The New Tesla Electromagnetics and the Secrets of Electrical Free Energy

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COMMENTS ON THE NEW TESLA ELECTROMAGNETICS

Part I: Discrepancies in Present EM Theory

There are at least twenty-two major discrepancies presently existing in conventional electromagnetics theory. This paper presents a summary of those flaws, and is a further commentary on my discussion of scalar longitudinal Tesla waves in a previous paper, "Solutions to Tesla's Secrets and the Soviet Tesla Weapons," Tesla Book Company, 1981 and 1982.

I particularly wish to express my deep appreciation to two of my friends and colleagues who at this time, I believe, wish to remain anonymous. One of the two is an experimental genius who can produce items on the bench that do not work by orthodox theory. The second is a master of materials science and electromagnetics theory. I thank them both for their exceptional contributions and stimuli regarding potential shortcomings in present electromagnetics theory, and their forbearance with the many discussions we have held on this and related subjects.

It goes without saying that any errors in this paper are strictly my own, and not the fault of either of my distinguished colleagues.

(1) In present electromagnetics theory, charge and charged mass are falsely made identical. Actually, on a charged particle, the "charge" is the flux of virtual particles on the "bare particle" of observable mass. The charged particle is thus a "system" of true massless charge coupled to a bare chargeless mass. The observable "mass" is static, three-dimensional, and totally spatial. "Charge" is dynamic, four-dimensional or more, virtual and spatiotemporal. Further, the charge and observable mass can be decoupled, contrary to present theory. Decoupled charge -- that is, the absence of mass -- is simply what we presently refer to as "vacuum." Vacuum, spacetime, and massless charge are all identical. Rigorously, we should utilize any of these three as an "ether," as suggested for vacuum by Einstein himself (see

Max Born, Einstein's Theory of Relativity, Revised Edition, Dover Publications, New York, 1965, p. 224). And all three of them are identically anenergy -- not energy, but more fundamental components of energy.

(2) Electrostatic potential is regarded as a purely 3-dimensional spatial stress. Instead, it is the intensity of a many-dimensional (at least four-dimensional) virtual flux and a stress on all four dimensions of spacetime. This is easily seen, once one recognizes that spacetime is identically massless charge. (It is not "filled" with charge; rather, it is charge!) Just as, in a gas under pressure, the accumulation of additional gas further stresses the gas, the accumulation of charge (spacetime) stresses charge (spacetime). Further, if freed from its attachment to mass , charge can flow exclusively in time, exclusively in space, or in any combination of the two. Tesla waves -- which are scalar waves in pure massless charge flux itself -- thus can exhibit extraordinary characteristics that ordinary vector waves do not possess. And Tesla waves have extra dimensional degrees of freedom in which to move, as compared to vector waves. Indeed, one way to visualize a Tesla scalar wave is to regard it as a pure oscillation of time itself.

(3) Voltage and potential are often confused in the electrostatic case, or at least thought of as "composed of the same thing." For that reason, voltage is regarded as "potential drop". This also is not true. Rigorously, the potential is the intensity of the virtual particle flux at a single point -- whether or not there is any mass at the point -- and both the pressure and the point itself are spatiotemporal (4-dimensional), not spatial (3-dimensional) as presently assumed. Voltage represents the spatial intersection of the difference in the potential between two separated spatial points, and always implies at least a miniscule flow of mass current (that is what makes it spatial!). "Voltage" is spatial and depends upon the presence of observable mass flow, while scalar electrostatic potential is spatiotemporal and depends upon the absence of observable mass flow. The two are not even of the same dimensionality.

(4) The charge of vacuum spacetime is assumed to be zero, when in fact it is a very high value. Vacuum has no mass, but it has great massless charge and virtual particle charge flux. For proof that a charged vacuum is the seat of something in motion, see G.M. Graham and D.G. Lahoz, "Observation of static electromagnetic angular momentum in vacuo," Nature, Vol. 285, 15 .May 1980, pp. 154-155. In fact, vacuum IS charge, identically, and it is also "spacetime" and at least four-dimensional.

(5) Contrary to its present usage, zero is dimensional and relative in its context. A three-dimensional spatial hole, for example, exists in time. If we model time as a dimension, then the spatial hole has one dimension in 4-space. So a spatial absence is a spatiotemporal presence. In the vacuum 4-space, a spatial nothing is still a something. The "virtual" concept and the mathematical concept of a derivative are simply two present ways of unconsciously addressing this fundamental problem of the dimensional relativity of zero.

(6) The concepts of "space" and "time" imply that spacetime (vacuum) has been separated into two parts. We can only think of a space as "continuing to exist in time " To separate vacuum spacetime into two pieces, an operation is continually required. The operator that accomplishes this splitting operation is the photon interaction, the interaction of vector electromagnetic energy or waves with mass. I have already strongly pointed out this effect and presented a "raindrop model" of first-order physical change itself in my book, The Excalibur Briefing, Strawberry Hill Press, San Francisco, 1980, pp. 128-130.

(7) "Vector magnetic potential" is assumed to be always an aspect of (and connected to) the magnetic field. In fact it is a separate, fundamental field of nature and it can be entirely disconnected from the magnetic field. See Richard P. Feynman et al, The Feynman Lectures on Physics, Addison-Wesley Publishing Co., New York, 1964, Vol. II, pp. 15-8 to 15-14. Curiously, this fact has been proven for years' yet it has been almost completely ignored in the West. The "Vx" operator, when applied to the A-field, makes B-field. If the Vx operator is not applied, the "freed" A-field possesses much-expanded characteristics from those presently allowed in the "bound" theory. Specifically, it becomes a scalar or "shadow vector" field; it is not a normal vector field. (note: for V read inverted capital Delta)

(8) The speed of light in vacuum is assumed to be a fundamental constant of nature. Instead it is a function of the intensity of the massless charge flux (that is, of the magnitude of the electrostatic potential) of the vacuum in which it moves. (Indeed, since vacuum and massless charge are one and the same, one may say that the speed of light is a function of the intensity of the spatiotemporal vacuum!). The higher the flux intensity (charge) of the vacuum, the faster the speed of light in it. This is an observed fact and already shown by hardcore measurements. For example, distinct differences actually exist in the speed of light in vacuo, when measured on the surface of the earth as compared to measurements in space away from planetary masses. In a vacuum on the surface of the earth, light moves significantly faster. For a discussion and the statistics, see B. N. Belyaev, "On Random Fluctuations of the Velocity of Light in Vacuum," Soviet Physics

Journal, No. 11, Nov. 1980, pp. 37-42 (original in Russian; translation by Plenum Publishing Corporation.) The Russians have used this knowledge for over two decades in their strategic psychotronics (energetics) program; yet hardly a single U.S. scientist is aware of the measured variation of c in vacuo. In fact, most Western scientists simply cannot believe it when it is pointed out to them!

(9) Energy is considered fundamental and equivalent to work. In fact, energy arises from vector processes, and it can be disassembled into more fundamental (anenergy) scalar components, since the vectors can. These scalar components individually can be moved to a distant location without expending work, since one is not moving force vectors. There the scalar components can be joined and reassembled into vectors to provide "free energy" appearing at a distance, with no loss in between the initial and distant points. For proof that a vector field can be replaced by (and considered to be composed of) two scalar fields, see E. T. Whittaker, Proceedings of the London Mathematical Society, Volume 1, 1903, p. 367. By extension, any vector wave can be replaced by two coupled scalar waves.

(10) The classical Poynting vector predicts no longitudinal wave of energy from a time-varying, electrically charged source, In fact, an exact solution of the problem does allow this longitudinal wave. See T. D. Keech and J. F. Corum, "A New Derivation for the Field of a Time-Varying Charge in Einstein's Theory," International Journal of Theoretical Physics, Vol. 20, No, 1, 1981, pp. 63-68 for the proof.

(11) The present concepts of vector and scalar are severely limited, and do not permit the explicit consideration of the internal, finer-grained structures of a vector or a scalar. That is, a fundamental problem exists with the basic assumptions in the vector mathematics itself. The "space" of a vector field, for example, does not have inter-nested sublevels (subspaces) containing finer "shadow vectors" or "virtual vectors," Yet particle physics has already discovered that electrical reality is built that way. Thus one should actually use a "hypernumber" theory after the manner of Charles Musés. A scalar is filled with (and composed of) nested levels of other "spaces" containing vectors, where these sum to "zero" in the ordinary observable frame without an observable vector resultant. In Musés' mathematics, for example, zero has real roots. Real physical devices can be -- and have been -constructed in accordance with Muses' theory. For an introduction to Musés' profound hypernumbers approach, see Charles Musés' foreword to Jerome Rothstein, Communication Organization and Science, The Falcon's Wing Press, Indian Hills, Colorado, 1958. See also Charles Musés, "Applied Hypernumbers: Computational Concepts," Applied Mathematics and

Computation, Vol. 3, 1976. See also Charles Musés, "Hypernumbers II," Applied Mathematics and Computation, January 1978.

(12) With the expanded Tesla electromagnetics, a new conservation of energy law is required. Let us recapitulate for a moment. The oldest law called for the conservation of mass. The present law calls for the conservation of "mass and energy", but not each separately. If mass is regarded as simply another aspect of energy, then the present law calls for the conservation of energy. However, this assumes that energy is a basic, fundamental concept. Since the energy concept is tied to work and the movement of vector forces, it implicitly assumes "vector movement" to be a "most fundamental" and irreducible concept. But as we pointed out, Whittaker showed that vectors can always be further broken down into more fundamental coupled scalar components. Further, Tesla discovered that these "coupled components" of "energy" can be individually separated, transmitted, processed, rejoined, etc. This directly implies that energy per se need not be conserved. The new law therefore calls for the conservation of anenergy, the components of energy. These components may be coupled into energy, and the energy may be further compacted into mass. It is the sum total of the (anenergy) components -- coupled and uncoupled -- that is conserved, not the matter or the energy per se. Further, this conservation of anenergy is not spatial; rather, it is spatiotemporal in a spacetime of at least four or more dimensions.

(13) Relativity is presently regarded as a theory or statement about fundamental physical reality. In fact, it is only a statement about FIRST ORDER reality -- the reality that emerges from the vector interaction of electromagnetic energy with matter. When we break down the vectors into scalars (shadow vectors or hypervectors), we immediately enter a vastly different, far more fundamental reality. In this reality superluminal velocity, multiple universes, travel back and forth in time, higher dimensions, variation of all "fundamental constants" of nature, materialization and dematerialization, and violation of the "conservation of energy" are all involved. Even our present Aristotlean logic -- fitted to the photon interaction by vector light as the fundamental observation mechanism -- is incapable of describing or modeling this more fundamental reality. Using scalar waves and scalar interactions as much subtler, far less limited observation/detection mechanisms, we must have a new "superrelativity" to describe the expanded electromagnetic reality uncovered by Nikola Tesla.

(14) "Charge" is assumed to be quantized, in addition to always occurring with -- and locked to -- mass. Indeed, charge is not necessarily quantized just as it is not necessarily locked to mass.

Ehrenhaft discovered and reported fractional charges for years, in the 30's and 40's, and was ignored. See P.A.11. Dirac, "Development of the Physicist's Conception of Nature," Symposium on the Development of the Physicist's Conception of Nature, ed. Jagdish Merha, D. Reidel, Boston, 1973, pp. 12-14 for a presentation of some of Ehrenhaft's results. Within the last few years Stanford University· researchers also have positively demonstrated the existence of "fractional charge." For a layman's description of their work, see "A Spector Haunting Physics," Science News, Vol. 119, January 31, 1981, pp. 68-69. Indeed, Dirac in his referenced article points out that Millikan himself -- in his original oildrop experiments -- reported one measurement of fractional charge, but discounted it as probably due to error.

(15) Presently, things are always regarded as traveling through normal space. Thus we use or model only the most elementary type of motion -- that performed by vector electromagnetic energy. We do not allow for things to "travel inside the vector flow itself." Yet, actually, there is a second, more subtle flow inside the first, and a third, even more subtle flow inside the second, and so on. We may operate inside, onto, into, and out of energy itself -- and any anenergy component of energy. There are hypervectors and hyperscalars unlimited, within the ordinary vectors and scalars we already know. Further, these "internal flows" can be engineered and utilized, allowing physical reality itself to be directly engineered, almost without limits.

(16) We always assume everything exists in time. Actually, nothing presently measured exists in time, because the physical detection/ measurement process of our present instruments destroys time, ripping it off and tossing it away -- and thereby "collapsing the wave function." Present scientific methodology thus is seriously flawed. It does not yield fundamental (spacetime) truth, but only a partial (spatial) truth. This in turn leads to great scientific oversights. For example, mass does not exist in time, but mass x time (masstime) does. A fundamental constant does not exist in time, but the "constant x time" does. Energy does not exist in time, but energy x time (action) does. Even space itself does not exist in time -- spacetime does. We are almost always one dimension short in every observable we model. Yet we persist in thinking spatially, and we have developed 1nstruments that detect and measure spatially only. Such instruments can never measure and detect the phenomenology of the nested substrata of time. By using scalar technology, however, less limited instruments can indeed be constructed -and they have been. With such new instruments, the phenomenology of the new electromagnetics can be explored and an engineering technology developed.

(17) We do not recognize the connection between nested levels of virtual state (particle physics) and orthogonally rotated frames (hyperspaces). Actually the two are identical, as I showed in the appendix to my book, The Excalibur Briefing, Strawberry Hill Press, San Francisco, 1980, pp. 233-235. A virtual particle in the laboratory frame is an observable particle in a hyperspatial frame rotated more than one orthogonal turn away. This of course implies that the hyperspatial velocity of all virtual particles is greater than the speed of light. The particle physicist is already deeply involved in hyperspaces and hyperspatial charge fluxes without realizing it. In other words, he is using tachyons (particles that move faster than light) without realizing it.

(18) Presently quantum mechanics rigorously states that time is not an observable, and therefore it cannot be measured or detected. According to this assumption, one must always infer time from spatial measurements, because all detections and measurements are spatial. With this assumption, our scientists prejudice themselves against even looking for finer, subquantal measurement methodologies and instrumentation. Actually this present limitation is a result of the type of electromagnetics we presently know, where all instruments (the "measurers") have been interacted with by vector electromagnetic energy (light). Every mass that has temperature (and all masses do!) is continually absorbing and emitting photons, and in the process they are continually connecting to time and disconnecting from time. If time is continually being carried away from the detector itself by its emitted photons, then the detector cannot hold and "detect" that which it has just lost. With Tesla electromagnetics, however, the fundamental limitation of our present instruments need not apply. With finer instruments, we can show there are an infinite number of levels to "time", and it is only the "quantum level time" which is continually being lost by vector light (photon) interaction. By using subquantal scalar waves, instruments can move to deeper levels of time -- in which case the upper levels of time ARE measureable and detectable, in contradistinction to the present assumptions.

(19) In the present physics, time is modeled as, and considered to be, a continuous dimension such as length. This is only a gross approximation. Indeed, time is not like continuous "dimension," but more like a series of "stitches," each of which is individually made and then ripped out before the next stitch appears. "Vector light" photons interact one at a time, and it is this interaction with mass that creates quantum change itself. The absorption of a photon -- which is energy x time -- by a spatial mass converts it to masstime: the time was added by the photon. The emission of a photon tears away the time, leaving behind again a spatial mass. It is not accidental, then, that time flows at

the speed of light, for it is light which contains and carries time. It is also not accidental that the photon IS the individual quantum. Since all our instruments presently are continually absorbing and emitting photons, they are all "quantized," and they accordingly "quantize" their detections. This is true because all detection is totally internal to the detector, and the instruments detect only their own internal changes. Since these detections are on a totally granular quantized background, the detections themselves are quantized. The Minkowski model is fundamentally erroneous in its modeling of time, and for that reason relativity and quantum mechanics continue to resist all attempts to successfully combine them, quantum field theory notwithstanding.

(20) Presently, gravitational field and electrical field are considered mutually exclusive. Actually this is also untrue. In 1974, for example, Santilly proved that electrical field and gravitational field indeed are not mutually exclusive In that case, one is left with two possibilities: (a) they are totally the same thing, or (b) they are partially the same thing. For the proof, see R. M. Santilli, "Partons and Gravitation: Some Puzzling Questions," Annals of Physics, Vol. 83, No. 1, March 1974. With the new Tesla electromagnetics, pure scalar waves in time itself can be produced electrically, and electrostatics (when the charge has been separated from the mass) becomes a "magic" tool capable of directly affecting and altering anything that exists in time--including gravitational field. Antigravity and the inertial drive are immediate and direct consequences of the new electromagnetics.

(21) Presently, mind is considered metaphysical, not a part of physics, an not affected by physical means. Literally, the prevailing belief of Western scientists is that man is a mechanical robot -- even though relativity depends entirely upon the idea of the "observer." Western science today thus has essentially become dogmatic, and in this respect borders on a religion. Since this "religion," so to speak, is now fairly well entrenched in its power in the state, Western science is turning itself into an oligarchy. But mind occupies time, and when we measure and affect time we can directly measure and affect mind itself. In the new electromagnetics, then, man regains his dignity and his humanity by restoring the reality of mind and thought to science. In my book, The Excalibur Briefing, I have already pointed out the reality of mind and a simplified way in which it can be modeled to the first order. With scalar wave instruments, the reality of mind and thought can be measured in the laboratory, and parapsychology becomes a working, engineering, scientific discipline.

(22) Multiple-valued basic dimensional functions are either not permitted or severely discouraged in the present theory For one thing, integrals of multiple valued derivative functions have the annoying

habit of "blowing up" and yielding erroneous answers, or none at all. And we certainly do not allow multiple types of time! This leads to the absurdity of the present interpretation of relativity which permits only a single observer (and a single observation) at a time. So if one believes as "absurd" a thing as the fact that more than one person can observe an apple at the same time, the present physics fails. However, the acceptance of such a simple proposition as multiple simultaneous observation leads to a physics so bizarre and incredible that most Western physicists have been unable to tolerate it, much less examine its consequences. In the physics that emerges from multiple simultaneous observation, all possibilities are real and physical. There are an infinite number of worlds, orthogonal to one another, and each world is continually splitting into additional such "worlds" at a stupendous rate. Nonetheless, this physics was worked out by Everett for his doctoral thesis in 1956, and the thesis was published in 1957. (See Hugh Everett, III, The Many-Worlds Interpretation of Quantum Mechanics: A Fundamental Exposition, with papers by J. A. Wheeler, B.S. DeWitt, L. N. Cooper and D. Van Vechten, and N. Graham; eds. Bryce S. Dewitt and Neill Graham, Princeton Series in Physics, Princeton University Press, 1973.) Even though it is bizarre, Everett's physics is entirely consistent with all the present experimental basis of physics. The present electromagnetic theory is constructed for only a single "world" or universe -- or "level." The expanded theory, on the other hand, contains multiply nested levels of virtual state charge -- and these levels are identically the same as orthogonal universes, or "hyperframes." Multiple kinds -- and values -- of time also exist. The new concept differs from Everett's, however, in that the orthogonal universes intercommunicate in the virtual state. That is, an observable in one universe is always a virtual quantity in each of the other universes. Thus one can have multi-level "continuities" and "discontinuities" simultaneously, without logical conflict. It is precisely these levels of charge -- these levels of scalar vacuum -- that lace together the discontinuous quanta generated by the interaction of vector light with mass.

However, to understand the new electromagnetic reality, one requires a new, expanded logic which contains the old Aristotlean logic as a subset. I have already pointed out the new logic in my paper, "A Conditional Criterion for Identity, Leading to a Fourth Law of Logic," 1979, available from the National Technical Information Center, AD-A071032.

Even as logic is extended, quantum mechanics, quantum electrodynamics, and relativity are drastically changed by the Tesla electromagnetics, as I pointed out in my paper, "Solutions to Tesla's Secrets and the Soviet Tesla Weapons," Tesla Book Company, 1580

Magnolia, Millbrae, California, 94030, 1980.

The present electromagnetics is just a special case of a much more fundamental electromagnetics discovered by Nikola Tesla, just as Newtonian physics is a special case of relativistic physics. But in the electromagnetics case, the differences between the old and the new are far more drastic and profound.

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13. R. Schaffranke, "The Development of Post-Relativistic Concepts in Physics and Advanced Technology Abroad," Energy Unlimited, No. 12, Winter 1981, pp. 15-20.

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COMMENTS ON THE NEW TESLA ELECTROMAGNETICS

Part II: The Secret of Electrical Free Energy

Again I wish to express my deep appreciation to two of my friends and colleagues who at this time, I believe, wish to remain anonymous. I thank them both for their exceptional contributions and stimuli, and their forbearance with the many discussions we have held on this and related subjects.

Also, it goes without saying that any errors in this paper are strictly my own, and not the fault of either of my distinguished colleagues.

Present electromagnetic theory is only a special case of the much more fundamental electromagnetism discovered by Nikola Tesla at the turn of the century.

Pure vacuum is pure charge flux, without mass. The vacuum has a very high electrical potential -- something on the order of 200 million volts, with respect to a hypothetical zero charge.

Thus in an ordinary electrical circuit, each point of the "ground" -- which has the same potential as the vacuum -- actually has a non-zero absolute potential. This circuit ground has a value of zero only with respect to something else which has the same absolute electrical potential.

Voltage, which is always associated with a flow of electrical "mass" current (even if only a miniscule flow), is, by definition, a difference dropped in potential when a charge mass moves between two spatially separated points. What we have termed "electrical current" only flows where there is a suitable conducting medium between things which have a difference in absolute potential. Furthermore, between any two points in any material, there is considered to exist a finite resistance -- if we apply a voltage and have a mass current flowing between the two points! The simple statement that V = IR irrevocably ties together voltage drop, mass current, and resistance between two points. Rigorously, to have one of the three is to have them all. To lose one is to lose all three. Immediately we see a major error in present theory: One can have a "difference in scalar potential" between two points without having a "voltage drop" between them. Specifically, if no mass current flows between them, no resistance exists between them, and no voltage drop exists between them.

In the same fashion, one can have a "scalar wave" through the

In the same fashion, one can have a "scalar wave" through the vacuum without a voltage wave. In that case, the wave has no E-field and no H-field. The only reason one has an E-field

around a statically charged object is because the charged electrons accumulated on the object are actually in violent motion. It is this motion of the charged masses that produces E-field -- as well as H-field whenever that entire E-field ensemble moves through laboratory space.

Now let us reason together in the "approximate" manner utilized in present electromagnetic theory. For example, let us examine a bird sitting on a high tension line.

The bird sits on the high tension line without a flow of mass electricity, because there is no significant difference in potential drop between the bird and the line. Specifically, between the bird's two feet -- each in contact with a different portion of the line -- there exists no potential difference. This is true even though, with respect to the vacuum, each foot is at a potential that would be "100,000 volts higher," were a mass current flowing. And it is true even though the absolute potential of each foot may be some 200.1 million "volts," were a mass current flowing.

Now an interesting thing happens to the bird when he flies through the air to light upon the high tension wire. As he flies toward the wire, he is flying through the massless electrostatic potential field of the wire, for that field extends an infinite distance away from the wire. The electrostatic potential field -- pure $\emptyset$-field -- is actually the spatio-temporal intensity of the massless charge at a point. In other words, as the bird flies to the wire, he flies into an increasing "massless charge" potential, building up to 100,000 "volts" higher than the earth. However, very little (if any) "mass flow" potential difference is experienced upon his body in approaching the wire, and so essentially no "charged mass currents" are induced in his body. Thus the little flier safely navigates into the teeth of a very high electrostatic potential, lights upon the wire, and is not "fried" in the process. When he lights on the wire, his body has reached the electrostatic potential that each foot's contact point has. Again, there is no mass current flow. But his body is immersed in an increased flux of massless charge -- which is what the electrostatic potential represents. And each "virtual particle" flow in that charge potential represents a "massless (scalar)" electrical current.

The point is, one can have any amount of massless charge flow -- "scalar" current -- without any mechanical work being done in the system. All electrical work in a circuit is done against the physical mass of the charged masses that flow. Rigorously, force is defined as the time rate of charge of momentum. Even in the relativistic case where $F = ma + v(dm/dt)$, change of momentum requires mass movement. No mechanical work, and hence no energy, is expended by massless charge flow.

That is why the vacuum massless charge -- which is composed of a very high flux of massless "particles" -- normally does no work

That is why the vacuum massless charge -- which is composed of a very high flux of massless "particles" -- normally does no work on our systems, and expends none of its very high "potential energy." It is exactly the same as the bird which flew into an

increasing scalar field as it approached the high tension wire -- no work was done upon the bird by the increasing scalar flux currents encountered by its body.

By existing "in the vacuum," so to speak, we (the whole earth) are as birds sitting on a high tension line! Until we create significant difference in potential, via our present electromagnetic circuits, no current can flow -- anywhere. Even if we produce potential differences, we must have a conductor and charged masses to flow, if we wish to produce mechanical work. Presently our electromagnetic theory allows us to create a difference in potential within different parts of a circuit, but only by moving and shifting charged mass. We therefore have to do work on this electrical mass in moving it around, and we only get back the work we have put into the circuit. In other words, presently all we do is "pump" electrical mass.

Now notice what would happen to the bird on the line if we substantially "pulsed" the potential on the line. Suppose we "pulsed" it such that the bird's physical system -- considered as a circuit containing a capacitance, a resistance, an inductance, and many free electrons -- became resonant to the pulsing frequency. In that case the "bird system" would resonate, and a great deal of electrical mass would surge back and forth in the body of the bird. In the bird's body, voltage would exist, charged mass current would flow, work would be done, and the bird would be electrocuted.

Also, note that, without mass movement, electromagnetic vector fields are not produced (and a portion of the difficulty lies with the actual vector mathematics itself). Scalar (nonvector) waves continually penetrate "space" where there is no mass movement. This means there can exist a "delta-ϕ" without a voltage or an E-field. The present theory does not allow this, because it always uses "q" (charge) to be charged mass. Briefly, without belaboring the point, let us just say that it is the mechanical spin of the individual charged particle -- such as the electron -- which "entangles" or "knits together" or "couples" independent scalar waves into vector waves. A vector wave is simply two coupled scalar waves. The entire force field concept -- such as the E-field and the B-field -- is operationally defined in terms of the force exhibited on a test particle, or test mass. Rigorously, an E-field does not exist as a force field in vacuum, but as two coupled scalar ϕ-fields "tumbling about each other." When these two coupled, tumbling fields meet a spinning electron, e.g., the force emerges on the electron mass. In short, movement of a rotating mass changes delta-ϕ to "voltage", creating the V/I/R triad.

By "accumulating charged mass particles" -- such as electrons -- one certainly can increase the value of ϕ, which represents the charge intensity or "scalar electrostatic potential." However, that is not the only way to increase it. Resonance and rotation of charged masses can also be appropriately employed to vary the vacuum charge potential ϕ, under the proper circumstances.

or charged masses can also be appropriately employed to vary the vacuum charge potential Φ, under the proper circumstances.

By the correct application of rotary principles and Tesla electromagnetic theory, it is possible to oscillate -- and change -- the vacuum potential itself, in one part of an electrical system. Thus by correct procedures a part of a system can be electrically altered so that the absolute value of its "ground" (vacuum) potential differs significantly from the normal vacuum-ground potential of the remainder of the circuit. In other words, we shift the vacuum-ground potential of part of the circuit by oscillating the massless vacuum charge itself, and in so doing we gain a substantial, oscillatory electrical potential difference between that part of the circuit and the normal ground potential of the rest of the system. Then we connect the two parts of the system by means of a conductor containing a load in the middle.

In every conductor, a large number of "free electrons" are available. If we oscillate the actual vacuum charge itself, unlimited additional free electrons also become available from the Dirac sea, since partial "unstripping" of the negative energy wells (each containing an electron) occurs. This "unstripping" of the potential of the well is due to vacuum potential oscillation, which oscillates time as well as space. To a negative energy well (positive time), the oscillation of its "time stream" increases the well's negative potential during one half-cycle and decreases its potential for the other half-cycle. Thus during half the oscillatory cycle, negative energy electrons may be lifted from the Dirac sea if the oscillation is sufficiently intense.

Therefore we obtain an attendant voltage and flow of mass current through the load. This voltage and current, by the way, are essentially limitless, and are free for the asking, assuming the proper "vacuum oscillation" is initiated and maintained so that electrons are continually being lifted from the Dirac sea by the time oscillations, and fed into the circuit.

Standard electromagnetic theory assumes that the vacuum potential is zero. It does not recognize the existence of massless charge, separated from charged mass. Therefore, orthodox scientists have never looked for a way to engineer the vacuum, because they have not realized it is composed of pure massless charge. Electrical physics has almost hopelessly confused charge and charged mass, thereby eliminating scalar longitudinal electrostatic waves. Expressed in the bird/high tension line analogy, the present electromagnetic theory restricts us to walking along the high tension line, laboriously carrying small batteries and power units, unaware of the limitless, surging power beneath our very feet.

Electromagnetically, we have been rather like one of the five blind men who touched an elephant. We have only touched one small portion of the electromagnetism "elephant," yet we thought we had grasped the entire beast.

OVERTURE TO A NEW AGE TECHNOLOGY

From an Update by Dr. Rolf Schaffranke

> " ... as there has been a steady erosion in U. S. activity in the basic sciences, there has been an increase in the level of such activity in Western Europe and Japan. If that continues, we are in danger of losing our position of scientific leadership."
>
> Val. L. Fitch, Prof. of Physics at Princeton University, in an interview with *U.S. News & World Report*, June 21, 1982.

West Germany:

The prototype of the first motorcycle equipped with a "flux-motor" (the inventor's designation for a tachion field converter or gravity-field generator) of 2 KW output has completed a test run of approximately 20,000 km without repairs. Principle of operation: The T-converter is constantly recharging the electrical power battery of the vehicle, resulting in an operation which is noiseless, fuelless and polution-free. After completion of all scheduled tests, a public demonstration to the press is planned within a few weeks from the time of this writing. (June 17, 1982) See photo, Pg. 19. A new factory for the production of gravity-energy-field converters in the town of Oldenburg is scheduled to produce individual home heating units. The design of automobile power plants based on the same principle is also in preparation. Reported efficiency factors of several hundred percent are anticipated.

Japan:

Mazda continues research on the "magnetic Wankel engine" (45 HP) for electric automobiles, based on the principle of Kure Tekko. The gravity research of Prof. S. Seike is now sponsored by Hitachi, after millions of Japanese received updated information via popular science magazines. It is interesting to note that Saudi Arabia has decided to invest $100 million in Hitachi stocks.

France:

The "Kromrey" converter has completed tests at the Institute for Magnetostatics, University of Strasbourg. One prototype delivered 700 Watts at 600-1200 RPM, at a fairly uniform rate. However, France, as the No. 1 developer of nuclear energy in Europe, is still reluctant to concentrate her energies on a revolutionary new technology which could result in drastic curtailments of her well-developed nuclear industry and associated exports. See photos, Pg. 22.

Denmark:

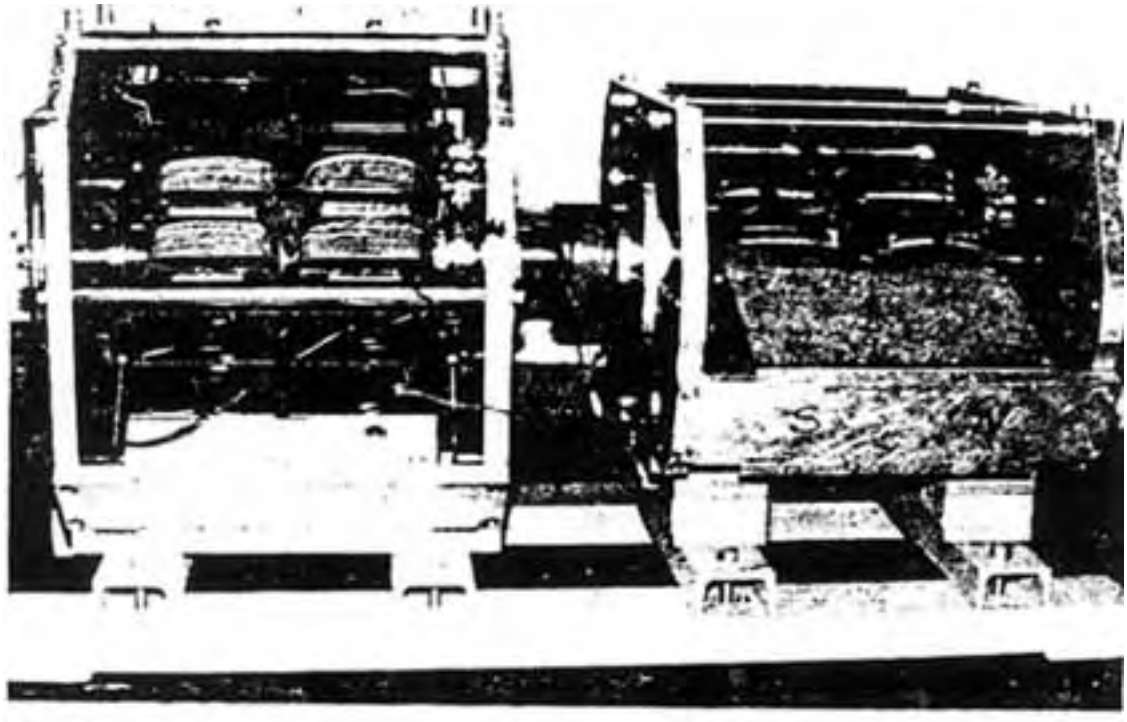
Dr. Jensen, physicist at the University of Kopenhagen, reported test results of 300% efficiency with a specially designed, 5-coil transformer in connection

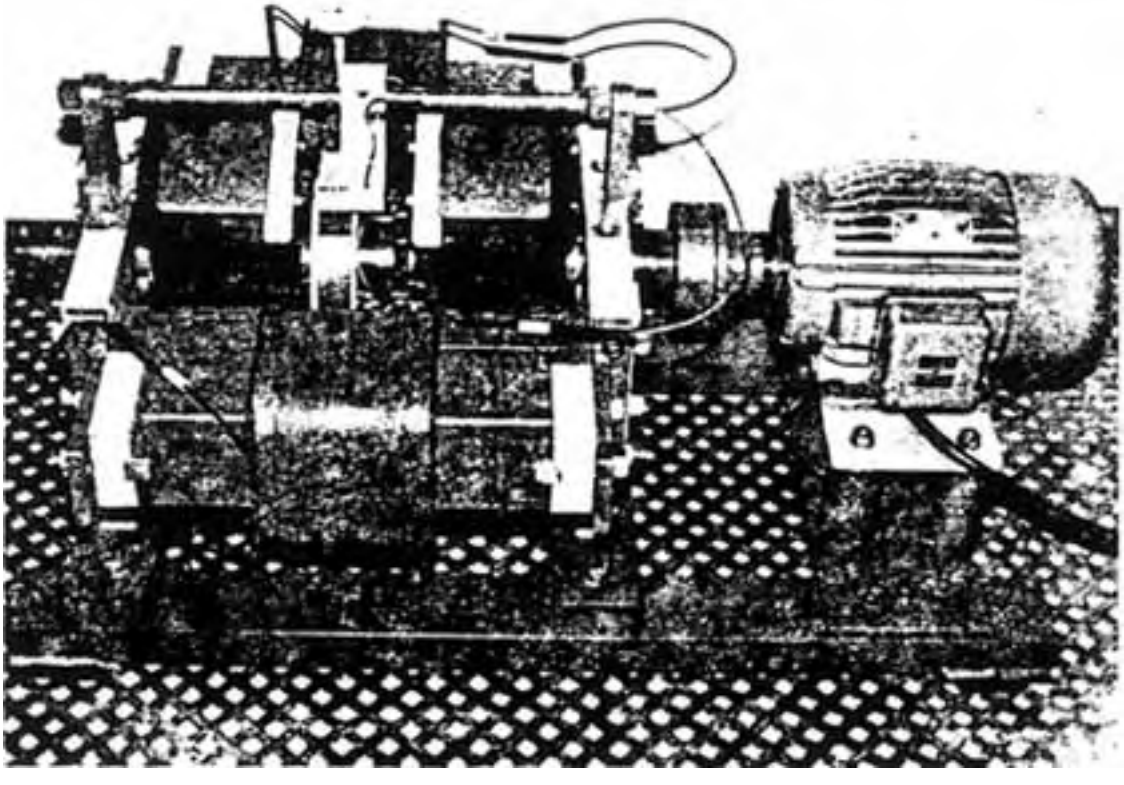
with a tachion field converter based on the principle of the "N" machine. First reports were presented at the International Conference on Energy Technology in Hannover, Nov., 1980.

England / USA:

A "bullet train" based on the magnetic levitation system of British Prof. Eric Laithwaite is now under consideration for construction between Los Angeles and San Diego. Japan and West Germany are already operating high speed experimental trains, suspended magnetically to reduce friction, that may soon attain speeds of more than 200 miles per hour. The Laithwaite-Eastham method would use electromagnetic forcefields induced over an aluminum-topped concrete track. The project will probably be headed by a Japanese company as the prime contractor.

West German gravity-field unit in operation





Swiss-French gravity field converter system "Kromrey"

REVIEW AND OUTLOOK

THE DEVELOPMENT OF POST-RELATIVISTIC CONCEPTS IN PHYSICS AND ADVANCED TECHNOLOGY ABROAD

Rolf Schaffranke, Dr. h. c.
Member A.I.A.A.

This paper was presented at The First International Symposium on Non-Conventional Energy Technology, Toronto, Ontario, Canada, Oct. 23-24, 1981. (Reprinted by permission of the author.)

"Far more harm is done to the progress of science by skepticism than by gullibility". (Dr. Robert Wood, Director R & D, McDonnel-Douglas Astronautics Div., Cal.) NASA - Langley Research Center in Hampton, VA is named after Samuel Pierpont Langley (1834-1906), an American astronomer, engineer and architect.

Langley worked out the aerodynamic principles for manned flight. In principal, his calculations were correct; but the structural materials he used for wings and engines were ,insufficient. In December of 1903, the *New York Times* published an editorial complaining about his foolish dream and the associated waste of government money. The editorial predicted that: "man would not fly for a thousand years".

Only 9 days after the editorial was published, the Wright brothers made their first successful powered flight at Kitty Hawk. (Dec. 17, 1903). But, again, as late as 1905, the *Scientific American* suggested the happening was a hoax - two years after the event which changed history. Let's reflect for a moment on the fact that only in a single lifetime, man has journeyed from Kitty Hawk to the surface of the moon!

The analogy to the problem of alternative energies and their development is, of course, obvious. We try to educate the preaching orthodoxies. But orthodox solutions are no longer enough. Our system of education can only give from

the past. The present must operate on inspiration and intuition, or the future will be lost. The past no longer has enough of the answers for arising crises for which there are no precedents. To keep pace with the requirements of the future, we must begin to teach not only what to learn, but how to learn, how to analyze, how to search for the truth. Only then will be able to recognize discrepancies between experiment and dogma and to cope with problems which appear to be just beyond the corner. History has shown again and again that no single individual can rise above the species without being persecuted. The reasons for that are:

Some of the most powerful forces in homo sapiens have always been

Greed, Pride, Ego, Fear and, above all, the Desire to Control Others,

.

A brand new German book titled *Energy in Abundance*, which is evidently creating a considerable impact in the European community, challenges the contemporary high

priests of science, the "Guardians of the Status Quo" and uncovers an almost incredible narrowmindedness and ignorance in science, politics and economics, "approaching the criminal" as the author puts it. The contemporary waste of genuine intellectual creativity is castigated as a cultural scandal approaching barbarism. The book stresses that a truly promising approach to the so-called energy crisis requires a fundamental and thorough re-evaluation of the theories, dogmas and axioms which form the basis of present day science and the foundation of our technology. As in the past, the formidable inertia of the establishment is not only based on inaccurate, incomplete and outdated information, but also on its reluctance to accept new ideas. The honest search for the truth first requires that we first demythologize generally accepted claims of so-called experts of the past. An excellent introduction to this problem is the article "Resistance by Scientists to Scientific Discovery" by Bernard Barber in *Science*, Vol. 134, pp. 596-602, of Sept. 1961, or the paper by Stephen C. Brush in *Science* of March, 1974, titled "Should the History of Science be Rated 'X'"?, culminating with a statement of Huxley:

> "Authorities", "disciples", and "schools" are the curse of science and do more to interfere with the work of the scientific spirit than all its enemies".

The former astronaut, Capt. Edgar D. Mitchell, one of our famous contemporaries, also stressed the need for an open mind!

> "History has shown time and again that important scientific discoveries generally happen only when someone steps outside the limits of his traditional discipline and looks at something from a fresh point of view. Then what should have been obvious all along comes into focus".

Those of us who are familiar with the pioneering efforts of Dr. Hans Nieper of Hanover will appreciate this statement by an ex-astronaut.

One of the most important cornerstones of today's scientific dogmas dates back to 1905, more than 3/4 of a century ago. Lest we forget, television and radar, jet-planes and cyclotrons, moonrockets and close-up photos of the planets of our solar system were nothing but wild fantasies of science fiction then.

The speed of light was assumed to be constant and the maximum possible speed in the universe; vacuum was to be a total void. In reality, the speed of light as measured in the Michelson-Morley experiments was not at all the same in all directions. The "ether-drift" still amounted to the respectable velocity of about five miles per second, and similar results were obtained by D. C. Miller in a series of experiments extending over twenty-five years, from 1902 to 1926.

"Even worse, the measurements showed such marked discrepancies with previous results as to occasion a distress call to the U. S. Coast & Geodetic Survey, whose surveyors repeatedly remeasured the length of the tube and found no error there," reported the *Popular Science Monthly* March 1934 issue. And it continued: "More recently, speed of light observations only emphasized the apparent erratic behavior of the light beam that the scientists were attempting to plot. On some days it seems to travel faster than others by as much as 12 miles a second. Its speed seems to vary with the season, and also in a mysterious shorter cycle lasting about 2 weeks. Finally, the scientists ended by taking an average of all the readings which has just been announced as 186,271 miles per second".

In his paper "A Critical Look At the Theory of Relativity", Library of Congress Cat. No. 77-670044, F. K. Preikschat compiled all known light velocity measurements during the past 300 years or so, from Olaf Roemer in 1676 to the Laser measurements conducted by the National Bureau of Standards (USA) in 1972.

Of the 27 experiments undertaken in this field, 18 of them after the turn of this century, it must be concluded that the velocity of light as measured within the reference system of our earth has changed as much as plus/minus 50 km/sec, during the past century. Preikschat plotted a curve of these deviations and suggests a possible relationship between sunspot activities and changes of the earth magnetic field during the time period in question.

The "universal constancy of light" appears, therefore, as somewhat shaky "empirical evidence" for our cornerstone in physics, especially since Einstein himself has gone on record as saying:

"If a single one of the conclusions drawn from it (relativity theory) proves to be wrong, it must be given up; to modify it without destroying the whole structure seems to be impossible".

Another modification concerns the definition for the term "vacuum" in physics, as documented by a paper in the *American Scientist*, March-April 1980, titled "Is The Vacuum Really Empty?" by Prof. Walter Greiner, University of Frankfurt, BRD, and Prof. Joseph H. Hamilton, Vanderbilt University, Nashville, Tenn.

The authors conclude that a neutral vacuum is by no means as "empty" as previously claimed in our textbooks, and suggests a new definition as follows:

"The vacuum is the lowest stable state that a region of space can have while being penetrated by certain fields".

Because of the tremendous time lag in our educational system, many research

projects and their ensuing experimental data have been withheld from public scrutiny. The scientific community tends to have a vested interest in preserving the system it created and of which it is a part. It responds to new situations through the coloration of this attachment. A case in point are the carefully conducted experiments of T. T. Brown with charged bodies in a high vacuum, as described in my booklet *Ether Technology* (1977). These experiments suggest the actual presence of certain fields in vacuum, whether we call them gravitational field, tachion-field, ether-field, neutrino or Fermi-sea, etc. is of secondary importance at this moment. Although Brown spent, reportedly, more than $200,000 of his own funds over several decades on such experiments, he was nevertheless unable to have the results published in the scientific media of America.

Things are even worse when it comes to experiments conducted abroad, which often tend to confirm disregarded experimental results on this continent, as we shall see shortly. To highlight the wide discrepancies between orthodox (and obsolete) dogmas and actual, physical realities pertaining to the true subatomic structures as we know them to be today, let us briefly review the structure of the matter:

A molecule is the smallest division of a substance. Further division would cause it to cease being a substance. The smallest of true molecules can be illustrated when we use the globe of the earth for our standard. If a single drop of water were magnified until it was as big as the earth, each molecule would be about the size of a TENNIS BALL.

On the next step down, an atom is the unit which makes up the nature of the molecule, consisting of the nucleus and the surrounding electrons to render the atom "stable". An atom of hydrogen contains one proton and one electron to balance or neutralize the proton. Matter then is divisible into electrons and protons. But - and here comes the rub: Between electrons and protons are spaces so vast, in comparison with the masses of each, that, if the proton in the carbon atom were the size of a golf ball hanging from the ceiling of the great hall at Pennsylvania Station in New York, its electrons would be represented by six small wasps winging in a little knot against the four walls of the gigantic structure of the building! In effect, one could claim there is little final solidity of substance to anything: The universe consists of "emptiness", charged with electrical energy! If we translate the above to the measurements and terminology of the physicist and "magnify" the atom mathematically, with all its distances and dimensions kept in proportion so that the orbit of the electron would have a diameter equal to that of the earth about the sun, approximately 184 million miles, the diameter of the electron itself would only be 2,000 miles, and the diameter of the nucleus, where

electron itself would only be 2,000 miles, and the diameter of the nucleus, where

mass and weight of the atom are truly concentrated, can be taken as 2 miles only. We thus obtain a picture of a central mass with a diameter of 2 miles (nucleus), another object with a diameter of 2,000 miles (the electron, in the case of the hydrogen atom) at a distance of 92 million miles away from it, orbiting the nucleus. Evidently, there is plenty of room inside this system. And "room" is not a vacuum, it is not nothingness, but space itself, spatial energy, a field which can be identified with the ether of the past - and of the future. Nobel prize winner, Max Planck, during a lecture in Florence, Italy, once made a truly remarkable statement which describes the problem facing the physicist today:

> "As a man who has devoted his whole life to the most clear-headed science, to the study of matter, I can tell you as the result of my research about the atoms this much:
> 'THERE IS NO MATTER AS SUCH!'
> All matter originates and exists only by virtue of a force which brings the particles of an atom to vibration and holds this most minute solar system of the atom together. ... We must assume behind this force the existence of a conscious and intelligent MIND. This mind is the matrix of all matter".

This cosmic matrix is needed if we want to explain "action at a distance", lines of force, stresses, a magnetic field and so on. When the concept of the ether was abandoned, it had to be replaced by the concept of "space" instead. In reality, we merely switched terminology. We used to say that "ether fills all Space". But "filling" is not exactly the descriptive word to use. Perhaps we should rather define it: "Ether is a condition of space in which electrical manifestations for the atomic construction of materials is possible". This primordial energy is "free" or in an uncondensed state. It exists in interstellar space but remains unrecognizable until it begins to coagulate or gets into a vortex pattern. It constitutes the formative field force of nature, an immense reservoir of latent energy.

The claim of our textbooks that the Michelson-Morley experiment "disproved" the existence of the ether is incorrect. It merely disproved the existence of a noticeable ether drift or drag. As an analogy, if somebody would postulate that the absence of wind disproves the existence of the atmosphere around our planet, the fallacy of this postulate would be immediately apparent to all.

"Michelson and Morley centered their attention on the Earth's orbital velocity (30 km per second). They had no knowledge of the existence of galaxies; of motions of galaxies in relation to each other; of the motion of our solar system in our galaxy..... Their negative results are explainable on the basis of pre-1900 classical mechanics, so provide no proof of the absence of ether or Louis de Broglie's

'subquantic medium'. Thus, the limited information available to Michelson and Einstein is emphasized by recent findings, particularly in astrophysics", writes Dr. H. C. Dudley in the *Bulletin of the Atomic Scientists*, January, 1975, under the title "Michelson's Hunch Was Right". And Dr. Dudley continues: "In fact, 1929 saw Michelson still attempting to experimentally demonstrate the ether, which his intuition and reasoning told him ought to be present".

"Today most persons are largely unaware that the ether concept began to be seriously reexamined by two of physics most notable theoreticians, Paul Dirac in 1951 and de Broglie in 1959, both Nobel laureates. The ether is now being called the "neutrino sea" by astrophysicists, and has been characterized as an energy-rich particulate, subquantic medium. A rather voluminous literature on the subject is accumulating as indicated by a recent review, *The Cosmic Neutrino*, with 665 references covering only the period 1965-1972.....It appears that an open-minded reexamination of this area of physics is long overdue in order to open up new avenues of approach to this pressing problem".

Michelson, Dirac, de Broglie were not the only Nobel prize winners in favor of a reexamination of the ether question. Others were Stark, Arrhenius, A. H. Compton, Lenard, H. Yukawa, and Frederick Soddy, the British scientist who, during the convention of Nobel laureates in Lindau, 1954, described the current dogmas in physics as "an orgy of amateur physics" and "arrogant swindle" - with particular emphasis on the theory of relativity. ("The Wider Aspects of the Discovery of Atomic Disintegration", New World Publications, St. Stephens House, Westminster S.W.I.)

It remained largely unknown, even among physicists, that Einstein himself had serious doubts. In 1949, he wrote to his old friend, Maurice Solovine, who congratulated him on his 70th birthday:

> "Now you think that I am looking back at my life's work with calm satisfaction. But, on closer look, it is quite different. There is not a single concept of which I am convinced that it will stand firm and I am not sure if I was on the right track after all".

And one of my Canadian friends who I believe is present here today stated quite correctly in a letter to me:

> "The myths around Einstein are really not of his making as he himself often questioned his own conclusions and I felt he was quite aware of his own limitations which others were covering up. The physicists protect their members much the same way that the medical profession protects its own."

The purpose of these remarks is not to spark another controversy about the merits of the theories of relativity. Rather, they want to show that so-called

merits of the theories of relativity. Rather, they want to show that so-called

"scientific evidence" is a rather elastic term and that "verification" is always a relative affair. Or, as K. R. Popper so aptly put it:

> "Only in our subjective experience of conviction, in our subjective faith, can we be 'absolutely certain'".

This symposium presents an excellent overview of research and experiments reported from English speaking countries, or experiments published in the English language, as for instance from Japan. However, as Dr. Tenhaeff from Holland has formulated the problem,

> "It is important to pay attention to publications of colleagues in other countries. In the Netherlands and Germany, every academically educated man or woman knows at least three foreign languages. English and American authors only pay attention to material in English. In my opinion, this leads to an 'impoverishment' which puts a drag in science. Some seem very chauvinistic and seem to believe that only the researches done in their country are important. I regret this. Science is international, and international cooperation is of the greatest importance in science".

In presenting some brief reports from abroad, I shall attempt to bring corroborative evidence in support of alternative technology developments discussed during our meeting here in Toronto. Let me start with the most sensitive and secretive society, with Russia.

In his German original of the paper "Some Remarks on the Shielding Theory of Gravity", which was published in the Hanover Proceedings in more detail than the English abstract, Dr. Hans Nieper mentioned the Berlin engineer Levetzow, who was one of the first to postulate a combination pressure and shielding theory for the phenomena of gravity. Levetzow was soon overshadowed by the rising star of Albert Einstein, but one of his followers, Horst Pinkell, went to Russia in 1928 as an exchange student - and never returned. Together with Russian scientists, he was asked to prove the actual existence of the cosmic radiations postulated by Levetzow, now designated as neutrino sea or "tachion field". The work was done in Sterlitamak, South of the Ural mountains, and in 1938, sporadic reports reached the West about the discovery of extremely short corpuscular waves by Pinkell and Gorjew. These were the long sought "Hemmstrahlen" or drag waves associated with gravity. Rumors have it that a metal alloy was soon developed which acted as a drag wave polarisor and, in 1947, agents reported experimental Russian aircraft using this discovery. In 1951, a former German Junkers aircraft engineer reported about his activity pertaining to a super-secret project code named COW-7 in Siberia, a disk-shaped craft which could rise vertically and which belonged to the

Siberia, a disk-shaped craft which could rise vertically and which belonged to the

secret weapons then developed by the Soviets. Whether it was related to the Canadian AVRO project or something entirely different remained unknown, only the Levetzow gravity theory was assumed in connection with the activity in question.

Japan: My esteemed friend, Prof. Seike, who kept me informed about the research conducted by him and his co-workers, surprised me once with a significant statement, which I feel is important to repeat for the benefit of frustrated researchers on this side of the Pacific: "In the early stage of my studies, physicists could not understand what I was doing, while actors and actresses did so by intuition". It was the private support of about 800 individual artists, etc., in Japan which allowed Seike to work, experiment and publish his findings, and not the support of the Japanese equivalent of a National Science Foundation or a similar bureaucratic institution in that country. Again and again, I was surprised how quickly and eagerly American experiments, as for instance the almost forgotten "Ionocraft" of the late Major de Seversky, were duplicated and explored even in Japanese secondary schools. Admiral Rickover has more than once complained about our intellectual complacency: "As a nation, we seem addicted to 'spectatoritis'. We sit in the bleachers and let the game of life unfold before us".

The results are known: The Japanese have achieved top position in science and technology, and not only with tachion beams melting stones, producing "biased" water with a freezing point of minus 4 degrees Celsius, and a G-power generator obtaining 400 V DC output from a 10 V input driving source. I wish to take this opportunity to thank Prof. Seike for sharing his work with us in this country, and wish him the best of success for the future.

France: The work of SEPED was explained by M. René Louis Valée and some French publications in the area of gravity-research have been translated by the NASA translation service, as for instance the theory of the electromagnetic Magnus-Effect (of Marcel Pagés).

Specific mention must be made of the Raymond Kromrey G-field generator, a French-German-Swiss development which appears very closely related to the American "N" machine principle, the "Sunburst" machine and the "Permanent Magnet-Motor" Patent of Howard Johnson. Utilizing either permanent or electromagnetic modules, the generator output exceeds the input by far. One prototype delivers approximately 700 watts at speeds varying between 600 and 1200 RPM. Models with an output of 100 to 160 kw are presently in the planning stage. Several European patents have been granted against heavy opposition, especially from French industrial circles. The development was about 40 years in the making and the inventor stresses the need for a reinvestigation of electromagnetic and gravitic forces, as well as a reexamination of many cemented dogmas in present-day physics.

Germany: A system of rotating electromagnets and magnetic "stator rings" of the German "Kunel" Generator complement the general trend of the American and French generators mentioned before. The first prototype was reported to have been tested in April, 1980. Here, again, very heavy opposition from the German orthodox science establishment. Of special interest is a comment by Nobel laureate Werner Heisenberg, reported to have been made vis-a-vis the inventor:

> "I think it is possible to utilize magnetism as an energy-source. But we science idiots cannot do that; this has to come from the outside".

More details about French and German developments have been published in the new book already mentioned, *Energy in Abundance* by Hilscher and, hopefully, an English version of this important work will be available by next year. Generators which do interact with surrounding energy fields have been designated as "open systems", in contrast to our present "closed system" technology of gasoline and diesel engines, steam turbines, nuclear power plants and so forth. The theoretical basis for all "open systems" is the realization that there simply is no such thing as "empty space". In reality, space is filled with an extremely energy rich, subatomic and subquantic continuum. In short, a "pre-physical state of matter", which can be tapped, as for instance by the spinning of magnetic systems which extract momentum via a vortex-formation of the universal "tachion field".

Austria: This small heartland of Central Europe is proud of her native pioneers in science, among them Dr. Wilhelm Reich, Viktor Schauberger and Karl Schappeller. But after Dr. Reich died in an American prison in 1957 and Victor Schauberger died only five days after his return from the USA (in 1958), where he received an incredibly unfair treatment from certain industrialists, there is little enthusiasm among Austrians to touch base with correspondents on this continent. Viktor Schauberger's son, Walter, refuses, as a matter of principle, to communicate with Americans, no matter in what language. To illustrate the type of "contract" Viktor Schauberger was forced to sign, it stated:

> that all of his patents would become the property of the "consortium",
> that any future inventions or developments would also become the property of the "consortium",
> that he would refrain from discussing any of it with third parties,
> that he would refrain from publishing,
> that all plans and models would remain with the "consortium" after his departure from America.

There is a favorite saying in that small country which is much to the point:

> "After the Greek philosopher Pythagoras had discovered his famous

theorem, he sacrificed a whole hecatomb of oxen as a thanksgiving to the Gods. Ever since, all the oxen in the world are running scared whenever a new truth has been discovered".

Knowledge of the ideas of Schauberger and Schappeller appears to be essential for an understanding of our changing picture of the physical world. As an example, the former forest ranger Viktor Schauberger had watched numerous times some trout standing, apparently motionless, in the strong currents of Alpine mountain streams. This and many similar observations of nature brought him to the gradual development of his "implosion-theory" and associated hardware (see Jensen paper elsewhere). His son is continuing the work in the "Pythagoras-Kepler" School in Bad Ischl. Another prolific researcher is the Viennese engineer Franz Seidl, known for his studies of the use of magnetic field effects as "trigger energy" for voltage and power multipliers.

Holland: A small country with strongly developed intellectual independence appears to be Holland, where Prof. J.M.J. Kooy developed his "Space Dynamics". His hypothesis of gravitational action is based on the realization that all celestial bodies can be conceived as practically transparent in relation to the size of the elementary particles and their mutual distances in the structure of matter. Gravitons or tachions, coming from all directions of deep space, can pass through a celestial body like water passes through a fishnet, and only a minute fraction of the cosmic gravitons or tachions will be intercepted. Study of the effects of the tachion field or space continuum of the fabric of material substances, magnets and crystal lattices can lead to development of converters and novel production facilities for readily usable, conventional E/M energy. When the American inventor Edwin V. Gray was blocked in his efforts to develop his "Pulsed Capacitor Discharge Electric Engine" for which he had received U. S. Patent #3,890,548, he found open ears and open minds in Holland.

The fact that Gray was named "Inventor of the Year" from the Department of Patent Rights in Los Angeles, California, where Dr. Chalfin of Cal Tech confirmed that:

> There does not exist an even distantly similar engine to this one in the world. Conventional electric engines use up power. In this system energy is used up for only a minute part of a millisecond. It operates without heat loss and there is no energy loss whatsoever with this system",

had more meaning to the people of PHILIPS and others in Holland than to the energy establishment in his native America.

England: There is perhaps no more controversial inventor at this time than

John R. R. Searl and his Levity Disc, powered by the Searl Effect generator. It is claimed that model craft have been demonstrated with flight characteristics showing anti-gravitational and inertia-free properties. Demonstrations have been photographed and videotaped. Searl calls his generator a "Gyro-Flywheel High Energy Density Mechanical Magnetic Device" and claims that the magnets used are not the common type, ordinary magnets. The Australian engineer Athol Park of Melbourne, Australia, who visited Searl a few years ago described it this way:

> "From a briefcase, Mr. Searl takes a bar magnet and two steel rollers. He places the rollers at either end of the magnet. They appear to be attracted to the poles - but, when they are pushed gently around the corners of the magnet, they chase each other round and round.... "

The engineer quotes Searl:

> "The crystals in the magnet are changed by putting it in a magnetic flux oven and by frequency control. The result is motion of a magnetic field - a completely new source of power. Units (modules) based on this principle are what power my levity unit - the motor and generator built as one, fuelless unit".

In one of his numerous newsletters he states further:

> "The power plant is a self-contained, onboard closed system of conversion elements with energy input from a latent storage source".

Because Searl has never divulged all details and his explanations are generally of a non-technical, "unscientific" nature, many investigators have chosen to dismiss him as a swindler and imposter. In sharp contrast to this is the opinion of a well-experienced American engineer who reported after a visit with Searl:

> "I found it refreshing to note the keen sense of moral responsibility which he feels for the use to which his discovery is put... The Searls live in modest circumstances. Luxuries are few. They do not own a car. Mr. Searl bicycles several miles daily to his place of work in Maidenhead. There he is an electrical technician and training supervisor in a bearing factory".

But perhaps most significant was the following observation of the American visitor about Searl:

> "We were also interested to hear him say that many of his ideas came to him while he slept. He would go to sleep with questions, and awake with answers... and refreshed. He seemed to have the

ability to restore vital powers more quickly than most people".

And the American concluded his report with the statement:

"The impression we gained of Mr. Searl was one of a very sincere and generous person, a dedicated and tireless worker with perfect confidence in the outcome of his efforts, a man of high principle with a keen sense of loyalty to those who are helping him, and of responsibility for the future welfare of our planet and its people".

In view of the very contradictory nature of comments and impressions by those who have met Searl, it might be wise to reserve final judgment on the Searl-Levity-Disc and its inventor at this time.

New Zealand: Some of Searl's keenest supporters and observers of his work are in New Zealand and Australia. And one of the sharpest young physicists in that country (new Zealand), unhampered by calcified ideology, developed the mathematical foundation for a theoretical anti-gravity effect, using the hydrodynamic analogy of the ether. He uses the equivalent of the hydrodynamic Reynolds number, above a certain value of which the laminar flow past a solid surface breaks down and becomes turbulent due to shear rupture of the viscous cohesion of a fluid, together with his deduction that anti-gravity could be obtained by creating a "vacuum: in the ether in such a way as to correspond to the production of turbulence in a magnetic field. Turbulence in a fluid occurs when Reynolds number RE = 1, when the inertial shearing force equals the viscous cohesion force in the fluid in the vicinity of an approximately spherical body immersed in the fluid, resulting in separation of the boundary layer and formation of a wake, i. e. vacuum or free surface around the body. He calculated the threshhold for turbulence in the ether, = a vacuum = an anti-gravity effect, using the refined value of ether kinematic viscosity which he obtained.

His theory would confirm the observations of very high voltage produced in the case of the Searl Levity Disc, and the very high voltage needed in the vacuum experiments with flying disc-shaped bodies of T. T. Brown, the "ionocraft" observations of Major de Seversky, the "Electro-Field Rockets of Prof. Dudley, the observations of Northrop Corp. with "Electro-Aerodynamics in Supersonic Flow" and similar American documentation and patents.

Since the New Zealander is now in the process of attempting to publish his theory in a reputable British magazine, I am not at liberty to divulge his address prematurely. Interest in New Zealand and Australia is running high, and possible breakthroughs in energy technology should not come totally unexpected in these two countries with strong intellectual ties to England.

Conclusion

There is now overwhelming evidence for the actual existence of a very high density, energy rich space continuum formerly called "ether". This space energy can be concentrated, gathered, focused, magnified and compacted by magnets or magnetic materials, which appear as the new core materials for converters of all kinds, utilizing the cosmic energy for new technology applications.

Crystals are energy-sensing and channeling devices; they can serve as transducers, as for instance in the Moray-Device, or the "rock electricity" of T. T. Brown.

Combinations of crystals and magnetic materials appear to be the mainstay for the development of "hyper-space" - converters and generators of power - utilizing free, cosmic energy in our future.

Unbiased, totally honest and impartial reexamination and reevaluation of all scientific theorems and dogmas, as well as unhampered opportunities for the pioneers of the new technology on the American and European continent appear to be the prerequisite of success.

Those who accept that anything of the nature of ideas or ideology is permanent, use all their strength to hold on to it, and to condemn all who do not agree. The next stage of this spiritual illness of the mind is to build a monument to what they perceive is Truth, and then to build a monument to their own permanence in the world. This, they do by seeking fame or fortune, and authority over others. This is the contemporary, planetary psychology situation, and thus are we losing the gift of perspective and horizon and are no longer able to discern what is important. Skeptics are on record as saying:

> "We are not running out of natural resources or intellectual talent, we are running out of the freedom of innovation that made the countries on the North American continent the most advanced nations on earth".

The future will show whether this freedom, which includes the freedom and the duty of taking risks, can be restored to the degree our Founding Fathers have been striving for. Only then will we know whether the late Wernher von Braun was not too overly optimistic when he stated:

> "The cosmic age will bring a dawn of knowledge not yet envisioned. It will dwarf all our present knowledge and ideas and, through its vastness, may even bring men closer together on their own planet".