large metal capacity plates were tested, both in air and in vacuum. In his early radiant energy converters, Tesla directed brilliant sunlight onto these elevated plates. These light "white" metal plates (tin, magnesium, aluminum) were connected to a high voltage mica capacitor. The other terminal of this capacitor was grounded. With these simple arrangements, Tesla produced extraordinarily powerful discharges, producing power capable of operating motors and other appliances. His later experiments proved the value of housing the metal plate in a highly evacuated glass vessel.

In the intense aetheric stream of strongly focussed sunlight, both Tesla and Le Bon each assumed that light metal atoms were literally being dissolved in an expulsive blast of very fine radiant particles. This dissolution was viewed as the mechanism which released the enormous charge, the "radioactivity surpassing that of Radium". This brilliant discovery acquired an equally brilliant realization...that radioactivity could be controlled.

In several thrilling chapters, Le Bon discussed the dissolution of his light metal plates as "fuel". His devices were "photoreactors". The implications contained in the phenomenon were far too numerous to mention and far too dangerous for academicians to relinquish. The stunning announcements of Le Bon were received with a wide and typically schismatic degree of response in the consortium. His terminology for "intra-atomic energy" was far too revolutionary for many of his colleagues. Because of the manner in which his thrilling work was simply ignored by fellow academes, Le Bon found himself publishing his own books. Suffice it to say that, with such a phenomenon being thoroughly grasped and implemented, a new energy and materials technology would have been unleashed in society. Thus does the indelible bibliographic testimony give witness to several experimental instances where notable scientific researchers of highest credentials consistently observed solar-stimulated transformations of matter. There are many more such entries than I am able to mention here. But no matter, here the controversy must begin. For it is clear that no such experimental possibility is provided by any of the existing atomic models.

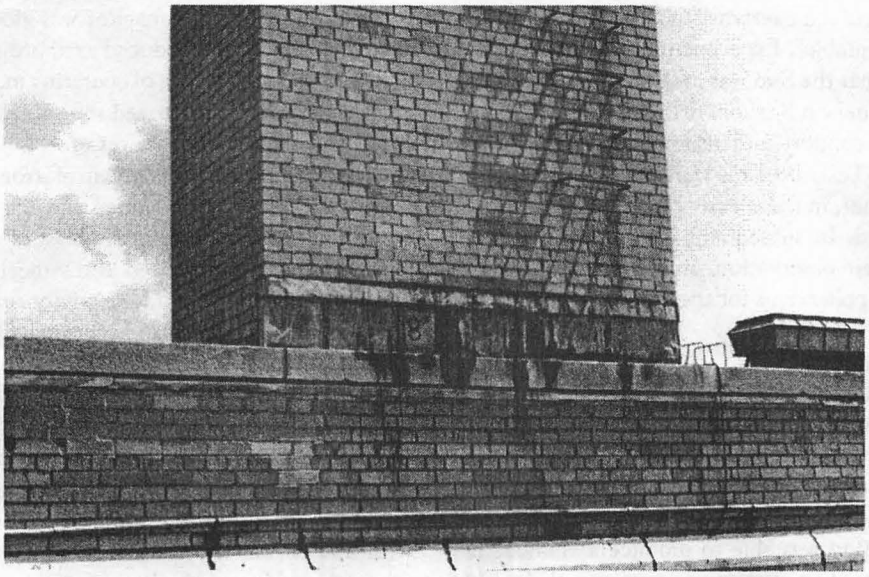
Please recall that Tesla viewed shattered atoms as collections of massless particles "not further decomposed". What then is the exact solar process responsible for the conversion of tin, magnesium, and aluminum into a condition of radioactivity "surpassing that of Radium"? Consider the modern requirements for such an effortless

conversion, and realize that if we are indeed to accept the contemporary schema, then we cannot accept the evidence of these significant and highly reproducible experiments. But if we do accept the experimental evidence, if we prove that the testimony of the experimental findings is true, then we become candidates for academic derision. For in accepting the experimental evidence, we also accept the fact that sunlight can dissolve metal atoms into subatomic particles!

BARRIERS

To violate the barrier potential of a metal nucleus, to shatter it into subatomic particles, is a prospect which high energy physicists do not engage lightly. Rather than seize the serendipity of discoveries made by Tesla and Le Bon, the first conventional experiments with atomic shattering preferred to begin with the limited state of knowledge. Approaching the problem of "atom smashing", Rutherford and others used the output flux of certain radioactive materials in order to bombard neutral targets. It was in this manner that Rutherford "discovered the nucleus".

In their progressive quest to define and "construct the atomic model", the possibility never crossed the academic mind that the very process of "working on matter" might have introduced a serious error. Failing to acknowledge the philosophy, the science of mind and consciousness, academia also failed to realize the simplest philosophical consideration. In their successive and diverse applications of work on matter, their consortium produced a series of discoveries which merely reflected their own actions on matter.



Copper sheeting on rooftop

Consider this carefully: If particles are used to strike matter, particles emerge. If light is applied, light emerges. If gamma rays strike matter, gamma rays emerge. If electrons are used, then electrons emerge. This process of applications and yields continues ad infinitum, until more ultimate and more refined particles are developed. But the most important realization is one which teaches consciousness about matter more directly than all of these kinematic concerns.

The force barriers of nuclei exist only because of the energetic applications which produced them. The stronger the strike...the stronger the "barrier". Matter evidences an hysterical constricting response to violent impact. Atoms "manifest" only when matter is violently impacted. "Atomic centers" are reactive responses to any amount of violence done to matter. And this is a more surprising phenomenon than the static existence of atomic lattices. But it was an archane doctrine, teaching the manner in which matter becomes the experimenter's mirror. It is the doctrine which teaches us that, peering deep into a reflective pool, each face produces its own reflection.

The application to matter of each action produces the specific observation. The application of certain energies to matter literally determine the nature of each resulting observations. Strike hard — hard particles out; strike sharp — sharp particles out; strike soft — soft particles out. We would also make clear the fact that all of the kinematic forces related to matter, all of the "internal barriers", all restrictive "barrier potentials", and "thresholds", are therefore the superficial effects of treatment — and certainly not fundamental causes.

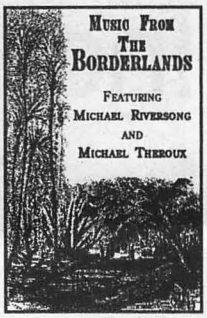
This consequence of treatment and observation produces a distorted science, a completely distorted worldview. To physicists of the 20th Century, greater power seemed the only means of "surmounting the nuclear barriers". But do the barriers actually exist? Is matter constricted into atomic centers when matter is at rest? Physics saw that the faster the applied particles, the more demanding the natural laws of penetration became. In truth, the only natural law was the manner in which matter was being used by the physicists. The soft approach would have revealed "soft laws"! This is in fact what Le Bon and Tesla discovered, where soft sunlight permeated and shattered matter into...aether.

SKYLIGHTS

In order to determine whether prolonged exposure to intense sunlight really can stimulate radioactivity in neutral materials, one first requires an elevated site. I found such a site, obtained permissions and keys to the roof. It afforded nearly an acre of space. Perfect. The old copper sheeting was everywhere. Apple green and completely intact since the very day it was placed. Tall vertical skylights, airshafts, and chimneys interspersed the vantage point, an excellent population of variegated sites from which to select several good sites. Exposed to intense, direct sunlight for six decades without significant human intervention, the copper sheeting had been in place since the building was built in 1937. This roof copper therefore, in my estimation, offered a perfect prooftext for the originally stated thesis of Mr. Lehr.

If the very highest elevations are preferred for our purpose, this roof thoroughly fulfilled that requirement. It was conveniently the tallest structure for several miles in Bay Ridge, Brooklyn. The surrounding neighborhood is primarily residential. This was vital, since a relatively neutral radiation environment is necessary for the acquisition of accurate readings. Fortunately, the elevated site I

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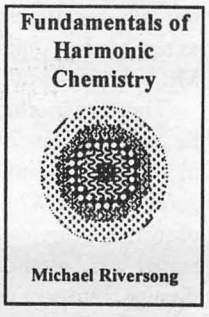
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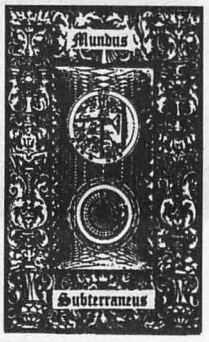
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Mr. Lehr reported that rooftop sheet copper, after decades of direct exposure to sunlight, was literally transformed into a radioactive isotope. He told that this transformative process yielded sometimes excessively radioactive copper. This immediately suggested a thought stream which brought the conversation to a perfect closure. That natural radioactivity appears in the environment, often very suddenly and spontaneously, is not a fact generally mentioned in any scientific circles. Yet, I was aware there were numerous references which spoke of this remarkable natural process throughout the Victorian Bibliography.

RADIOACTIVE SUN

The academic world was divided into quantitative and qualitative oppositions many times during the years when X-Rays were discovered. On one occasion during 1896, the schism engaged an experimental discovery which challenged the quantitative model of Optics and Light too thoroughly for comfort. Constituting yet another fascinating lost chapter in the Victorian legacy, it all began when several experimenters discovered certain strange actions of focussed sunlight on photographic emulsions.

These experimenters plainly demonstrated that sunlight contained species of radiant energy which were capable of duplicating, in every attribute, those rays of Roentgen. An intriguing collection of "solarigraphs" were taken by Hammer, Morton, Rittenhouse, Schmidt, Case, Robertson, Ker, d'Infreville, G. Thompson, and Nikola Tesla.

Tesla may have been the first to achieve this experimental wonder. He certainly was first to make a public statement of his theoretical views concerning the effect:

"When radioactive phenomena were discovered, I was prepared to view them as merely the secondary effects of an external radiation, and as no trace of such a disturbance could be detected on earth, I concluded that the primary activating rays were of cosmic origin and most likely to emanate from Suns closely resembling our luminary.

"As the first step in clearing up this mystery, I undertook to ascertain whether the Sun was charged to a potential sufficiently high to produce the tremendous electrostatic repulsion, which I had found to be the only force in Nature capable of accounting for that phenomenon.

"I finally ascertained...that the Sun was at a constant positive potential of about 216 Billion Volts. Owing to its immense charge, the Sun imparts to minute positively electrified particles prodigious velocities...some attaining a speed exceeding 50 times the velocity of Light".

In the Tesla lexicon, the Sun was "positive" in charge. This was

a term referring, not to the conventional positive charge used in electrophysics, but to one connoting potentials in the Aether. The high positive potential represented the "supply potential" by which the Sun expelled an enormous flood of rays. It was reasonable to suppose that the Sun could expose well-shielded photographic plates as easily as could artificially produced X-Rays. Indeed, there were researchers who showed that, after short exposures to full sunlight, the fogging of photosensitive plates could occur directly through thick wrappers of metal foil.

Soon, the several transformative effects of sunlight on metals and minerals were discovered. After interposing opaque objects between their plates and the Sun, many other experimenters proved it possible to produced clarified images. Solarigraphic images were produced even when the photoplates were sealed in thick foil wrappers. In certain of these experiments, solar light seemed able to pass through coins and keys, producing images with softened edges. These images were often surrounded with aureoles of dark starlike "discharge lines". Such radiating patterns served only to heighten the mystery. That the Sun itself was a "radioactive body" was not questioned after this episode of discoveries.

The concept that an unknown component in sunlight was causing the phenomenon of radioactivity stood as completely plausible, but utterly "unacceptable". Experimental evidence rendered very believable the fact that the Sun was indeed a source of special radiations. But these gradual vindications of the Tesla model proved too decisive for academic comfort, and insurgent theoretical reprisals sought only to topple Tesla from his well-deserved place. Most important was the fact that, in these early simple proofs, the early Teslian view was verified. In subsequent exceptional instances, largely accidental in their observation, numerous Victorian researchers found special applications for the Tesla Aether Model.

LE BON

It was while considering all of these theoretical possibilities that Dr. Le Bon discovered a strange corollary of the Hertz photoelectric effect. It was an effect whose intensity of yield and technological potential astounded the scientific world of his time. In the course of exposing certain light metals (magnesium, aluminum, tin) to focussed sunlight, Dr. Le Bon was able to produce a "radioactive" expulsion of charges. These first experiments were simple inquiries into the spontaneous appearance of radioactivity in the natural environment.

The modified experiment which Le Bon conducted was imminently simple: a simple magnesium plate on which sunlight was focussed by a lens. Measurements were made by his modified gold leaf electroscope. Nothing could be more basic. The radioactive yield of this arrangement succeeded in producing an enormous and unexpected electrostatic charge. According to Dr. Le Bon, this yield measured intensities "surpassing the radioactivity of Radium".

With cessation of the focussed sunlight, the radioactivities which Le Bon reported very slowly withdrew. The radiant outputs settled to a nearly neutral value after each exposure, but a residual radioactivity always remained. The residual, or "artificial" radioactivity, appeared after successive exposures. These were features which had never been induced through the focussed use of solar ultraviolet light. Such highly expulsive reactions, especially with its residual results, could not easily be explained without resorting to the aether model.

Here was no simple corollary of the Hertz photoelectric effect. What this data indicated was the presence of a radiant component in sunlight which was nothing like ordinary photons. Le Bon reviewed the basic components of the Tesla aether theory for his readers. He also taught that external aetheric bombardments produced the apparent auto-radioactivity of dense elements, which behaved as "targets" for the aetheric particles. It was not then difficult to comprehend the strange effects in his simple experimental arrangement, which produced extraordinary radioactive yields directly from sunlight.

PHOTONUCLEAR EFFECTS

Tesla had independently recognized the extraordinary potentials which were released when sunlight was properly utilized. It is clear that Tesla also recognized the special character of reactions evolved by exposing light metals to intense sunlight. Large metal capacity plates were tested, both in air and in vacuum. In his early radiant energy converters, Tesla directed brilliant sunlight onto these elevated plates. These light "white" metal plates (tin, magnesium, aluminum) were connected to a high voltage mica capacitor. The other terminal of this capacitor was grounded. With these simple arrangements, Tesla produced extraordinarily powerful discharges, producing power capable of operating motors and other appliances. His later experiments proved the value of housing the metal plate in a highly evacuated glass vessel.

In the intense aetheric stream of strongly focussed sunlight, both Tesla and Le Bon each assumed that light metal atoms were literally being dissolved in an expulsive blast of very fine radiant particles. This dissolution was viewed as the mechanism which released the enormous charge, the "radioactivity surpassing that of Radium". This brilliant discovery acquired an equally brilliant realization...that radioactivity could be controlled.

In several thrilling chapters, Le Bon discussed the dissolution of his light metal plates as "fuel". His devices were "photoreactors". The implications contained in the phenomenon were far too numerous to mention and far too dangerous for academicians to relinquish. The stunning announcements of Le Bon were received with a wide and typically schismatic degree of response in the consortium. His terminology for "intra-atomic energy" was far too revolutionary for many of his colleagues. Because of the manner in which his thrilling work was simply ignored by fellow academes, Le Bon found himself publishing his own books. Suffice it to say that, with such a phenomenon being thoroughly grasped and implemented, a new energy and materials technology would have been unleashed in society. Thus does the indelible bibliographic testimony give witness to several experimental instances where notable scientific researchers of highest credentials consistently observed solar-stimulated transformations of matter. There are many more such entries than I am able to mention here. But no matter, here the controversy must begin. For it is clear that no such experimental possibility is provided by any of the existing atomic models.

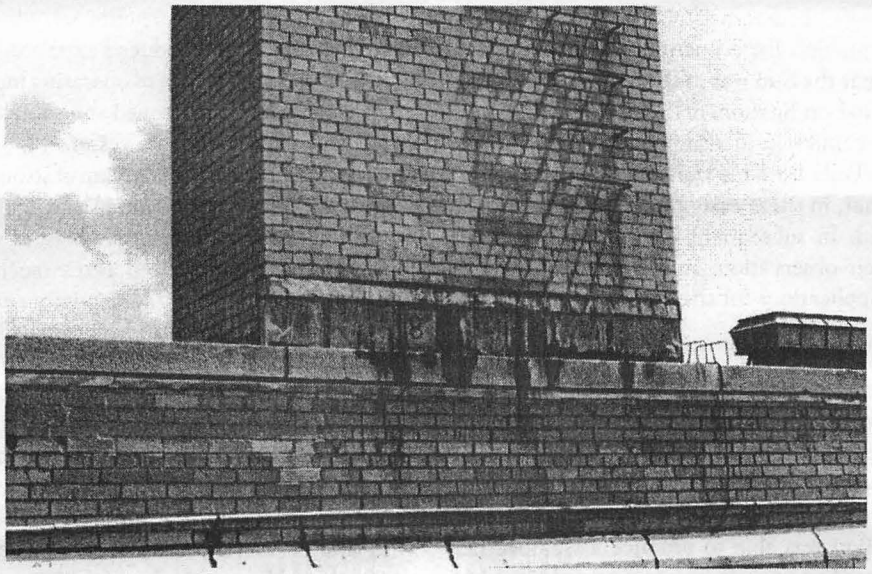
Please recall that Tesla viewed shattered atoms as collections of massless particles "not further decomposed". What then is the exact solar process responsible for the conversion of tin, magnesium, and aluminum into a condition of radioactivity "surpassing that of Radium"? Consider the modern requirements for such an effortless

conversion, and realize that if we are indeed to accept the contemporary schema, then we cannot accept the evidence of these significant and highly reproducible experiments. But if we do accept the experimental evidence, if we prove that the testimony of the experimental findings is true, then we become candidates for academic derision. For in accepting the experimental evidence, we also accept the fact that sunlight can dissolve metal atoms into subatomic particles!

BARRIERS

To violate the barrier potential of a metal nucleus, to shatter it into subatomic particles, is a prospect which high energy physicists do not engage lightly. Rather than seize the serendipity of discoveries made by Tesla and Le Bon, the first conventional experiments with atomic shattering preferred to begin with the limited state of knowledge. Approaching the problem of "atom smashing", Rutherford and others used the output flux of certain radioactive materials in order to bombard neutral targets. It was in this manner that Rutherford "discovered the nucleus".

In their progressive quest to define and "construct the atomic model", the possibility never crossed the academic mind that the very process of "working on matter" might have introduced a serious error. Failing to acknowledge the philosophy, the science of mind and consciousness, academia also failed to realize the simplest philosophical consideration. In their successive and diverse applications of work on matter, their consortium produced a series of discoveries which merely reflected their own actions on matter.



Copper sheeting on rooftop

Consider this carefully: If particles are used to strike matter, particles emerge. If light is applied, light emerges. If gamma rays strike matter, gamma rays emerge. If electrons are used, then electrons emerge. This process of applications and yields continues ad infinitum, until more ultimate and more refined particles are developed. But the most important realization is one which teaches consciousness about matter more directly than all of these kinematic concerns.

The force barriers of nuclei exist only because of the energetic applications which produced them. The stronger the strike...the stronger the "barrier". Matter evidences an hysterical constricting response to violent impact. Atoms "manifest" only when matter is violently impacted. "Atomic centers" are reactive responses to any amount of violence done to matter. And this is a more surprising phenomenon than the static existence of atomic lattices. But it was an archane doctrine, teaching the manner in which matter becomes the experimenter's mirror. It is the doctrine which teaches us that, peering deep into a reflective pool, each face produces its own reflection.

The application to matter of each action produces the specific observation. The application of certain energies to matter literally determine the nature of each resulting observations. Strike hard — hard particles out; strike sharp — sharp particles out; strike soft — soft particles out. We would also make clear the fact that all of the kinematic forces related to matter, all of the "internal barriers", all restrictive "barrier potentials", and "thresholds", are therefore the superficial effects of treatment — and certainly not fundamental causes.

This consequence of treatment and observation produces a distorted science, a completely distorted worldview. To physicists of the 20th Century, greater power seemed the only means of "surmounting the nuclear barriers". But do the barriers actually exist? Is matter constricted into atomic centers when matter is at rest? Physics saw that the faster the applied particles, the more demanding the natural laws of penetration became. In truth, the only natural law was the manner in which matter was being used by the physicists. The soft approach would have revealed "soft laws"! This is in fact what Le Bon and Tesla discovered, where soft sunlight permeated and shattered matter into...aether.

SKYLIGHTS

In order to determine whether prolonged exposure to intense sunlight really can stimulate radioactivity in neutral materials, one first requires an elevated site. I found such a site, obtained permissions and keys to the roof. It afforded nearly an acre of space. Perfect. The old copper sheeting was everywhere. Apple green and completely intact since the very day it was placed. Tall vertical skylights, airshafts, and chimneys interspersed the vantage point, an excellent population of variegated sites from which to select several good sites. Exposed to intense, direct sunlight for six decades without significant human intervention, the copper sheeting had been in place since the building was built in 1937. This roof copper therefore, in my estimation, offered a perfect prooftext for the originally stated thesis of Mr. Lehr.

If the very highest elevations are preferred for our purpose, this roof thoroughly fulfilled that requirement. It was conveniently the tallest structure for several miles in Bay Ridge, Brooklyn. The surrounding neighborhood is primarily residential. This was vital, since a relatively neutral radiation environment is necessary for the acquisition of accurate readings. Fortunately, the elevated site I

chose for this purpose was in a relatively "untouched" state. Unfrequented by disturbing human agencies, the five-story structure provided a perfect opportunity for a great number of consecutive radiation readings.

The roof is smokeless, indeed opened to the winds. To the west may be seen first the Narrows, and then the blue-green ridges and hills of Staten Island. To the east, one sees again over the low roofs of private homes and a few apartment buildings. It is a scenery interspersed with occasional tall church spires, and leads out toward Rockaway Beach and the southern Long Island seacoast.

Free and continual access to such an elevated site is a prerequisite for such observation. Each time I gingerly placed my key in the screen door lock leading to one such roof, quietly climbed the haunting silent flights, opened the heavy bronze doors, and walked out into the sunlight, I fully expected to find some new discovery. I was never disappointed.

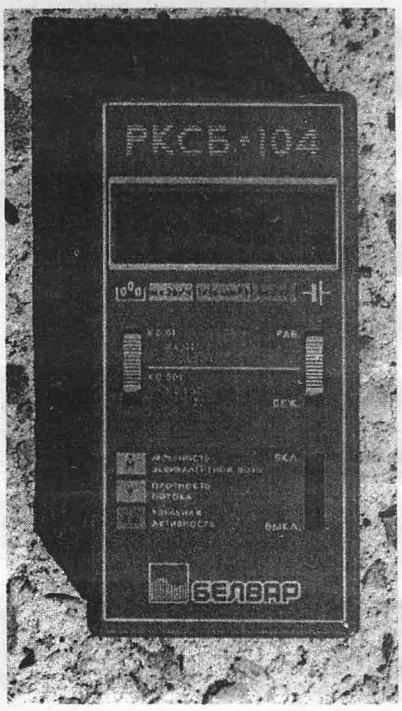
READINGS

I decided to focus my experimental readings on the copper-covered surfaces which "followed" the solar track, purposing to make the climb no fewer than three times throughout each day. I therefore limited the sites to "east-facing" and "west-facing" walls. In addition, I chose a group of highly elevated surfaces and another of roof-level surfaces. It was important to find a great number of separated sites. Therefore, two elevated and two level copper surfaces were selected for both eastward and westward facing walls, a total of eight separate sites. This was a population which could efficiently be visited and measured three times daily. Each entire operation required at least twenty minutes per visit. Each site was numbered with a large dry marker. Furthermore, the placement of the Geiger Counter on each site was limited to a small fixed area which was marked.

Very accurate measurements were obtained with a handheld Russian-made Geiger Counter, the BELBAR RKSB (MIKON-104). This Counter was obtained from David Shannon Minerals (1-602-985-0557) at a more than reasonable price ($61.00 with shipping). Most equivalent American models are exorbitant in price and far less accurate.

The unit is small (6 X 3 X 1 inches) and lightweight, making for an easy means by which numerous field readings may be made in a short time period. The reliable performance of this convenient and remarkably inexpensive unit provides well-calibrated readings in either alpha, beta, or gamma radiations. As described in the translated instruction brochure, a few simple modifications of DIP switches on the back panel permit threshold sensitization to specific rays.

The removal of its moulded plastic back-panel exposes the Geiger Tubes to any radiation source and, once set to do so, counts individual events. Radiation counts from two internal 3 inch Geiger Tubes are amplified by solid state electronics and displayed on a large black and gray LCD. Automatic interpolations can be obtained by appropriate switch assignments, and an interpolated hourly exposure in MicroRoentgens is then displayed. The MIKON-104 made measurements more convenient than my RADIAC equipment, a bulky military unit. Originally manufactured for use in the Soviet nuclear industry, the MIKON unit is provided with an extensively documented passport (1992 validation). This documentation was stamped and signed by Soviet technical officials before release from the manufacturer, an admirable quality-control feature.



Handheld Russian-made Geiger Counter, the MIKON-104.

CRITERIA

It is of course recognized that a proper research on this fascinating topic demands observations over seasonal time lengths, a pursuit which will be followed during the course of the next year. But several remarkable data artifacts have been identified. The data correlations are numerous and sundry, and will be discussed after the tables have been presented.

The sites are listed as L (roof Level) and H (High elevation), designations intended to represent the relative rooftop elevation of each site. This variable was thought important, especially when considering the effect of free-standing elevation in strong sunlight.

Readings were usually taken at times roughly "symmetric" about noonday: at 8 AM, Noon, and 3 PM. Gamma Ray readings (May 5 to 10) were followed with a separate series of Beta Ray readings (May 12 to 17). A determination of the Cosmic Gamma flow [GF] for each hour preceded each line of Gamma readings. Likewise, a determination of the Cosmic Beta flow [BF] for that hour preceded each line of Beta readings.

The regional cosmic ray flow was taken from two cardinal solar directions. These readings were made by simply holding the counter overhead at a 45 degree angle, consecutively facing the sky to the East, and then to the West. To insure greatest accuracy, Cosmic Gamma flow values east [GFE] and west [GFW] were taken before each hourly Gamma readings. Cosmic Beta flow east [BFE] and west [BFW] were likewise taken before each hourly Beta readings. The importance of these preliminary Cosmic Ray readings cannot be underestimated.

Both the Cosmic Gamma flow readings [GF] and the Beta flow

I GAMMA RAY READINGS ON ROOFTOP COPPER SHEETING
MAY 1997
(Values in MicroRoentgens)

				EAST FACING					WEST FACING			
D	T	W	GFE	1L	2H	3L	4H	GFW	5L	6H	7L	8H
5	8A	S	13	22	28	17	26	12	13	21	10	25
	12P	S	16	20	27	24	25	14	17	25	21	23
	3P	S	18	18	23	15	21	15	20	17	21	20
6	8A	R	14	18	36	18	29	18	19	24	27	14
	12P*	C/W	23	18	30	16	23	22	16	16	22	16
	3P**	C/W	19	18	26	16	20	20	37	30	34	31
7	8A	S/C	19	15	27	19	20	14	21	19	23	19
	12P	S/C	17	19	25	17	15	13	17	24	20	14
	3P	S	19	18	19	15	19	12	15	18	10	18
8	8A	S	13	18	31	13	26	11	10	16	17	13
	12P	S	16	16	28	11	19	13	20	20	11	14
	3P	C	18	17	20	17	22	21	21	15	18	26
9	8A	C	16	31	24	17	21	19	11	22	9	15
	12P	C	26	8	24	16	23	16	17	23	20	13
	3P	R/C	20	25	36	19	26	14	23	25	19	18
	TOTALS			281	404	250	335		277	315	282	222
	MAXIMA			31	36	24	29		37	30	34	31
	MINIMA			8	19	11	15		11	15	9	11
	DEVIATION			23	17	13	14		26	15	25	20

* tornadic stormfront during measurements
** sunshine following severe lightning storm

readings [BF] represent a specific particle flowrate from space. Such readings provide an imperative reference for the radioactivity levels measured at each site. It was critical that these values be taken each hour, since the celestial flow might augment or diminish each site reading by a defined amount. In addition to these cosmic flowrates, the prevalent meteorological conditions were all noted with each reading, signified on the chart by [W]. Notes are clear, S (sunny), C (clouds), R (rain), W (wind). The reader should verify each of several intriguing data artifacts by inspecting the attached tables.

VINDICATION

We first note the singular fact that ALL of the exposed copper sheets are quite radioactive! It is obvious that the simple exposure of copper to intense and unobstructed sunlight over time successfully converts neutral copper into radioactive isotopes. And now come all the shattered remains of modern theory. To the victors go the spoils! The readings which I obtained therefore actually vindicate those statements made by my dear departed friend, Wilhelm Lehr. He was right!

My readings also corroborate the experimental research of Dr. Gustav Le Bon, vindicating the Victorian Bibliography. More accurately, copper shows itself resistant in the production of the great yields observed by Dr. Le Bon with the lighter metals. But the effect, both of the general conversion and residual radioactivity in the metal, is shown to be a real and measurable phenomenon.

I might add that my unrecorded readings of rooftop iron plates always gave curiously null results. In comparison to the copper sheeting, the iron was significantly neutral. At no time was I able to acquire the slightest indication that the iron roof pipes and other artifices, poised in their elevated positions for nearly 40 years, were the slightest bit radioactive. Therefore it seems rather obvious that a critical skill in observation precedes the realization of this phenomenon, a skill which I fear is seriously lacking in the academic halls.

The astute reader recognizes an essential quandary. In effect, we are asking how or why this artificial radioactivity was rendered. How is it possible that atoms have been transmuted from a simple, prolonged exposure to direct sunlight? How can a copper-clad rooftop outperform a linear accelerator? Accepting this evidence, we must also accept a new phenomenon...or ignore every thesis defining weak and strong nuclear binding forces.

This simple experimental evidence compels the acceptance of a contradiction, determining either our endorsement of a new model or the stubborn refusal to relinquish that which has been proven false and incomplete. How else will we then rationalize the fact that some component of sunlight is able to outdo the deadly work of artificially accelerated particles?

ARTIFACTS AND CORRELATIONS

The data in these two small tables has produced significant short-range correlations and several notable "artifacts". We include the following observations:

1 - SITE POSITION AND ORIENTATION

(a) Higher Beta and Gamma Counts on all high sites [H].
(b) Higher Beta and Gamma Counts on all East-facing sites.
(c) Highest Beta and Gamma Counts on all high East-facing sites.
(d) Highest Beta and Gamma Count deviations on rooflevel [L] sites.

2 - DIURNAL HOUR

(e) High Gamma Counts on East-facing [H] sites in early morning.
(f) High Gamma Counts on West-facing [L] sites in late afternoon.
(g) High Beta Counts on East and West-facing sites from Noon to late afternoon.

3 - COSMIC RAY FLOW

(h) Fluctuations in GFE do not produce increased site Gamma counts.
(i) Fluctuations in GFW produce high counts in west [H] sites.

II BETA RAY READINGS ON ROOFTOP COPPER SHEETING
MAY 1997
(Values in MicroRoentgens)

				EAST FACING					WEST FACING			
D	T	W	BFE	1L	2H	3L	4H	BFW	5L	6H	7L	8H
12	8A	S	22	23	41	24	23	26	21	16	20	21
	12P	S	26	33	45	31	25	20	28	25	16	17
	3P	S	24	19	43	28	35	20	24	34	26	22
13	8A	C	18	23	31	21	38	19	23	23	36	30
	12P	C	23	29	50	26	34	16	25	29	30	21
	3P	C	20	25	43	32	37	17	20	21	29	22
14	8A	S	25	29	37	21	31	16	27	28	22	25
	12P	S/C	18	25	32	18	33	25	30	35	32	34
	3P	S/C	14	22	34	36	20	17	21	30	15	24
15	8A	C	24	24	37	17	23	25	16	29	23	24
	12P	S	31	21	31	32	30	30	28	24	18	34
	3P	S	21	25	44	26	37	19	25	20	16	37
16	8A	S	19	21	37	26	38	23	31	22	27	24
	12P	S	19	18	50	25	18	37	23	23	26	29
	3P	C	23	25	34	31	29	21	20	25	16	22
	TOTALS			362	589	394	451		362	384	352	331
	MAXIMA			33	50	36	38		30	35	36	37
	MINIMA			18	31	17	18		16	16	15	16
	DEVIATION			15	19	19	20		14	19	21	21

(j) Fluctuations in BFE produce high Beta counts in east [H] sites.

4 - METEOROLOGICAL FACTORS

(k) High Gamma counts in east and west-facing sites with Clouds or Rain.

(l) High Beta counts in east and west-facing sites with bright Sunshine.

MECHANISMS

The data reveals several other contributing factors to the radioactivity of the rooftop copper. Were we completely mechanistic in our thinking, we would give apologetic analysis of each factor. We would first have to actually accept the evidence, a controversial and problematic proposition which academes would NEVER engage. That the source of radioactivity in rooftop copper is not entirely found in sunlight seems indicated by the data tables. It is obvious that in the production of such radioactivities, sunlight represents but one stimulating agent of change.

Some have suggested that the observed count pulsations follow the cosmic ray flow, that the significant variations are due to the augmentations contributed by incoming particles. But the absolute distinction between celestial radiation, and that which has been measured in the copper, is at once recognized. Now do the simple combined effects of sunlight and electrostatic charging actually result in the strange transmutations which I have observed? One would imagine that only a comparative study of elevated metals would reveal the truth of the matter. Some would propose relatively simple "in situ" studies, observing various metals, solar intensities, solar orientations, exposure times, and elevations. All the superficial inert forces.

The quantitative analyst will note that data reveal a dramatic effect due to elevation. That these sites have been exposed to both the strong sunlight and the powerful effect of elevation will offer yet another means by which the transmutations may be reduced to inert basic forces. One notes that the more highly elevated sites evidence higher Beta and Gamma counts at certain sites. This is especially true of the east-facing sites. The mechanist then observes something of a "coordination" or "cooperation" between solar orientations, and elevation, imagining of course that the combined forces produce the radioactivity over time. There are data which reveal the effects of insolation and elevation. Analysis will examine the manner in which both effects combine to accelerate the transmutation process in rooftop copper.

They will elucidate on the very obvious role of grounding, especially through the material of steel-framed buildings. The facts pertinent to electrostatic charging will be espoused, the steel building frame being the responsible agent of charge absorption. According to the banal theory, all elevation effects are correlated to the rooftop discharge of ground absorbed electricity. Such ground charges would concentrate into the building frame during solar peak hours or during conditions of storm.

Gradually rising through the steel and concrete of the building, ions would appear to be "beta rays" when measured. Their discharge rate would depend on all of the previous variables, being also most strongly observed from specific rooftop sites. The geometry of walls and shaft edges would then determine the degree in which ions are projected without impedance. It would not therefore be difficult to imagine that certain sharply pointed rooftop sites, those which have been laminated with copper, would give the greater Beta values. Lo and behold, when we examine the Beta Charts, this is precisely what we find. One does indeed notice the wildest sorts of fluctuations from the most elevated and sharply pointed roof sites.

In this case, the few quantitative analysts, who might take pleasure in undoing this phenomenon, would seek therefore to reduce the entire find to a combination of inert forces: solar intensity, solar orientation, elevation, ground charging, and site geometry. In hopes of determining the exact combination of inert forces responsible for the observed phenomena, the obsessed quantitative researcher would arrange a controlled laboratory model of the otherwise natural configurations. The relative effect of sunlight and electrostatic charging could then easily be assessed with regard to different metals.

In the academic pursuit, one would therefore be led to imagine that a simple knowledge of the exact inert forces would always solve every such anomaly. The reductive reasoning would now compel certain conclusions about the observed phenomenon, always seeking to eliminate the experiment on grounds of "poor and fallible technique". After each inert force was assessed, both alone and in varied combinations, the phenomenon would most likely be reduced to a consideration of unsterile experimental procedures and instrumental failures.

Closer to the heinous truth is the consistent observation that academes are always more predisposed in their experimental approach than their much-promoted skepticism would admit. The academic hatred of convention-defying discoveries is almost as renown as their inability to manage the larger energetic organizations which integrate the natural world. Preferring to find the error rather than the truth, any academe would throw all of this evidence out with both the premise and experimental method. Orthodoxy would place this experiment in the many chambers of willful ignorance, there to sit among the all too numerous natural wonders which also defied quantitative reduction. While Beta counts can be resolved in terms of electrostatic charge effects, there exists in my body of data a mystery not so easily resolved.

MYSTERIOUS VARIATIONS

Quantitative force reductions have too long ruled the scientific community. Reductionist predispositions cannot however manage our next and most important foray. While the previous sections served to clear the more vapid treatments of my work, and were a necessary departure from my theme, the following sequence of thoughts will launch the reader sufficiently beyond these mundane considerations. Careful study of my data tables reveals a remarkable artifact, one which recognizes the pulsating character of counts as completely anomalous.

My Geiger-Muller readings show radiation counts levels which nearly twice exceed the hourly cosmic ray background. But while these strong maxima do vindicate W. G. Lehr, they are not the most intriguing aspects of experiment. One observes that radiation values vary with each reading. One critic considered my data to be the result of spurious effects, of some malfunction in the reading instrument. Subsequent reference readings were taken from a fixed radiation source, one whose radiant output was known from previous observations. The unit read the same levels as prior to the

III COPPER FRAGMENT (GAMMA COUNTS)

	COPPER	OXIDE
	13	22
	13	10
	18	11
	10	8
	12	20
	12	10
	11	14
	10	13
	17	13
	14	14
	10	14
	16	17
	9	18
	12	14
	16	13
	20	15
	14	10
	13	11
	12	11
	5	6
	8	12
	12	14
	10	16
	13	10
	14	13
MINIMA	5	6
MAXIMA	20	22
DEV.	15	16

rooftop tests, proving itself consistent and well-calibrated. The MIKON-104 was not at fault and, at each site, measured variations in radiation counts.

Another voice protested that the copper sheeting was non-uniform in its radioactive condition, and that I had inadvertently taken handheld readings at very different spots on the copper surface. Any vulgar skeptic may be satisfied with the possibility that, having thus obtained spurious readings from hour to hour through the course of a week, my study is invalid. I do not mind very much then to relate that this prior contingency had early been assessed. The sections were each outlined with a marker to establish "count constancy". Personal error was not the cause of the variable readings, an anomaly where there should have been none.

That all of the exposed copper surfaces were radioactive was a fact beyond question. That the copper sites demonstrated a residual radioactivity is also noted with a profound sense of wonder. Yet, looking again at the tables, we read the deviations of counts taken from each site, and are now faced with a true mystery. Collectively then, the indicated values do not represent those normally registered with materials which are conventionally deemed "radioactive".

The "clock-regular" consistency of radiation from mineral matter had been early verified by several researchers (Becquerel, Chadwick, Curie, Rutherford, Soddy et al). It was therefore conventionally agreed that each radioactive mineral demonstrated a "half-life" of decay, during which time a specific radiant yield was always expected. One could select any radioisotope, and with some accurate degree of precision, determine what the radiant yield should be. Subsequent instrumentations revealed the usual high degree of correlation between the predicted yields and those actually measured.

My values are different. They vary with each hour. One observes that both Beta and Gamma rooftop counts "pulsate", apparently with each minute! I have tried these tests repeatedly, yet obtain the same results. In order to test how quickly the pulsations occur, I tried a crude experimental method which, though manual, shows very clearly the anomalous pulsating nature of these radioactive isotopes. Having found a stray sample of copper from the roof, I conducted a series of consecutive readings. The inward "dark copper" face and the "green exposed face" were consecutively and repeatedly read for the course of an half hour. I obtained the remarkable data found in tables 3 and 4.

Taken over the course of a relatively short time, these pulsating counts are significant...and mystifying. Indeed, these are some of the most anomalous variations one can obtain from any single radioisotope, and it is precisely in the study of these pulses that we obtain the most profound revelation. The remarkable count minima, those sudden and anomalous "dropouts", offer a most unexpected aspect to the phenomenon. That there should be absolutely no such deviation from the ordinary constancy of a radioactive output is a conventional "rule". No purely quantitative analysis may unravel the puzzle.

The early mechanistic Tesla aether model helped only to explain some of the more kinematic effects which have been here observed, and has been my guiding principle in the more mechanistic considerations of the phenomenon. I have found however, that this model does not sufficiently explain these pulsations.

Skeptical readers may be led to imagine that the fluctuating Beta Counts represent either the action of downward impinging cosmic rays, or upward ion discharges from the sharply edged elevated sites. And varying Beta counts can be correlated with surging electrostatic fields in the building. Yes, they would be read as "counts" by the MIKON-104...but Gamma counts do not correlate with any electrostatic fluctuations. Why then do they pulsate?

There is NO recognized mechanism to explain the pulsating Gamma Rays. In the conventional lexicon, they constitute a population of energies unlike all other radiations: neutral, massless, and produced by the deepest transactions in electron orbitals. For the undoing of our experiment, this species of energy represents, for the quantitative analyst, an impasse.

Indeed, are there any forces which can effect a sudden surge or suppression in Gamma Ray intensities? Certainly none of the inert forces. The Mossbauer (resonant gamma) transitions is not applicable here, especially since neither the materials nor temperature levels satisfy the necessary conditions for that effect to occur. No combination of the inert forces can be offered as an adequate answer in this regard. The amazing manner in which each Gamma Count varies throughout the course of a single minute suggests a far deeper kind of influence. But where in the natural energetic strata may we find this agent?

This is hard evidence of a more mysterious influence than conventional models afford. One would therefore be reckless in viewing these dynamic expressions as a combined effect of sunlight

and electrostatic charging. Since intensified solar, cosmic ray, or electrostatic charging can not effect pulsing variations in Gamma emissions, we would seek a far more permeating and ultimately more potent force...a "dark modulator".

DARK MODULATOR

What we have observed defies the contemporary model of radioactivity, where the temporal fluctuation of counts in the natural setting reveals a "dark" macroscopic influence. It is "dark" because we do not normally recognize its dynamic action. It is intriguing to note that the medium of radiation perhaps best serves us as an indicator of this dark macroscopic influence, whose movements permeate entire regions en masse. Please understand then that the radioactivity of matter is not simply an indicator of such macroscopic dark influence, it is a product of it. When under the influence of this fundamental permeation, radioactivity is projected out from matter.

It is clear that no merely inert force is responsible for the production of Gamma Ray variations. It is also evident that the typically early mechanistic model of Tesla explains only the more superficial kinematic actions at work in the roof copper. It strives to grant some rationale for the more overt Beta fluctuations, and offers some small perspective on the Gamma variations. But there are aspects of this latter phenomenon in which the early mechanistic model of Tesla utterly fails.

The curious pulsation in which both Beta and Gamma values consistently vary is correlated with changes in solar orientation, solar intensity, elevation, and meteorological conditions. When all of the data charts are examined, it is very clear that several conjugate processes are in operation. But these conjugate relationships do not simply relate with the kinematic forces, as our previous examination has attempted to show. In several of the data artifacts, we see a defined relationship between radioactive counts and the actual solar track during daylight hours. That aspect in which the radioactive counts literally "track" the solar intensity is a feature uncommon in radioactivity as conventionally known.

IV COPPER FRAGMENT (BETA COUNTS)

	COPPER	OXIDE
	9	7
	5	7
	9	7
	6	7
	11	10
	8	8
	15	6
	8	8
	5	14
	7	10
	6	7
	7	10
	17	8
	10	13
	7	11
	12	10
	6	9
	3	6
	12	11
	4	9
	10	10
	11	11
	8	10
	7	7
	10	8
MINIMA	3	6
MAXIMA	17	14
DEV.	14	8

Because we note a significant Gamma Ray variation with meteorological conditions, we find further evidence that the phenomenon has little to do with either the Tesla Model or the reigning conventional theory. Man-made radioactive materials do not wane and waver with conditions of weather: of temperature, sunlight, barometric pressure, windflow, elevation, and diurnal hour — as my readings indicate. Not one of these parameters should effect changes in radioactivity. Nevertheless, the data stands. It is corroborated by former experimental masters, whose credibility exceeds my own.

The observed variations provide a compelling evidence that the phenomenon is not like any other artificial radioactivity. It is clear that this more mysterious agency acts upon the whole body volume of any radioactive sample produced by equivalent natural process. One notes with amazement the "atempic" or "arrhythmic" quality with which these radiations are being modulated, evidence that the dark modulator is no inert force. Inert forces do not exhibit such atempic rhythms. Indeed, one only observes such rhythms in systems which are thoroughly biological in nature. But where in the natural environment is such an enormous agency to be found? Where is this mysterious dark modulator?

The revelation comes now. We see it in the pulsating data. We see it because we understand what inert force cannot accomplish. We might indeed be deceived or hastily tempted to reference this dark modulator with some of its by-products — with the solar fluctuations, with electrostatic surges, with cosmic particle flowrates, with the moody weather — indeed, with the very winds! But it is none of these. Indeed, the dark modulator moves, guides, and shapes them all. And we will delve into its domain in our forthcoming series. Until then watch everywhere in Nature for the movements of a power whose deep and mysterious organizations shape the world, that dark world-permeating modulator by which "the wind blows where it wills, and you hear the sound of it, but cannot tell from where it has come, or where it is going".

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May I now extend my many thanks for the many kind persons who have encouraged this scientific adventure? They must be given to Thomas Buxton (coffee and keys), Leonard Medina (building history), Bruce Young (roof access), Dan Winter (every wonderful text on Dr. Gustav Le Bon and more), to Rich Napolitano (shocked expressions), to Michael Theroux (talking machines and shortwave), and especially...to my dear friend W. G. Lehr.

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Contined from page 5

trend toward elimination of working models is voiced in his report: "...the time will come when models will again be required in connection with all applications...". To accomodate the new flood of electrical innovations, Congress allows the Bureau to rent storage space in the Union Building (1893).

Additional proof that models are yet being collected is found in the Patent Office News (27 March 1894), in which we find that "80,000 of the 159,900 working models were removed in order to meet the urgent demand for additional room".

In 1908, the Patent Office requests that the Smithsonian Institute acquire all of its immense models collection, a strong suggestion that models are yet being received and reviewed on demand. Only 1000 are taken. In 1925, Congress transfers the Patent Bureau to the Department of Commerce and amends the Patent Laws.

Patent Examination becomes firmly established as a clerical process, consisting of a *written specification* and a *list of claims*. Models are prohibited in the initial steps of application. The first clerical step determines the *"completeness of presentation"*, a bureaucratic examination of writ. The second clerical step engages the professional services of an examiner who uses the search process to determine "originality and utility". This bibliographic self-reference does not insure the operability of any device, and merely compares past operability with specifications and claims.

The new Law restricts the working model requirement. Nevertheless, legal steps are legislated for the retrieval of any rejected patent claim on the basis of only one feature: successful demonstration of a working model. Supportive evidence for the continued supply of working models to the Bureau is found in the thriving business of professional machinists and modelmakers in Washington DC until 1942. In 1952, Patent Regulations are revised.

The Patent Directives (as of 1997) remain self-contradictory, especially in reading the stated Law. In the Manual of Patent Examining Procedure [608.3 Models, Exhibits, Specimens, 35 USC 114] we read that, "The Commissioner may require the applicant to furnish a model of convenient size to exhibit advantageously the several parts of his invention". This represents the traditional portion of Law which ruled the more thorough examination procedures before 1925. But we are then shocked to find one of the many contradictions [37 CFR 1.91], in which "models were once required in all cases admitting a model as part of the application...but such models are no longer generally required...*and will not be admitted unless specifically called for.*"

This precedent now absolutely prohibits inventors from submitting working models and gives no consideration of uncommon discoveries and their necessary demonstrable embodiments. Applications are routinely rejected on an examiner's whim, the opinion of evaluators alone having been delegated sufficient authority to contest the issue of "sufficient innovation".

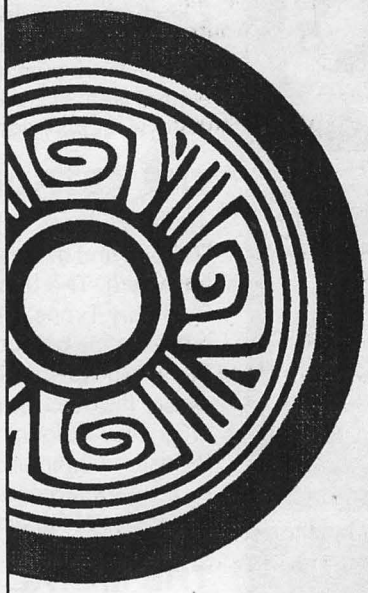
I believe that this historical summary sufficiently substantiates my initial statements, where working models once always accompanied patent applications. Since the bulk of my patent texts are dated before 1925, the integrity of my thesis remains preserved. I will also venture to suggest that Mr. O'Brian is completely correct when making his commentary, but only as concerns the most contemporary attitude toward "working models". Our statements are correct, but each in their time frame. In this matter I leave you *Most Respectfully Yours*. I am confident that historical reference will prevail in assessing the issues germane to this mundane debate.

— *Gerry Vassilatos, Staten Island, New York*

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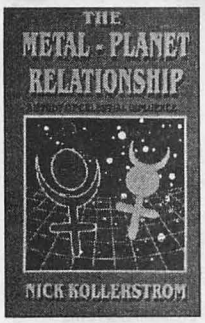
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ADVANCED GEOBIOLOGICAL CLASSIFICATIONS

by Michael Riversong

GEOBIOLOGY: The comprehension and analysis of energies which emanate from the Earth, and their effect on living beings.

Several different kinds of energies are known to emanate from parts of this planet, under various circumstances. Until recently, they had not been classified very well. In this article, observations from both ancient and modern times can contribute to our understanding of these energies and their effects on us.

FLOWING WATER

One of the first kinds of geobiological energies ever classified was that which comes from flowing underground water. From ancient times, it was known that certain spots were not good home sites, because anyone who lived there was subject to "wasting away", which was the old expression for what is now known as cancer. It is not knowable when dowsers first correlated these spots with flowing underground water. Approximately 100 years ago, statistical studies were done in Germany and Switzerland which confirmed the correlation. Modern researchers in most European countries recognize this type of energy, and it is an important part of environmental practice. Wolfgang Maes in Dusseldorf, Germany, has done extensive research into this matter, and has managed to correlate flowing underground water with positron emissions. Positrons are relatively rare subatomic particles, which are structured and charged opposite to electrons. It is not yet known why flowing underground water would create positron emission zones on the surface, but it is clear that any kind of positive charge is not good for higher life forms. As an example of this, the positively charged ammonium ion is certainly a poisonous substance. It is often emanated by things which are decaying. When water is flowing underground, there is obviously some other, as yet unknown process at work, which creates a flow of toxic particles approximately one-millionth the size of an ammonium ion.

STRUCTURAL LINES

Buckminster Fuller, in his **Synergetics** work, put together a mathematical proof which indicated, among other things, that planets are held together with force lines which are potentially infinitely long and infinitely thin. At this point, there is some agreement that such a set of lines indeed exists which form according to Fuller's theories, in a precise geometrical pattern. These lines are sometimes said to make the earth look like a soccer ball. There have been allegations made by certain researchers that these lines create flows of light energy which were found in Russian satellite photographs, but information confirming this has been difficult to find. Interestingly enough, major intersections of these lines are generally correlated with sites considered by many peoples to be somehow sacred, at a standard offset. Here is a list of several such sites:

Baboquivera, near Tucson, Arizona
Salt Lake City
Atlantis, in the Bahamas
Novgorod, Russia (once called "Lord Novgorod the Great")
Qom, Iran
The Amazon Jungle's legendary pyramids
Egyptian pyramids
Easter Island

The significance of structural lines in relation to living beings, aside from correlation with sacred sites, is not presently known. The fact is that unique characteristics of local terrain are more important, even near sacred sites. One bit of research was done in March, 1996, at the main Mormon Temple in Salt Lake City, Utah. A walk around the temple with a discreetly held compass showed several significant deflections of the needle. This indicates the presence of a strong magnetic force in that immediate area.

MAGNETIC LINES AND SPOTS

Most planets have some kind of magnetic field, as far as we know. The strongest known planetary magnetic field is associated with Jupiter, and so any information about that planet's field will help us determine the effects of magnetism in its extreme forms. On the Earth, the magnetic field is fairly strong relative to the planet's mass, but is imprecise and wobbly. It has been known to move around, even in historical times, it is not centered on the gravity poles and is thus unrelated to this planet's daily spin, and it varies in strength and polarity over time, according to geological evidence. In certain localities, there are also many known areas of magnetic disturbance. The cause of these disturbances is not always known. In some cases, large iron deposits or even an iron ore known as magnetite have been tied to disturbance areas. Some magnetic disturbances are connected to hot springs. These have been observed near Steamboat Springs, Colorado, and Thermopolis, Wyoming. Additionally, an odd AC magnetic field suppression was found next to the Yampa Vapor Caves in Glenwood Springs, Colorado, in June, 1991. Since

humans all have personal magnetic fields, it is likely that areas of magnetic disturbance would have some effect on them. However, the exact effect is difficult to determine. All we have so far is folklore, which says that people who live in mountainous areas, where such disturbances are more common, tend to be regarded as mentally unstable or fierce. Ancient stereotypes of hillbillies, Albanians, Yugoslavs, Montangnards, Tibetans, Afghanis, and Yemenites would seem to confirm this. Obviously, much more research needs to be done in this area.

COMMERCIAL LINES

Over the past few decades, a term called "Ley Lines" has become popular in some circles. However, this term is much too general to cover the variety of linear phenomena which have been found. Also, the word "Ley" itself is simply an archaic word for "line", and thus is not a very useful term. Ancient highway and urban planners seem to have known about certain energy patterns which would facilitate transportation and trade. Because of local topography, these were almost never straight lines. It is known that Romans would often set the course of roads by a type of dowsing. This is largely how the original layout of London was created, which has one of the greatest concentrations of commercial lines in the world. Cattle trails were sometimes used as the basis of roads. This method was practiced in some of the first American cities, including Boston, Brooklyn, and the oldest parts of Manhattan. These are called "commercial" because any kind of trade activity seems to be enhanced along these lines. However, they are not the best places to live. This is partly why the most important commercial areas of older cities have generally become separate districts. Commercial lines can be easily compromised by human activity and buildings. In many cities, decay began with the process of carelessly placing new buildings, monuments, and transportation lines with absolutely no regard for harmony with the environment. For example, Brooklyn was once a thriving commercial and artistic area. Beginning in the late 1800's, a population boom pulled attention away from careful siting and design of buildings. Many cheap structures were quickly and carelessly erected. Now, several districts of this great city are inhabited only by degraded beings who are much worse in their culture and mannerisms than even the most feared of ancient barbarians. This has also happened to Chicago, Detroit, Newark, parts of Los Angeles, and to some degree, Wichita. Fortunately, not all North American cities have been so affected. Cities which are built around major commercial lines and have managed to avoid massive decay include Toronto, Kansas City, San Francisco, Pittsburgh, and Seattle. Some newer cities such as Denver, Omaha, Calgary, and San Diego cannot yet be evaluated by these criteria. The exact energy composition of these lines is not presently known. They seem to be related to structural lines. The most likely energy composition would be predominantly resonant force, although gravity and dendritic (weak nuclear) forces may also play a role in the formation of commercial lines.

MINOR GRID LINES

In 1204, a monk made a mistake copying an old document, substituting the word "grail" for "grille". Since there was no such word as "grail", people assumed a definition which evolved into a type of cup or vessel, which legends then associated somehow with Christ. This confusion has persisted to modern times. What ancient knights were really seeking was knowledge of the "Holy Grille". They were on a course of study which would allow them to help people find the proper locations for homes, churches, and markets. Knights traditionally also had to learn various martial arts, which has become the focus of our understanding of legends. In fact, operatives within the European institutional churches were very content with this level of misunderstanding, as it eventually gave them a monopoly on these areas of vital knowledge. Orders of knights were slowly and systematically defeated or corrupted, and the secret knowledge became increasingly inaccessible to sincere students. On a local level, a few modern European dowsers have found small grid lines at about nine meters apart, and another system about a meter apart, which can sometimes be seen as patterns in newly fallen snow on flat areas. These have been named respectively "Hartmann lines" and the "Curry net", following the corrupt modern practice of naming significant discoveries after people. These systematic patterns were probably known to the ancients, but with significant breaks in the continuity of knowledge in Europe and the Middle East, and the exclusive holding of this knowledge by certain families in China and India, it is difficult to reconstruct what actually happened. These minor grid systems do seem to follow one general rule. Sleeping areas should never rest directly on any grid line. Based on personal observation and experiments done both by myself and selected clients, what we are really dealing with is interactions of several force systems. This means that a number of factors must always be considered whenever locating any human artifact, in the pursuit of optimum health and prosperity.

MINERAL ZONES

OIL: Directly over oil deposits close to the surface, vegetation is usually affected. This can even make an area totally barren, as in the Rub al'Khali of Arabia, where an extremely light grade of oil is very close to the surface. Some oil areas, like the Midwest Basin of Wyoming, and the Caspian Sea, contain extremely unattractive, sparse, scrubby vegetation. In general, it is not good for humans to live in these areas. Actually, outside of the oil production business, there would be no way for people to support themselves in most of these areas. Fumes from the oil don't seem to be a factor, as they are not perceptible until the stuff is actually disturbed and drawn up. Los Angeles would seem to be an exception, but the oil fields there are very small and localized in the tortured, nearly chaotic geology of the region. The places in LA where oil was found, such as the Baldwin Hills, are definitely not good places for people to live. Crude oil could conceivably be generating some kind of subtle energy field, which would account for this.

GOLD: In ancient times, it was said that angels or demons guarded treasure and gold deposits. Gold does have a harmonic characteristic which draws and organizes a tremendous amount of energy. At this time in history, the true significance and the most important possible uses of gold remain largely unknown. Those who believe in the history of Atlantis know that gold was an essential component of their air transport technology.

RARE EARTH: Based on known characteristics of the Lanthanide series of chemical elements, it would stand to reason that any area with a significant deposit of these materials would have special characteristics. Many rare earth deposits are on the site of

known meteor hits. More research needs to be done on this, especially near Yttrby, Sweden, where the most significant rare earth deposit in history was found.

CHEMICAL REACTIONS

Certain chemical processes may be facilitated by geobiological energies. This is an area which needs a lot more exploration. It is now known that most molecules will form into specific geometric patterns, which have similarities to geometric patterns associated with geobiological energies. Some simple, common compounds, such as ammonia, actually form into little pyramids. The energies which are most likely to affect chemical reactions are those from mineral deposits, magnetic forces, and commercial lines. One odd bit of evidence for these effects lies in the fact that, as cold fusion research became well-known, most attempts to replicate the results originally created in Salt Lake City were failures. Remember, Salt Lake City reposes at an extremely important structural crossroads of this planet. Most notably, experiments in Boston, a decaying Eastern city, were complete washouts. However, experiments in the vicinity of San Antonio, Texas, showed good results. This city is a known geobiological power point, and its original pattern has not been greatly compromised. Some cold fusion research is currently being done in the southern part of France, where there are excellent geobiological conditions.

OBSERVATION OF ENERGIES

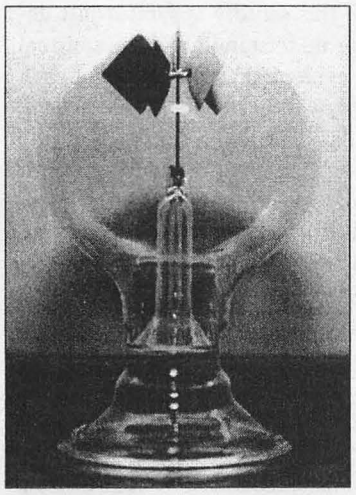
Traditionally in Europe, geobiological energies were found by dowsing. There were other techniques. For example, we know Romans became expert in how geobiology was reflected in the internal organs of sheep. However, these techniques have not been passed down to the present generation of researchers. Dowsing is simply a matter of tuning in to the energy pattern which one wants to locate, and using some sort of indicator to show where the pattern is. These days, wires, copper welding rods, and various kinds of pendulums are commonly used. In former times branches of certain plants were used. This kind of perception actually relies on the existence of a small sensory apparatus installed deep within the human brain, called the pineal body. It is shaped like a pine cone, and of a perfect configuration to send and receive many kinds of resonant wave forms. By combining this understanding of anatomy with new findings in energy pattern research, we can now train ourselves to perceive geobiological energies directly, with no intermediate circuits needed to run indicators such as pendulums and wires. Nerves radiate throughout the human body from the pineal body. Thus, the signals coming into the pineal body can be interpreted as any sensory input you choose. Most Americans are comfortable with visual input. Russians tend to be more comfortable with auditory perceptions, and Africans usually prefer to interpret the signals as skin sensations. These are strictly cultural patterns, and are useful in any context. Within any cultural group, of course, there will be exceptions, so the above statements are only general guidelines. One simple way to use this perception is to tell yourself that areas which are unhealthy for people will show up as dull, blackish or brownish areas. These are created by the interaction of all the systems mentioned above. Areas which are healthy will show up brighter, in various soft colors. Colors which are too intense would only be good for special purposes, and should never occur in sleeping areas. Actually, this sensory apparatus just described is unnecessary. As further understanding of the spiritual nature of humans develops, it is evident that the owner of each human body is a fully spiritual being, with native abilities of its own. Without getting into any particular doctrine, a survey of all the world's religions has determined that one ability which any spirit has, innately, is full perception of all possible frequencies of all forces of the material universe. Humans are limited in our perceptions, and most of us would be literally driven to madness if we were suddenly able to see the totality of all energies around us. Because of this fact, it is vital that all researchers into geobiology work with a spiritual discipline. Atheists or agnostics in this field can be quite destructive, because without a fundamental understanding of the spiritual background of this universe and its life, tremendous damage can result from misapplication of the observations. This is why, in ancient times, this knowledge was deliberately concealed from the general public and even some authorities. Now, a lot of knowledge is being revealed daily (we live in "the age of Light"), so more voices must be dedicated to not only clarifying the information coming out, but to strongly urging the application of ethics to this field. Governmental regulation will not work, because it never has for any great period of time. We must therefore go back to the origin of ethics, and the origin of the word itself, which comes from an ancient Greek word for "self". In other words, ethics must emanate from you, the reader, and can only be applied by the individual to the self. It is in this context, with all researchers and practitioners constantly asking, "What is the greatest good for the greatest number of beings?", that knowledge of geobiology can transform our world into the paradise it should be. ❐

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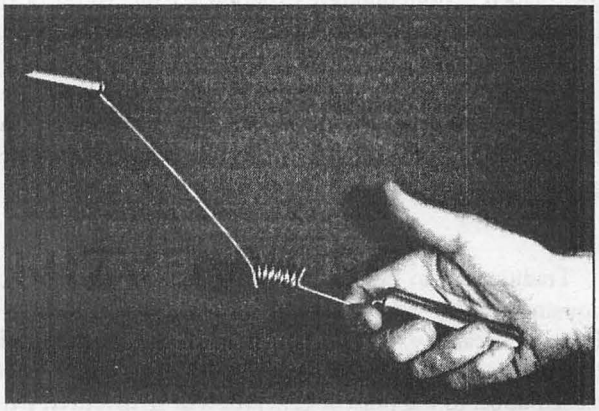
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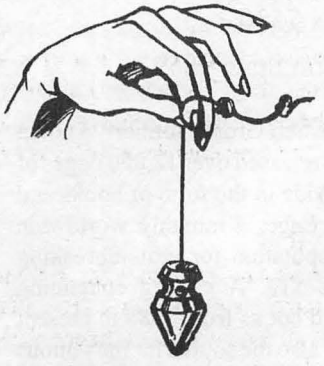
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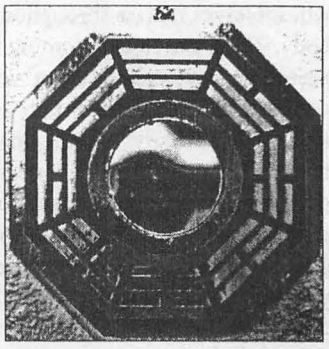
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INTELLECTUALS AND VISIONARIES

Studies in the Enculturating Process

by Marion L. Daye

ACADEMES are once again propelling a strange new doctrine, which derides the role of dream and vision in the pursuit of scientific truth. In order to affirm their belief that dreams and imaginations corrupt and contaminate the sciences, several new facilities have been constructed with a deliberate aim toward preventing the freeflow of imagination and dream imagery. Hoping to effectively sterilize what they consider to be the "wanderings of intellect from central themes", these facilities are architecturally designed to present researchers with neutral, "non-evocational" environment for "pure thought". Intellectuals assigned to complete classified tasks will not be interrupted or distracted by the wanderings of imagination or dream images.

This erroneous and thoroughly damaging doctrine is actually being promoted among the younger student bodies of several learning institutions. It is in this "cleansed state", claim the academicians, that the mind is truly liberated to launch on tasks which demand pure applications of intellect and reason. Such deplorable expressions intend on formulating a new kind of human being. They believe the lie that when once this sort of human has been stripped of all emotion, stripped of all association, stripped of all imagery, stripped of all visionary "noise", then the attainable scientific heights will be unlimited. An armada of such intellectuals supposedly could begin developing a super culture.

Dreamless architecture. Biospheres. Artificial environments. Virtual Reality. The self alienating theme is consistent. This kind of sterility is not new. It is in fact an importation of eastern religions, which aim toward the progressive personal attainment of "non being". Self purification. Self help. Self Will. The concept that visionary flights are wasteful distractions has been promoted for a number of years by those wishing to magnify their own self-centered desires. Only those whose intentions are to achieve against their peers endorse such self-immolating exercises.

Out-proportioning one's own humanity with blind ambition requires the sacrifice of originality and vision. One literally steps upon hearts and heads to achieve against personal limitation, believing that the magnification of self will is a process necessary to personal success. Believing in yourself. Gaining personal success at this price causes loss in the very deepest regions of our being. It is a region which normally distinguishes us from the machines which we create.

Those who engage in these personal transformations lose their own souls. Dr. Faustus revisited. Nietzsche's superman. But how do such distortions of doctrine arise? Seeking to emulate machine process is a new social theme, a product of the Industrial Age and the old temptations of humanity. How then is it possible that academic science has been so duped by a recurring theme?

Can it be that these pure and perfect intellects are forgetful and fallible? More than this, can it be that academes are not truly observant enough to identify the negative metaphors and types which are again expressing themselves? Science was once an artistic pursuit through which was generated all technology and industry. How is it that science, originally the domain of visionaries, should now begin detesting and rejecting the very energies which gave it breath and being?

SENSATION

The fundamental belief which rules academic thought in these regards today has produced a mutated assessment of culture and civilization. Too long professed in lecture halls and erudite scholarly journals, this distorted and incomplete doctrine elevates the labor of sheer intellect and reason above all other conscious expressions. While intellect and reason are parts of the human experience, they are by no means the entirety of that experience.

Closer examination reveals the true role of intellect and reason, a role which figures last in the analytic steps of experience. Nevertheless academes have wedged themselves into a conscious poise which reveals the diminution, not the expansion, of human experience. The academic establishment relies entirely on the supposition that "logic, reason, and intellect" is the central inspiring agency which determines each successive step in technological development. What they repeatedly affirm throughout is that humanity relies on intellect alone.

Assuming this partiality to be fact, they discipline students to eradicate all other experiential movements in order to produce completely logical thinkers. This discipline, they believe, will produce the kind of science and technology which can lead humanity into a higher quality of life. Judging from the quality of life which academes seem to experience — a diminished world experience — I would of necessity hold back my own capable sarcasm.

The academic poise is a pitiful degeneration of whole experience, no part of which may be evaluated or eradicated by those who use consciousness itself to make those kinds of faulty judgements. When we examine the roots of this thorn tree, we realize why these conclusions were reached, and why they took root in academic halls. The progressive erosion of the human experience began with a very small group of writers in the last century. Believing that human nature is isolate and autonomous, a mere collection of inert sensors in an energetic environment, they devised a model of consciousness curiously not unlike their own laboratory instruments.

Declaring that sensation was a stimulation of nerves, that awareness was an assortment of associations, that imagination was a discharge of internal genetically inherited associations, the "new human being" was born. Alienated. Isolated. A mere target for inert energies. According to them, colors did not exist outside of the neural receptors. Ideas and thoughts were mere "chemical flutters" in the blood. Dreams and memories were relegated to simple associational networks, the image of machine perfection. The poison seeps deep into the mind, bringing about the death of soul. The death of sensation and joy. It infers the insidious notion that sensation does not exist, that consciousness is an accident, and that experience is a lie. The most unschooled person knows the true source of such an idea. How is it that the academes do not?

CULTURE

Such a perverted and outrageous view of conscious experience now necessitates exposure and correction. One senses that a subtle and corrupting mind influence has too long been allowed to proliferate unchallenged. Those of us who develop our visionary and perceptual abilities have found that our scientific progress is absolutely enhanced, not depressed, in the process. When we hear academes assert that intellect and reason alone form the very pillars on which culture rests, we are compelled to react with concern. It is intriguing that, while academes are firm in their antisensual beliefs, we are more sure of our own views. The two camps are mutually exclusive, because of the result of the quantitative sense-restriction laws.

One is shocked to discover that many younger and more impressionable minds are endorsing the lie of visionless science. Eradicating the living energies which are represented in their own imaginations and dreams, students soon find themselves adrift in a grey world. Torn away from their first great natural birthright, students experience the horrors of a visionless inertial world where their professors still grope for meaning. Visionless science produces endless separations from the very Nature which it claims to seek. The academic worldview is sterile, cold, and alienating. Quantitative science leads to separations from nature, not communions.

Those who build culture know that intellect is a tertiary stage in the development of civilization. Culture is the result of a process, not the result of applied scientific understanding. The sciences serve this process, but do not generate its power. Culture is not the result of understanding at all. Culture does not find its source in intellect or reason. Intellect and reason each serve the enculturating process. Culture is the result of a visionary process, a process of dreams and imaginations which present sensitive recipients with compelling symbols. These symbols drive their recipients toward an ever deepening consciousness, with resulting effects which reach society as art and technology.

The embodiments of energetic dream symbols in art and technology produce the noumenous artifacts of which culture is made. The enculturating process begins in the dream sea, in the sense organ which ancients called "mind vision". To eradicate this gate of personal experience is to eliminate future survival on more fronts than can be now conceived. Art and technology are thus the pure expressions of a consciousness which begins as received dream images. None of these energetic images is derived from intellect or reason. They are not mere discharges from an internal set of associations. The deep mystery through which ideas are received by sensitives is not a force of intellect, reason, or scholarly application.

Imagination, intuition, and dream. Each is the true vessel, the gate through which externally derived and often unexpected spontaneous visionary energies flow. The enculturating energies. For the reception of these, there is no professional tutelage, merit, award, or socially approved ascensions. Modern educational process has never addressed this fundamental truth for good reasons. The visionary gift is not prized and desired by any who would seek professional elevations. Those who, with arduous and passionate desire seek the mysteries, will find vision and glories. They will also find their love pierced through with the thorns of derision and rejection. The visionary is an uncommon personage whose presence is simultaneously desired and rejected.

Vision is the cultural generative process. The visionary is the agent through whom conscious energies are given expression. Cultural process drives humanity in progressive technological directions. World culture does not exist without the visionary symbols which spawn technology. Technology empowers humanity to achieve increasing degrees of survival in a savage world state. When their survival is threatened on offensive fronts which technology cannot successfully engage, cultures perish. Cultures which manage the modification of their technology survive. What promotes such survival? Visionary dream symbols, not intellect or reason.

DREAMS AND VISIONS

The agonies which comprise the survival theme require sudden and unexpected new discoveries, the exploitation of which leads to new technological foundations. When pressed to the wall, neither intellect nor reason function as generative organs for the survival of humanity. Intellect and reason are applications, tools through which dream symbols may be embodied in material form. Intellect and reason are examination tools which operate after visions are received. Visions are primary. Visions lead the mind to recognize the significance of natural phenomena. Visions prompt discoveries. Discoveries are secondary. When discoveries are made, then material embodiments may be forged. This requires intellect and reason, the tertiary servants of vision.

Armed with the dream and visionary symbols which have previ-

ously stimulated certain mystery seekers, discoveries are made. Empirical discoveries are made empirically, often accidentally. This process of visionary discovery frustrates academes who are rarely participants in these early stages. Collected and collated, strange and anomalous phenomena form a growing body of knowledge which can be studied. It is then that academes may begin to enter the process. Dependent on knowledge *a posteriori*, the tools of intellect and reason find themselves shuffling and reshuffling a fixed set of facts. This is the chief work in which academes are employed.

But, redistributed facts, however convoluted, do not produce revolutionary new conceptions which lift consciousness out of the fixed set. Intellect and reason soon find themselves exhausting their available body of knowledge. It is often found that the frustrations of such a rigidified system of knowledge force the intellect to cease all activity, permitting a sudden penetrating flash of visionary energy to discharge. Then, and only then, do new mind elevating conceptions emerge for intellect and reason to begin their tertiary work. Cultural revolution requires visionary reception. Vision is the gate through which new views on Nature are received. Vision is therefore the foundation for new and revolutionary cultural progressions. Vision is then the means by which the new technology of each cultural succession is forged.

NEW WORLDVIEW

In cultural desperation, none of the academic pursuits can successfully operate, necessitating completely revolutionary approaches to survivalistic problems. It is vision alone which provides survivalistic avenues which both baffle the learned and surprise the visionary. Visionary stimulations prompt cultural motivations. Dream visions lead in surprising and unexpected directions. They are streams which change their recipients, and new and expanded consciousness are the first results. Only a new world view compels change. Recapitulation does not affect true change. Those who believe that modern technology has produced a "new age" have been the dupes of advertising campaigns that know the reality.

Consumer technology has produced nothing which was not already possible forty years ago. The mass produced machine hordes which daily assault our lives do not serve our deepest need level. Incapable of supplying consciousness while over indulging our superficial senses, all present technology is rapidly reaching an sociological impasse. There is a dying portion of our being, produced by both academic science and its subsequent technology. The curious effect of scientific proliferations on society is that it dictates and moulds experience into the limited parameters which its technology then enforces.

Technology compels progressive erosions of the dream content in experience. Radio replaced human contact. Television replaced direct experience. Such evacuations of the soul ultimately lead to nonentity. These are the social conditions which the academes design for a future world "devoid of distractions". A new worldview is needed now. Technology must change to meet the human requirements. Technology must address human experience at more fundamental levels than currently expressed.

Art was once technological application. Art was a means for stimulating consciousness and extending the mind. Magickal experience was once the original and true goal of artistic effort. Machines which engage both conscious and perceptual energies directly, magnifying communal experience with the fundamental world. The visionary world. This is a technology which has not been given credence by academes, whose preoccupation with inertial energies prevents all such possibility. A technology must emerge which magnifies, intensifies, and extends normal experience. Based on the instrumentation of visionary energies, we rediscover that Radionic Technology, which humanity so urgently requires, is one whose impact on subjective perception and experience is primary. Utilizing the energies of consciousness, radionic technology reinforces the original doctrines concerning world, perception, experience, and consciousness. ❐

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The Pundit Curmudgeon

Controlling The Growth of Microorganisms With Magnets

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THINK beyond the words in the title of this column. The possibilities for beneficial technical change in our civilization resulting from the use of magnets to control the growth of at least some bacterial, algal, and viral growths are beyond being merely significant. And yet this is a field which has received little attention.

Because of the simplicity of the use of magnets in regulating or controlling the growth of microorganisms, virtually everyone can investigate such uses in connection with the treatment of water—some applications in connection with infections, and some in connection with a significant number of other common aspects of life. Because of this simplicity, enough of us can get interested in applications of magnetism such as these, and can produce and confirm knowledge, forcing the acceptance of magnetic treatment for at least a few significant purposes.

Hopefully my limited experience using magnets in maintaining the condition of the water in my hot tub will stimulate this interest. My knowing of this type of application of magnetic energy gradually became "real" or "active" during the past few months prior to the preparation of this column. As a consequence of my being aware of the nearly current joint work of Rawls and Davis and the activities of many others in using magnets for healing and other purposes, my active awareness of this topic should have been obvious to me much sooner.

In any event, the story of my recognition of the use of magnetic growth control is best discussed by stating what I did in more detail than many would like. This is to facilitate replication of what I have done. Hopefully this verbalization will make those who read this column aware of the importance of this topic and facilitate others investigating it in the detail that the topic deserves.

Probably the tale of my activity relative to using magnets to control or regulate the growth of microorganisms should start as 1996 was passing, when I was checking my files in preparing to write another Pundit Curmudgeon column (which was and is substantially unrelated to this discussion). At the time I encountered the expired Rigby US Patent 4,065,386. The abstract in the figure reproducing the top of the cover sheet of this patent reads as follows:

"A method of treating water to control or eliminate algae and bacterial growth wherein the water is passed through a magnetic field. The magnetic field is generally normal to the direction of flow of the water."

The patent discloses that treatment with a device as disclosed in it renders water "almost completely unsuitable for the propagation and growth of algae." It contains a further assertion that the treatment specified "may not rid the water...of bacteria" and that less chlorine may be required than in the past.

A structure for effecting this treatment is shown in the accompanying reproduction of the only sheet of drawings in the patent containing Figs. 1-4. A treatment unit as illustrated in Fig. 1 has magnets 11 located around a plastic shaft 12 and separated by plastic spacers 13. This structure "...is aligned to produce a magnetic field which is at right angles to the axis through the inlet 6 and outlet 7." One can discuss whether or not this statement meets the statutory standards of 35 USC 112 for the disclosure of a valid patent. Since the Rigby patent is expired, there is also no reason to discuss the latter in connection with the complete absence in it of any clue as to the strengths and sizes of the magnets 11.

The copy of the Rigby patent in my files included a seldom seen page indicating that someone had incurred the expense of instituting a re-examination proceeding, seeking to invalidate or restrict the claims of the patent. This was strong secondary evidence indicating the probable truth and accuracy of the statements in Rigby's patent as to the use of a magnetic field to do in algae and bacteria. After reflecting on the latter and the other materials I had read about the effect of magnets on various types of growths on or about Jan 19, 1997, I ceased the use of the halogenator in connection with my domestic hot tub to see what, in fact, a small magnet would do in controlling visually apparent growths that might develop in it.

United Sta

Rigby

[54] **ALGAE GROWTH CONTROL**

[75] **Inventor:** Robert Alexander Rigby, Canterbury, Australia

[73] **Assignee:** Algard Pty. Ltd., Balwyn, Australia

[21] **Appl. No.:** 696,502

[22] **Filed:** June 16, 1976

[30] **Foreign Application Priority Data**

Dec. 10, 1975 Australia 4244/75

[51] **Int. Cl.²** C02B 3/02

[52] **U.S. Cl.** 210/60; 210/64

[58] **Field of Search** ..... 210/42 S, 222, 223, 210/60, 64; 71/67; 162/161; 21/54 R; 204/155, 156

[11] **4,065,386**

[45] **Dec. 27, 1977**

[56] **References Cited**

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Primary Examiner—Thomas G. Wyse
Attorney, Agent, or Firm—Jack M. Wiseman

[57] **ABSTRACT**

A method of treating water to control or eliminate algae and bacterial growth wherein the water is passed through a magnetic field. The magnetic field is generally normal to the direction of flow of the water.

6 Claims, 4 Drawing Figures

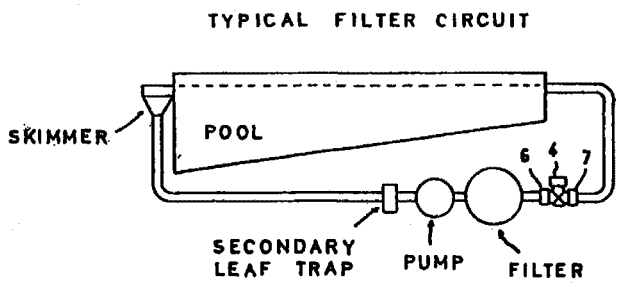


FIG. 3.

Curiosity was my sole motivation for doing this. I could not help but wonder if the use of magnets to cut down on or eliminate the use of the usual "pool chemicals" might be one of those things cast aside or rejected by established technology or vested interests for any one of a variety of reasons. Since I am the only one who uses the tub I recognized that I would not jeopardize the health of any one other than myself by substituting a magnet for the usual "chemicals" in the tub.

This tub is a typical back yard type structure with a 5 foot (about 1.5 meters) inner diameter and a 500 gallon (about 1,892 liters) capacity. It includes a fiber glass liner covered with what is probably a polyester gel coat, but which could be some sort of an acrylic coating. It is used with a typical external pump, electric heater, and filter assembly of a type apparently used by many manufacturers of hot tubs. This assembly was connected to the tub using standard PVC pipe and fittings.

Up until the time that the magnet was used, various chemicals were employed in accordance with conventional practice to keep the water in the tub usable. A commercial floating halogenator was used in the tub to dispense bromine as an oxidizing agent except when the tub was used. Whenever I was home it was normally employed twice daily for about 20 to 30 minute intervals. When the tub was not in use it was always covered. At all times the tub was maintained within the range from about 108 to about 110 degrees Fahrenheit (about 42-43 degrees Celsius).

Probably a combination of laziness and logic caused me to think that it would be unnecessary to use Rigby's structure as shown in Fig. 1 of his patent to obtain the same results he achieved. It seemed that if a stack of magnets would provide these results in a water line, then, to at least a degree, these same results would be manifested if a magnet were merely located in the container used to hold the water passed through the line, so long as there was some circulation past the poles of the magnet. As a result of Rigby not mentioning polarization effects or the need for any specific type of flow adjacent to magnets, it was assumed that these factors could be neglected during a preliminary trial or test. Since the patent gave no clue as to the size of any magnet or magnets used, I decided to start off with a small magnet to see what would happen.

The particular magnet used was a rectangular ferrite magnet about 3/8 x 7/8 x 1 7/8 inches (about 1 x 2.1 x 4.6 centimeters) in dimension obtained from a local Radio Shack store. This magnet is roughly the size of a large domino. It was magnetized, so that one of its large flat faces is of one polarity and the other is of the opposite polarity. Because of limitations of my Gaussmeter, I was unable to measure the strength of the magnet by locating the instrument against one of its poles. The strength of the magnet can be indicated by noting that as the meter was moved toward one of the poles, the pointer of the meter started to deflect at a distance of about 7 inches (about 18 centimeters) from the pole.

When the magnet was first used, no effort was made to change the content of the water within the tub, except in connection with the halogenator. It was stored away from the tub. The magnet was located on one of its long, narrow sides, on a slightly raised "seat" in the bottom of the tub, at a distance of about 24-30 inches (60-76 centimeters) from the recirculation inlet into the tub. This location was chosen because, here, the magnet was not apt to be knocked over when the tub was used, yet both of its poles would be in the path of recirculated water as it was pumped back into the tub.

Contrary to what my wife expected, from about 19 January 1997, when the halogenator was removed, until 5 May 1997, when the tub was emptied, the tub water was of a clear, sparkling character and had the same previously described "slippery" soft water type feel. Starting on or about the first of March, a few, off-white, fibrous agglomerates appeared in the water. Apparently, they were partially removed from the water by the periodic operation of the pump and filter, but they gradually multiplied to the point that they were more visible all of the time.

A week or so after these growths were first observed, it was recognized that they were all probably some form of moss having about the density of water. These fibrous agglomerates were easily

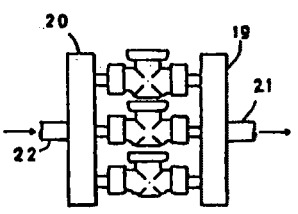


FIG. 4.

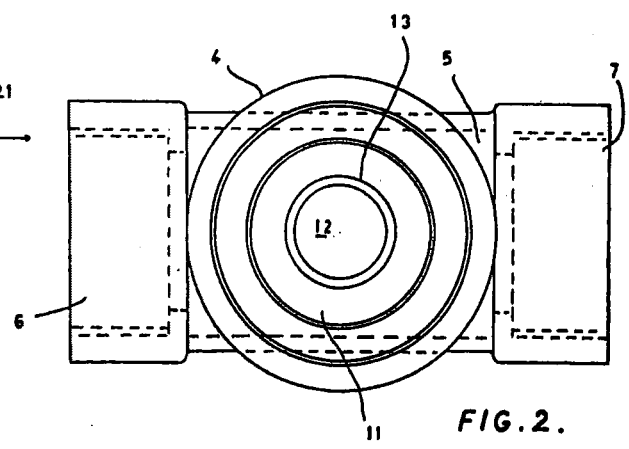


FIG. 2.

broken up and, except for their color, reminded me of the slime that develops in a trickling filter sewage treatment unit or along some mountain streams. At the time I thought — and I still believe — that they were probably primarily composed of some sort of algae; it lacked the usual blue-green color either because the tub was usually covered or because the magnet was being used.

I left on an extended trip soon after the middle of March. I expected the condition of the water in the tub to remain substantially unchanged during my absence, when no one would be using the tub. Instead, the volume of circulating, fibrous agglomerates increased during the three plus weeks of my absence. The tub water continued to appear as clear as before these growths were noticed and continued to have approximately the same "feel" as previously noted. On returning I also noticed that the growths were starting to loosely adhere to the clear "plastic" fixtures in the tub and perhaps, to a limited extent, to the coating on the interior of the tub.

By about May 1 the volume of these growths had continued to increase to the point that the worries and remarks of my wife became an unwelcome motivation for changing the tub water and otherwise cleaning out the tub. These inducements to activity could not be ignored. This lead to draining and rinsing the tub with tap water. This was followed by filling the tub and "shocking" it with a chlorine compound. Several more cycles of draining and rinsing with tap water followed until it was thought that the interiors of the tub and its associated apparatus could not avoid being reasonably clean.

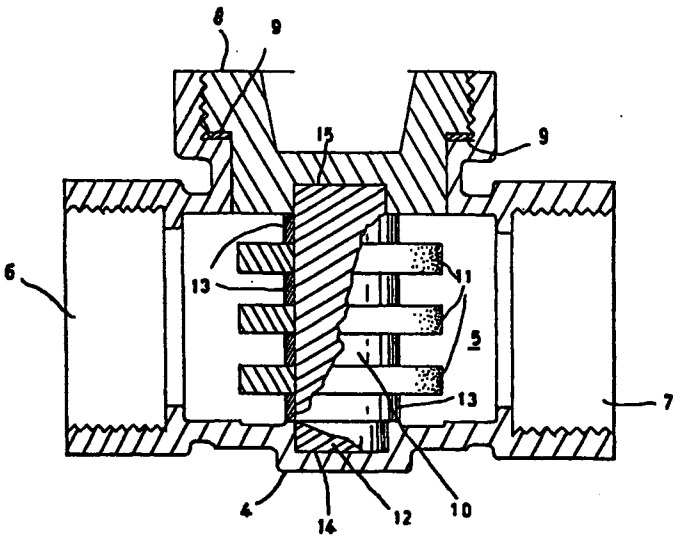


FIG. 1.

At the time the tub was initially drained, it was discovered that a unitary growth had developed on the inside of the perforated fixture covering the line leading from the tub to the pump. This growth was different from the fibrous agglomerates. It was of nearly the same off-white color as the agglomerates, but it had more or less the color and consistency of a common custard desert. It did not have a fibrous, moss-like character. Instead, it had a friable, ring-like "body", appearing as a gel that had been molded by contact with the perforations in the fixture. Extending from the body was a series of short, spaghetti-like columns. Surprisingly, there was no indication that either this fixture or this unitary growth was acting as a filter for the fiber-like agglomerates.

When the tub had been cleaned and refilled and the entire filter replaced, a much larger ferrite magnet was selected to replace the initial magnet. This second magnet was rectangular in shape, about 1 x 3 x 6 inches (2.5 x 7.6 x 15.2 centimeters), except where a small chunk had been knocked off of one corner; the oppositing, large, flat faces of the magnet were of opposite polarity; except for one of its large faces and where the corner had been removed, all of the magnet was covered with an unknown, white, paint-like composition. Since this particular magnet had been obtained at a second hand electronics store, which was going out of business, nothing was known about its history or the coating. When the strength of it was indirectly measured as previously described, the pointer of the Gaussmeter started to deflect about 30.5 inches (approximately 77.5 centimeters) from a face of the magnet.

Prior to being placed in the tub, the magnet was placed in a plastic bag, which was exhausted to the extent possible and then sealed, to avoid contaminating the tub water by direct contact with the white coating. The encased magnet was then located in about the same position as the previous magnet. The tub recirculation unit was then operated as before in a conventional manner. Periodically, the position of the new magnet was changed slightly in an attempt to make sure that there was approximately equal flow past both poles of the magnet over a given period of time.

The use of the tub with the larger magnet commenced on 12 May 1997. After a week or so, on two occasions, relatively small, sad-looking, floating, moss-like, whitish gray growths appeared in the tub. These physically looked like growths of the type previously encountered that had somehow been emaciated. It was assumed that they were remnants of the prior growths, which had somehow not been removed from the tub and its attachments during cleaning.

As this is being written, slightly more than 2 months later, no other sign of any sort of growth has appeared in the tub. The water in it has something of a soft water type feel and is clear. At times one can debate whether there isn't a small amount of body oil on the surface of the water in the tub. Nothing so far suggests that there will be any change in the condition of the tub water so long as the tub is used as at present.

The fact that I have subjected myself to the magnetically treated tub water twice a day, when at my home, without suffering any apparent illness attributable to the use of the tub, at least suggests that the Rigby patent was partially correct in its statements about magnets being capable of controlling algal and bacterial growth. For the same reasons it is possible to prognosticate that magnets can be used directly so as to at least regulate some viral growths or activity.

Anyone seeking to attack the validity of any or all of these related conclusions because they are not based on "proper scientific" evidence would be tempting to deny reality. The observations supporting these conclusions are a type of evidence that we all commonly rely on in reaching the decisions necessary to survive in our society. These observations about controlling the growth of microorganisms are of a type which are normally admissible into evidence. While they are not supported by the usual detailed comparative testing caused by factors which are more political than

technical in character, they are available evidence obtained in the absence of the usual funding hassles and the usual discredited peer review games.

Under these circumstances, the observations and subsequent conclusions, relative to the validity of the claims of the Rigby patent, must be given full faith and credit until there is convincing evidence that they are not to be trusted. This is particularly true since they are in conformity with the statements in the Rigby patent. Unfortunately if the experiences with magnets and a hot tub discussed are to have much significant meaning, it is necessary to extend or broaden these conclusions, that they may be applied in diverse circumstances.

Any such broadened conclusions relative to the nature of magnetic treatment, which have been reached on the basis of quite restricted experience, are also clearly open to attack because they are based on logical deductions and do not merely constitute restatements of what is obvious from the evidence. From a practical standpoint, such broader than justified-by-the-evidence type conclusions are not really conclusions, but instead are mere speculation based on restricted, undesirably limited evidence. This can be illustrated by speculating that magnet treatment as used is not always effective.

Because of the diversity of algae, bacteria, and viruses, it is considered self apparent that some of them will be reasonably immune from magnetic growth control or regulation. Nay sayers should note that this does not detract from the desirability of using magnets to treat water directly. Instead it goes to the issue of the treatment parameters within which magnetic treatment can be effectively used.

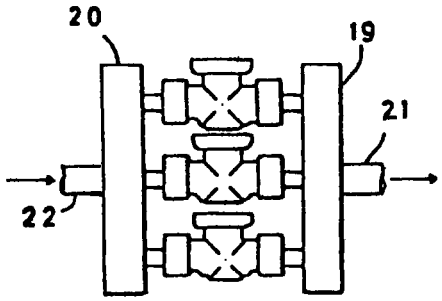


FIG. 4.

This is the old issue which plagues a patent lawyer when a client presents him or her with the details of one embodiment of a chemical invention and a firm, believable statement that no further work will be done to determine the limits of the invention. Usually speculation thereafter determines the extent of the invention. And the patentee suffers if this logical guess work is seriously in error.

Fortunately no one will really be damaged by speculating, on the basis of routine experience with "time-temperature" dependent reactions, that magnetic treatment of water to control the growth of various microorganisms will be effective over the wide temperature range from the freezing point to the boiling point of water. By comparison to the "rule" that normally a reaction tends to increase in speed toward completion with an increase in temperature, it can be expected that the time to achieve a given level of any growth controlling or regulating effect will decrease as the treatment temperature increases.

Logic causes one to question as to the effectiveness of such treatment at the upper end of this range because of the possibility of undesired "side" type reactions which may result from magnetic treatment. This leads to the prime question about this type of treatment — what really happens to cause the results achieved by the treatment? It also goes to the presently unknown mechanism of whatever is set in action by exposing either "pure" mineral free water or a solution to a magnetic field from the two different poles or both of a magnet. Are or are not collateral or side effects involved in achieving the intended growth related results with the magnetic treatment of water ?

Currently there is a knowledge revolution in connection with a recognition of the properties of common water. No longer is it just an effective solvent. Because of the fact that its surface tension and at least some other physical properties of water can be changed by appropriate treatment, water must be regarded as a sort of solvent -reagent which probably enters into an almost unlimited variety of complex forms and joint "structures", depending upon the circumstances at any particular time.

From the well established use of magnets to place inorganic ions, such as calcium and magnesium ions, in solution in water piping systems, we can deduce that the mere exposure of water to a magnetic field somehow alters the chemical nature of the water in such a manner that a "modified" intermediary form of water is created, and that this altered form of water is capable of forming soluble, relatively stable chelate or chelate type complexes with inorganic ions. It seems clear that there is a time interval or period after the formation of the intermediary form of water within which these complexes can be formed and that following this time period the water probably reverts to its original form.

The "key" aspect of the use of magnetically altered water, as used in removing pipe scale and in other applications, such as treating tub water, must relate to the nature of the modified or intermediate form of water. Logic suggests that this intermediate type of water must be quite versatile. In some unknown manner it must be capable of piercing or at least interfering with any form of an organic surface coating or covering which encloses or otherwise defines the exterior of any type of common bacteria, algae, or virus. This may even be merely the result of the change in the surface tension of the water.

It seems likely that it involves some sort of a complex mechanism creating an "association" of water molecules capable of interfering with and probably piercing protective colloid and gel like surface barriers. If, as expected, such a conglomeration of water molecules is itself, or is in the nature of, a chelate holding one or more metallic ions, it is possible to hypothecate that the magnetic treatment of water converts water from a traditional solvent into probably a series of complexes useful in supporting and conveying various ions, so that these ions can enter into or serve as catalysts for various biological reactions.

Support for the conclusions relative to the ability of magnetic energy to modify the physical nature of water comes not only from the use of magnets to clean up water pipes, but is also found in the frequent references to the use of magnets for healing purposes, and even the use of minute currents between internal and external electrodes located so as to attenuate microorganisms in the blood. These currents must have associated magnetic fields permeating the blood. The use of such currents was discussed from a patent

standpoint in the prior Pundit Curmudgeon column "Preliminary Reactions to Kaali et al US Patents 5,139,684 and 5,188,738" appearing on p.37 of the First Quarter 1997 issue of *Borderlands*. The former topic is so well documented that it would be a waste to refer to references concerning it.

In the use of magnets for healing purposes and in the use of both internal and external electrodes with a small current to attenuate microorganisms, the fundamental mechanism employed has got to be the same or about the same as the manner in which a magnet both affected and effected growths in my hot tub and in which a magnet was used by Rigby to control growths in swimming pools. It is interesting that even the language used by Rigby relative to controlling or eliminating bacterial and other growths has the same common meaning as the word "attenuate" as used by Kaali et al.

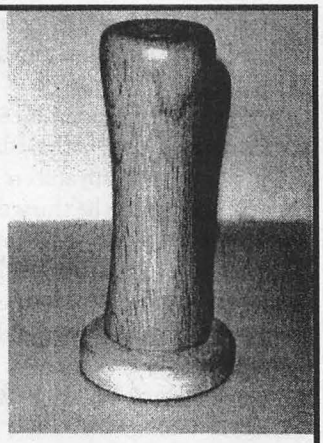
Under the circumstances, isn't it time to stop being concerned with different procedures for using magnets to attenuate bacterial, algal, and viral growths, and instead start investigating the mechanism or mechanisms by which such attenuation is accomplished instead of speculating on this subject matter. Such investigation will cover many specific topics. Should the energy associated with one or both poles of a magnet be used? If the use of only one pole seems preferable, which pole should be this specific pole? Would cycles of energies from different magnetic poles be employed? These are inherently related to the strengths of the magnetic fields used and the duration of the period a growth should be exposed to magnets.

What are the relationships of these items to the currently promoted use of magnetic drinking water, and to the sophisticated radionics involved in using patterns in treating water with a magnet to render it effective or more effective in treating various health problems? In asking these questions we must inquire as to the relationships between the use of magnets to act on the water and the use of magnets to accomplish different objectives.

Will the answers to these and related questions concerning the use of magnets to control microorganism growth ever be ferreted out? Will the treatment of microorganisms with magnetic fields to regulate their growth be by-passed, or will it become an aspect of alternative technology socially elevated to so-called "established science"? With our present system of "accepted" technology, apparently only an impetus from alternative technology will result in answers to these and related questions. ❐

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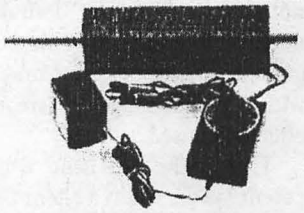
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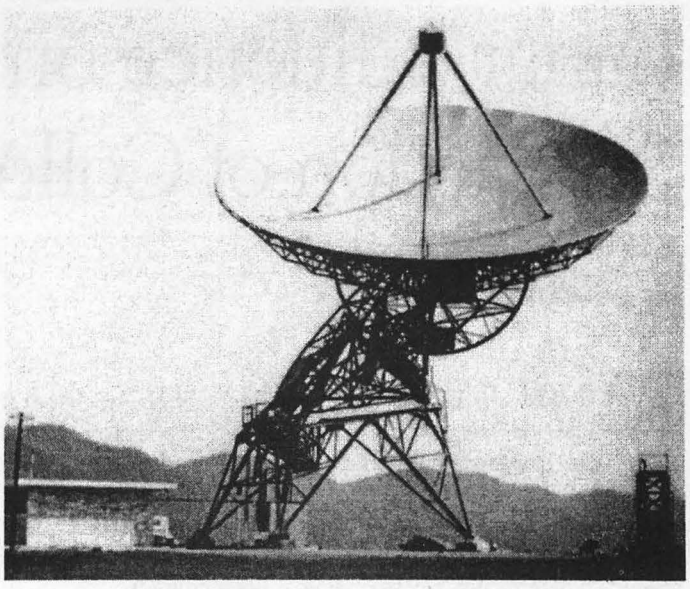
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"Contact" or "CONtact?"

A Review by Brian Butler



WITH the Information Age in full swing, it is no surprise to see more and more once rare, and even esoteric, information permeating society. It doesn't take much searching to find that various fields of Borderland research have hit even mainstream film. *Men in Black* and *Conspiracy Theory* are two recent films that illustrate this. Over the past several years, a plethora of themes related to experiential, spiritual, and otherwise unconventional science have emerged on screen. Conspiracies, cover-ups, and UFOs now dazzle viewers on the big screen, after untold years on the editing room floor of the imagination. The focus now is on the possibly post-mortem film tribute to the late skeptic and mechanist Carl Sagan — *Contact*. Sagan's high-profile life as a scientist is typically associated with astronomy and the PBS series *Nova*. More pertinent is his affiliation with that sector of the scientific community that searches for intelligent life in the Universe. *Contact*, starring Jodi Foster *et al*, was based on Sagan's novel by that name. It introduces filmgoers to some interesting and controversial topics in modern science, especially Search for Extra Terrestrial Intelligence (SETI). This is done in a truly Hollywood manner, with all the right parts in all the right places. Some of the parts are used and worn out, even inoperative, but they are there nonetheless. Even so, there are some interesting facets from the perspective of a Borderland Researcher. Having a keen interest in film and having closely followed the "Detecting Bio-Dynamic Signals" series in *Borderlands*, my expectations were high. Needless to say, I was disappointed. From a classical film perspective, the movie lacked strong, well-developed characters, as well as a clear conflict-resolution loop. An ubiquitous emotional sappiness undermined the strength of the lead character Eleanor Arroway (Jodi Foster). From a Borderland perspective, the film had a mechanistic slant that rendered it unbelievable. Ultimately, the movie slipped into that too common of a category where revolutionary ideas are neutralized and come across as outlandish, even absurd.

Due to the weakness of the film, from a classical film-critic point of view, and the interest of our readers in the scientific side, we can skip the armchair critique of the film. We will instead focus on the aspects of the film that relate to communications between worlds. The most obvious unappealing element was the mechanistic one. It seems absurd to think that alien intelligence with the technology capable of transporting physical matter (i.e. Jodi Foster) through the very fabric of space-time would rely on a sluggish Hertzian wave to carry its message. A human experienced an 18-hour time lapse in three seconds, and the fastest the Vegans can deliver a message to Earth is nearly 30 years. I find that hard to believe, unless the Vegans were in on the SETI project. There are too many cheap similarities to SETI in the film. The type of message, the way it was sent, the way it was decoded, were all suspiciously like the SETI message, but the Vegans could not have received our "slow as Planck's constant" message. Besides, contact with alien intelligence via radio transmission is precluded by the necessity for developed radio technology as we know it — a slim chance in my view.

Other facets of the film eat away at the viability of independent scientific thought. There were too many hints at conspiracy in the film. It seems that the eccentric who funded Foster's team may have faked the message from Vega. In fact, I came away from the film convinced, because of Hadden's numerous allusions to games and trickery, that Hadden sent the message as his final charade before death. Like so many Hollywood endeavors, this film plants the seed of doubt in the minds of the viewers. The possibility of contact with creatures out in the Universe becomes subtly unrealistic, a joke, outlandish.

Finally, there is the movie's conclusion — an utterly fruitless one. Not only is it hard to believe that some of the governments of the world would cooperate to build a machine costing billions, that they know absolutely nothing about, but then the traveler in the machine is told that she hallucinated. What did this "International Machine Consortium" expect to experience or learn? Did they not entrust all with the machine's passenger? And, did they do so only to tell her that she hallucinated? Did they not expect in the least to have their minds collectively blown by the fact that the machine made all kinds of light and lightning, accompanied with a multitude of magnetic and perceptual anomalies?

Once again Hollywood spits in the face of scientific frontiers and posts armed guards along their barbed-wire encrusted detention camp view of the Universe as quantitative science dictates. ❐

Lunar Influence on the Electrochemical Production of Colloidal Silver

by Michael Theroux

IT is well known that the quality of homemade electrochemical colloidal silver varies with every batch made. While some of this variance can occur due to mechanical and/or operator malfunction, such as improper voltage due to low batteries, the use of impure waters (other than distilled), incorrect duration of electrode contact, etc., there are other factors which play an important role in producing high quality electrochemical silver colloids.

The research work of Eugen and Lily Kolisko in the 1920s and 30s introduced the idea that certain celestial events had a profound effect on metals, and that the ancient traditional relationships between specific metals and planets could be demonstrated via laboratory experiment. The process of these experiments involved placing cylinders of special filter paper into dishes which held measured amounts of the various metal salts. Then, the capillary patterns which subsequently emerged, could be studied with reference to specific solar system events (a complete detailed description of the experimental process is contained in the book, *The Metal-Planet Relationship* by Nick Kollerstrom, available from BSRF). Early on, the Koliskos observed the effects that the moon's phases had on solutions of silver chloride, and that profound effects could be viewed during lunar eclipses.

This information prompted the idea that lunar influence could produce exceptional differences in the quality of electrochemically produced colloidal silver. We immediately began preparing the necessary experimental equipment for the upcoming lunar eclipse (March 23, 1997, 8:45PM PST). Two CS-300 colloidal silver generators were used for the electrochemical process and a digital countdown timer would ensure that each batch ran for the exact prescribed time of 20 minutes. The first and second of four batches were initiated just prior to, and during the eclipse, and the last two just after the eclipse. The electrodes were checked and cleaned before each batch was run to assure a consistent voltage throughout the experimental run. The water used was distilled and was provided from the same bottle, and then pre-measured into 8 oz. glasses of identical size and make. Normal batches of colloidal silver produced in this way yield a count of about 6000 to 8000 ppb (parts per billion) of silver.

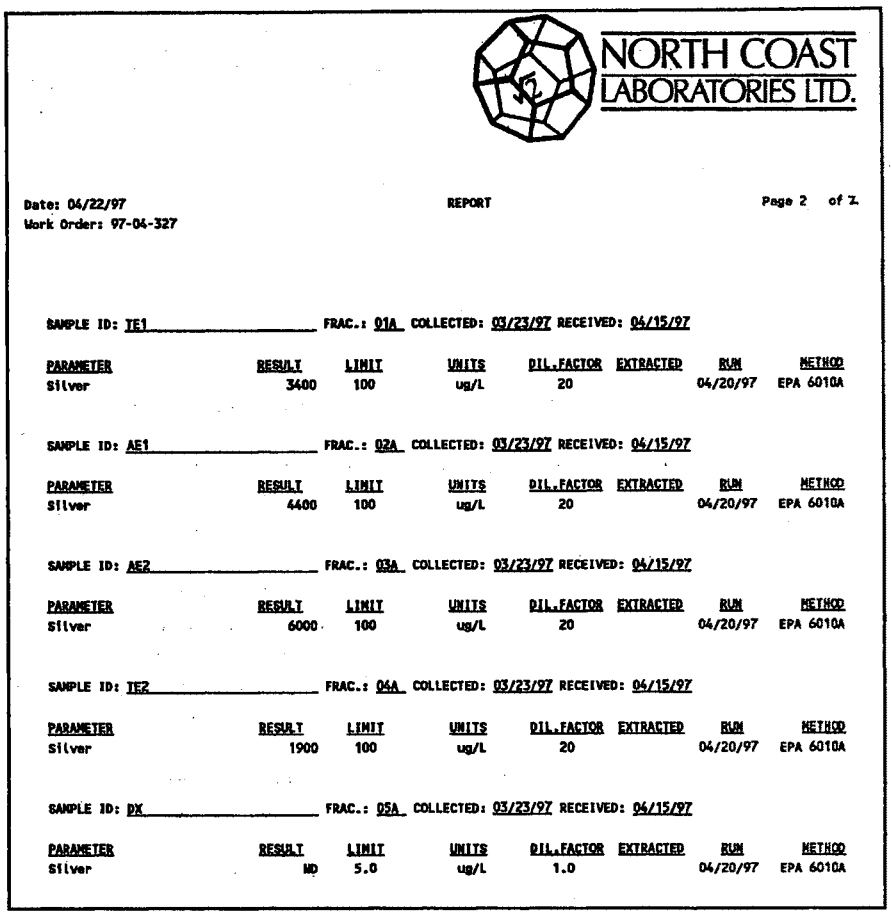
It had been noted with earlier batches of colloidal silver that a simple taste test easily detected differences in quality. Some batches would produce a heavy metallic taste, while others had no distinguishing differences from plain distilled water. After the eclipse experiment was completed, an initial taste test was conducted on the four batches. The first batches run just before and during the eclipse were perceptually absent of the characteristic metallic taste usually associated with a strong batch of colloidal silver. The two batches after the eclipse proved very metallic in taste. These samples along with a control were then taken to a local lab for analysis. The results shown in Figure 1 indicate that the amount of silver began to decrease nearing the eclipse, with a reduction to 1900 ppb during the eclipse. The last batch revealed a rise toward normal levels.

This data strongly suggests a lunar influence on the electrochemical production of colloidal silver. But, the lunar influence presides over other factors which are a part of the experimental test setup. Most are familiar with the lunar effect on tides, and going back into the distant past, many understood that the moon exerts a powerful influence on water itself. Folklore and fact abound with tales of lunar influence upon water, moisture, and other liquids. Plutarch instructed that the full moon caused such an increase in moisture that it made timber, wheat, and other grains which were cut at this time more likely to become decayed and rotten. If cut at the new moon, they would be dry and brittle.

The medieval medical practise of bleeding was to be governed according to lunar phases and their attendant proportions of moisture. Dr. E. J. Andrews, in 1960, confirmed that bleeding is worse around full moons than at any other time. Thousands of post-op records were compared to the dates of lunar phases showing a remarkable 82 percent of post-op bleeding episodes occurred on or around the full moon. Several other researchers and doctors would confirm his findings.

The medicinal effects of many folk remedies were also governed by the phases of the moon due to fluctuating moisture content. Bread was said to rise and leaven better during a full moon, owing to a better retention of moisture. There is a vast catalog of such correspondences between the moon and water, and more still with recent scientific investigations. G. Piccardi, a pioneer on water structure and water activation, demonstrated that cosmic energy forces are important factors in the modification of standardized laboratory chemical and phase-change experiments. He also discovered a dynamic and energetic movement to the Earth's path in orbit that corresponds to seasonal changes.

The moon is not without its effects on electricity and electrical conductivity. Variations have been recorded in the electrostatic strength of the atmosphere caused by lunar-phase influenced fluctuations in ionization. H.S. Burr discovered that the electrical potential of trees climaxed during full moons, and was unrelated to fluctuations in barometric pressure, humidity, or the weather. The only outside influence the tree's electrical potential fluctuation kept pace with was that of the changing phases of the moon. L. Ravitz found that people also possessed peaks of potential difference in



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Date: 04/22/97 REPORT Page 2 of 2
Work Order: 97-04-327

SAMPLE ID: TE1 FRAC.: 01A COLLECTED: 03/23/97 RECEIVED: 04/15/97

PARAMETER	RESULT	LIMIT	UNITS	DIL.FACTOR	EXTRACTED	RUN	METHOD
Silver	3400	100	ug/L	20		04/20/97	EPA 6010A

SAMPLE ID: AE1 FRAC.: 02A COLLECTED: 03/23/97 RECEIVED: 04/15/97

PARAMETER	RESULT	LIMIT	UNITS	DIL.FACTOR	EXTRACTED	RUN	METHOD
Silver	4400	100	ug/L	20		04/20/97	EPA 6010A

SAMPLE ID: AE2 FRAC.: 03A COLLECTED: 03/23/97 RECEIVED: 04/15/97

PARAMETER	RESULT	LIMIT	UNITS	DIL.FACTOR	EXTRACTED	RUN	METHOD
Silver	6000	100	ug/L	20		04/20/97	EPA 6010A

SAMPLE ID: TE2 FRAC.: 04A COLLECTED: 03/23/97 RECEIVED: 04/15/97

PARAMETER	RESULT	LIMIT	UNITS	DIL.FACTOR	EXTRACTED	RUN	METHOD
Silver	1900	100	ug/L	20		04/20/97	EPA 6010A

SAMPLE ID: DX FRAC.: 05A COLLECTED: 03/23/97 RECEIVED: 04/15/97

PARAMETER	RESULT	LIMIT	UNITS	DIL.FACTOR	EXTRACTED	RUN	METHOD
Silver	ND	5.0	ug/L	1.0		04/20/97	EPA 6010A

Figure 1: *Laboratory test results of the silver content in electrochemically produced colloidal silver samples made during lunar eclipse. Samples "TE1 & 2" were produced just before and during the eclipse, while "AE1 & 2" were produced following eclipse. Sample "DX" was a control of plain distilled water.*

accord with full and new moons. E.K. Bigg observed over an 81 year period that magnetic storms peaked in intensity just after full moons, and were lightest around new moons. Disturbances in the earth's magnetic field have been found to follow lunar cycles.

It is obvious that these associations indicate that the entire process of the electrochemical production of colloidal silver is ruled by lunar influence. For that matter, all chemical processes are inextricably directed by celestial authority. It is essential to understand then, when the most propitious times occur to conceive these suspensions. With respect to the production of colloidal silver, lunar influence tables must be consulted. We know that tides are a direct manifestation of lunar forces, but there are also atmospheric tides which play an important role in the understanding of how the moon affects chemical reactions. D'Alembert, in 1746, was the first to discover lunar tides in the earth's atmosphere. Atmospheric tides attend daily and monthly lunar cycles similar to ocean tides. High tide is observed when the moon is directly overhead or on the exact opposite side of the earth. This is called upper and lower transit respectively, or "souths" and "norths". The highest atmospheric tide can be measured as air pressure, and occurs at lower transit every day. These daily high tides peak twice a month at new and full moons. The highest tides occur when the full or new moon is at perigee (closest approach to the earth), and higher still when the new or full moon at perigee crosses the ecliptic, or geometrical plane formed by the path of the earth's orbit.

From a quantitative viewpoint, these tides are extremely small causing the barometer to rise only .001 inches in a day. This influence is location dependant, and may be as much as three times higher near the equator as it is in middle latitudes. This still seems too quantitatively minuscule to have any effect on silver electrodes in an 8 oz. glass of water.

Here we must turn to the work of John Alden Knight. In the mid 1920s, while fishing with a friend, he was told about the folkloric "moon-up/moon-down" theory. The basic premise is that fish feed only at certain times of the day, and that the best times could be found when the moon was either "southing" or "northing". Knight went on to develop this theory over the next few decades into what is now known as the "Solunar" (combining Sun and Moon) theory. Of course, this theory didn't just apply to fish, and he would discover that animals, including humans, would become more active and have more energy at these times than at all other times of the day. One might wonder why they wake up in the middle of the night full of energy only to consult the tables Knight created, and find that a Solunar period was in progress. These periods last anywhere from 1½ to 3 hours dependant on the moon's relationship to other celestial processes. Minor Solunar periods are indicated during the rising and setting times of the moon, and Major periods are indicated during the two transits. These periods are, of course, location dependant, and Knight has created tables which are available for every major fishing location in the country (see references). The easiest way to roughly calculate this for yourself is to add 6 hours to the rise and set times for the moon. If you are connected to the Internet, you can obtain moon rise and set times for your local area for the entire year by going to the Naval Observatory's website at http://riemann.usno.navy.mil/aa/data/docs/RS_OneYear.html. Once you have these, simply add 6 hours to the daily rise or set time to find the major periods.

These appear to be the best times for the production of colloidal silver. If on a new or full moon, even better. Although we haven't had lab tests done on every batch (the cost is $40 per sample), taste tests and light yellow color confirm a fairly good batch every time they have been made during major Solunar periods. Minor periods produce a somewhat fair batch, and in-between times have consistently yielded a poor quality colloid.

Other moon factors to consider are high and low runs/rides, and the traditional full moon names. When the moon "Runs High", or "Rides Low" on the equator, this refers to how high the moon is in the sky that day. The moon is always highest for that day when it souths, but its height above the southern horizon at southing varies

during the month. It's at its highest above the horizon when it souths on a "Runs High" day. It's at its lowest on a "Rides Low" day, which happens about two weeks later. On the celestial equator, the moon is about halfway between these extremes and this occurs twice during the month. This is caused by the interaction of the moon's phases and the seasons. For the Northern hemisphere the midsummer full moon is always low in the sky, whereas the midwinter full moon is nearly overhead.

The traditional names of the full moons for each month of the year represent the qualities possessed by each individual moon. For example, "Harvest Moon" in September was said to be responsible for the ripening of produce. To the Romans, Diana's day fell at the time of the Harvest Full Moon, and offerings were made to her at this time to ensure the ripening of their fruits. Some of the names associated with each month's full moon are derived from the traditional Algonquin Native American or Colonial Full Moon Names as follows:

January	Wolf Moon, Old Moon, Winter Moon, Yule Moon.
February	Snow Moon, Hunger Moon, Trapper's Moon.
March	Worm Moon, Crow Moon, Crust Moon, Sap Moon.
April	Pink Moon, Sprouting Grass Moon, Fish Moon, Egg Moon, Planter's Moon.
May	Flower Moon, Corn Plant Moon, Milk Moon.
June	Strawberry Moon, Rose Moon, Honey Moon, Hot Moon.
July	Buck Moon, Thunder Moon, Summer Moon, Hay Moon.
August	Sturgeon Moon, Red Moon, Green Corn Moon, Dog Days Moon, Wood Cutter's Moon.
September	Harvest Moon, Fruit Moon, Dying Grass Moon.
October	Hunter's Moon.
November	Beaver Moon, Frosty Moon.
December	Cold Moon, Long Nights Moon.

While this is fascinating from the standpoint of folklore, no correlations have yet been made between these full moon names and their respective qualitative influences. The Solunar theory seems to hold true at all times of the year, but can be slightly altered by these other factors, and delicate adjustments to your tables (plus or minus a maximum of 45 minutes) would then be in order.

As you become familiar with these Solunar periods, you will also begin to notice how many other daily events are directed by the moon's influence. Once the connection has been made, there is no turning back, and many new discoveries concerning celestial influences will surely appear in time. The practical benefits of these correspondences are starting to reveal themselves to us in many ways, and hopefully will point us in the direction of a greater quality of scientific endeavors. ❐

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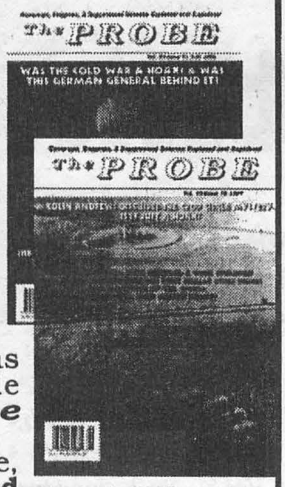
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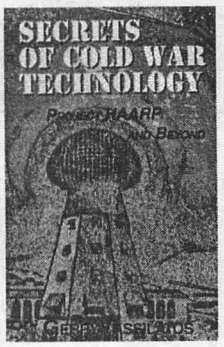
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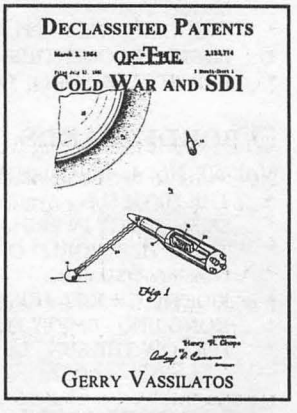
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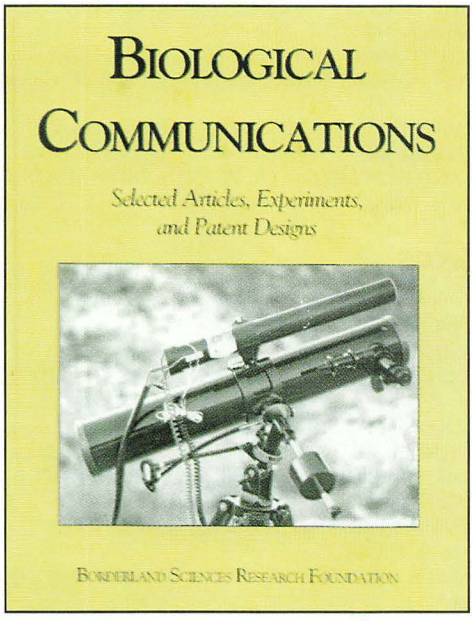
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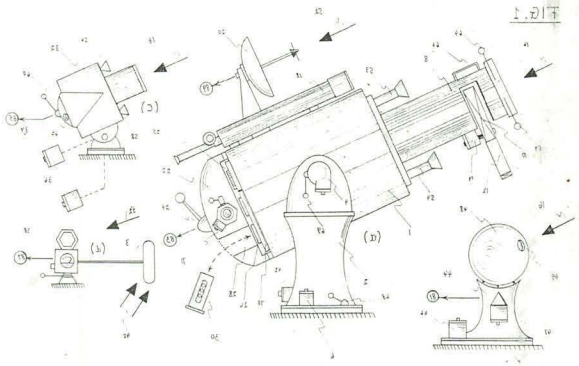


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