

**A ZYGONIC ANALYSIS OF THE POSSIBLE INTERACTION
OF SPIRITUAL AND SCIENTIFIC PROCESSES
IN THE ANALYSIS OF MAXWELL'S EQUATIONS
FOR ELECTROMAGNETIC WAVES**

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1. Summary

The term "zygonic" implies a method that has meaning both to religious leaders and scientists as is implied in the projects of the magazine: *Zygon: Journal of RELIGION & SCIENCE*. This method requires that the investigator from science or engineering must study spiritual groups, like attending services of churches and taking classes at churches or centers of spiritual enlightenment. Then I find that many spiritual leaders don't want the study of weapons on their premises. This requires study of how new weapons for World War III is usually the misuse of resources used for millennia by natural healers. Then I try taking a book like *Gravitobiology* (Bearden, 1991) to show to an MIT professor, which could form a link between science and spirituality through quantum biology, and find that the physics and electrical engineering professors reject the book as the work of "cranks." Is there a "reality" that both the spiritual leaders and the scientists can see? I am using this "zygonic" approach to search for such a "reality." There is a certain poetry needed to make sense of this investigation. If we prematurely seek to explore every detail of definitions before we complete a sentence about the poetic structure of the quantum vacuum we may never get in gear to realize the potential of humankind to use the natural computer and memory of the quantum vacuum to perceive the vista of the evolutionary path that Nature has provided us. I perceive a convergence of two paths: [1] electrical engineering of electromagnetic waves, and [2] the sequential recording of each higher level of the organization of human ideals in the (eternal) spiritual way resident in the quantum vacuum memory. The quantum physicist David Bohm spent the last years of his life experimenting with dialog processes between religious leaders, scientists, laymen and laywomen. An overview of the historical development is given; followed by brief explanations of the following: three roots; the physical vacuum; longitudinal scalar waves; torsion waves; healing by scalar waves; Weaponization of scalar waves; quantum potential weapons; consciousness hypothesis; and what must we do? We can achieve some integration of philosophical concepts for world peace through use of Teilhard de Chardin's concept of the "Noosphere" coupled with Academician N. I. Vernadsky's use of the Noosphere concept in about 1945, connected with Barbara Marx Hubbard's "Conscious Evolution" (Hubbard, 1996), Ervin Laszlo's concept of consciousness connected with the holofield in the quantum vacuum (Laszlo, 1996), the Muslim Woman Leader Elaine Smith's concept of how humanity is trying to give birth to the next stage of human evolution (Smith, 1996), and the dialog process of using Hazel Henderson's concept of facilitating a change from a "zero-sum-game" to a "win-win game" (Henderson, 1996).

Keywords: electromagnetic healing, electromagnetic waves, holofield, quantum vacuum, Tesla weapons.

2. Introduction

In general, I have found that both religious leaders and scientists act as if they had brain damage such that they refuse to notice the new barbarians who are seizing possession of the higher order electromagnetic fields in the quantum vacuum flux that historically have been used for healing, to make new weapons of mass mind control and biological destruction. This may lead to World War III and the possible destruction of all life on planet Earth.

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To start this analysis I first imagine that I am a Bald Eagle flying high above the Sierra Nevada Mountains looking down upon the different types of activities in Northern California.

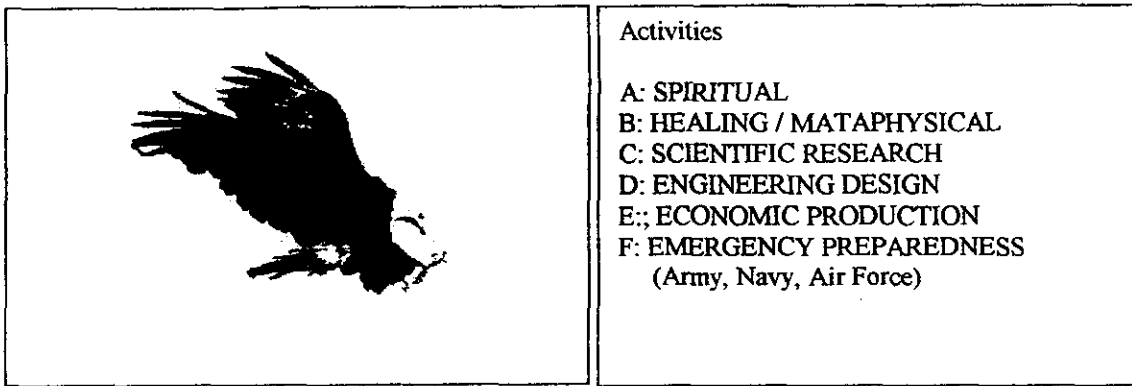


Fig. 1. Bald Eagle Scanning the Major Activities of Civilized Society

3. Historical Development

The scientists who in 1882, i.e., 117 years ago substituted the approximate Maxwell-Heaviside Equations in place of the accurate Quaternionic Version of Maxwell's Equations in Physics and Engineering Textbooks triggered errors of omission in electrical engineering. The discarding of two of the three roots and the scalar and vector potentials have confused engineers like me as to the validity of accepted solutions of partial differential equations in engineering. American engineers rarely develop an understanding that they are using approximate equations for electromagnetic waves. The use of the approximate equations didn't make a significant difference in designing RADAR systems for World War II. However in the present era, one needs the exact equations to be aware of the types of waves different from Hertzian waves, such as longitudinal scalar electromagnetic waves with which one can set up interferometers on the other side of the planet, and remotely manufacture electromagnetic bombs or missiles at the site, instead of having to transport heavy physical missiles.

The lack of understanding of these things among Western Engineers may have given the mythical Khanate of Tesla Technologies somewhere in Central Asia near the 13th Century territories of the Khanate of the Golden Horde and the Khanate of Kaidu, a 30-year advantage over the West in developing weapons that may insure their victory in World War III. With my Eagle's perspective, I can perceive the potential relationship of work in the different fields, but I can't find the details. In the emergency preparedness row, I can't tell whether the Air Force is up to date in understanding electromagnetic theory, or whether they are using a security classification to cover up their ignorance of the developments of 1864, 1882, 1890 (Hunt, 1991), 1904, 1920, 1937(Tesla, 1993), 1959 (Aharonov & Bohm, 1959), 1976, 1983 (Hunt, 1991), 1991(Bearden, 1991) and 1993 (Bearden, 1993).

In the period 1960 to 1986, Leaders of the Soviet Union made a series of brief announcements that their scientists were researching a new class of more powerful weapons of mass destruction and they appealed to the United Nations to convene a committee to establish international control of such new weapons (Kruschev, 1960; Brezhnev, 1975; Gromyko, 1975, 1976, 1977; Gorbachev, 1986). Eventually a UN Committee was established, but little was accomplished. The Soviet disclosures and proposals were summarized in a book in 1983 (Ustinov, 1983).

However, literature searches show a lot of activity in the application of scalar electromagnetic waves and torsion waves <show a lot of activity> in Russian and former Soviet controlled territories on the humanitarian application of low power scalar longitudinal electromagnetic waves and torsion waves to medical diagnosis, medical treatment, and basic scientific research.

There is research going on about the scientific extension of Chinese acupuncture principles to health problems. Traditional astronomy gives pictures of what was going on 200 years ago in a star that is 200 light years away. Russian astronomers now can develop pictures of what was happening on a star 200 light years away just a few minutes ago. This is possible because of the information carried by torsion waves that travel faster than the speed of light (Shipov, 1998).

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4. Three Roots

Three roots: A typical mathematical derivation of Maxwell's Equations in the 1937 era, 62 years ago, usually resulted in the finding of three roots pointing to three possible sets of equations representing electricity and magnetism. Normally only one of the roots appeared to have any meaning, and the other roots were discarded as spurious. It is my contention that the discarded roots contained some information pointing to other possible solutions.

Overlooking the spurious roots leads to ignorance on the part of engineers about possible Overunity motors that could enable us to design automobiles without pollution producing fossil fuel burning, to design new instruments for medical healing of people, and storing and retrieving of concepts stored in the quantum vacuum holofield, leading to conscious social evolution of better social systems. More details are included in a handwritten supplement to my 1996 ISSS Budapest paper (Wood, 1996)

4.1 First Order Root

The first order root leads to the 20 equations in the first column

	Maxwell		Heaviside
	Cartesian	Quaternion	Vector
(A)	$a = dH/dy - dG/dz$ $b = dF/dz - dH/dx$ $c = dG/dx - dF/dy$	$\mathfrak{H} = \nabla \nabla \mathfrak{A}$	$\mathbf{B} = \text{curl } \mathbf{A}$
(A')	$da/dx + db/dy + dc/dz = 0$	$S \nabla \mathfrak{H} = 0$	$\text{div } \mathbf{B} = 0$
(B)	$P = ay/dt - bz/dt - dF/dx - d\phi/dx$ $Q = az/dt - cx/dt - dG/dt - d\phi/dy$ $R = bx/dt - cy/dt - dH/dt - d\phi/dz$	$\mathfrak{C} = \nabla \mathfrak{A} \mathfrak{H} - \mathfrak{H} - \nabla \phi$	$\mathbf{E} = \nabla \mathfrak{A} \mathbf{B} - \dot{\mathbf{A}} - \text{grad } \phi$
(E)	$4\pi u = dy/dy - dz/dz$ $4\pi v = dz/dz - dy/dx$ $4\pi w = dx/dx - dz/dy$	$4\pi \mathfrak{C} = \nabla \nabla \mathfrak{C}$	$\mathbf{C} = \text{curl } \mathbf{H}$
(F)	$f = K/4\pi P$ $g = K/4\pi Q$ $h = K/4\pi R$	$\mathfrak{D} = K/4\pi \mathfrak{C}$	$\mathbf{D} = \epsilon \mathbf{E}$
(I)	$u = CP + K/4\pi dP/dt$ $v = CQ + K/4\pi dQ/dt$ $w = CR - K/4\pi dR/dt$	$\mathfrak{G} = \mathfrak{C} + K/4\pi d(\mathfrak{A})/dt \mathfrak{C}$	$\mathbf{C} = (k + \text{ad/dt})\mathbf{E}$
(J)	$df/dx + dg/dy + dh/dz = \rho$	$S \nabla \mathfrak{D} = \rho$	$\text{div } \mathbf{D} = \rho$
(L)	$a = \mu \alpha$ $b = \mu \beta$ $c = \mu \gamma$	$\mathfrak{B} = \mu \mathfrak{H}$	$\mathbf{B} = \mu \mathbf{H}$

Fig. 2. Maxwell's Cartesian Equations, Maxwell's Quaternions, and Heaviside's Vector Equations.

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Heaviside made a further change from the eight equations in the third column in the above fig. 2. He reorganized those equations to get a more compact representation of Maxwell's equations, reduced to four equations:

$$\begin{array}{ll} \text{div } \mathbf{E} = \mathbf{r} & \text{curl } \mathbf{H} = \mathbf{k} \mathbf{E} + \epsilon \dot{\mathbf{E}} \\ \text{div } \mu \mathbf{H} = 0 & - \text{curl } \mathbf{E} = \mu \dot{\mathbf{H}} \end{array}$$

This further simplification eliminated the vector potential \mathbf{A} and the scalar potential ψ . This eliminated a clue to the existence of longitudinal scalar electromagnetic waves. The impact of this has been that American electrical engineers were unaware of the longitudinal scalar electromagnetic waves, while engineers of some unidentified country appeared to be using the longitudinal electromagnetic waves to build new weapons. Many events have been observed in different parts of the world that were consistent with different Tesla type weapons.

4.2 Second Order Root

The second order root yields: $\mathbf{E} = 0$

In 1937, when I was an undergraduate student, the mathematics and engineering professors discarded this root, saying that it didn't mean anything in nature. It turns out that in 1890, Nicola Tesla discovered that there are scalar longitudinal electromagnetic waves consisting of standing waves going in opposite directions that add up to zero.

4.3 Third Order Root

The third order root yields: $\mathbf{E} = \text{square root of } (-1)$.

In 1937 my professors discarded this root, saying that it was imaginary and did not represent anything in nature. In the 1950's the Catholic Priest/Anthropologist Teilhard de Chardin claimed that "Love" was "radial energy." In mathematics the square root of (-1) represents the vector "i" or a vector ninety degrees out of phase with the real axis. This points the direction of research toward there being feedback shift registers in the brain which code data into a Galois Field form to generate a hologram in the "holofield" in the quantum vacuum flux to produce "consciousness."

5. The Vacuum

In 1864, when Maxwell developed his equations, physicists didn't know anything about the quantum vacuum. They called it the luminiferous ether. Maxwell did remarkably well in developing the equations for electromagnetic waves. The Michaelson-Morley experiments convinced physicists that the ether was a true vacuum so Maxwell's equations worked for this true vacuum, but, with the exception of Nicola Tesla, engineers still missed having any knowledge of longitudinal scalar electromagnetic waves. With the development by theoretical physicists of quantum mechanics doubt was cast upon whether the ether was truly a vacuum.

The history of the theoretical physics work on analyzing the vacuum is covered in the book by Podolny, *Something Called Nothing*, (Podolny, 1986). Important theory and measurements on the nature of non-locality in quantum mechanics was developed by Aharonov and Bohm, (Aharonov, 1959,1961). A number of important developments in quantum mechanics are listed in the reference section of this paper. The latest book defining some new concepts on the quantum vacuum is by Shipov, *A Theory of Physical Vacuum*, (Shipov, 1998). See also, Dmitriev, *Planetophysical Function of Vacuum Domains*, (Dmitriev, 1999).

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6. Longitudinal Scalar Waves

Nicola Tesla also discovered these waves in the 1890's and took a boat to Europe to argue with the university professors about why they didn't include this type of waves in the engineering textbooks. The professors responded by saying, "Longitudinal waves were too complicated for those dumb engineers to understand!" Tesla returned to New York and developed a theory and experiments, transmitting electricity across long distances without wires. The investment bankers of the day such as J.P. Morgan were scared of Tesla's talk about being able to transmit free energy to the people of America without being able to meter or charge them for it. And so in 1904 J.P. Morgan cut off the funds to Tesla's research lab, thus pushing Tesla into bankruptcy so that he couldn't do any more research on free energy.

Without funds for laboratory equipment and staff, Tesla switched to working primarily on theoretical devices and systems using the longitudinal waves for military weapons, shields against military weapons, and other unusual military devices.

7. Torsion Waves

Russian research papers and books report on another kind of wave, Torsion Waves and Spin Waves, that are generated by spinning electrons and groups of spinning electrons. Torsion waves travel at almost infinite velocity. The sun and other astronomical bodies naturally generate torsion waves. Russian Astronomers can now analyze the light from the sun and sort out the torsion wave components, which are then used by the computer to reconstruct the image of what was happening on the sun a few seconds ago. Using ordinary light showed the image of the sun as it was 9.3 minutes ago.

8. Healing by Scalar Waves

Many healing systems appear to involve longitudinal scalar waves in a transfer of energy from the quantum vacuum flux to bio-energy waves in the human system. Many healing processes involve healers transferring energy from the quantum vacuum flux through their hand or arm and then by waving them around or massaging with them, release energy to the various acupuncture point systems of the patient which increases the energy distribution to the part of the patients body that needs the additional bio-energy. Healers need to organize to establish how much bio-energy the military weaponeers are allowed to divert from healing systems for the purpose of killing people.

9. Weaponization of Scalar Waves

A remote interferometer can be set up over a target on the other side of the earth with scalar EM beams from two stations crossing each other to form an interferometer pattern and can be reflected back to the radar control station. Than a third scalar EM station can send a signal to the interferometer area with instructions as to what coordinate to convert scalar energy to Hertzian energy. The Hertzian energy then can be used to start a fire or blow up a plane or start an earthquake or other earth devastating events.

10. Quantum Potential Weapons

Another type of weapon can be generated by establishing a very high voltage in an antenna at the base station that will raise the quantum potential, a calculated amount, in the quantum vacuum field of the target area to cause overheating or freezing, otherwise disturbing the humans in the target area.

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11. Consciousness Hypothesis Using Feedback Shift Registers, Galois Field, Torsion Field and HoloField

There is a hypothesis being debated that consciousness involves the storage of information outside of the brain in the holoField of the quantum vacuum flux. The concepts of an interconnected universe were discussed in a book by Erwin Laszlo (Laszlo, 1995) and further developed in a book oriented more for the layman to understand (Laszlo, 1996).

It is proposed that the system of human consciousness be compared with a computer communication system to determine what components in the computer system are similar to the required components in the human brain consciousness system. For some components of the computer communication system there may be no corresponding component in the brain/mind systems commonly discussed. This leads to the search for the need in the brain/mind consciousness system that there has to be some antenna existing in nature that maintains the carrier signal for consciousness. Then we look for where such a system can be and we find that ancient redwood trees may be performing some function like this. For humans to move to a higher level of consciousness, we have to be sure that some living system other than human, like the trees, are providing the necessary radio frequency carrier signal in the holoField to make the human brain-mind consciousness system function.

To develop a tentative block diagram of such human to holoField connections we must first consider the possibility that our present neurons in the brain are capable of setting up a feedback shift register similar to that in the tape units of the IBM computer tape drive 2400 Brown, 1969; Peterson, 1961). If such a shift register configuration can be achieved in the human brain logic section one can then conceive that there may already exist the logic of setting of a Galois field in the brain system. Then we have to determine whether there is a suitable torsion field, inertial field, or other wave structure in the quantum vacuum to connect logic from the brain through to the holoField. Then we have to know what is the mechanism by which the external living system like the trees run their carrier frequency of the holoField. There are more details we need to look into in due course as to what are the possible configurations.

12. What Must We Do?

12.1 Organize Research

We must organize a task force to do advanced research on all three orders of electromagnetic waves. This will involve a lot of interdisciplinary work. We will have to have scientists visiting the religious services. Then we may have to develop elementary science courses for religious leaders too. We will have to educate both religious leaders and scientists to experience things that the other group does so that both get a feeling of how the other group decides what to believe.

12.2 Apply to Healing Systems

We must apply the results of such research to developing cures for diseases with the second order electromagnetic waves. As a starter I suggest you examine what the healer Barbara Ann Brennan has published about her healing work. (Brennan, 1992) Her book deals with the human aura surrounding the human body, and the history of mankind's use of bioenergy for over 5000 years, and how the healer collects bioenergy with hand movements in space around the patient, and reradiate bioenergy into correct channels of the human body to promote healing.

12.3 Use These Fields for Setting Templates for Evolution

We must use the third order root to develop climate change templates and ideal social order templates to help guide conscious social evolution. Barbara Marx Hubbard has worked on this problem by studying and meditating about a book from the Bible, namely, Revelation. In her published study of her work she uses three different type styles in her book: one style for direct quotations from the Book of Revelation, the

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second for comments from, "higher voices", and the third, the comments of Barbara, herself, relative to the prospects of human conscious evolution to the next stage of development. (Hubbard, 1995)

12.4 Establish Dialog with Weaponers

We must develop a dialog with the mythical "Khanate of Tesla Technologies" to organize a change from a Zero-Sum Game to a Win-Win Game as suggested by Hazel Henderson in her book, *Building A Win-Win World* (1996).

We can achieve some integration of philosophical concepts for world peace through use of Teilhard de Chardin's concept of the "Noosphere" coupled with Academician N. I. Vernadsky's use of the Noosphere concept in about 1945, connected with Barbara Marx Hubbard's "Conscious Evolution" (Hubbard, 1996), Ervin Laszlo's concept of consciousness connected with the holofield in the quantum vacuum (Laszlo, 1996), the Muslim Woman Leader Elaine Smith's concept of how humanity is trying to give birth to the next stage of human evolution (Smith, 1996), and the dialog process of using Hazel Henderson's concept of facilitating a change from a "zero-sum-game" to a "win-win game" (Henderson, 1996).

We must initially analyze what characteristics of Capitalism and Communism are intrinsic properties and which are conflict generated properties. The studies by Howard Bloom can help us understand the difference between basic properties and conflict generated properties to increase understanding of opponents past behavior. Then we can use Stafford Beer's proposals on how to structure an organization so that the chances of a dictatorial evolution are reduced. For Bloom's and Beer's contributions, I quote from their publisher's leaflets about their books:

Some of the problems are fairly well analyzed by Howard Bloom in his book, *The LUCIFER PRINCIPLE -A Scientific Expedition into the Forces of History*. 1995, New York: The Atlantic Monthly Press. [Lib: CRSO.1.3B] His book is summarized in a publisher's brochure as follows: "*The Lucifer Principle* is a revolutionary work that explores the intricate relationships between genetics, human behavior, and culture to put forth the thesis that "evil" is a by-product of nature's strategies for creation and that it is woven into our most basic biological fabric.

In a sweeping narrative that moves lucidly among sophisticated scientific disciplines and covers the entire span of the earth's, as well as mankind's, history, Howard Bloom challenges some of our most popular scientific assumptions. Drawing on evidence from studies of the most primitive organisms to those on ants, apes, and humankind, the author makes a persuasive case that it is the group, or "super-organism," rather than the lone individual that really matters in the evolutionary struggle. But Bloom asserts, the prominence of society and culture does not necessarily mitigate against our most violent, aggressive instincts. In fact, under the right circumstances the mentality of the group will only amplify our most primitive and deadly urges. In Bloom's most daring contention he draws an analogy between the biological material whose primordial multiplication began on earth and the ideas, or "memes," that defines, give cohesion to, and justify human super-organisms. Some of the most familiar 'memes' are utopian in nature -Christianity or Marxism; nonetheless, these are fueled by the biological impulse to climb to the top of the hierarchy. With the meme's insatiable hunger to enlarge itself, we have a precise prescription for war. Biology is not destiny; but human culture is not always the buffer to our more primitive instincts we would like to think it is. In these complex threads of thought lies the Lucifer Principle, and only through understanding its mandates will we be able to avoid the nuclear crusades that await us in the twenty-first century."

Beer, Stafford. *BEYOND DISPUTE - The Invention of Team Syntegrity*. 1994, Chichester, England. [Lib: CRSO.5.1B] "Over the last forty years, Stafford Beer has published a steady stream of books and papers in which he has applied cybernetic science to organizational problems. *Syntegrity* is a powerful invention in the organization of normative, directional, and strategic planning and other creative decision processes. The underlying model is a regular isosacahedron (20 sides). This has 30 edges, each of which represents a *person*. An internal network of interactions is created by a set of protocols. A group organized like this is an ultimate of *participatory democracy*, since each role is indistinguishable from any other. There is no hierarchy, no top, no bottom, no sideways. Beer illustrates how continued dynamic interaction between *persons* causes ideas and resolutions to hum around the sphere, which reverberates into a kind of group consciousness. Mathematical analysis of the structure shows how the process is determined by the even spread of synergy."

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13. References

NOTE: Since the subjects of longitudinal scalar electromagnetic waves, torsion waves, and possible holofield structures in the quantum vacuum are not systematically covered in Western Science and Engineering literature, more references are included in this list of references than are cited in the main text of the report to help the reader find clues as to who is working in these fields.

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Additions of 5/4/99; 5/13/99: Bergson, Brown; Laszlo; Peterson; Randrup, Smith.

A1853K3.rtf (word)