

ISSN: 2473-7194



USPA Journal & Newsletter

**The Official Publication of the United States
Psychotronics Association (USPA)**

New Series Volume 3, Number 11 (November, 2017)

Journal & Newsletter of the United States Psychotronics Association (USPA)

New Series Vol. 3, No. 11 (November, 2017)

Editorial Office: USPA Newsletter, John H. Reed, M.D., Managing Editor, 4401 Roland Avenue, Suite 405, Baltimore, MD 21210, USA. Email: joreed43@gmail.com; telephone: 443-858-0575

Manuscript Submission: Submit all manuscripts as Microsoft Word documents or PDFs by the 12th of each month.

Editor-in-Chief: John H. Reed, M.D.

Associate Editor: Lutie Larsen

United States Psychotronics Association (USPA) website:

<http://psychotronics.org/about.php>

USPA Facebook page: <https://www.facebook.com/uspsychotronics/>

Back Issues are available on the USPA website above.

Copyright: Authors retain the copyright to their writings. However, USPA has the right to post copies of the USPA Newsletter in the USPA physical and online libraries and elsewhere on the Internet.

USPA Newsletter (ISSN: 2473-7194) is published monthly by the United States Psychotronics Association, Editorial Offices, 4401 Roland Avenue, Suite 405, Baltimore, MD, 21210 USA

Table of Contents

News, Events, and Columns:

Internationally Known Researchers to Speak at 40th Annual USPA Conference, July 20-22, 2018: p. 1

Dr. Beverly Rubik Speaks at Transformative Technology Conference: p. 2

Short Psychotronics News, Notes, and Queries, **plus Updates**: p. 3

Newly Discovered Psychotronics Related Organizations and Periodicals: p. 5

2017 USPA Conference DVD Order Form: p. 7

2016 USPA Conference DVD Order Form: p. 8

Global Foundation for Integrative Medicine (GFIM) Conference, March 8-9, 2018, New York City: p. 9

USPA Continues Program Offering Digital Copies of All USPA Conference Presentations, 1978-2017: p. 12

“Among the Missing” (**and Updates**): Missing People, Books, Collections, Artifacts, Manuscripts, Periodicals, and Organizations, by John Reed, MD: p. 13

The Ontario College of Homeopathic Medicine (OCHM) Offers a Diploma in Homeopathic Medicine and Health Sciences. p. 21

Articles:

Electromagnetic Bioinformation in Intercellular Interaction, by Vlail P. Kaznacheyev, M.D. p. 22

Thought and Mind as the Projection of Metaholomorphotic Fields by the Brain: A Proposed Mechanism, by Jonathan D. Cowan, Ph.D., p. 47

Abstracts of Important Articles:

Gariaev, P. P., Vladychenskaya, I. P. & Leonova-Gariaeva, E. A., PCR Amplification of Phantom DNA Recorded as Potential Quantum Equivalent of Material DNA. DNA Decipher Journal. Vol. 6, No. 1 (March, 2016), pp. 1-11; p. 74

Davies, A. M., Weinberg, U., and Palti, Y. "Tumor Treating Fields: A New Frontier in Cancer Therapy." Annals of the New York Academy of Sciences, vol. 1291 (July, 2013), pp 86-95; p. 74

Ellis, Wladislaw. Pulsed Subcutaneous Electrical Stimulation in Spinal Cord Injury: Preliminary Results. BioElectroMagnetics, Vol. 8, No.2 (1987), pp. 159-164. p. 75

Books of Interest:

An Introduction to Medical Radiesthesia & Radionics, by Vernon Wethered, p.76

Shape Power: A Treatise on How Form Converts Universal Aether Into Electromagnetic and Gravitic Forces, by Dan A, Davidson, p. 78

The Body Electric – Electromagnetism and the Foundation of Life, by Robert O. Becker, M.D. and Gary Seldon, p. 83

Regular Features:

USPA Generous Donor Recognition Page: p. 87

USPA Library and Psychotronics Periodicals Update: p. 88

USPA Local Groups and Affiliates Update: p. 97

Exchange Corner and Classified Advertisements: p. 98

United States Psychotronic Association Officers & Board Members: p. 100

What Is Psychotronics? p. 101

Ten USPA Membership Benefits and Membership Information: p. 102

USPA Membership Application and Link to Online Application: p. 103

USPA Catalog of Conference Lectures, 1978-1994, Available for Sale: p. 104

J.G. Gallimore's Five Rare Books Now Available for Sale: p. 105

Internationally Known Researchers to Speak at 40th Annual USPA Conference, 2018



We are proud to announce that a number of internationally known researchers have confirmed that they will be speaking at the 40th annual United States Psychotronics Association (USPA) conference, **July 20-22, 2018, at the beautiful Hyatt Regency Hotel in Deerfield, Illinois, a suburb of Chicago.** (pictured at left). These speakers include **Dr. James Oschman, Dr. J.J Hurtak, Jeffrey Mishlove, Dr. Patrick Bailey, Dr. Beverly Rubik, Dr. Glen Rein, and Dr. Linda Lancaster.** They will be addressing

the theme of the conference, which for 2018 is ***“Mind, Matter, and Aether: Applications of Radionics.”***

In addition to the above illustrious speakers, we will have numerous other researchers addressing new and developing methods on these and related subjects, such as **energy medicine, scalar waves, quantum fields, orgone energy**, and related topics, as we seek to advance the pioneering efforts of **Albert Abrams, Robert C. Beck, Ruth Drown, T. Galen Hieronymus, Georges Lakhovsky, Wilhelm Reich, Royal R. Rife, Nikola Tesla, Marcel Vogel**, and others. Further updates will be sent out in the coming months as more conference speakers are selected for this special event involving leading edge sciences. Please send your inquiries to: uspsychotronics@yahoo.com

Call for Papers: For an opportunity to speak at the 2018 USPA conference on any of the above subjects, please send your title, an abstract, and a short biography of yourself to the email address: uspsychotronics@yahoo.com . Please title your email with “2018 abstract - (your last name)” Abstracts are due by March 15, 2018. Accepted speakers will need to provide their own transportation and lodging, but the Conference fees will be waived.

Call for Vendors/Exhibitors

The USPA welcomes vendors and exhibitors representing groups, firms, and organizations focused on the interactions of matter, energy, and consciousness. Fees are \$30 per table, plus 10% of gross sales. **For more information please contact Bob Peters, VP of Exhibitor Relations, at: cathyschleyer@msn.com.**

The USPA website: www.psychotronics.org

Join USPA on Facebook: <https://www.facebook.com/uspsychotronics/?fref=ts>

Dr. Beverly Rubik Speaks at Transformative Technology Conference

On October 14, 2017, Dr. Beverly Rubik, president of the United States Psychotronics Association (USPA), spoke before the annual Transformative Technology Conference in Palo Alto, California. The honor of speaking before this conference is given only to those who are among the most innovative in the nation, especially for innovations that are revolutionary or transformative in some way. Dr. Rubik more than qualifies in this regard, since she was the head of the Center for Frontier Sciences at Temple University for seven years and has headed the [Institute for Frontier Science](#) in Oakland, California, for more than twenty years. In addition, she holds faculty positions at Saybrook Graduate School and Energy Medicine University.

Dr. Rubik's talk was titled, "Psychotronics: Intention Meets Technology" and the abstract is shown below. You can watch and listen to Dr. Rubik's presentation at: <http://ttconf.org/> You have to sign up with a name & email address to access these files. Then go to Day 2, and 3:35 pm.

Psychotronics: Intention Meets Technology

Beverly Rubik, Ph.D.

President, US Psychotronics Association

Presentation at Transformative Technology Conference, October, 2017, Palo Alto, CA

Psychotronics is a decades old field established around the science of mind-body-environment relationships. It is an interdisciplinary science concerned with the interactions of matter, energy, and consciousness. Psychotronics involves the study, research, and applications of the physics and technology of the mind, brain, spirit, consciousness, and the underlying forces of life and nature – hence the term “psychotronics”. We believe that a true understanding of the universe must include the spiritual, as well as, the technical. We stress research, with documentation of results, and practical applications, rather than personal experience and unsupported hypotheses. Join this session to learn more about the cutting edge of new and controversial bio-signals. Learn the history of psychotronics and the frontiers of biosignals.

Short News, Notes, and Queries

(If anyone would like to make a short news announcement, report something, has a question about anything related to psychotronics and related subjects, or has any information or comments about any of the following notes and queries, please write to the editor, John Reed at: joreed43@gmail.com)

1. **Do any of you happen to know anything about the Paraphysical Laboratory that was founded in the UK by Benson Herbert in 1966, or have any issues of the Journal of Paraphysics that he published for more than 20 years?** Mr. Herbert's laboratory was located at Privett Farm, Downton, Wiltshire, England, between Salisbury and Southampton. His mission included an attempt to provide a workable theory and physical explanation for paranormal phenomena, including telepathy, remote viewing, dowsing, and other extraordinary abilities and phenomena. Unfortunately, Benson Herbert died in 1991, and no one seems to know what became of the papers and records of the laboratory, or if he even had any family, who might be able to shed light on this. So if you know anything about Benson Herbert or have any issues of his periodical, please contact the editor at: joreed43@gmail.com.
2. **A comprehensive bibliography of articles on biophotons, subtles energies, and related subjects has recently been discovered via the Wayback Machine.** This bibliography was compiled by Dr. Marco Bischof in 2006 and includes over 1,700 articles and monographs on these subjects, dating back to the early 1900s. They include the works of such pioneers in this field as Dr. Alexander Gurwitsch, Dr. Harold Saxton Burr, Dr. Fritz Popp, and many others. Most citations are from peer reviewed journals. [This bibliography is available here for your use.](#)
3. **We have been recently informed that one of the radionics devices that Jerry Gallimore invented in the 1970's or 1980's used a GSR meter in place of a stick plate.** Does anyone happen to have or know anything about this particular device? Such a device would be very significant, because if there is a such a radionics device that can be successfully used without a stick plate, which depends on the sensitivities and subjectivity of the user, it would enable nearly anyone to use that radionics device. One of the problems that beginners in radionics often have is the detection of the "stick", on the stick plate, and some people are never able to develop this ability.

4. **Do any of you know anyone who has ever owned, used, or did research on the Dotto Ring?** This was an electrotherapy treatment device developed by Gianni Dotto back in the 1970's and is said to have been used successfully to treat cancer and other diseases in humans and animals. In addition, the Dotto Ring was also said to be able to slow down the aging process and even rejuvenate individuals to some degree.
5. **Does anyone know anything about a man named William Lehr (1933-1996), who lived in Scammon, Kansas, and who developed several energy and healing devices, and made a reproduction of the T. Henry Moray energy device?** In addition, Lehr is said to have created a high-powered spark-gap device for healing purposes that cured a man who had been sent home to die, as well as a huge bibliography of articles and books dealing with new energy sources and energy medicine and treatment.

6. **Does anyone have video tapes of the presentations that Andrija Puharich made at the 1982 US Psychotronics Association Conference?** The title of Dr. Puharich's first presentation was: "Chemical Compounds: Receptors of Artificial ELF", and was sold for a period of time on the USPA website with this title and catalog number F6.

The second presentation that Dr. Puharich made at the 1982 USPA Conference was the Keynote Address at the Awards banquet. The Title of this presentation was "Kindling + 1" and had catalog number F7. If anyone has either or both of these tapes, please contact the editor, John Reed at: joreed43@gmail.com.

Andrija Puharich, Chemical Compounds: Receptors of Artificial ELF (1982) F6

Andrija Puharich, Keynote Speaker:, Kindling +1; Awards Banquet (1982) F7

7. **Art Tool and Die Company:** Does anyone know anything about the Art Tool and Die Company that was located in Detroit, Michigan, in the 1930s and 1940s, and apparently manufactured radionics devices? It has been referred to in a number of publications on radionics, psychotronics, and related subjects, but it is not clear what devices they manufactured.



8. **Mangrove College for Radionics:** Does anyone know anything about the Mangrove College for Radionics, and if it ever published a periodical of any kind? Its address at one time was: 1313 N. Market St., Hercules Plaza Suite 3410, Wilmington, Delaware 19801, although this appears to be a mail box service location. It was once headed by a Dr. P. W. Meier.

Newly Discovered Psychotronics Related Organizations and Periodicals, November, 2017

A number of newly discovered psychotronics related organizations and periodicals have been discovered since the last issue of the **USPA Journal and Newsletter**. These organizations and periodicals, some of which ceased operation many years ago, are listed below, with brief information. **If you know anything about these organizations, please contact the editor.** The periodicals have been added to the master list of psychotronics periodicals in the **USPA Periodicals Library section** of this journal. We are seeking copies of all issues of these periodicals, which we plan to digitize and make available to our members as a USPA membership benefit. So if you have any issues the periodicals listed below or any of the missing issues of the periodicals listed in the USPA Periodicals Library section of this Journal, please let the editor know by emailing him at: joreed43@gmail.com.

Organizations:

Institute for Resonance Therapy (IRT): This organization was founded in Germany in the 1980s by Dr. Marion Graefin Hoensbroech. One of their major focuses is experimentation on methods for restoring forests in Germany and surrounding countries. In 1986, they began experimenting with radionics devices of various kinds. They found that of all the devices they tested, the SE-5 performed the best. It is not known if this organization ever published a periodical of any kind. If any readers have ever heard of this organization or know anything about it, especially if it published a periodical, please write to the editor, John Reed, at: joreed43@gmail.com.

Institute of Psionic Medicine: This organization (not to be confused with the Psionic Medical Society) was founded in Hindhead, Surrey, England in 1975 by Dr. George Laurence, Dr. Aubrey Westlake, Dr. Carl Upton, and Dr. Gordon Flint, the latter of whom served as the first Dean. The Institute focused on research on psionic medicine and related subjects. It is not known if this Institute still exists, but is believed to be defunct. This organization published a Newsletter, whose title is not known.

Psionic Medical Society: This organization was founded in Hindhead, Surrey, England in 1968 by Dr. George Laurence, Dr. Aubrey Westlake, Dr. Carl Upton, and others. It focused on psionic medicine and related subjects. Dr. Laurence served as the first president. This organization published two known periodicals: 1) Psionic Medicine (1969-1999) and 2) Newsheet (Psionic Medical Society), 1975-1977; In the early 2000's, to reflect its broader focus, the name of this organization was changed to The Laurence Society of Holistic Medicine, and the periodical name was changed to Holistic Medicine Today.

Periodicals: (all added to the master list of USPA psychotronic periodicals)

Experimental Special Data Bulletin: This was a monthly periodical published in Kansas City, Missouri, by the Radiation Laboratories, Inc., headed by T. Galen Hieronymus. It began with Vol. 1, No. 1 (January, 1948) and continued through at least Vol. 2, No. 7 (July, 1949), but it is uncertain if any issues were published after that date. The USPA Library needs all issues of this periodical;

Journal of Electrotherapeutics: Published in NY, New York, by the American Electrotherapeutic Association. It began with Vol. 1, no. 1 in 1883, and continued to be published under this title through Vol. 19, no. 12 (December, 1901), when the title was changed to the Journal of Advanced Therapeutics (see following title). Editorship continued under William B. Snow, M.D., and journal numbering was also retained under the new title. The USPA Library needs all issues of this periodical;

Journal of Advanced Therapeutics: Published in New York, New York, by the American Electrotherapeutic Association. It began with Vol. 20, no. 1 (January, 1902), and continued to be published under this title through Vol. 33, no. 10 (December, 1915), when the title was changed to the American Journal of Electrotherapeutics and Radiology. Editorship continued under William B. Snow, M.D., and journal numbering was also retained under the new title. The prior title of this journal had been Journal of Electrotherapeutics; The USPA Library needs all issues of this periodical;

US Psychotronics 2017 Conference DVD Order Sheet			
DVD	No.	Name	Presentation Title
	2017-1	Jon Klimo, Ph.D / Scott Beutlich	Welcome / USPA "Ted Talk"
	2017-2	Nick Begich	Mind Control: A Brave New World or Enhancing Human Performance
	2017-3	George Kuepper	Radionics & Biodynamics in the Garden: Tuning in to Nature
	2017-4	Lorna Reichel	Unseen Worlds of Subtle Energy
	2017-5	Don Paris	Consciousness Interactive Technology in the 21st Century
	2017-6	Glen Rein	The Holographic Nature of the Mind and its Role in Mediating Higher Order Healing Phenomena
	2017-7	Beverly Rubik and Harry Jabs	The Memory of Water and Beyond
	2017-8	Michael Leger	21st Century Radionics – Theory and Practice
	2017-9	Ed Kelly	Radionics: Easy as 1-2-3!
	2017-10	Jon Klimo, Ph.D.	Nonlocality, Higher-dimensionality, and Radionics
	2017-11	Judy Lynne Cole	K.I.S.S. "Hello" to the Next Collaborative Revolution in the Industries of Health, Art and Music
	2017-14	Linda Lancaster	Endocrine System and its Role in Radionics
	2017-15	Ellen Kamhi	Pineal Stimulation for Higher Health and Consciousness: Radionics - Dowsing - Botanicals
	2017-16	Elizabeth Rauscher	Psychotronics, PSI and Consciousness: A New Revolution
	2017-17	Dan Taylor	History and Overview of Radionics
	2017-18	Marty Lucus	Higher Octaves of Physical Frequencies
	2017-19	Rainer Fromknecht	Body – Water as a Conducting System for Electromagnetic Information
	2017-20	Craig Dongoski	Mental Radio
	2017-21	Scott Ertl	Magnetism and Polarity
	Full Conference Set \$195 with shipping		
Number of DVDs _____ x \$12 _____ + Shipping: _____			
Amount Paid	Name		
\$	Street Address		
	City, State, Zip		
	Phone		
	Email		
Fees in US dollars only, payable to: USPA			Shipping: First DVD \$3.00 Plus \$.50 for each additional DVD
USPA Office - 815-355-8030 Email: USPsychotronics@gmail.com			
Mail to: 525 Juanita Vista Lane, Crystal Lake IL 60014			
Credit Card Number _____			
Exp. Date _____ CVC Code _____ Zip Code _____			
Signature _____ Date _____			
Check or MO Amount \$ _____ Check or M/O # _____			
Send money via PayPal to USPsychotronics@yahoo.com			
Request PayPal billing from your email account:			

2016 US Psychotronics Post-Conference DVD Order Sheet

MP4	DVD	ID	Speaker and Lecture Title
		2016-1	Dr. Beverly Rubik & Harry Jabs- "Geometry Coupled with Intention: Effects of a Pyramidal Structure"
		2016-2	Dan Taylor - "The Physics of Radionics – USPA Luminaries Light the Way"
		2016-3	Panel Discussion- "Subtle Energy w/ E. Kamhi, J. Klimo, G. Rein, E. Rowley, B. Rubik, W. Tiller, Dan Taylor
		2016-4	Ed Kelly - "The History of Kelly Research Technologies"
		2016-5	George Kuepper - "Practicing Radionics for Farming and Gardening: Past, Present and Future"
		2016-6	Tim Lippert - "Elimination of Lyme Disease, Allergies, and the use of Radiation Hormesis"
		2016-7	Dr. Don Paris - "The Latest Advances in Radionics"
		2016-8	Lutie Larsen and Linda Lancaster - <i>Radionics Cameras of the 1900s</i>
		2016-9	Marty Lucas - "Geometry and the Shape of Disease"
		2016-10	Panel Discussion - "Radionics / G. Kuepper, E. Kelly, L. Larsen, L. Lancaster, T. Lippert and D. Paris"
		2016-11	Dr. William Tiller - "The Power of Human Intention and its Many Applications"
		2016-12	Gayle Mack - "Spiral Breath and the Glia Brain: Activate Higher Consciousness"
		2016-13	Tom Masbaum - "Consciousness - Some Effects of Emotions and Memories on the Body"
		2016-14	Judy Lynn Cole - "Phase Shifting"
		2016-15	Dr. Glen Rein - "Subtle Light Energy and the Substratum: Bio-Physics and Mysticism"
		2016-16	Dean Radin - "Skype: Mind-Matter Interactions at the Quantum Level"
		2016-17	Geoffrey Miller - "Free Energy 30 Years Ago and Where We are NOW in 2016"
		2016-18	Ellen Kamhi - "Herbs, Dowsing, and Radionics: Self-Care Techniques for the Coming Times"
		2016-19	Dr. Karl Maret - "Exploring Subtle Energies in Energy Medicine"
		2016-20	Dr. Jon Klimo - "Radionics: Working with the Post-Cartesian Unified Field"
		2016-21	Kenneth Diehl - "Subtle Energy Relationships in Human Form and Function"
		2016-22	Mary Hardy - "Balancing the Grid so the Schumann Resonance Does Not Affect Human Consciousness"
		2016-23	Dr. John Reed - "Evidence Based Psychotronics"
		Totals	Prices:: 15.00 Each - Plus Shipping (see box below)

Special! - Buy 4 get the 5th one FREE		Full Conference Set \$215		
Number of DVDs _____ x \$15 _____		+ Shipping: _____ Due \$ _____		
MP4 Price - _____ x \$15 _____		Due \$ _____		
Amount Paid		Name		
\$ _____		Full address		
		Phone/email		
Fees in US dollars only, payable to:				
USPA				
USPA Office - 815-355-8030		Email: USpsychotronics@gmail.com		
Mail to: 525 Juanita Vista Lane, Crystal Lake IL 60014				
Credit Card Number _____		Shipping: First DVD \$3.00 Plus \$.50 for each additional DVD		
Exp. Date _____	CVC Code _____			Zip Code _____
Signature _____ Date _____				
Check or MO Amount \$ _____		Check or M/O # _____		
Send money via PayPal to USpsychotronics@yahoo.com				
Request PayPal billing from your email account _____				

Note: If a recording is not available for whatever reason, you will be given a refunded or credit.



GFIM

Global Foundation for Integrative Medicines

2018 - NEW YORK CITY

SAVE THE DATE
THURSDAY & FRIDAY MARCH 8-9, 2018



GFIM
GLOBAL FOUNDATION FOR
INTEGRATIVE MEDICINES
GFIMUSA.COM

2018 GFIM NYC
AT CURRENT, PIER 59

“The Elements of Healing our Planet and Ourselves”

GFIM’s mission is to promote the integration of all medicines by uniting a diverse international community of doctors, researchers, students, healers and patient advocates from all over the world.

We acknowledge and hold in equal esteem the healing power of Western Medicine, Eastern Medicine, Indigenous Medicine, Energy Medicine, Prayer, Mind-Body Medicine, Nutrition, Natural Medicine, Homeopathy, Yoga, Movement Arts and all integrative practices that heal.

On March 8th & 9th, 2018 at Current – Chelsea Pier 59, GFIM will be organizing this year's World Congress of Integrative Medicines featuring some of the brightest minds and healers of our time to share their knowledge with our intimate audience. It is our belief that **“through healing we unite in peace.”**

Our Honored Speakers include:

Linda Lancaster, PhD

Alfredo Sfeir Younis, GFIM Peace Ambassador

Dietrich Klinghardt, MD

Terry Tempest Williams, Author, Environmentalist

Woody Merrill, MD

Jim Gordon, MD

Ann Louise Gittleman, PhD & NY Times Bestselling Author

Prof. Martin Pall, PhD

Ben Asher, MD

Glen Rein, PhD

Martha Cortes, DDS

Jerry Epstein, MD

Roger Laborde, Shaman

Loch Kelly, Meditation and Spiritual Counselor

Will Keepin & Cynthia Brix

Sylvia Moss, Sound Healer

with more to be announced!

Our GFIM team:

John Sherdon, DOM & GFIM Conference Coordinator

Camilla Rees, GFIM Ambassador

Kenneth Lee Diehl, Shaman

Althea Gray, Healer

Sandra Rose Michael, DNM

Radha Gopalan, MD

Martina Goldberg, PhD

More Details including a limited amount of discounted pre-sale tickets to be announced before December 2017. If you are interested in more information and notification of the release of pre-sale tickets, please email us.

gfimcongress@gmail.com



The poster features a blue gradient background. At the top, the text "2018 GFIM WORLD CONGRESS OF INTEGRATIVE MEDICINES" is written in white, bold, sans-serif font. Below this is a circular logo with a central blue sphere and four surrounding icons: a flame, a leaf, a water drop, and a pulse line. The text "ELEMENTS OF HEALING" is written in large, white, bold, sans-serif font below the logo. At the bottom, a small blue sphere is shown creating a ripple in water. To the left of the sphere, the text "PLEASE SUPPORT GFIM BY BECOMING A MEMBER" is written in white, bold, sans-serif font. To the right of the sphere, the text "GFIMUSA.COM" is written in white, bold, sans-serif font.

**2018 GFIM WORLD CONGRESS OF
INTEGRATIVE MEDICINES**

ELEMENTS OF HEALING

**PLEASE SUPPORT GFIM
BY BECOMING A MEMBER**

GFIMUSA.COM

USPA Continues Program to Offer Digital Copies of All Conference Presentations, 1978-2017

The United States Psychotronics Association (USPA) is continuing its program to make all USPA Conference presentations available on DVDs and other digital media. Through this program you will eventually be able to access all of the hundreds of presentations given over the years at USPA conferences from 1978 through 2017, and subsequent years. It will include all of the presentations given by such luminaries in the psychotronics field as (alphabetically):

Arden Anderson, Cleve Backster, Col. Thomas Bearden, Robert C. Beck, Robert Beutlich, Chris Bird, Tom Brown, Eldon Byrd, Phillip Callahan, Beverly Coleman, Bruce De Palma, Eric Dollard, Sherry Edwards, Jerry Fridenstine, Jerry G. Gallimore, Toby Grotz, Mary Hardy, Barbara Hero, T. Galen Hieronymus, Kathleen Joyce, Elen Kamhi, Peter Kelly, Moray B. King, John Klimo, Lutie Larsen, Samuel Lentine, Peter Lindemann, Andrew Michrowski, Henry Monteith, Peter Moscow, Preston Nichols, Brian O'Leary, Don Paris, Dale Pond, Andija Puharich, Elizabeth Rauscher, Glen Rein, Beverly Rubik, Carl Schleicher, Ed Skilling, Maj. Gordon Smith, Dennis Stillings, William Tiller, Thomas Valone, Marcel Vogel, Charles Whitehouse, and many, many more.

The DVDs of all of these USPA Conference presentations will be made available at <http://uspa.emediapress.com/>, and presentations will be added year-by-year over time. Many of the presentations from 1978, 1979, and 1980, are already available, so please go to this website to see what presentations you may be interested in. And, of course, keep this website in your "favorites" folder and check back periodically to see new selections that have been added. Please be patient, however, because there are hundreds of presentations, and it will take some time to get them all up on the website for the forty years, 1978-2017.

Among the Missing, (and Updates): A Column about Missing People, Organizations, Periodicals, Books, Artifacts, and Collections in the Psychotronics Field

by John H. Reed, M.D

This is a new “column” or section of the USPA Newsletter, and will be an ongoing part of every issue, with the purpose of helping the USPA, as well as, our members and research associates locate people, organizations, periodicals, books, artifacts, devices, collections, and other items that have seemingly disappeared, or have been extremely difficult to find. **Updates will be added, and each missing item will be retained in future issues until it is found or otherwise resolved, since some readers may not have seen prior issues of the USPA Newsletter or the original notice of the missing item.**

In addition, this will also serve as a “People Locator Service” to help find authors and researchers on psychotronics, radionics, subtle energies, energy medicine, and related subjects, who have “disappeared” or have died long ago, and whose relatives you may be trying to find in order to preserve the research papers and collection of that person.

In our research and reading, we all have encountered people, organizations, periodicals, books, articles, or other things that we have tried to find, and some people have searched for years to find something, but have not yet found it, despite the vast resources of the Internet. However, with our large USPA membership, we can all help one another find what we have been searching for. Some of you may have experience in genealogical research, or private investigation, law enforcement, or even intelligence work which you could utilize to help each other, or perhaps just make suggestions on how or where to search for something.

So if there is anything you have been searching for and need help to find, please write to me, John H. Reed, M.D. at: joreed43@gmail.com, and I will include your search help request in the next and subsequent issues of the USPA Newsletter. And if you have any information about an item that is listed in “Among the Missing”, please write to the same email address and share what you know or your suggestions. If there is something that is confidential, your confidentiality request will be honored and protected.

Missing Person: Paul Sauvin, USPA 2nd Vice Pres., 1976 and 1st Vice Pres., 1977

Paul Sauvin, whose full name is Pierre Paul Sauvin, is an electrical engineer and inventor who, [according to one source](#), worked in the aerospace industry and later with the National Institute for Rehabilitation Engineering at St. Joseph’s Hospital in Paterson, NJ. He also worked with Dr. Carl Schleicher, head of Mankind Research Unlimited, and helped develop a device called the [“AGRAD Machine”](#). This device was designed to

control crop insects, and was introduced on an experimental basis, although it is not known if it ever reached commercial production. Paul Sauvin's mother was Edith Sauvin, who lived in White Plains, NY, and died August 25th, 1987. Edith's only child was Pierre Paul Sauvin, who himself had 2 sons, Alan Paul Sauvin and Steven Eric Sauvin. He also had one daughter, Jane Elizabeth Sauvin. Any help in locating the children of Paul Sauvin would be greatly appreciated, and please write to joreed43@gmail.com.

Missing Person and Periodical: William Reid, Editor of the Journal of Scientific Controversy

We are trying to find William Reid, or his surviving family, who lived in the Boulder, Colorado, area in the 1960s and edited a periodical called "**Journal of Scientific Controversy**."

Mr. Reid had placed an advertisement in a 1963 issue of **Analog Science Fiction and Fact** (ASFF) stating that the first issue of the **Journal of Scientific Controversy** would be published in the second quarter of 1963. The advertisement showed William Reid as the editor, **with the address: P.O. Box 855, Boulder, Colorado**. (There was no zip code at that time.)

However, it is uncertain how many issues, if any, were ever published of this periodical. It is not found in any public, government, or university library in the world, including the Library of Congress or British Library. But many periodicals on controversial subjects are not held by such libraries, so this is not entirely surprising.

If any of you know, or once knew, a person by the name of William Reid, who lived in the Boulder, Colorado, area in the 1960s, please write to the editor at: joreed43@gmail.com. Many of you are family tree and genealogy researchers, so even if you have never heard of this man, perhaps you would be kind enough to check your genealogy resources to help locate him or his family.

Missing Device: Marcel Vogel's Omega- 1 Radionics Instrument

In a 1987 meeting presentation, [YouTube Video, available here, beginning about 4:20](#), Marcel Vogel states that he had been trying to find a way by which he could measure the subtle energies and fields in the crystals he was working with, and that he prayed to God to give him an instrument to make such measurements. Marcel says that about two months later, a man named Daniel Perkins, apparently guided by higher forces to build such an instrument, came to Marcel's door and said, "Here is your instrument, the Omega-1. You will know how to use it," and walked away. **But where is that particular Omega-1, and were any other Omega-1 instruments built?** It is known that other Omega models of radionics instruments were produced, especially Omega-5 instruments, but it is not known if the company that built them still exists. **In addition, does anyone know who Daniel Perkins is, and where he is located?** Anyone who can shed light on this mystery, please write to the editor at: joreed43@gmail.com.

Missing and Mysterious Stone: The “Swedish Stone” of T. Henry Moray’s “Free Energy” Device:

Has anyone done any research on what the substance called “Swedish Stone” is that T. Henry Moray used in the 1920s to extract energy from cosmic rays and produce electricity? According to Moray’s original diaries, he discovered the stone somewhere near the city of Abisko, Sweden, in 1913 when he was there doing his overseas Mormon missionary service. He brought the stone back to the US and subsequently created a device using the stone to produce electricity in much the same way that silicon is used to produce electricity when struck by light. However, the Swedish stone used in Moray’s device apparently had the particular molecular and/or crystalline structure such that it would produce electricity when struck with **cosmic rays**, which constantly strike the earth. And since cosmic rays are an electromagnetic wave with much higher energy than light, which is also an electromagnetic wave, Moray’s device produced a great deal more electricity than any current silicon based devices of similar size.

Since cosmic rays flood the universe, clearly such a device could provide essentially free electrical power anywhere on earth or anywhere else in the universe. Some have hypothesized that the Swedish stone was a radioactive substance, whose radioactivity was used to produce the electricity. However, others believe that the Swedish stone was not radioactive, but just happened to have the particular structure necessary to convert cosmic rays to electricity. Theoretically there are substances like silicon, only of a different structure, that will convert each of the electromagnetic wave frequencies to electricity, and perhaps Moray just accidentally discovered the substance that would do this with cosmic waves. **Please contact the editor if you have any information about this “Swedish Stone” substance: joreed43@gmail.com**

Andrija Puharich’s Lost Manuscript and other Puharich Mysteries by Greg Mallozzi

During the late 60s and into the 70s, Puharich owned and worked out of a large house in rural Ossining, New York. A home laboratory known as Lab 9. Lab 9 produced the most mysterious and far out work that Puharich was involved in when he began to delve deeper and deeper into parapsychological, experimental research: like alleged communication with extraterrestrial beings VIA trance mediumship and ELF (extremely low frequency) waves and their effect on the brain.

At Lab 9, Puharich worked with a faraday cage, a large cage that blocks electrostatic and electromagnetic influences. Puharich found that when a subject was placed inside the faraday cage and a certain level of specially controlled electromagnetic waves were sent through the cage, the subjects ESP abilities were heightened significantly. He conducted what some have called inhumane, psychological experiments on human subjects. Lab 9, like The Round Table Foundation, began to attract people from all walks of life.

Shrouded in controversy, the new film on the life of Dr. Andrija Puharich that we are producing will show what Lab 9 was really like, using never before seen photos, videos and transcripts. In 1978, a mysterious attempt to burn down Lab 9 was made. The town of Ossining ruled it arson. Puharich's publisher, Doubleday, was also broken into at this time and the manuscript he was working on was destroyed. Was someone out to get Puharich, to discredit and sabotage his work? If so, who? People who were present at Lab 9 at the time of the infamous fire will weigh in on what really happened, which to this day is unsolved.

If anyone has any knowledge about the missing manuscript or other mysteries surrounding the life of Dr. Andrija Puharich or has any video tapes, audio tapes, or correspondence of Puharich, please contact:



Greg Mallozzi at:

gregorymallozzi@gmail.com or the editor

John Reed at: joreed43@gmail.com

Combo Mystery: Missing Person, Organization, and Book, All Related

Person: Dr. Floyd S. Graham, Sr.

Organizations: Radionic Laboratories and Radiant Associates, Inc. founded by Floyd S. Graham, Sr. **Book:** The Radiant Era, by Floyd S. Graham, Sr.

This is our first "Combo Mystery" of a missing person, the organization(s) he founded, and the book that he wrote. The organization "Radionic Laboratories" was referred to in the American Society of Dowsters Quarterly Digest, Vol. 4, No. 2 (May, 1964), page 22, in a letter to the editor, by Dr. Floyd S. Graham, Jr. It indicated that Dr. Graham was the president of the "International Headquarters Unit" of "Radionic Laboratories", located in the small town of Tumtum, Washington, which is located northwest of Spokane, WA. The letter was signed "Radiant Associates, Inc.".

These names suggest that there may have been two different organizations, or that the "Radionic Laboratories" was part of the corporation, "Radiant Associates, Inc. However, I checked my database of incorporated organizations, which covers both profit and non-profit corporations, operating or defunct, that have been formed in the United States and worldwide since the early 1900's, and neither name was shown as ever having existed in the State of Washington. But since the letter was written and published in 1964, there is little doubt that Dr. Graham and the organization entities he mentioned did exist at that time in Tumtum, WA.

A further mystery related to Dr. Graham is the booklet he wrote titled, "The Radiant Era", date and place of publication unknown. It is being offered for sale online, with a

photo, as shown at left. It is said to be published by the Journal of Natural Living, and is 22 pages long, stapled, and sized 6.75 by 7.75 inches.

However, a check of the WorldCat database, which lists the holdings of every library in the United States, Canada, and the UK, including the Library of Congress and the famous British Library (AKA British Museum Library), shows that this booklet by Dr. Graham is not located in any known library.

So if you know anything about Dr. Floyd S. Graham, Sr., the Radionic Laboratories, or Radiant Associates, Inc., in Tumtum, Washington, or anything about his booklet, The Radiant Era, please contact the editor, John H. Reed, at: joreed43@gmail.com. If you happen to have a copy of the booklet in your personal collection, the USPA Library would greatly appreciate it if you would make a xerox copy of it for the library, which you can scan and email as a PDF, or send the physical copy to: USPA Library and Archives, 4401 Roland Avenue, Unit 405, Baltimore, MD 21210.

Missing Devices:

1. **The AGRAD Machine:** In the 1970's Mankind Research Unlimited, Inc.(MRU), headed by Dr. Carl Schleicher, was offering for sale a device called the AGRAD Machine. It was intended to be used in the electromagnetic treatment of crops and the control of insect populations, and sold for \$390.00. MRU claimed that AGRAD machines had been used for several years by MRU researchers to conduct experimental applications of the type described in **The Secret Life of Plants** by Christopher Bird and Peter Tompkins, and **Report on Radionics** by Edward W. Russell. Theoretically, the AGRAD machine was intended to produce effects through electromagnetic wavefronts that would interact with and control insects by disturbing the insect sensor mechanisms. A photo of the device and additional information appeared in one of MRU's publications [which you can access here](#).

Missing Organizations:

1. **American Electronic Research Association (AERA):** Albert Abrams established the American Electronic Research Association in the early 1920s and it continued to operate until at least 1935, when John F. Spaulhurst was the president of AERA, according to the 1935 Edition of Who's Who Among Association Executives. The AERA published the monthly Journal of the American Electronic Research Association from 1924 through some point in 1936, when it ceased publication, according to Harvard University records.. Only two libraries in the world are known to have issues of this periodical. There are only two issues in the Harvard University Medical School Library, and the Kirkwood School of Osteopathic Medicine has one issue. If you know anything

about this organization, or happen to have any issues of its journal, please contact the USPA Journal and Newsletter editor, John Reed at: joreed43@gmail.com.

2. **International Association for Psychotronic Research (IAPR):** Does anyone know what became of the International Association for Psychotronic Research? And do any of you have copies of its meeting proceedings or newsletter, if such a newsletter were published? It was founded in 1973, even before the United States Psychotronic Association (USPA), which was founded in 1975. However, the current location or activities of the IAPR are unknown.

The IAPR held numerous international conferences around the world, beginning with its first in 1974 in Prague, then Czechoslovakia. At this conference, Dr. Zdenek Rejdak was elected president for the Eastern Division of the IAPR, and Dr. Stanley Krippner was elected president for the West. The 8th International Conference on Psychotronic Research was held in Milwaukee, Wisconsin, 1993, as a joint conference with the United States Psychotronics Association (USPA), but it is unknown if any subsequent conferences of the IAPR were held.

Proceedings of each of these conferences were published. If copies of these proceedings can be obtained, or any newsletters that it may have published, we will add them to the USPA Library and make them available to USPA members. If you have any knowledge about this organization, please write to the editor at: joreed43@gmail.com

3. **International Radionics Association (IRA):** Does anyone know anything about the **International Radionics Association (IRA)**, which was located in Springfield, Missouri in the late 1940s. This is known, because a book called **The Truth about Radionics** was published in 1947 by this organization, and although the author's name is anonymous, it is highly probable that the author was T. Galen Hieronymus, who passed away many years ago.

I checked several newspaper databases, and references to this organization were found in the press as far back as the early 1930s, and as late as the early 1960s, but nothing more recent than that. If you have any knowledge about this organization, please write to the editor at: joreed43@gmail.com

Missing People, and Updates:

Missing USPA Related People:

We are trying to track down some of the original directors and officers of the United States Psychotronics Association (USPA), when it was organized in 1975, with the word

“Radionics” in the organization title. Does anyone have any information on the current whereabouts of the following people, or family members, if the person is known to have passed away, or where they passed away?? Please check Ancestry.com, social media websites, newspaper archives, and any other databases you have to help find these people.

1. **Dr. Marcel Vogel and his Research Papers:** Does anyone know what became of the papers and files of Dr. Marcel Vogel, who died in 1991? Dr. Vogel did extensive research on crystals and crystal healing, pyramid power, the “Backster Effect” involving plants and their bioenergetic fields, and a number of other psychotronics related subjects. He also spoke numerous times at USPA conferences. Marcel Vogel worked at IBM for 27 years and had 32 patents. If you have any knowledge about Marcel Vogel and what became of his papers and files after he died, please write to your editor at: joreed43@gmail.com. The USPA would like to make sure that all of his papers are preserved.

Missing Periodicals:

1. **British Journal of Radiesthesia and Radionics:** Does anyone have any issues of The British Journal of Radiesthesia and Radionics. It was published in London, England, by the British Radiesthesia Association, 1953-1963. The original title was **British Journal of Radiesthesia**, published from 1953-1957. No libraries in the United States, public or university, have this journal in their collection., and only five libraries elsewhere in the world are known to have any issues at all: The British Museum Library (AKA The British Library), Oxford, Cambridge, the National Library of Scotland, and Trinity College Library, in Dublin Ireland. If you have any issues of this periodical, will you please let me know? And for our members and associates in The UK and Ireland, if you can access these periodicals at any of the above libraries, you would do a huge service for all of us if you would Xerox what issues are available and send them to me. A generous donor has offered to pay whatever expenses are involved for doing this service. We will add them to the USPA Library and make them available to researchers. Please contact the editor at: joreed43@gmail.com

Missing Books:

Rhea White and Larissa Vilenskaya wrote a book titled **Parapsychology in the Soviet Union, Eastern Europe, and China: A Compendium of Information**. It was supposedly published by Scarecrow Press of Metuchen, NJ, a well know publisher of reference books. This book was listed as reference work #680 on [page 213 of Rhea White's book, Parapsychology: New Sources of Information, 1973-1989](#) , also published by Scarecrow Press. I called the publisher, and they said they have never published this book, and know nothing about it. As you can see from entry #680, Rhea

White noted that this book was “in press”, so it may have been in a preparation stage, but the manuscript may never have been sent to Scarecrow Press.

Again, I have searched the WorldCat, which shows books and monograph holdings of virtually every public and university library in the United States and Canada, and many of the large libraries in the UK and elsewhere in the world. But this book title does not exist in the WorldCat database, which indicates that this book is not held in any library, even special collections, which are also included in WorldCat. Unfortunately, I was unable to ask either of the authors about this, since both have passed away.

Rhea White was a well known parapsychology researcher, so some of you may have known her or heard her speak of the missing book manuscript that she was working on. Larissa Vilenskaya was from Russia, but lived and worked in the San Francisco area, and she was a prolific researcher on Russian and Eastern European psychotronics research. Please write to your editor at: joreed43@gmail.com if you have any information about this at all.



Training Tomorrow's Homeopathic Leaders

The Ontario College of Homeopathic
Medicine offers a **Diploma in
Homeopathic Medicine and Health
Sciences. What you get:**

- Part time and Flexible classes
- The opportunity for online training
- An extensive fully supervised clinical internship
- Courses taught by very experienced Homeopaths, world renowned guest speakers, PhDs and Medical Doctors

ONTARIO COLLEGE OF
HOMEOPATHIC MEDICINE

GRADUATING HOMEOPATHS
OF DISTINCTION SINCE 2001

**CONTACT
US**

**WWW.OCHM.CA
INFO@OCHM.CA
416.535.5995**

ELECTROMAGNETIC BIOINFORMATION IN INTERCELLULAR INTERACTIONS

Dr. Vlal Kaznacheyev
Novosibirsk, USSR

The author (Doctor of Medicine, Director of the Institute for Clinical and Experimental Medicine in Novosibirsk, USSR) has been conducting experiments in "distant intercellular interactions" for 15 years. In these tests two sealed containers with tissue cultures inside of them, which had bottoms of ordinary or quartz glass, were placed together, bottom to bottom (i.e., in "optical" contact). A deleterious agent (various types of virus, poison, etc.) was introduced into one of these cultures and led to "disease" and death of the cells. Twelve hours after the features of the "disease" appeared in the infected or poisoned culture, the same features were observed in the uninfected culture (in 70-80% of the tests). This same "disease" led to death of the second culture, although no virus or poison was introduced into it, and there was no possibility for accidental contamination. Moreover, if an uninfected culture was in "optical" contact with an infected (or poisoned) culture for 18-20 hours and then it was connected to a second uninfected culture, the features of the disease were observed in this untouched culture in 20-30% of the tests. The author believes that an ultra-weak electromagnetic radiation (possibly in the ultraviolet range of the spectrum) emitted by living cells is a carrier of information about cell "disease" and death from one culture to another. His assumption about the involvement of ultraviolet radiation is based on the fact that the interaction occurred through quartz glass but did not occur through ordinary glass. He further discusses the general role of electromagnetic fields in nature, having discovered that solar

activity and the Earth's magnetic field greatly effect the results of his experiments. The significance of this research for further biological studies, as well as for diagnosis and therapy, is emphasized. (Editor's abstract).

Organic life on Earth developed under the influence of various environmental factors. Among the most significant of these factors were natural electric and magnetic fields. The high sensitivity of biological structures to the influences of electric and magnetic fields has been proven by numerous experiments.

Previous studies have demonstrated the significant role electromagnetic fields (EMF) play in affecting internal biological regulatory processes as well as the influence of external field disturbances upon organisms [1-5]. Environmental electromagnetic fields may be caused by human technological activities, or may be of natural origin (e.g., geomagnetic fields, interplanetary magnetic fields, atmospheric electricity, cosmic rays, etc.). Fields and radiations of various frequencies (from slow periodic changes of magnetic and electric fields of the Earth up to gamma rays) are known to exist in the atmosphere. Many forms of radiation originate in outer space: cosmic radiation, solar wind, thermal radiation, high frequency radiation (e.g., the radiation of a wave length of 21 cm emitted from hydrogen), and low frequency radiation. They can trigger extremely complicated secondary and tertiary processes within the terrestrial atmosphere, and influence the Earth's biosphere.

Only a certain portion of the sun's radiation penetrates the atmosphere and reaches the Earth's surface. Most of this radiation is in the visible range. The existence of a geomagnetic field above 0.7 oersted has been known for a long time [5]. The intensity of the geomagnetic field varies at different latitudes and is constantly changing. Numerous studies have indicated correlations between processes at different levels of the biosphere and heliogeophysical factors, which determine changes of the Earth's natural electromagnetic field. It is quite possible that the range of electromagnetic radiation reaching the Earth's

biosphere plays a role in the evolution of life and participates in its processes. This possibility has already been established for a considerable part of the spectrum. The influence of electromagnetic fields and radiation on biological systems caused by energy interactions when electromagnetic energy is transformed into other forms has also been established. Along with energy interactions which occur in biological processes, informational interactions are also significant. Biological effects caused by these interactions do not depend on the energy level introduced into a system. A signal carrying information evokes only a redistribution of the energy or matter in the system itself, and regulates the processes in the system. In the course of evolution, living organisms clearly made use of exogenous electromagnetic fields to obtain information about environmental changes [3].

There are many examples in research illustrating the participation of fields in information transmission between living objects and organic substances in nature. In some cases these types of interaction have a particular significance [1,5-7]. From the viewpoint of physics these forms of energy have all the properties necessary for information transmission: high penetrating ability, high speed of information transmission, and the ability to regulate certain processes at a distance. One may suggest that electromagnetic interaction is a common principle of information exchange between functioning living systems and is reflected in different forms of life activity [7]. From this viewpoint the question of the biological role of electromagnetic emission of cells becomes most significant. In the last decade a growing number of scientists [3,4,8-11, etc.] consider that electromagnetic fields have a regulatory and informational role in biosystems. Thus, according to our data, the electromagnetic field of cells is important in the transmission of intercellular biological information. In the 1930's Gurvich (who discovered so-called mitogenetic rays) demonstrated the biological significance of the electromagnetic field [12,13]. Gurvich indicated the possibility of information transmission from one cell to another by electromagnetic quanta and postulated a hypothesis about the existence of fields in living systems

which he called "biological fields."

Today the problem of the recording, storage, and transference of biological information within cells and between cells and organs has become of vital importance. It is difficult to explain all the regulatory mechanisms of the metabolic processes within cells and organisms only in terms of humoral and neurohumoral factors, as well as in terms of known biophysical factors such as changes in various potentials, gradients, etc. The search for new and more effective channels of communication seems worthwhile.

The necessity for studying thermodynamic characteristics of vital processes was emphasized by Soviet scientists Gurvich, Bauer, Vernadsky, and Chizhevsky in their early works [1,2,12-16]. There were further attempts to study informational mechanisms specific to life processes. Ultraweak photon emission has been detected in all the plant and animal cells investigated. The so-called spontaneous luminescence of biological objects appears to be a universal property of living cells [11,17-23]. The function of this emission as a signal is a question for discussion. Different but closely related concepts such as biophotochemistry, mitogenetic radiation, biochemical luminescence, electromagnetic intercellular interactions and biophotons have been developing in the 1970's. These concepts assume the use of physical and physico-chemical mechanisms by cells as the means for informational interactions in biosystems. Experimental results and theoretical considerations in biology have led scientists to postulate that bioluminescence and biophotons (in biophotochemical reactions) are related processes. These biophotons can also be used for stimulating biophotochemical reactions. Thus intercellular communication may be achieved due to the relationship of biochemiluminescent and biophotochemical reactions. This agrees with the hypothesis proposed by Sung [24], who considers this phenomenon to be the mechanism for cellular communication.

At the same time, Popp [11] and his collaborators developed the biophoton concept. Popp states that living systems may utilize radiation for intercellular communication and possibly for transferring genetic information because cells mainly emit photons before

mitosis. According to Popp, cells also emit secondary radiation which exhibits a group velocity of about 10 meters per second. The proliferating cell cultures emit more intensively than do the cultures in which growth has ceased.

All these and some other experimental results have led Popp to postulate that biological systems have the capacity to store and to process coherent photons coming from the external world. According to Popp's viewpoint, the regulation of cell proliferation is achieved by means of photochemical potential. Proceeding from the thermodynamic analysis of the biological system, Popp comes to the conclusion that the replication and transcription of DNA are regulated by definite interactions in the photonic field. On the other hand, it is assumed that biological systems may be considered as a system of interlinked nonlinear oscillators with a short damping period [25]. This system is characterized by diminution of entropy, extreme polarization and conductivity (we speak here about resonance), highly effective transformation and utilization of energy as well as by the ability to store information for a long time.

Thus, from Popp's standpoint it is possible to postulate (and Popp does) the possibility of information storage. This concept presumes the transformation of "free" or "communicative" information into structurally "bound" information, and that the "biological state of a cell may be completely regulated by the photon field within the population" [11, p. 137].

In 1965 we made the assumption that a biological system may be conceived as a nonequilibrium photon constellation which exists due to the constant influx of energy from outside. Protein-nucleic structures exist in cells as long as they are amalgamated by the photon constellation which forms the informatory-regulatory system of a cell with extremely high reliability. Quantum information is coded in the cell's chemical compounds and reveals itself during biochemical conversions which in their turn are initiated by the preceding flows of information existing within a cell as well as externally [26]. In biological systems information can be carried by quanta of electromagnetic field (bio-photons). Studies based on this speculation have shown the

universal character of information interactions and the wide use of the electromagnetic communicative channel in living nature.

Since 1966 we have been studying the phenomenon of distant intercellular interactions specified by electromagnetic ultraviolet (UV) radiation [6,7,26-34]. In our research on the biological effect of electromagnetic radiation of a biosystem we used the method of biological detection once suggested by Gurvich. As we were interested in whether any signal function is inherent in a cell's electromagnetic emission, a cellular state was required which could be distinctly determined with the aid of a biological detector. As a suitable model for this purpose, cell cultures were infected by various viruses (e.g., Coxsackie A-13, classical fowl pest virus, adenoviruses), or treated with UV radiation, or mercuric bichloride (sublimate). When using these models, specific influences of the viruses, UV radiation, and sublimate upon cell cultures were evaluated by following their cytopathic and immunologic effects. In our experiments, the affected cultures served as sources of specific signals coded in the ultraweak radiation of the informant cells. Intact cell cultures not affected by the extreme agents served as detectors for this radiation. Cells of the intact culture (below referred to as a "mirror" culture) which were in optical contact with the affected tissue culture showed all morphological signs of the extreme state which were specifically inherent to the corresponding agent (below these morphological signs are referred to as the "mirror" cytopathic effect or "mirror" CPE).

Methods

Tissue cultures used for the study were grown in special containers on quartz or glass plates of various thickness (from 0.2 to 2.0 mm), soldered to the polished brim of the container. The transmittance of quartz plates was 70-90% in the range of 280-320 nm. For glass plates maximum transmittance was in the visible range from 440 nm and above.

After a cell monolayer has been formed at the bottom of

the container, containers with the affecting factor were mounted in pairs with intact containers (Fig. 1) and secured on a rotating drum at right angles to its axis (Fig. 2). The drum was placed inside a blacked-out thermostat ($t=37^{\circ}\text{C}$) and rotated together with the containers at a speed of 25 revolutions per hour. All experiments were tested for the appearance of spontaneous degeneration of the tissue culture cells. Two to four days later the containers were taken out, disassembled, the glass plates with the cells grown thereon unsoldered, and after fixing and staining, the cultures were morphologically investigated. The cytopathic effect (CPE) was calculated by the ratio of the number of dead cells to the number of total cells and by the type of morphological changes. Weak positive CPE was estimated at the value of the ratio 1:10, moderate CPE - 1:5, and pronounced CPE - 1:2.

Results and Discussion

The CPE caused by the Coxsackie A-13 virus consists in the disconnection of the cells' monolayer and the appearance of rounded cells. Subsequently, the rounded basophilic cells were pycnotized: they became shrunken and polygonal with extremely polychromic nuclei. These pycnotic cells then disintegrated and their debris could be seen among remaining intact cells. In the "mirror" cell cultures mitotic depressions, disconnection of the cellular monolayer and the appearance of pycnotic hyperchromic cells were observed (Fig. 3). These cells were subsequently destroyed. Actually, in the "mirror" cell cultures the same evolutive forms of degeneration were observed as in the virus-infected cultures. The rate of "mirror" CPE development was 12-14 hours behind the degeneration of the infected cultures. All experiments were accompanied by a corresponding check for spontaneous degeneration in the intact cultures. No "mirror" CPE developed in containers with bottoms made of plain glass. Coxsackie A-13 virus was regularly isolated from the infected containers. No virus was isolated from the "mirror" containers, both with negative and positive "mirror" CPE. The positive "mirror" CPE occurred in 74% of the cases.

Experiments with classic fowl pest virus and adenoviruses (types 5, 7, 23) were carried out according to the same scheme as were the experiments with Coxsackie A-13 virus. The "mirror" CPE was observed in 78-82% of these experiments.

To demonstrate the universality of the distant intercellular interactions under study, we chose another model of cytopathic influence upon fibroblast cultures from hen and human tissues, namely the toxic effects of mercuric bichloride (sublimite). Sublimate causes its toxic influence by blocking sulfhydryl groups of enzymes in the cells and by damaging the biochemical functions of thymine and some amino acids. We used a dosage of mercuric bichloride which did not cause coagulation of proteins, but due to damage of respiratory enzymes led to death of the cells two to three days following application of the poison. This dosage was found experimentally. After two to three days in the containers affected by sublimate, the cytopathic effect was clearly visible. This effect consisted in the disintegration of the monolayer, granular vacuolar dystrophy of cells and nuclear pycnosis. The process was completed by total death of the monolayer. In "mirror" containers the "mirror" CPE was observed which also consisted in the degeneration of the monolayer, vacuolization and granular dystrophy of cytoplasm, and nuclear pycnosis (Fig. 4). Death of cells in the "mirror" CPE was slower than the death of cells in containers affected by sublimate.

Thus, distant intercellular interactions were observed under the influence of extreme agents of a biological and chemical nature upon cells. Questions then arose concerning the specificity of electromagnetic signals of cells which were influenced by an extreme agent of a physical nature (e.g., UV radiation). Morphological changes in the cell culture damaged by the UV radiation corresponded to those described in the literature. Cells first lose their tinctorial properties and their affinity to basic dyes. Then the nuclei undergo condensation into dense hyperchromic bodies. The cytoplasm remains oxyphilic. The nuclear compound disintegrates and the cells turn into rounded plasmatic formations which undergo further degeneration. In "mirror" cultures the character of morphological changes is

identical.

We have studied species and tissue specificities of electromagnetic channels of communication. Experimental data which have been obtained earlier confirm the informative role of internal electromagnetic emission of cells in the homologous cell cultures. Questions then arise of the specificity of electromagnetic signals from cells affected by different extreme agents and the possibility of cells of one origin reacting to the signals emitted by the cells of other origin. As the criterion for determining the functioning of the optical channel of communication, we used the presence or absence of "mirror" CPE in homologous detector-cultures when inductor-cultures were influenced by different extreme agents. The cultures, which served as inductors or detectors in our experiments were selected according to their species specificity, tissue or organ origin. For this purpose we compared cells from different tissues of an animal of one species and cells originated from one organ but of animals of different species. It has also been important to determine whether "mirror" CPE exists between the cell cultures from malignant tissues or between the malignant and normal tissues.

Different species of tissue cultures were represented by: trypsinized fibroblasts from human embryo (HEF), a cultured strain of monkey inguinal lymphonodus cells (MIL), mice fibroblasts (L), renal epithelium of pig embryo (PEC), and human embryo renal cells (HERC). The malignant strains of cell cultures were cultured epithelial cells of cervical carcinoma (Hela cells), and cultured cells of larynx carcinoma (Hep-2 cells).

Inductor-cultures were subjected to the influence of the extreme factors listed above; and one of the intact cultures served as the detector-culture. This "mirror" culture was heterologous in respect to the inductor-culture. Analysis of the data obtained has shown that cells of homologous tissues yield a high percentage of the positive "mirror" CPE (62-83%), while in heterologous tissue cultures different results were obtained (Table I). In cultural malignant cell strains (Hep-2, Hela) "mirror" CPE was observed in 23-30% of the experiments. The similar response of these two malignant cell cultures may probably be

explained by the fact that both cultures belong to one species (humans). The existence of electromagnetic communication was observed between two epithelial renal cell strains (12-14%), and between cultured renal cells and malignant cell strains (6-12%). Thus, the distant electromagnetic cellular interaction described is specific and occurs only between genetically kindred cell strains. This interaction disappears as the heterologicity of cultures increases.

Some general characteristics of electromagnetic cellular interaction have been discovered through many years' research (since 1965). These results may be summarized in the following way: Distant interaction between two isolated tissue cultures occurs if an optical contact through thin quartz or mica plates exists. This interaction is manifested in repetition of morphological signs of a cytopathological process induced in tissue culture by virus, sublimate, or UV-radiation. This phenomenon is designated as a "mirror" cytopathic effect ("mirror" CPE).

When the inductor-culture was subjected to the action of an inhibitor of the mitotic cycle (colcemid), we obtained the same process of inhibition of cell division in the "mirror" culture as was observed in the inductor-culture. This model was of a quite different kind since in this case the information was not about cell death but about changes in the mitotic cycle. This phenomenon was observed with all homologous cell cultures studied.

This allows us to conclude that these effects are of general biological importance and represent a peculiar type of cellular interaction. Whenever this cellular interaction reflects some common property of different cultured cells which have been affected by cytopathic agents, the morphological manifestation of this interaction ("mirror" CPE) is sufficiently specific for each of the extreme agents selected. During morphological evaluation of the basic and "mirror" CPE, when deciphering the results using a "blind" method, one can with certainty determine which agent corresponds to the given "mirror" CPE, thus indicating the specificity of distant cellular interactions.

Table I
Distant Intercellular Interactions in
Heterogenous Systems
(Manifestations of "Mirror" CPE, %)

Culture-inductor	Culture-detector											
	HEF	CEF	Hep-2	HeLa	MIL	PEC	L	F1	RH	AMH	HERC	MK
HEF	73	0	0	0	0	0	0					0
CEF	0	73										
Hep-2			70	30	0	0	0	0	14			20
HeLa	0	0	23	70	0				6			
MIL			0		63			0				
PEC			4			81			14			33
L	0		0				68					
F1			0	0	0			70				
RH	0		16	6		12			75	0	0	
AMH									0	70	0	
HERC									0	0	60	
MK	0		40			33						76

The specificity of this interaction is demonstrated by the fact that the functional state of the inductor-culture is characterized not by cell death but by the inhibition of division and growth of the cell monolayer. These features, which are distinct from cell death, are repeated in the "mirror" culture (modes of the control of mitotic cycle). Finally, during comparative visual evaluation of the initial

and "mirror" cell cultures of the same strain affected by different extreme agents (viruses, UV-radiation, sublimate), it is not difficult to notice similar features between the initial and "mirror" cultures toward the agent, but there are clear differences between various "mirror" effects.

The discovered phenomenon of distant cellular interactions was observed in more than 12,000 container pairs. The probability of occurrence of positive "mirror" effect was 60-85% (for the 95% confidence interval). The regularity of development of "mirror" CPE and its universality may be emphasized by Pearson's criterion for statistical evaluation of the efficacy of viruses and UV-radiation. It was found to be equal for these damaging agents. However, the probability of appearance of "mirror" effects was lower ($57 \pm 5.5\%$) in experiments where mitotic cycle was regulated as compared to those where lethal agents were used. The χ^2 criterion shows a difference between distant transference of cytopathic effects and control of the mitotic cycle.

The results obtained show that distant interactions have features of biological specialization. Evolutionarily remote species have limited and "forbidden" possibilities for electromagnetic interaction. We can assume that the type of cellular interaction described here, has been developing in the course of evolution according to conformity between the recipient and source of informative signals. Simultaneously by obtaining "mirror" CPE in cellular detector-cultures we managed to register electromagnetic emission of tissue culture cells which was identical to the emission of inductor-culture cells. For this purpose, photomultipliers were used (FEU-39, FEU-42, FEU-30). It has been found that tissue culture cells emit photons of the electromagnetic field which were detected by the device. The character of emission intensity varies during the period of 3-12 hours depending upon experimental conditions: introduction of an extreme agent, illumination, etc. With the help of time-lapse microphotography it has been revealed that distant cellular interactions depend on the phase of the process under study.

Thus, it may be concluded that the discussed cellular interactions in tissue cultures express the existence of mechanisms which may serve for specific regulation of some

vital processes. It is difficult to believe that signals concerning cell death have only a "triggering" function, i.e., they play only the role of initial (or local) signals as possibly occurs in Gurvich's mitogenetic effect. Clearly, the process of mitosis is programmed in the cell and if the cell is affected by some selective influence which can trigger this program, then the whole subsequent mitotic process is arranged by the cell itself [17]. If this then suggests the possibility of the prolonged regulation of metabolism in "mirror" culture cells, one should conceive a large variety of signals. Several variances of this phenomenon may be presumed. First, some authors suppose that every cycle of enzymatic activity in damaged cells is accompanied by an electromagnetic emission of definite wavelength and polarity [12,13,16,18-23]. The consecutive entering of these signals into healthy cells should induce in these cells activation of enzymatic systems in the same succession [17,24]. This implies that for the inductor cell the emission is only a loss, a witness of its life process, while for the detector cell this emission plays the role of a specific signal.

The following hypothesis seems more probable: It can be presumed that for the inductor-cell the electromagnetic emission is a necessary and compulsory attribute of its activity. These fields constitute the inner system for the transference of information which is of vital importance for the cell. Such a hypothesis has been proposed time and again by many authors [6,7,11,12,23,25,26,35,36]. If one recognizes the existence of such EMF, then it is conceivable that under certain conditions other cells when influenced by these EMF perceive them as part of their own life-regulatory system. We accept this proposition as a most suitable working hypothesis for explaining our results [6,7,26,30].

Indeed, "mirror" CPE appears only when quartz or mica plates are not thicker than 0.8 mm, while the plates made of glass are ineffective. The interactions occur at a sufficiently large distance to separate the two cultures and may be caused by electromagnetic emission in the UV range. Since quartz plates are also transparent for rays of the infrared region of the electromagnetic spectrum, the role of infrared rays needs special attention. Infrared emission

reflects behavior of molecular structures and processes at a submolecular level.* It is theoretically conceivable [8] that rays with molecular spectra frequencies may influence processes of self-assembly of large molecules on genetic matrices. We have previously mentioned that some information about actions of mitotic agents is transferred in the visible range of the electromagnetic spectrum. These facts allow us to presume that different frequencies of cellular electromagnetic emission carry information about different cellular processes. As the distance between cultures increases or the quartz and mica plates used become thicker, the efficiency of communication between the cultures becomes lower. This fact is in accord with general regularities of interactions between emissions and matter, i.e., the efficiency of "mirror" CPE depends upon absorption and dissipation of energy from electromagnetic waves bearing information. The electromagnetic nature of intercellular communication may be demonstrated by peculiar kinetics of the cell's emission intensity in cultures infected by virus as recorded with a photomultiplier FEU-39. The emission intensity correlates in time with phases of the development of the viral infection. The shape of emission intensity curves is constant for each group of viruses studied (adenoviruses, Coxsackie A-13, myxoviruses) and, probably, reflects features of interaction between viruses and sensitive cells (Fig. 5). The emission intensity registered by the physical detector is about $10 - 10^3$ quanta/cm²sec. This corresponds to an output of emission per cell of about $10^{-10} - 10^{-8}$ erg/cm²sec.

* In another study a similar interaction of cellular cultures occurred not through quartz glass but through ordinary plexiglass. This indicates that ultraviolet radiation may not be the only cause for the effect of intercellular interactions. (See A.F. Kirkin, "Non-Chemical distant interactions Between the Cells in a Culture," English translation in: **Parapsychology in the USSR**, Part V, San Francisco: Washington Research Center, 1982, pp. 25-29.) - Ed.

It is known at present that certain conditions are necessary for the appearance of distant cellular interaction (DCI). There are conditions which enhance the DCI-effect and, on the contrary, which can weaken and change it in quality. For example, irradiation of the detector-culture with a low dose of ultraviolet light (15-20 sec, BUV-30 lamp, distance 50 cm), before its contact with the inductor-culture, increases the occurrence of the "mirror" effect up to 99-100%. Increase of temperature in the thermostat up to 38.5°C also enhances the "mirror" effect up to 90% (normal growth temperature was 37°C). The same temperature increase (+1.5°C) in control container pairs did not induce spontaneous degeneration of cells. An important condition for reproducing "mirror" CPE is rotation of culture containers with the velocity of 24-25 rev/hour*.

For induction of "mirror" CPE the damaged culture should contact the intact one for no less than 4-6 hours. Afterwards the cultures may be separated, but the cytopathic effect will be developed in the "mirror" culture with all characteristic morphological features of "mirror" CPE. However, the scale of "mirror" degeneration is limited, and after 2-3 days the monolayer restores while degenerated cells disappear as a result of lysis. The minimum contact time necessary for appearance of "mirror" CPE (4-6 hours) coincides with the period necessary for the synthesis of viral m-RNA in infected cells. It also coincides with the period of development of paranecrosis (as judged by the test on granules formation) in cells poisoned with sublimate. Thus, the mechanisms which "trigger" "mirror" CPE are formed during the first 4-6 hours after application of the agent to the cells. However, this duration of contact between damaged and intact cultures is not sufficient for development of irreversible destructive "mirror" reactions. For the complete development of "mirror" CPE, longer contact of infected and non-infected cultures is necessary.

* One more necessary condition is the maintenance of both inductor and detector cultures in complete darkness throughout the experiment - Ed.

This thesis is confirmed by the delay-time of the development of the morphological criteria of "mirror" CPE as compared with the inductor-cells. In our preliminary experiments on the accumulation of fluorochrome (acridine orange) in cells which reflected the permeability of lysosome membranes, we found that after only two hours of rotation of the inductor and detector containers (which were in optical contact), the amount of the fluorochrome accumulated in lysosomes of cells from "mirror" (detector) containers exceeded by $61 \pm 10\%$ the amount of dye accumulated in lysosomes of control cells.

It should be noted that reactions of "mirror" culture cells were common, i.e., all cells of the monolayer equally accumulated fluorochrome in lysosomes. Differences between control and "mirror" cells decreased with time and in 24 hours accumulation of dye was observed to be equal in both cultures. However, after 72 hours accumulation of the fluorochrome greatly increased (300%) in those containers where specific degeneration of the monolayer and appearance of "mirror" CPE were observed.

The number of emanating damaged cells of the inductor-culture and the number of cells in the detector-culture are of great importance for the development of "mirror" cytopathic effect. Detector-culture cells receive the signals and then, probably, re-emit them again. This was ascertained in experiments on secondary transmission of "mirror" effect. In these experiments inductor and detector containers were in optical contact for 18-20 hours, and afterwards the "mirror" container was used as an inductor, i.e., it was reconnected with the new intact detector-container. The specific morphological response was observed in every subsequent "mirror" container but it weakened gradually and became completely extinct before the third or fourth attempt. The percentage of occurrence of distant cellular interactions decreased 20-30% in these experiments.

Of course, there remain many questions and unclear points. One of them is the problem of the biological significance of the phenomenon mentioned above. It is not clear why cells damaged by extreme agents induce injury in healthy cells, rather than the healthy cells influence damaged cells. In our opinion, such a mechanism could be of

biological significance if the extreme agent causing cytopathic reaction in the cell would be deprived of the possibility to further spread its influence in surrounding cellular structures due to anticipatory damage of the nearest cells by the influence of electromagnetic signals. Virus-infected cells, for example, would be surrounded by unviable cells in which further development of viruses would be impossible. Under experimental conditions "mirror" effect in tissue cultures may reflect in some distorted way such a biological "expediency." Certainly, this interpretation is disputable and raises many questions. Why, for example, does "mirror" effect fade when a detector-culture becomes the inductor? What causes the lag-appearance of CPE in detector-cultures? Biophysical mechanisms of this effect also remain unclear. One can assume that the appearance of some "critical mass" of dying cells is necessary for development of antiviral protection at the level of an organism.

Additionally, these experiments were carried out on tissue cultures which represented an association of cells without the complex integrative influence of nerve, hormonal, and immunologic systems. Such cell associations may be helpful in studies of intimate regulatory mechanisms hidden under a veil of later evolutionarily developed strata. However, this model may be unsound when using signals which trigger inadequate reactions. The phenomenon described in this report may represent only one manifestation of the complex regulatory mechanisms of biological systems and may reflect the most profound properties of living matter which underlie the origin of life and the development of the biosphere as a complex biological system on planetary and cosmic scales.

The significance of these studies becomes clear when searching for a means to influence pathological processes through reducing noise in the electromagnetic channel of cell information transmission. Presence of noise is of special importance in such pathological processes as viral infection, radiation injuries, malignant tumors, and aging.

The therapeutic efficacy of many drugs may be associated with their ability to transform or "sink" the emission of cells of a sick organism. Further studies in

this field may create new principles of prevention and treatment of diseases because many disorders may be better understood through our knowledge of electromagnetic interactions within organisms [11].

Until recent time, the property of living matter to emit electro-magnetic waves has been almost exclusively interpreted only from the viewpoint of the energies they carry. Thus, the ability of biological radiation to transfer information was declared impossible on the basis that it is too weak. In this connection we want to recall words by researchers Chizhevsky and Shishina: "Biology deals with systems which are far more complicated than those which physicists use to test their theories. Living organisms with an evolutionarily developed high organization and the finest inner regulation are immeasurably more complex than the most complicated man-made automatic systems. But how odd: in technology it becomes quite common to see that a ruling signal, so insignificant in its power, controls tremendous energy flows, while in biology such a situation is considered incredible" [37, p. 10].

Numerous observations on the role of electromagnetic fields in transmission of biological information between cells lead to assume that a purely chemical mechanism of this communication probably is not primary, but results from more complicated processes which represent true mechanisms of transference of information within cells. In this case a functioning cell acts as the source and carrier of an intricate electromagnetic field. From this viewpoint, our present ideas about light autotrophicity of biosystems are one-sided. Usually we take into account only that part of exogenous electromagnetic fields which is assimilated as light by autotrophic biosystems for the synthesis of organic structures. However, external fields and emissions may play a vital role in regulation of the biosystem's internal processes such as maintenance of the cell's genetic structural homeostasis and functional self-regulation of genetic mechanisms. From this point of view there is no principal difference between so-called "light" and "dark" reactivations, since both processes are based on the action of light flow. Thus it is necessary to consider them as a united, indivisible mechanism of the regulatory-genetic,

light-dependent process. Then it may be assumed that in the course of evolution, during the interaction of living matter with inorganic matter (in this case, sun-cosmic electromagnetic flows), the role of the emissions is dual from the very beginning. First, the light flow serves as an energy source; second, emissory flows exert regulatory influence on genetic functions, and correct homeostatic and restorative processes. This last role is the principal one which we want to emphasize in this paper. In the course of evolution, the vital necessity of these two types of interaction of organisms with the outer flows is unequal. In autotrophic light-dependent organisms (plants, algae, some bacteria) flows of light exert both functions mentioned above. Heterotrophic organisms do not need light as an energy source and thus the regulatory and informative functions of light flows become of more importance. It may be asserted that there are no "pure" heterotrophs - all of them are light-dependent with regard to the second function of inner and outer light flows. Moreover, the role of outer and inner light flows becomes more complicated during their interactions within multicellular organisms.

* * *

We have been studying distant cellular interactions for 15 years and have found that the appearance of the "mirror" CPE has seasonal dependence. This seasonal prevalence is of dialectical character, influencing the occurrence of "mirror" CPE both positively and negatively.

We observed the occurrence of "mirror" cytopathic effect varied from 70% to 80%, depending on the month. At the same time, there were days with "negative" results, usually in months with the maximum (80%) occurrence of "mirror" CPE. Analysis of the results accumulated (more than 15,000 experiments) shows that some irreproducibility of the experiments cannot be explained only by technical or methodological errors. This assumption is based on the fact that the reproducibility of results shows a distinct seasonal prevalence (Fig. 6). "Negative" results appear more often in winter. However, even in summer when "mirror" CPE occurs more often, some experiments give "negative"

results. The seasonal prevalence of results suggests that the outcome of an experiment is influenced by some heliogeophysical indices. Analysis showed close correlation of distant cellular interactions with polarity of the interplanetary magnetic field. Negative polarity of the field usually precedes the appearance of "mirror" CPE. Disturbances of the geomagnetic field several days before a culture planting also result in occurrence of the effect. At large values of "F" index (large flashes on the sun) distant cellular interactions are less visible. In fact, we have found that during years of "active sun" (1969 and 1980) occurrence of the phenomenon was extremely unstable: there were changes of seasonal prevalence if appearance of "mirror" CPE. During the favorable season of the "active sun" year, there were often days with a 90-100% occurrence of "mirror" CPE and days when the effect was completely absent.

This observed dependence of distant cellular interactions upon different heliogeophysical variances leads us to assume that the manifestation of this phenomenon can vary at different latitudes. A latitude of 67° represents a zone of complex electromagnetic phenomena which closely depend on solar activity. Electromagnetic conditions (the structure of disturbances of the heliomagnetic field) may vary drastically. At present we are conducting synchronous experiments on the phenomenon of distant cellular interactions at different geographical latitudes. These experiments have the following characteristic features: first, at a definite moment of time each geographical point has its specific geophysical and meteorological situations which specify local peculiarities of the biosphere; second, in addition to local manifestations, these ecological factors are also characterized by global effects, and thus substantial changes of these factors must cause synchronous changes in biosystems at different geographical points.

We have repeatedly mentioned [7] that experiments on "mirror" CPE are designed in such a way that one monolayer of cells affected by the extreme agent served as a source of the specific signal coded in ultraweak light emission of affected cells. The intact tissue culture serves as a detector for these signals. The detector culture and the

affected one are completely separated and grow in different containers with autonomous life-providing systems. Thus, we deal with two monolayers of cell cultures which interact between themselves and with external factors. Using this method we have studied the influence of latitude changes on an isolated monolayer of cells. We have carried out synchronous experiments in Novosibirsk and in Norilsk at the polar day and polar night. Experimental conditions were strictly standardized: in both geographical points the same media and water (brought from Novosibirsk) were used. The statistical significance of the experimental results, synchronicity of experiments, and identical conditions of each test lead to the conclusion that different results of the tests are caused by external factors. These factors are primarily the electromagnetic field of the Earth, and certain geophysical parameters, including the "K" index, planetary index, and polarity of the interplanetary magnetic field (Fig. 7).

* * *

In the process of these studies new ways for diagnosis, and especially for therapy (directed flows of light of general and local meaning, external and internal application, etc.) may be developed. Also, this method can lead to new findings in surgery, transplantology, and immunology as well as in specific aspects of directed extracorporeal radiation of tissues, organs, blood, and other systems.

Thus, as a result of our studies, light dependence of biological systems appears to be of vital importance. Furthermore, the division of biological systems into autotrophic and heterotrophic organisms proves to be too limiting categorization. All extant organisms are autotrophic regarding their light dependence for genetic-regulatory processes. This hypothesis represents the development of our present work concerning the role of ultraweak light flows in biosystems. It is of great importance for research in and understanding of the evolution of the organic world, and for new approaches to pathology and therapy.

References

1. Vernadsky, V.I. Collected Works (Moscow, 1960) [in Russian].
2. Chizhevsky, A.L. The Earth's Echo of the Sun Storms (Moscow, 1973) [in Russian].
3. Pressman, A.S. Electromagnetic Fields and Living Nature (Moscow, 1968) [English Translation: Electromagnetic Fields and Life, New York: Plenum, 1970].
4. Konig, H.Z. "Bioinformation. Electrophysical Aspects," In Electromagnetic Bioinformation, Proceedings of the Symposium, Marburg, September 5, 1977 (Munich-Wien-Baltimore, 1979).
5. Dubrov, A.P. The Geomagnetic Field and Life (Leningrad: Gidrometeoizdat, 1974) [English Translation: New York: Plenum Press, 1977].
6. Kaznacheev, V.P. "Informational Function of Ultraweak Light Flows in Biological Systems," In Problems in Biophysics (Novosibirsk, 1967), pp. 7-18 [in Russian].
7. Kaznacheev, V.P., Mikhailova, L.P. Ultraweak Radiations in Interstellar Interactions (Novosibirsk, 1981) [in Russian; English Translation: San Francisco: Washington Research Center, 1982 (in press)].
8. Wiener, N. Cybernetics [Russian translation: Moscow, 1968].
9. Ruth, B. "Experimental Investigations on Ultraweak Photon Emission," In Electromagnetic Bioinformation, Proceedings of the Symposium, Marburg, September 5, 1977 (Munich-Wien-Baltimore, 1979).
10. Fischer, H. "Photons as Transmitters for Intra- and Interstellar Biological and Biochemical Communication - the Construction of a Hypothesis," In Electromagnetic Bioinformation, Proceedings of the Symposium, Marburg, September 5, 1977 (Munich-Wien-Baltimore, 1979).
11. Popp, E.A. "Photon Storage in Biological Systems," In Electromagnetic Bioinformation, Proceedings of the Symposium, Marburg, September 5, 1977 (Munich-Wien-Baltimore, 1979).
12. Gurvich, A.G. Theory of Biological Field (Moscow, 1944) [in Russian].
13. Gurvich, A.G. "A Concept of 'the Whole' in the Frame of

Biological Field Theory," In Works on Mitogenesis and Theory of Biological Field (Moscow, 1947), pp. 141-147 [in Russian].

14. Bauer, E.S. "General Theory of Living Substance. The Problem of 'Living protein'," Archives Biol. Sci., Vol. 35, Ser. A, Issue 1 (1934), pp. 1-36 [in Russian].
15. Bauer, E.S. "Contradictions between the Inner and Outer Work of Living Systems," Archives Biol. Sci., Vol. 35, Ser. A, Issue 1 (1934), pp. 37-52 [in Russian].
16. Bauer, E.S. Theoretical Biology (Moscow, 1935) [in Russian].
17. Konev, S.V. "On the Question of Nature and Biological Significance of Ultraweak Luminescence of Cells," in Bioluminescence (Moscow, 1965), pp. 181-183 [in Russian].
18. Tarusov, B.N., Polivoda, A.I., Zhuravlev, A.I. "Study of Ultraweak Spontaneous Luminescence of Animal Cells," Biofizika, Vol. 6, No. 4 (1961), pp. 490-492 [in Russian].
19. Tarusov, B.N., Zhuravlev, A.I. "Biochemiluminescence of Lipids," In Bioluminescence (Moscow, 1965), pp. 125-133 [in Russian].
20. Rottemeyer, M. Modelle zur Interpretation der Ultraschwachen Photone-emission aus Biologischen Systemen, Diplomarbeit (Marburg, 1978) [in German].
21. Barenboym, G.M., Damansky, A.N., Turoverov, K.K. Luminescence of Biopolymers and Cells (Moscow, 1966) [in Russian].
22. Vladimirov, Yu.A. "Ultraweak Luminescence of Subcellular Structures," Ultraweak Luminescence in Biology, Proceedings of the Symposium (Moscow, 1969) [in Russian].
23. Marchenko, I.S. Biofield of Forest Ecological Systems (Bryansk, 1973) [in Russian].
24. Sung, S.S. "A Possible Biophotochemical Mechanism for Cell Communication," In Electromagnetic Bioinformation, Proceedings of the Symposium, Marburg, September 5, 1977 (Munich-Wien-Baltimore, 1979).
25. Popp, E.A., Ruth, B. "Untersuchungen zur ultraschwachen Lumineszenz aus Biologischen Systemen unter Berücksichtigung der Bedeutung für die Arzneimittel-forschung," Arzneimit. Forsch. [Drug Res.], Vol. 27, No. 5 (1977) [in German].
26. Kaznacheyev, V.P. "Informational Function of Ultraweak

- Flows of Light in Biological Systems," In Materials of Scientific Conference "Physical and Mathematical Methods of Research in Biology and Medicine" (Novosibirsk, 1965), pp. 38-41 [in Russian].
27. Kaznacheyev, V.P., Ignatovich, N.V., Shurin, S.P. "Intercellular Distant Interactions in a System of Two Tissue Cultures Connected by Optical Contact," In Ultra-weak Luminescence in Biology (Moscow, 1969) [in Russian].
 28. Kaznacheyev, V.P., Mikhailova, L.P., Stephanov, S.B. "Studies on Cellular Monolayer and Cellular Distant Interactions in High Latitude Conditions," In Technical-Scientific Progress and Circumpolar Medicine (Novosibirsk, 1978), pp. 133-134 [in Russian].
 29. Kaznacheyev, V.P., Mikhailova, L.P., Sudarev, V.N., Shurin, S.P. "Studies on the Biological Role of Electromagnetic Emission as a Factor of Adaptive Behavior of Cells under Conditions of Latitude Changes," in Abstracts of the Second All-Union Conference Devoted to the Problem of Human Adaptation to Different Geographical, Climatic, and Labor Conditions (Novosibirsk, 1977), pp. 101-104 [in Russian].
 30. Kaznacheyev, V.P., Mikhailova, L.P., Sudarev, V.N., Shurin, S.P. "Distant Intercellular Interactions Caused by UV-radiation," In Photobiology of a Living Cell (Leningrad, 1979), pp. 221-223 [in Russian].
 31. Kaznacheyev, V.P., Mikhailova, L.P., Kadayeva, D.G., Dranova, M.P. "Conditions Necessary for Appearance of Distant Intercellular Interactions After UV-radiation," Bulleten Experimentalnoy Biologii i Meditsiny, No. 5 (1979), pp. 468-471 [in Russian].
 32. Kaznacheyev, V.P., Mikhailova, L.P., Shurin, S.P. "Distant Intercellular Interactions in a System of Two Tissue Cultures Connected by Optical Contact," In Regulation of Biosynthesis and Biophysics of Populations (Krasnoyarsk, 1969), pp. 372-374 [in Russian].
 33. Kaznacheyev, V.P., Shurin, S.P., Mikhailova, L.P. Discovery No. 122 "Distant Intercellular Interactions in a System of Two Tissue Cultures," Official Bulletin of the Committee on Inventions and Discoveries Affiliated to the Council of Ministers of the USSR, No. 19 (1973), p. 3.
 34. Kaznacheyev, V.P., Shurin, S.P., Mikhailova, L.P.,

Ignatovich, N.V. "Distant Intercellular Interactions in a System of Two Cultures Connected by Optical Contact," In Ultraweak Luminescence in Biology (Moscow, 1972), pp. 224-227 [in Russian].

35. Inyushin, V.M. "The Concept of Biological Plasma and Some Questions of Photobioenergetics," in Question of Bioenergetics (Alma-Ata, 1968) [in Russian].
36. Makovsky, E. Nature and Structure of Living Matter (Bucharest, 1976) [in Russian].
37. Chizhevsky, A.L., Shishina, Yu. In the Rhythm of the Sun (Moscow, 1969).

The Institute for Clinical
and Experimental Medicine
Siberian Department, USSR
Academy of Medical Sciences
Yadrintsovskaya Street, 14
Novosibirsk 630091 USSR

Note: This article was originally published in the journal, Psi Research, Vol.1, No. 1 (March, 1982);

THOUGHT AND MIND AS THE PROJECTION OF MENTAHOLOMORPHIC FIELDS BY THE BRAIN: *A PROPOSED MECHANISM*

Jonathan D. Cowan, Ph.D.

Abstract

This paper proposes a new understanding of the relationship between brain, mind and other biofields based on the emergent properties of the brain's parallel structure, which create a brain "laser." Several thalamocortical rhythms, including a 40 cycle per second oscillation associated with event scanning and a faster EEG rhythm found in healers and others, are hypothesized to give rise to coherent electromagnetic radiation, as well as multifaceted coherent radiation in the additional dimensions posited by string theory. These rhythms cause repetitive excitation of the sugar/protein coatings of the parallel axons of the thalamocortical columns. The synchronous excitation of these glycocalyxes of the parallel columns will cause similar chemical bonds to resonate and entrain one another, giving rise to coherent radiation. This electromagnetic/multifaceted radiation forms highly complex interference patterns (termed "mentaholomorphic fields") when they interact with each other and the electromagnetic/multifaceted activity in the cortical layers. The resulting mentaholomorphic fields may be related to thought, mind and particular states of consciousness.

INTRODUCTION

One of the most difficult problems faced by modern neurophysiology is to understand how the brain binds together a wide variety of simultaneous mental events, which produce very distinct and spatially separate changes in the central nervous system, into a unified representation which then gives rise to our apparently seamless conscious experience.¹

This paper puts forward a new approach to understanding how the brain can generate a field that may correspond to some aspects of mind and consciousness. This hypothesis is derived by combining well-accepted principles of neurophysiology, physics and chemistry. It suggests that several types of rhythmic activity that travel between the thalamus and the cortex, particularly a 40 Hertz (cycles per second) event scanning thalamocortical rhythm, also create a “brain laser,” projecting holographic fields related to mind and consciousness. Other EEG rhythms that can be measured from the scalp, such as the alpha rhythm, may also be involved, but are less powerful because of their lower frequencies.

This paper explores the hypothesis that the process underlying these EEG rhythms also gives rise to a brain “laser,” which is more powerful at the higher EEG frequencies. This coherent electromagnetic and multidimensional multifaceted (EMMM) radiation is directed at the cerebral cortex and projects a complex holographic image of the excitation pattern of the cortex, which contains a pattern of EMMM excitation and inhibition formed by recent thoughts. Implications for understanding mind, thought and biofields follow the detailed exposition.

THE EEG RHYTHMS OF HEALERS AND OTHERS

More powerful high frequency EEG rhythms may be present in healers and other individuals with paranormal abilities. Using an advanced EEG recording system that responded up to 127 Hertz, Wilson discovered that they were able to create powerful, high frequency rhythms.² Hunt has recorded much higher frequencies—up to 200 Kilohertz—in the mind-field of mystics.³

Wilson brainmapped a number of individuals with unusual ability to heal, channel, receive psychically, or report out of body or transcendent experiences. His brainmaps (multichannel Quantitative EEGs) reveal that these experiences typically begin with an activation of theta and delta frequencies at CZ, corresponding to the crown chakra in the esoteric literature. These rhythms rapidly diffuse throughout the head and then develop overtones at higher and higher frequencies, which are particularly intense in the temporal areas, T3 and T4. These intense high frequency bursts extend forward to F7 and F8 in healers. Using a magnetometer suspended a foot above the subject's head, he was able to observe electromagnetic field changes corresponding to the high frequency bursts in a limited number of subjects.⁴ He also found that the coherence between the EEGs of healers and their patients was well above chance levels in many cases.

A partial confirmation of his findings was published by Fahrion, Wirkus and Pooley, using EEGs to trace the changes in states of consciousness of healer Mietek Wirkus.⁵ They found that the healer was capable of producing the same very high frequency temporal lobe pattern during meditation. They used a lower sampling rate during healing and distant healing and found high amplitude 35-60 cycle EEG output in the healer during these conditions, as well as enhanced synchrony between sites in this band in several conditions.

THE 40 HERTZ RHYTHM AND THE NEUREKA! BRAIN SYSTEM

The discovery of a 40 Hertz electromagnetic rhythm, which originates in the reticular and intralaminar nuclei of the thalamus and repeatedly sweeps the cortex from frontal to occipital sites, may point the way to a new understanding of this hypothesis in less talented individuals. Magneto-encephalographic and EEG investigations of this event scanning rhythm have established that it has several unique properties and suggest that it has a unique role in binding together the neural representations of simultaneous events (or simultaneous features of a perception) into a unified whole. One indication of the importance of the 40 Hertz rhythm is that it is the most highly correlated with the rate of brain metabolism, suggesting that there is probably a good reason for such energy expenditure.⁶ Until recently, relatively few EEG studies of the

40 Hertz rhythm have been performed in comparison to its neurophysiological importance because of some methodological problems. In addition to the EMG (muscle contraction artifact) contamination issue, early researchers had to deal with another daunting methodological problem when measuring above 32 Hertz (cycles per second). The old style pen and paper strip physiological recorders couldn't easily go that fast without catching paper or spitting ink across the room. Most of the current research is recorded by computers and analyzed quantitatively or printed out by newer, faster technology. It is also well known that the higher the frequency of any EEG wave, the greater the percentage of its energy is lost coming through the scalp and meninges, so the 40 Hertz rhythm appears very small and therefore unimportant when it is measured from the scalp. On the surface of the cortex, it is much larger. I have recently developed a computational method, called the Neureka! Protocol, for clarifying the 40 Hertz rhythm and eliminating a lot of the EMG contamination, so that it can be used for neurofeedback training.⁷ This led to the hypothesis that the brain system associated with this rhythm (also termed Neureka!) is designed to process new discoveries by briefly enhancing awareness to encode more context of the thought or perception before the same system stores the event in memory.⁸

The 40 Hertz rhythm is present during waking and REM sleep, but is very attenuated in deep (delta wave) sleep.^{9,10} This 35-45 Hertz rhythm occurs spontaneously during the accurate performance of a conditioned response, during focused arousal prior to performing a complex task and while an animal is immobile and focused on its prey.¹¹⁻¹³

It is now becoming clear that advanced meditators have been training themselves to enhance and prolong the 40 Hertz rhythm for thousands of years. Studies of meditators have helped us identify the brain state that they intensify during meditation on kindness and compassion, and which also permeates their life.¹⁴⁻¹⁶ Recent data from Davidson's talk at the Mind and Life Symposium indicates that the particular brainwave rhythm that characterizes their state of kindness and compassion is also associated with the clarity of their meditation, suggesting a relationship to awareness.¹⁷ Preliminary data from our experience with the Neureka! Protocol indicates that it is also associated with feelings of satisfaction from accomplishment (the new discovery), gratitude, compassion, love and deep connection.

In an elegant series of experiments combining animal tissue work, implanted electrode studies and human MEG (magnetoencephalography), Llinas and his coworkers developed evidence for the hypothesis that there were actually two different brain systems that carried information at about 40 Hertz.¹⁸ Both of these systems involved feedback loops between (different) layers of the cerebral cortex and the thalamus, the organ shaped like two flattened eggs, one in each hemisphere, with a thick bridge between them in the center of the brain. Information, in the form of somewhat repetitive patterns of nerve excitation, travels back and forth between the thalamus and the cortex at about a 40 Hertz frequency in both of these systems. One system, the specific sensory and motor relay system, relays information from the external world through the outer nuclei technically called the extralaminar nuclei, those located outside a fiber bundle or lamina dividing each egg of the thalamus to the cortex. The 40 Hertz activity in this system may not be that different than the activity in other frequency ranges, “focused arousal” as Sheer argued.¹² The other, non-specific, thalamocortical system is uniquely set up to scan all the regions of the cortex and collect information back from them, using a beam that oscillates near a constant 40 Hertz frequency. It scans the brain from front to rear 40 times a second and delivers this information back to a more central location, the intralaminar nuclei, where it can be integrated and analyzed, combining or binding the different neural aspects of the event together. Hence, the name “event binding rhythm.” The scanning function can then be refined for the next pulse, modulating our awareness to emphasize the important new discoveries.

This event binding rhythm may be closely related to whether two events are experienced as either simultaneous (bound together) or separated in time. It sweeps from the frontal to the occipital lobes in 12-15 milliseconds, about half the period (25 milliseconds) of a 40 Hertz wave. If two clicks are presented at an interval greater than 12-15 milliseconds they are perceived as separate events and the magnetoencephalographic 40 Hertz rhythm is reset by the second event. At shorter intervals, the events are bound together into one experience and the 40 Hertz rhythm is not interrupted.⁹ Within that time frame, the events are perceived as a common image.¹⁹

Llinas argues that consciousness is actually a result of the simultaneous neural firing produced by the coherence (I prefer superposition) of the inputs from

the specific and non-specific systems on the layers of dendrites in the cortex. The specific system would then provide the content that relates to the external world, and the non-specific system would give rise to the context. Together, they generate a single cognitive experience, which Llinas calls consciousness.

LOCATING THE MIND

How does this scanned, unified representation give rise to conscious experience? Where is the mind and thought? How is it affected by this pattern of excitation and inhibition? Where is the awareness of conscious experience located?

Libet summarized the mounting evidence that there is actually almost a half-second delay between the input from an experience and the conscious appreciation of it.²⁰ During that half second, there is a complex cognitive process, still largely uncharacterized, which decides if an event is important enough to be consciously appreciated, and then adjusts the perceived timing of the event to make it integrate seamlessly with all the other preconscious and unconscious inputs. If all that follows after scanning is that the information is returned to the various thalamic nuclei as modulated 40 Hertz patterns of excitation, would that provide a sufficient understanding of this delay and conscious experience? One difficulty with this approach is that there is abundant evidence that there is very little cross-talk among the major thalamic nuclei, pointing to very little integration.²¹ Therefore, one pair of nuclei are more likely to be the center of awareness, the conscious appreciation of events. The thalamic reticular nucleus (see below) is a network of cells that intercommunicates well and projects extensively to other thalamic nuclei. The re-entrant information does continuously modulate its firing patterns, but it seems too thin and sparse to underlie the experience of conscious events. The intralaminar nuclei, particularly the centromedial nuclei, are probably the best candidate for the location of conscious integration or awareness, since the information from the cortical scan constantly returns to this central site. Lesions in this area are accompanied by major impairments of consciousness.

There is another line of thought which holds that mind and consciousness are not just local events. Rather, they exist as part of a constantly changing

fundamental field (or fields), termed the biofield, which has not yet been described in detail.²² Biologists and philosophers have been joined by physicists, who have based their analyses on empirical evidence and quantum theory.²³ Pribram pointed out some essential similarities between Bohm's idea of the *implicate order* and his concept that thought and memory storage are holographic.²⁴⁻²⁶ He proposed that there were holonomic (overlapping patches of holographic) structures in the cortical surface layers, which were produced by transforming inputs (from perceptions and thoughts) into slow electrical potentials according to holographic principles; Pribram sees a parallel between this and the first implicate order.²⁴

THE FORMATION OF THE MENTA-HOLOMORPHIC FIELD: *AN OVERVIEW*

My perspective is that the mind is not just inherent in the brain, but rather exists in a field that is co-located with it and simultaneously external to it, a multifaceted multidimensional "mentaholomorphic" field. My recent preference for this term, rather than *electroholomorphic* field used in a previous publication will be explained in detail later.²⁷ Briefly, since there is clear evidence that psi phenomena are not easily blocked by electrical or magnetic shielding, I now think it is better to emphasize the probability that there are other components of field(s) involved, very possibly existing in the additional dimensions postulated by string theory.

As shown schematically in Figure 1, life events give rise to experiences and thoughts, which are reflected in the electrochemical changes in the outer layers of the cerebral cortex, perhaps as holonomic transformations. These patterns of activity are projected by radiation from the "brain laser," to form fields that are complex, rapidly shifting holograms. Recognizing the potential similarities of these fields to the implicate order in Bohm's holomovement, and to Sheldrake's (1988) *morphic fields*, as well as the holographic transformation involved here, I have termed them *mentaholomorphic* fields.

This paper will focus on the example in which the object to be projected as a mentaholomorphic field is the chemical activity in a small area of cerebral cortex, although there are probably many other physiological systems in which

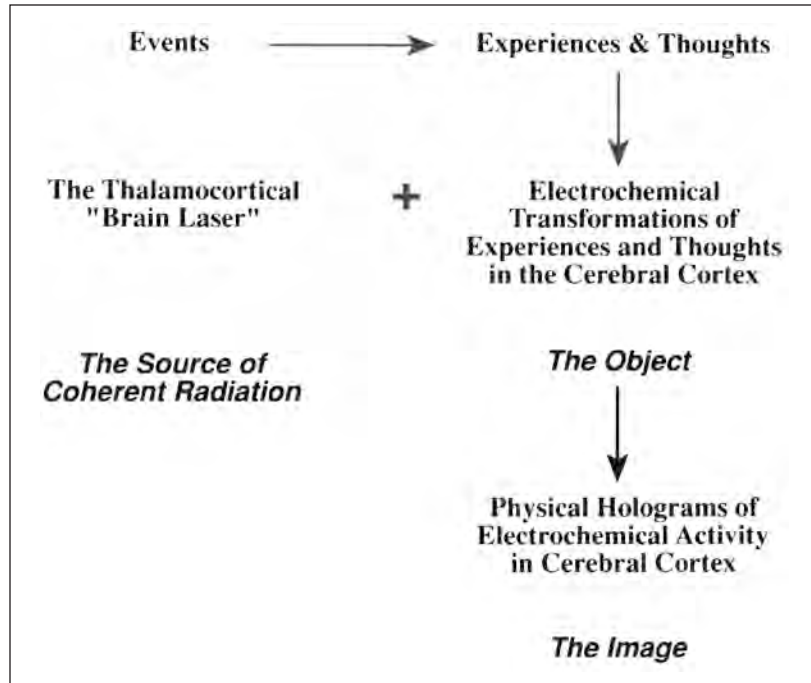


Figure 1. *Mentaholomorphic Field Formation: The boldface phrases are described in this model. The italicized phrases indicate the corresponding components in the process of forming a traditional holographic image.*

this proposed mechanism can take place. For purposes of exposition, the constant motion of the neurochemicals in this small area will be temporarily set aside in order to first understand the formation of a static hologram.

To create a hologram, it is necessary to have a coherent energy source as well as the object to be projected. A photographic plate would only be necessary if the hologram were to be recorded. The holographic image exists as an interference pattern in space whether or not a picture is made.

The source of coherent energy is the vibration of parts of the membranes of the axons that connect the neurons in the thalamus to the cerebral cortex. These axons run parallel to each other, forming columns that are essentially perpendicular to the cortical surface, with excitation flowing from the deeper

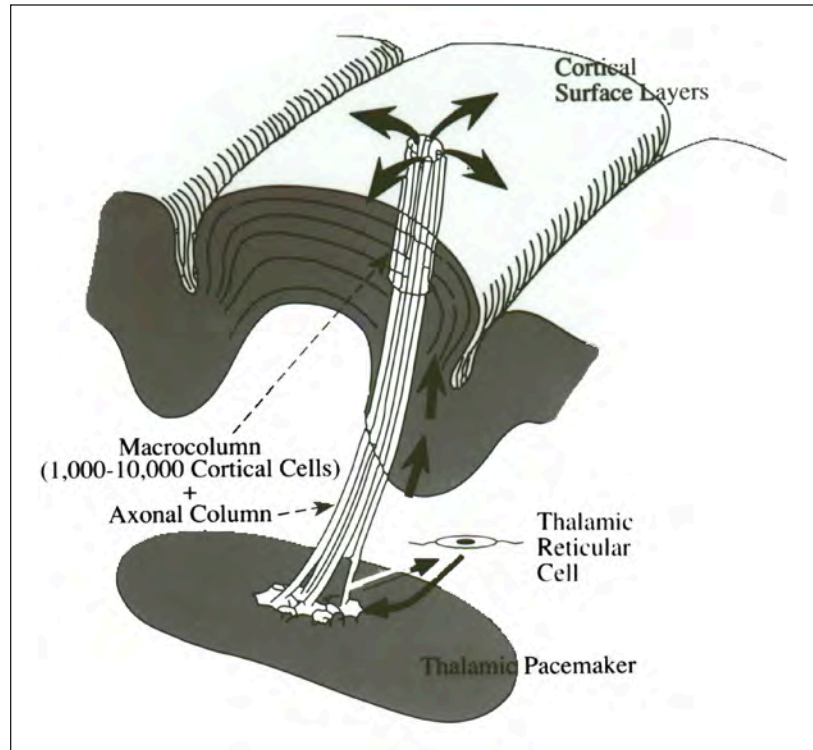


Figure 2. The “Brain Laser:” The column of axons transmits impulses synchronously from thalamus to cortex, providing the energy to produce coherent radiation.

structures (the thalamic nuclei) to the surface, as shown schematically in Figure 2. The patterned activity of these columns, in combination with the reciprocating messages from cortex to thalamus, is thought to be responsible for the formation of the synchronized activity of the EEG at 40 Hertz and below. Experiments have led an international committee of scientists to conclude that the reticular nucleus of the thalamus, a thin grid of neurons surrounding the egg-shell shaped thalamus, is responsible for originating and organizing the slower brain rhythms, including the 7-14 Hertz spindles present at sleep onset and some alpha and theta rhythms.²¹ Input from this surrounding sheet of cell can cause a group of neurons in the sensory-specific nuclei of the thalamus (located outside the lamina, thus “extralaminar”) to beat in complete synchrony, forming the pacemakers that drive each column of several thousand parallel

axons, and excite the slightly larger macrocolumn of 1,000 to 10,000 cortical cells. More recent studies have extended this generating mechanism to the 40 Hertz event scanning rhythm, which is thought to be produced by the *intralaminar* nucleus of the thalamus.²⁹ Axons from these cells project to layer I of all areas of the cerebral cortex; the thalamocortical circuit that generates these rhythms is completed by layer V pyramidal cell axons which return the excitation pattern to the reticular and intralaminar nuclei of the thalamus. Another 40 Hertz rhythm is generated by the reticular and the extralaminar sensory specific thalamic nuclei in response to particular stimulating events (auditory clicks, etc). It is thought to co-resonate with the event scanning rhythm, resetting the scanning rhythm and increasing its amplitude.^{9,10,30}

The constant, synchronous excitation of the axons from the neurons in the thalamus to the cortex provides the energy for the brain “laser” formed by each macrocolumn. Each time that a nerve impulse—a wave of depolarization—flows down the axon, metabolic energy is consumed at each point that it passes. With each impulse, the axonal membrane and its constituent molecules move and vibrate in an organized fashion.

After the impulse passes, many of the molecules and atoms, as well as their constituent charged particles will continue to vibrate at their characteristic resonant frequencies—well above typical EEG frequencies—for some time. Charged particles in motion create electromagnetic waves and may also create other types of multifaceted multidimensional waves (EMMM radiation). Coherent and synchronous waves result when these moving charged particles vibrate in phase with one another—that is, when their peak motions in the same direction are at precisely the same time. The molecular structure of each axonal membrane undoubtedly has many repeating units—the same pattern of constituents, embedded in very similar chemical environments. The presence of 1,000 to 10,000 axons in a synchronously-excited column multiplies the number of repeating units.

Following a basic law of physics, these repeating units, vibrating at the same frequencies, should entrain each other and tend to resonate together—to vibrate coherently in phase. This synchronous motion should produce coherent EMMM radiation; it constitutes a brain “laser,” emitting energy at a number of different frequencies. These coherent EMMM waves impinge upon the

chemical and EMMM activity in the surface layers of the cortex, as well as upon the meninges and the skull, forming an interference pattern—the mentaholomorphic field.

THE COHERENT VIBRATIONS OF THE AXONS' GLYCOLALYXES

Each of these axons has a repeating structure, the nodes of Ranvier, spaced at fixed intervals, and specifically designed to amplify the signal from the thalamus by activating the gate-channel complex, embedded in the axon's membrane. One particular membrane structure that should give rise to coherent energy waves is the glycocalyx, or sugar coating, which is composed largely of glycoproteins, or proteoglycans. These include a number of derivatives of chondroitin sulfate and heparan sulfate.³¹ Figure 3 is a schematic diagram of the membrane of a single axon in the column, with the outside on the right. All of these structures are inside the myelin sheath of each axon. Glycoproteins have an uncharged protein end, which dissolves in the fatty membrane, and a very negatively charged sugar end, which sticks out into the external fluid, somewhat like a ball on a rubber stick.³² Together, these sugars form the bulk of the glycocalyx. The diagram (modified from Lipton, 1986) also shows the gate/channel complex, which changes conformation to allow ions into the axon briefly during a nerve impulse, thus causing the nerve cell to depolarize.³³ It then returns to its original shape when the impulse has passed.

When this gate/channel complex in the membrane moves rapidly in response to a nerve impulse, the charged sugar ends that line the axonal membrane should all vibrate back and forth. These glycoproteins are either directly or indirectly (through the linking peptide shown as a dark ball) connected to the channel protein. As the channel opens and then closes in response to each impulse, its kinetic energy is transferred to the glycoprotein and to other surrounding structures, which vibrate and emit an electromagnetic wave until this motion is damped out. Other vibrational modes and frequencies and the related electromagnetic waves result from the movements of charged atoms within the membranes. This is roughly analogous to what happens every time that we open and then slam a door shut: some

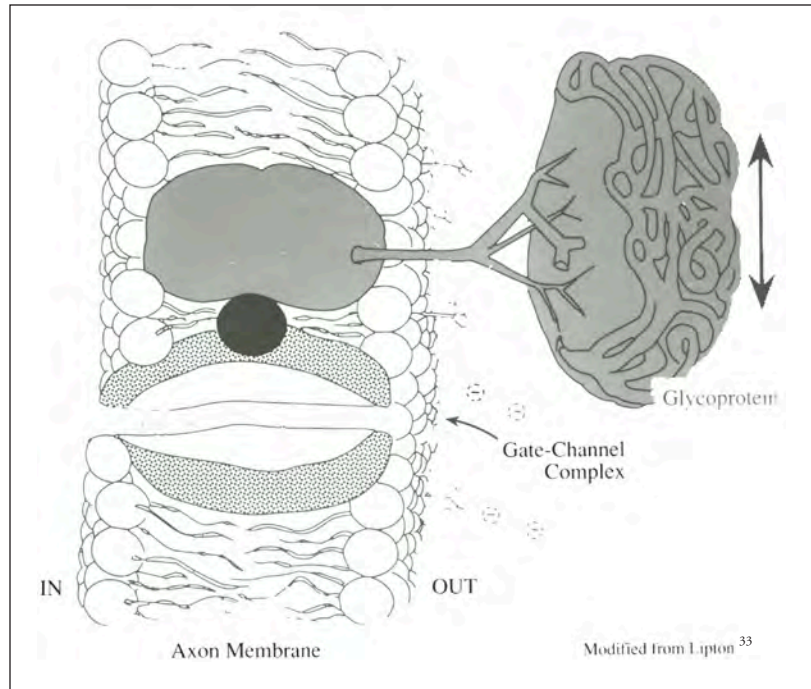


Figure 3. *The Glycoprotein Attached to the Gate/Channel Complex: Molecular constituents of the glycocalyx vibrate in response to the transferred energy from opening and closing the gate-channel complex.*

of the kinetic energy is transferred to the surrounding walls, where it vibrates their internal layers and the surface structures.

THE VIBRATION OF PARALLEL STRUCTURES PRODUCES COHERENT RADIATION

One type of movement is shown schematically in Figure 4, which depicts small portions of three axons in a macrocolumn. The balls represent charged portions of the glycoproteins in a simplified fashion. When they move in a parallel fashion, they give rise to the symmetric mode of vibration which is responsible for part of the emission spectrum—the unique electromagnetic pattern

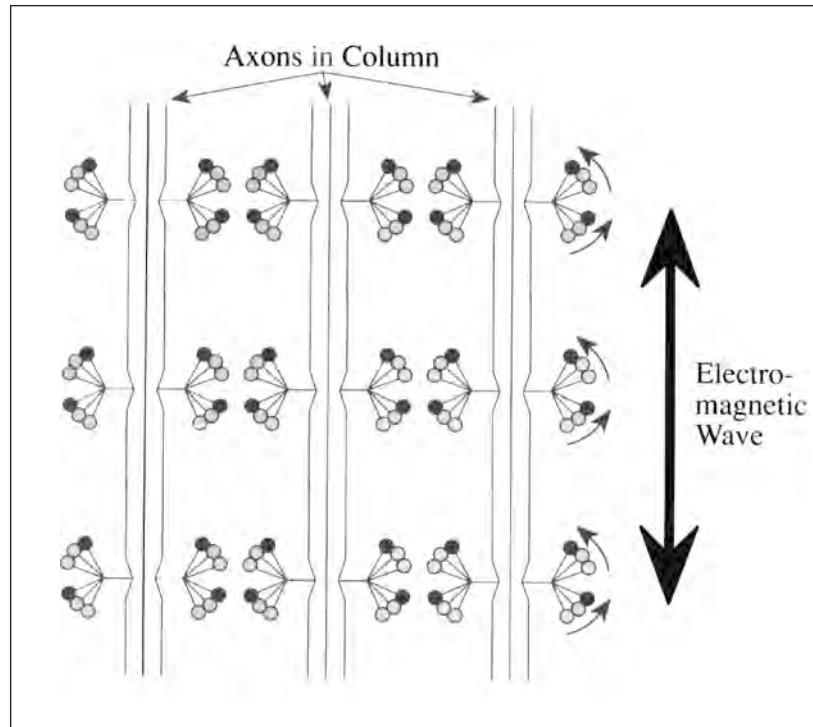


Figure 4. *Parallel Resonant Vibration of Charged Particles in the Glycoproteins: All of the balls (glycoproteins) are vibrating in similar fashion to the arrows in the last column. These give rise to coherent electromagnetic radiation. The myelin sheaths surrounding the axon are omitted for clarity.*

produced by the glycoprotein. The molecular structure of each axonal membrane has many of these repeating units, and there are many axons in a macrocolumn. When they all vibrate simultaneously in response to the depolarizations caused by the synchronous nerve impulses from the thalamus, they should follow a basic law of the physics of resonance and entrain each other so that they vibrate more closely in phase with each other. This should produce some synchrony and coherence in the energy radiations resulting from these characteristic vibrations. Of course, there will be a lot of more random activity in the glycoprotein molecules here and in the rest of the brain. The remaining non-coherent energy is not important to this hypothesis, since it is random

noise. From basic spectrochemistry, we know that each chemical has its own emission spectrum, resulting from the excitation and subsequent decay of vibrations of charged chemical bonds. Each characteristic vibration resulting from a different type of moving charge (from a different chemical structure) will emit waves as it decays at its own frequency. Since the chemical structure is attached to a fixed membrane, it will also have a characteristic direction (with respect to the membrane), in which the coherence is maximum. Therefore, several different brain “lasers” may result from the same thalamocortical source. If the macrocolumn has some curves, or if there are several repeating units oriented differently with respect to the membrane, there will be several directions in which the coherence is maximum, resulting in several “laser” beams with the same frequency but different spatial orientations.

An analogous phenomenon was demonstrated experimentally many years ago. The emission of coherent microwave (5 to 10 micron) radiation from the surface of stimulated axons was first demonstrated by Fraser and Frey in sensory nerves taken from the legs of the blue crab.³⁴ Further work by Frey and others established the coherence of this radiation.³⁵ It may be technically more accurate to add the term “maser” to refer to coherent radiation at microwave frequencies, or to generally discuss “brain coherent electromagnetic radiation,” but neither of these terms are as familiar to readers as “laser,” so I have decided to use “laser” in quotes throughout the paper.

The coherent EMMM waves formed by each pacemaker in the thalamus and its associated column of axons will, to a greater or lesser degree, reach the nearby cortical surface layers, as shown in Figure 5. Wavefronts from nearby columns may be coherent with one another, since the repeating units in these columns are very similar. If there is widespread phase synchrony between electrode sites in the EEG, this indicates greater breadth of the coherent wavefronts. These coherent wavefronts will be partly reflected from neurochemical structures in the cortical layers, including those chemicals which are (holonomically) modulated by the dendritic slow potentials. Some of these wavefronts should also be partly reflected from other structures, such as the dura shown in Figure 5, as well as pia, arachnoid and skull. The multiple reflections at the same wavelength will interfere with each other, forming holograms at each frequency produced by a brain “laser.”

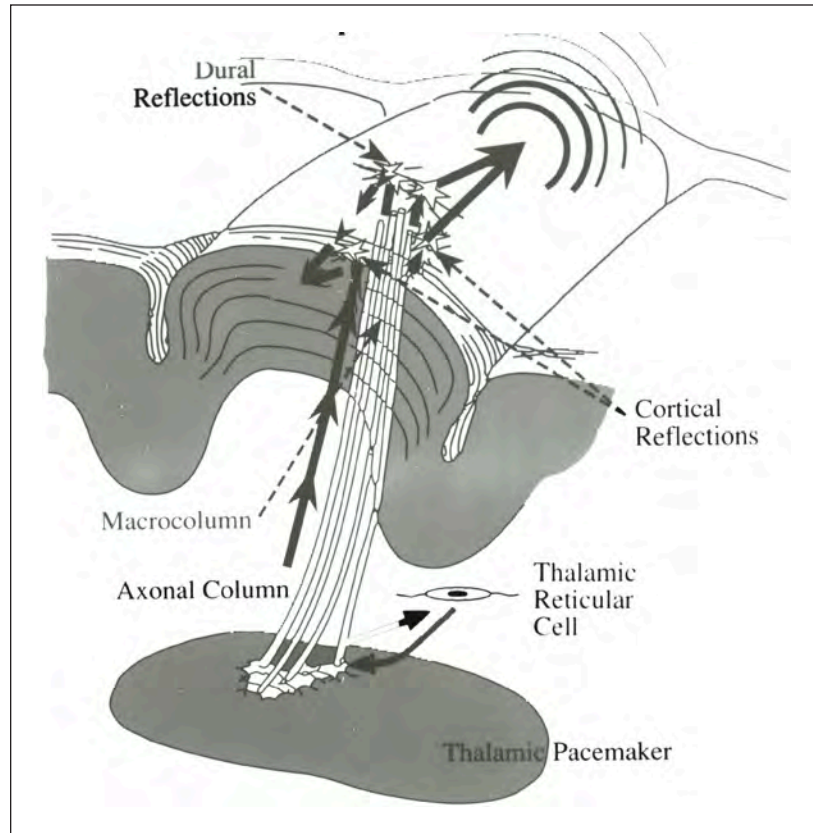


Figure 5. *The Brain “Laser” Produces a Mentaholomorphic Field: The coherent radiation produced by the axonal column interacts with the electrochemical (EMMM) activity in the cortical layers, the dura, pia (not shown), arachnoid (not shown), and skull (not shown), as well as from other axonal columns to form a holographic field.*

THE PROJECTION AND RECEPTION OF THE MENTAHOLOMORPHIC FIELD

The activity in the cerebral cortex shifts quickly, often faster than 40 Hertz, and the radiation from the thalamic pacemakers is at an even higher frequency. An extremely complex mentaholomorphic field will be generated by their interaction. It will extend throughout the brain and into the space outside the

brain. The partial transmission of this field through the skull will be aided by the fact that it is being pulsed or modulated at the extremely low frequencies typical of the EEG—the rate at which the thalamocortical axons actually fire. Although they are weak, magnetic fields produced by the brain are not typically impeded by the skull.^{32,36}

According to this model, the higher the wave energy and the more synchronous the phases of the waves from various cortical locations are, the stronger the output from the brain “laser” and the resulting hologram should be. More powerful EEG output at higher frequencies should also increase the efficiency of the brain “laser” because the energy of the rhythmic discharges of the thalamocortical tracts, which is reflected by the EEG recordings, drives the brain “laser” by vibrating the parts of the glycoproteins. The higher the frequency of the thalamocortical rhythms, the more frequently that these glycoproteins are re-energized and the more constantly they will vibrate (see Figure 4). The more energetic and consistent this vibration is, the greater that the resonance between the vibrating parts of neighboring glycoproteins, and the stronger the brain “laser’s” coherent output. All of these factors, acting together, should enhance the strength of the mentaholomorphic field emitted by the 40 Hertz scanning rhythm, relative to lower frequencies such as delta, theta, alpha, and beta. All of these rhythms may play a role in the formation of the mentaholomorphic fields, as will the even higher frequency fields of those talented individuals who can generate them.

The proposed mechanism for the reception of mentaholomorphic fields by the brain must assume that such fields exist and can persist through time, as Sheldrake does for his morphic fields. Holograms actually exist in the frequency domain, and time should not diminish them, since it is not a factor in their calculation. Recently, Tiller has proposed the idea that there are actually 10 or 11 dimensions, as superstring theory posits, but without its limitation that many dimensions are too small to observe.^{37,38} Tiller suggests that four of these dimensions (called R-space) are actually formed by the same type of Fourier transform process that creates a hologram. This book contains intriguing evidence for this general conception. The idea that there are additional dimensions that we cannot (routinely) sense, first put forth in the classic book, *Flatland: A Romance of Many Dimensions*, and more recently animated in the film *What the Bleep: Down the Rabbit Hole*, is very attrac-

tive as addition to the present hypothesis. Recently, physicist John Hagelin has pointed out that:

In addition to the particles and forces that we know and love—gravity, electromagnetism, and so forth—there are additional forces and particles that we don't see, but they fill the room. It was once thought that these were irrelevant to human life because they only interacted with us gravitationally, which is too weak to be of any interest. But if you do the calculations properly in the context of the superstring, you find that they also interact with us electromagnetically, even if rather weakly. . . .^{39(p.19)}

The strength of this interaction should be amplified by the coherence under discussion here.

As Bohm also suggested, several different types of fields, each operating at many spatial and temporal frequencies, may well be involved.²³ The characteristics of the particular type of radiation will partially determine the range and resolution of the potential information transfer; this has yet to be understood. Quantum fields do not diminish as quickly over distance as electromagnetic fields do. This uncertainty is why I now prefer the more encompassing term *mentaholomorphic*.

All that is required to read a hologram is a coherent reference beam of the same energy type, identical frequency and proper orientation. The portions of the coherent waves produced by the macrocolumns that are not reflected from cortical structures will serve as reference beams. The hologram will be received by the brain as a reconstruction of the same electrochemical pattern that was in the cortex at the time it was originally projected. This reconstructed image will influence the probabilities of occurrence of the ongoing patterns of electrochemical cortical activity, making them more similar to the pattern that originally gave rise to the image. I suspect that the activity pattern in the cortical surface layers quiets down during reception in order to eliminate interference with this process. These altered probabilities of neurochemical activity could then influence brain function by affecting the release of vesicles containing neurotransmitters into the synapse, by changing slow potentials, or by altering the function of the neuronal membrane, as well as through several other methods.⁴⁰ The resulting activity pattern in the cortical layers is then scanned by the 40 Hertz (Neureka!) system and the information is returned to the intralaminar nuclei of the thalamus for integration and action.

One issue with this approach is that it would seem to require that the head be in somewhat the same spatial orientation during transmission and reception, so that the reference beams are projected in the same directions at both times, if reception of mentaholomorphic fields generated by matter outside the head, and transmitted solely by ordinary physical means, is considered. However, anyone who has ever looked at a hologram knows that you can still see it fairly well from considerably off axis, so the orientation doesn't have to be perfect.

This new mechanism may also generate coherent scalar subtle energy waves and holograms. These waves should be formed by any antisymmetric-directly out of phase-modes of vibration of charged particles. These modes are well known and accepted in the field of spectrochemistry and should occur at many sites within membrane proteins. These vibrations may also entrain each other into coherence in the same way that the symmetric modes shown in Figure 4 do. These antisymmetric modes of vibration are the molecular counterparts of the two opposing electrical coils that Bearden showed were capable of producing scalars.⁴¹ These scalar waves and holograms may be particularly important as information transfer agents because they do not diminish in intensity with distance and they are not as easily shielded as conventional electromagnetic waves.

THE IMPLICATE ORDER, MENTA-HOLOMORPHIC FIELDS AND THE MIND

These fields appear to have some characteristics which have also been proposed for the properties of the mind. They are holistic, far reaching transformations of brain activity, which may also involve interaction with a larger, more encompassing field. Bohm has suggested that there is a relationship between the *implicate order*, his term for the true ground of being, and the *explicate order*, which roughly corresponds to the ordinary way in which we view reality.²³ The implicate order transforms, by a process he calls unfolding, to form the explicate order. By a constant process of folding and unfolding into each other, the implicate and explicate orders continuously form the totality of *what is*, which he terms the *holomovement*. He states that "This enfoldment and unfold-

ment takes place not only in the movement of the electromagnetic field, but also in that of other fields, such as the electronic, protonic, sound waves, etc. There is already a whole host of such fields that are known and any number of additional ones, as yet unknown, that may be discovered later.”²³(pp.177-178) If, as Bohm suggests, the actual content, structure, function, and activity of thought is in the implicate order, then perhaps this mechanism, or one very much like it, can begin to explain how the explicate order of everyday experience is transformed into several implicate orders (or levels) of thought and mind.²³(pg. 204) It may also help us to understand how, after this information interacts with the larger field, it is unfolded back into the explicate order.

It may actually be more accurate to suggest that there are at least two layers of implicate order. The present model enlarges on Pribram’s seminal idea that thought and components of memory storage are holonomic.²⁵ He proposed that there were “patchy” holographic (or holonomic) structures, consisting of dendritic slow electrical potentials in the cortical surface layers, which were produced by transforming input into slow electrical potentials according to holographic principles; this is the first implicate order.²⁴ Pribram did not suggest the formation of actual electromagnetic holograms or mentaholomorphic fields projecting beyond the cerebral cortex, as I have here. Both hypotheses are actually possible simultaneously: the brain may form multiple physical holograms of the patchy holographic transformations of the input to the cortex. This mentaholomorphic field would then be a second implicate order, or a “superimplicate” order.

A quantum mechanical approach to understanding the formation and retrieval of memory from the mentaholomorphic field can also be fashioned following Stapp’s ideas.⁴² Rather than pursue this digression here, I will simply note that the Zeno effect may be particularly important in understanding memory retrieval.

MENTAHOLOMORPHIC FIELDS, 40 HERTZ RHYTHM & MEMORY

There are several lines of evidence that indicate that the 40 Hertz rhythm profoundly enhances learning and memory. The clearest experimental

evidence for the specific role of the 40 Hertz rhythm in learning was published by Miltner et al. in *Nature*.⁴³ They measured the EEGs of a group of young women who were learning the association between a colored light and a shock to one hand, examining those regions of the cortex that were known to be stimulated by the light and the shock to the hand. They found that there was more 40 Hertz activity in those regions of the cortex, as well as some surrounding regions, during the trials than at other times. Furthermore, they examined the coherences between the 40 Hertz outputs of the specific areas involved and compared them with other regions and other times when the specific color and shock were not paired as controls. They found clear evidence that associative learning involved increased connectivity (coherence) between these brain regions in the 40 Hertz band, and that this coherence dropped off very quickly as they examined higher or lower frequencies. In a study of epileptic patients with electrodes implanted right on their cortical surfaces, Sederberg et al. found that their short-term memory for words was related to the gamma output of electrode sites in their frontal and temporal areas, particularly near the 40 Hertz band.⁴⁴ There are now many other studies demonstrating a relationship between memory and EEG rhythms above 30 Hertz. Our preliminary observations with Neureka! indicates that it increases when individuals try to remember something from long ago.

It is possible that memory storage and retrieval may be partly mediated by the mentaholomorphic fields produced by the Neureka! system, acting in combination with neuronal mechanisms. There is no reason why both processes—local synaptic and mentaholomorphic field—can't be working simultaneously. In fact, if reception of the mentaholomorphic signals is frequently of poor quality—as the small magnitudes of most psi effects would suggest—leading to a lot of uncertainty of thought, it would make good design sense to have a local backup system in the cerebral cortex. This system could act as an additional tuning mechanism to improve reception, by introducing additional information into the projected reference beams to refine the search. If the signal could not be discerned, it would substitute locally stored information from previous experiences. At other times, the information from both sources could be combined. Although using a backup could have disadvantages, it is probably better than waiting patiently for good reception if survival is at stake. One of the costs of adapting to the fast pace of decision making

in our modern world may be that we often lack the patience to wait for the reception processes to complete.

There are studies which show that stimulating cortical cells at more than 7 Hertz enhances long term potentiation of their ability to transmit information across synapses.⁴⁵ This process is triggered by calcium entering the cell every time the synapse is stimulated by two inputs at the same time.⁴⁶ It would seem reasonable that faster stimulation speeds, such as from a 40 Hertz scanning rhythm, would increase the amount of calcium entering the cells per second and speed up this process. Classical neurophysiology posits that long term potentiation of a group of cells connected together (a “cell assembly”) forms a long term memory.

Several factors may increase the probability of accurate memory retrieval via both of these mechanisms acting together. If the individual is in the same state of consciousness as he was during the projection of the field during memory storage, the coherent waves from the various axonal columns should be more similar than if he is not. If the context during memory retrieval (reception) is similar to that at storage (projection), then an experience should be easier to retrieve. This gives rise to state/context dependent learning and retrieval. If salient events, such as new discoveries and others related to survival increase the amplitude of the 40 Hertz rhythm, as discussed previously, this may aid both information storage and retrieval. Other factors that increase the amplitude and/or synchrony of these wave fronts should also aid retrieval, all else being equal.

This new mechanism may also help to account for “how long range synchronization across feature-specific neuronal modules emerges” quickly enough to be consistent with the observed speed of processing.⁴⁷

PROPOSED VALIDATION

There are many opportunities for both experimental testing and mathematical modeling of this proposed mechanism. For example, it should be possible to enlarge on Fraser and Frey’s work by scanning for coherent radiation over a

wide range of electromagnetic frequencies at varying distances from animal and human brains.³⁴ In an animal preparation, the skull and meninges could be partially removed to eliminate their interference. In addition, fiberoptic probes could be inserted to sample the coherent radiation at various layers.

EXTENSIONS OF THE THEORY

Other neuroanatomical structures may also contain synchronously-excited parallel axons that can project and receive mentaholomorphic fields. The coherent radiation from the thalamocortical system also radiates in the other direction, towards the thalamus, hypothalamus and brain stem, and may produce interference patterns with their activity. Within the brain, there are other bundles of parallel axons, some driven by pacemakers. The septal-hippocampal system is one example. A 10 Hertz scanning rhythm has been discovered in the olivocerebellar tract; it may be related to the awareness and coordination of movement.¹⁹ Nerve fibers that respond to pressure, temperature, muscle stretch and position in the periphery—for example, from the hands and feet running through the spinal cord to the brain—are regularly and repeatedly excited, as are the pacemaker fibers in the heart. Each of these parallel fiber bundles may emit coherent radiation.

In fact, all that is necessary for this type of holographic generation and reception mechanism is a number of aligned repeating units in any tissue, crystal, or other material and a method of exciting them into resonant modes of vibration. This type of parallel structure is frequently found in the membranes of cells that are arranged in a regularly repeating pattern. Subunits such as receptors, glycoproteins and other integrated membrane proteins which act as antennae can shift their conformation in response to events inside and outside the cell.⁴⁸ They can serve as energy transducers in both directions—creating and receiving energy fields at their resonant frequencies—like the radio tuner analogy that Sheldrake frequently discusses. The possibilities suggested by resonances that also vibrate in additional dimensions are very intriguing.

Hameroff suggested the idea that microtubules within axons are responsible for receiving and demodulating quantum fields containing information from the quantum field, which he hypothesizes to be the mind.⁴⁹ However, his proposal has a rather serious shortcoming: it lacks a method for transmitting informa-

tion from the brain to the mind. These microtubules are arranged in parallel with the axon's membrane. Therefore, the chemical groups that line the microtubules would have the parallel structure to resonate with each other from axon to axon. In his model they cannot upload information because they appear to lack a direct source of energy for exciting them into resonance. However, Hameroff states that "cytoskeletal structures (fodrin, actin filaments, etc.) connect membrane receptors to microtubules."⁴⁹ Adding this to Figure 3, a depolarization of the gate-channel complex could also set off modes of resonance in chemical groups within the axon—on the inside of the membrane, within the protein and actin filament connectors and (indirectly and more weakly) inside or outside the microtubules themselves. In other words, the repeated stimulation of the axon could drive a series of modes of resonance that encompass the membrane glycoproteins, the linking proteins and actin filaments and the cytoskeleton of the axon, acting together. This may be an even stronger projector of the mentaholomorphic fields than my previous proposal. Mentaholomorphic fields are, of course, also describable in quantum mechanical terms. The reception of these fields could take place by Penrose and Hameroff's objective reduction (within the microtubules), the present model's methods, or both simultaneously.

IMPLICATIONS AND APPLICATIONS

Perhaps the most intriguing question in this area is the relationship of this model to transmitting intention and related information across time and space. It is clear from the massive amount of data summarized in McTaggart, Sheldrake, Tiller et al. and Radin that effects such as clairvoyance, telepathy and telekinesis do take place.^{37,50-52} The magnitudes of these effects are relatively weak, although highly statistically significant. Can the insights from this hypothesis help dedicated intenders to amplify these effects? For example, would learning to enhance the amplitude of 40 Hertz waveforms by using Neureka! neurofeedback also improve the effect size and/or increase the success rate? It is intriguing that one of the key procedural details about projecting intent specified in many texts and the movie *The Secret* is to imagine that the intended outcome is already here and to create the associated feeling of satisfaction. Our preliminary observations strongly support the idea that feelings of satisfaction from accomplishment increase the amplitude of Neureka!

The combination of neurofeedback for single pointed Focus on the intention, and Neureka!, both available on the Peak Achievement Trainer, may be even more helpful in intensifying the broadcast of intention.

The recent books by Mc Taggart and Sheldrake can be used as catalogs of the potential implications and applications of this model.^{50,51} These include improving our understanding and potentially enhancing the effectiveness of telepathy and other paranormal links between people, clairvoyance, psychokinesis and prayer. The implications for studying energy healing, distant healing, channeling, and transcendent experiences are particularly profound if Wilson's groundbreaking finding of high frequency EEGs can be confirmed and extended. All of these can be studied by comparing successful vs. unsuccessful trials while simultaneously measuring the high frequency EEG and/or emitted coherent waves.

This type of projection and reception mechanism may also help us to understand the soul, the spirit, and the collective unconscious, as well as to explore the relationships among the brain, the mind, thoughts and states of consciousness.

• • •

CORRESPONDENCE: Jonathan D. Cowan, Ph.D. • Peak Achievement Training • 1103 Hollendale Way • Goshen, KY 40026 • jon@peakachievement.com

REFERENCES & NOTES

1. M. I. Posner & M. E. Raichle, *Images of Mind* (Scientific American Library, New York, NY, 1994).
2. E. S. Wilson, The Transits of Consciousness, *Subtle Energies* 4,2 (1993), pp. 171-183.
3. V. Hunt, *Infinite Mind: The Science of Human Vibrations* (Malibu Publishing Co., Malibu, CA, 1995).
4. E. Wilson, Personal communication.
5. S. L. Fahrion, M. Wirkus & P. Pooley, EEG Amplitude, Brain Mapping, and Synchrony in and Between a Bioenergy Practitioner and Client During Healing, *Subtle Energies* 3,1 (1992), 19-52.
6. T. R. Oakes, D. A. Pizzagalli, A. M. Hendrick, K. A. Horras, C. L. Larson, H. C. Abercrombie, S. M. Schaefer, J. V. Koger & R. J. Davidson, Functional Coupling of Simultaneous Electrical and Metabolic Activity in the Human Brain, *Human Brain Mapping* 21 (2004), pp. 257-270.
7. J. D. Cowan & S. Albers, *Manual for The Peak Achievement Trainer® Neureka! Protocols™* (Peak Achievement Training, Goshen, KY, 2007).

8. J. D. Cowan, *A Brief History of the 40 Hertz Rhythm* (Excerpted from Cowan & Albers, 2007).
<http://www.peakachievement.com/40%20Hertz%20History.htm>
9. M. Joliot, U. Ribary & R. Llinas, Human Oscillatory Brain Activity Near 40 Hertz Coexists With Cognitive Temporal Binding, *Proceedings of the National Academy of Sciences, USA* **91** (1994), pp. 11748-11751.
10. R. Llinas & U. Ribary, Coherent 40 Hertz Oscillation Characterizes Dream State in Humans, *Proceedings of the National Academy of Sciences* **90** (1993), pp. 2078-2081.
11. W. J. Freeman & B. W. Van Dijk, Spatial Patterns of Visual Cortex Fast EEG During Conditioned Reflex in a Rhesus Monkey, *Brain Research* **422** (1987), pp. 267-276.
12. D. Sheer, Focused Arousal, 40 Hertz EEG and Dysfunction. In T. Ebert et al. (Eds.), *Self-Regulation of the Brain and Behavior* (Springer-Verlag, Berlin, Germany, 1984), pp. 64-84.
13. J. J. Bouyer, M. F. Montaron, J. M. Vahnee, M. P. Albert & A. Rougeul, Anatomical Localization of Cortical Beta Rhythms in Cat, *Neuroscience* **22**,3 (1987), pp. 863-869.
14. N. N. Das & H. Gastaut, Variations de l'activite electrique du cerveau, du coeur et des muscles squelettiques au cours de la meditation et de l'extase yogique, *Electroencephalography & Clinical Neurophysiology, Supplement 6* (1955), p. 211.
15. J. P. Banquet, Spectral Analysis of the EEG in Meditation, *Electroencephalography & Clinical Neurophysiology* **35** (1973), p. 143.
16. A. Lutz, L. L. Greischar, N. Rawlings, M. Ricard & R. J. Davidson, Long-term Meditators Self-induce High-amplitude Gamma Synchrony During Mental Practice, *Proceedings of the National Academy of Sciences* **101**,46 (2004), pp. 16369-16373.
17. R. J. Davidson, Meditation-Based Clinical Interventions: Science, Practice, and Implementation, Paper presented at *The Mind and Life XIII Symposium: The Science and Clinical Applications of Meditation* (Washington, DC, 2005).
18. R. Llinas, U. Ribary, D. Contreras & C. Pedroarena, The Neuronal Basis for Consciousness, *Philosophical Society of the Royal Society of London B* **353** (1998), pp. 1841-1849.
19. S. Blakeslee, How the Brain Might Work: A New Theory of Consciousness. *The New York Times* (March 21, 1995), pp. C1-C10.
20. B. Libet, *Mind Time: The Temporal Factor in Consciousness* (Harvard University Press, Cambridge, MA, 2004).
21. M. Steriade, P. Gloor, R. R. Llinas, F. H. Lopes de Silva & M. M. Mesulam, Report of IFCN Committee on Basic Mechanisms: Basic Mechanisms of Cerebral Rhythmic Activities, *Electroencephalography and Clinical Neurophysiology* **76** (1990), pp. 481-508.
22. B. Rubik, The Biofield Hypothesis: Its Biophysical Basis and Role in Medicine, *The Journal of Alternative and Complementary Medicine* **8**,6 (2002), pp. 703-717.
23. D. B. Bohm, *Wholeness and the Implicate Order* (Cox & Wyman, Reading, England, 1980). Page references to Ark Paperback Edition, New York, NY, 1983.
24. K. H. Pribram, The Implicate Brain. In B. J. Hiley & F. D. Peat, Eds., *Quantum Implications: Essays in Honour of David Bohm* (Rutledge, London, England and Paul Kegan, New York, NY, 1987), pp. 365-71.
25. K. H. Pribram, *Languages of the Brain* (Brandon House, New York, NY, 1971).
26. K. H. Pribram, *Brain and Perception: Holonomy and Structure in Figural Processing* (Lawrence Erlbaum, Hillsdale, NJ, 1991).
27. J. D. Cowan, Mind as the Projection and Reception of Electroholomorphic Fields by the Brain, *Megabrain Report* **2**,2 (1993), pp. 23-30. Also presented at The First Annual

- Conference of The International Society for the Study of Subtle Energy and Energy Medicine, Boulder, CO, 1991.
28. R. Sheldrake, *The Presence of the Past: Morphic Resonance and the Habits of Nature* (Times Books, New York, NY, 1988).
 29. M. Steriade, R. Curro Dossi, D. Pare, & G. Oakson, Fast Oscillations (20-40 Hz) in Thalamocortical Systems and Their Potentiation by Mesopontine Cholinergic Nuclei in the Cat, *Proceedings of the National Academy of Sciences, USA* '88 (1991), pp. 4396-4400.
 30. R. Llinas, Is Dyslexia a Dyschronia?, *Annals of the New York Academy of Sciences* **682** (1993), pp. 48-56.
 31. R. K. Margolis, & R. U. Margolis, Nervous Tissue Proteoglycans, *Experientia* **49** (1993), pp. 429-446.
 32. W. R. Adey, The Cellular Microenvironment and Signaling Through Cell Membranes. In M. E. O'Connor & R. H. Lovely, Eds., *Electromagnetic Fields and Neurobehavioral Function* (Alan R. Liss, New York, NY, 1988), pp. 81-106.
 33. B. H. Lipton, Liquid Crystal Consciousness, *Planetary Society for Clean Energy* **5,4** (1986).
 34. A. Fraser & A. H. Frey, Electromagnetic Emission at Micron Wavelengths from Active Nerves, *Biophysical Journal* **8** (1968), pp. 731-734.
 35. A. H. Frey, Evolution and Results of Biological Research with Low-Intensity Nonionizing Radiation. In A. A. Marino, Ed., *Modern Bioelectricity* (Marcel Dekker, New York, NY, 1988), pp. 785-837.
 36. B. N. Cuffin & D. Cohen, Comparison of the Magnetoencephalogram and the Electroencephalogram, *Electroencephalography and Clinical Neurophysiology* **47** (1979), pp. 132-146.
 37. W. A. Tiller, W. E. Dibble & J. G. Fandel, *Some Science Adventures with Real Magic* (Pavior Publishing, Walnut Creek, CA, 2005).
 38. M. Kaku, *Hyperspace: A Scientific Odyssey Through Parallel Universes, Time Warps, and the 10th Dimension* (New York, NY, Oxford University Press, 1994).
 39. J. Hagelin, The Power of the Collective, *Shift: At the Frontiers of Consciousness* **15** (2007), pp. 16-20.
 40. J. C. Eccles, New Concepts on the Mind/Brain Problem, Paper presented at *The First International Conference on the Study of Consciousness Within Science* (San Francisco, February, 1990).
 41. T. Bearden, *AIDS: Biological Warfare* (Tesla, Greenville, TX, 1988).
 42. H. Stapp, *Mindful Universe: Quantum Mechanics and the Participating Observer* (In press, Springer 2006). Prior version available at <http://www-physics.lbl.gov/~stapp/stappfiles.html>
 43. W. H. R. Miltner, C. Braun, M. Arnold, H. Witte & E. Taub, Coherence of Gamma-band EEG Activity as a Basis for Associative Learning, *Nature* **397** (1999), pp. 434-436.
 44. P. B. Sederberg, M. J. Kahana, M. W. Howard, E. J. Donner & J. R. Madsen, Theta and Gamma Oscillations during Encoding Predict Subsequent Recall, *Journal of Neuroscience* **23,34** (2003), pp. 10809-10814.
 45. M. B. Sterman, EEG Oscillations and Synaptic Reorganization: A Model for the Mechanism of Learning Through Operant Conditioning, Paper presented at *The 36th Annual Meeting of the Association for Applied Psychophysiology and Biofeedback* (2006).
 46. R. L. Malenka & R. J. Nicoll, Long-Term Potentiation—A Decade of Progress? *Science* **285** (1999), pp. 1870-1874.
 47. L. Goldberg, The Possible Mediating Role of Quantum Mechanical Phenomena in

- Mind-Body Interactions, *Bridges* **16**,1 (2005), pp. 15-20.
48. B. H. Lipton, *The Biology of Belief: Unleashing the Power of Consciousness, Matter & Miracles* (Mountain of Love/Elite Books, Santa Rosa, CA, 2005).
 49. S. Hameroff, Quantum Computation in Brain Microtubules? The Penrose-Hameroff "Orch OR" Model of Consciousness, *Philosophical Transactions Royal Society London (A)* 356 (1998), pp. 1869-1896.
 50. L. McTaggart, *The Intention Experiment: Using Your Thoughts to Change Your Life and the World* (Simon and Schuster, New York, NY, 2007).
 51. R. Sheldrake, *The Sense of Being Stared At and Other Unexplained Powers of the Human Mind* (Three Rivers Press/Random House, New York, NY, 2003).
 52. D. Radin, *Entangled Minds: Extrasensory Experiments in a Quantum Reality* (Paraview/Simon and Schuster, New York, NY, 2006).

This article was published with written permission of the author, Jonathan D. Cowan, Ph.D., received October 30, 2017. Originally published in *Subtle Energies & Energy Medicine*, Vol. 17, No. 2 (2006)

Abstracts of Important Articles and Papers

Below are some abstracts of important papers related to psychotronics subjects found in the academic and professional literature. Many of these articles are still under copyright restrictions, but if you are interested in any of these articles, please write to the editor, John Reed, (joreed43@gmail.com) and he will assist you in getting a copy. Also, please remember that one of the benefits of USPA membership is your right to use the USPA Literature Research Service, whereby we will find any article, book, or other item you are seeking on any psychotronics related subject and provide it to you, if at all possible.

Gariaev, P. P., Vladychenskaya, I. P. & Leonova-Gariaeva, E. A., PCR Amplification of Phantom DNA Recorded as Potential Quantum Equivalent of Material DNA. DNA Decipher Journal. Vol. 6, No. 1 (March, 2016), pp. 1-11;

Abstract:

In this article, we describe the method and application of PCR amplification of phantom DNA recorded using modulated secondary broadband electromagnetic radiation (MBER) of LHN-303 Laser as potential equivalent of material DNA. As examples, we report two experiments applying the herein described method. We appeal to and invite other research groups to verify our method and results independently.

Davies, A. M., Weinberg, U., and Palti, Y. “Tumor Treating Fields: A New Frontier in Cancer Therapy.” Annals of the New York Academy of Sciences, vol. 1291 (July, 2013), pp 86-95;

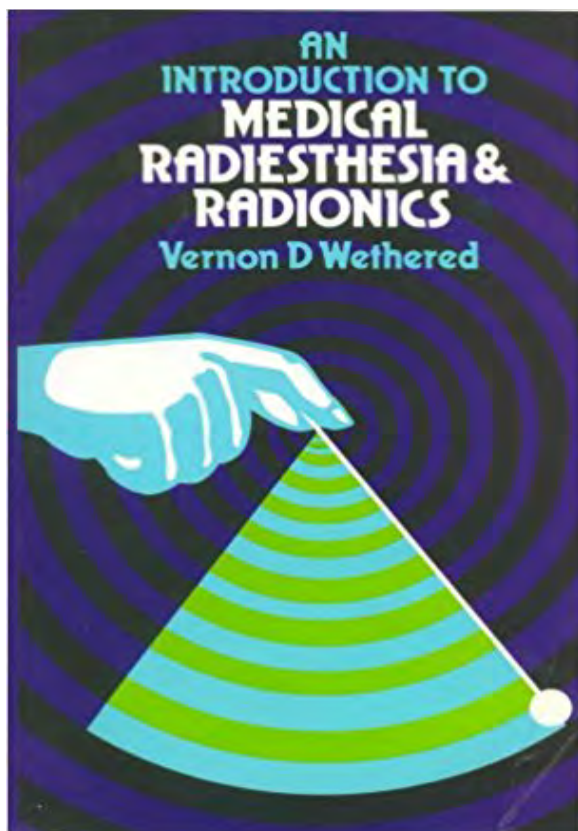
Abstract:

Tumor treating fields (TTFields) is a noninvasive, regional antimitotic treatment modality that has been approved for the treatment of recurrent glioblastoma by the U.S. FDA and has a CE mark in Europe. TTFields therapy delivers low-intensity (1–3 V/cm), intermediate-frequency (100–300 kHz), alternating electric fields to the tumor using transducer arrays placed on the skin around the region of the body containing the tumor. TTFields therapy affects metaphase, by disrupting mitotic spindle formation, and anaphase, by dielectrophoretic dislocation of intracellular constituents, resulting in apoptosis. TTFields therapy is frequency tuned to specific cancer cell types. The antimitotic effect of TTFields therapy has been demonstrated in multiple cell lines when the appropriate frequency was utilized. A phase III trial of TTFields monotherapy compared to active chemotherapy in recurrent glioblastoma patients established that TTFields therapy is associated with minimal toxicity, better quality of life, and comparable efficacy to chemotherapy. Ongoing and future trials will evaluate TTFields in newly diagnosed glioblastoma, solid tumor brain metastases, nonsmall cell lung cancer, and ovarian and pancreatic cancers.

Ellis, Wladislaw. Pulsed Subcutaneous Electrical Stimulation in Spinal Cord Injury: Preliminary Results. BioElectroMagnetics, Vol. 8, No.2 (1987), pp. 159-164.

Abstract:

The treatment of long-term, stable para- and quadriplegics with pulsed electrical stimulation for pain control resulted in, anecdotally, a significant number of these individuals showing increased motor function as well as sensory awareness. This small pilot study was conducted in order to assess the hypothesis that pulsed electrical fields can effect diseased neurological function. Thirteen para- and quadriplegic subjects with 18 months of stable neurological signs and symptoms were exposed daily to pulsed electrical stimulation for a 6-month period and assessed for any improvement in motor function or sensory perception. The hypothesis is that pulsed electromagnetic fields can normalize viable but dysfunctional neuronal structures. Results were encouraging.



An Introduction to Medical Radiesthesia & Radionics

by Vernon D. Wethered

Hardcover: 192 pages

Publisher: Random House UK (1996) (originally, 1957)

Language: English

ISBN-10: 0852071094

ISBN-13: 978-0852071090

Product Dimensions: 5.7 x 0.7 x 8.5 inches

[Available from Amazon.com](https://www.amazon.com), or freely available from the USPA lending Library (USPA membership Required)

This is a survey of radionics, including the psychological aspect of disease from the radionic point of view. It was through the late Dr. W. Guyon Richards, the first president of the Medical Society for the Study of Radiesthesia that Wethered came into contact with a therapy utilizing a radiesthetic technique. This involved diagnostic testing with an instrument based on the Albert Abrams method. Treatment consisted for the most part of administration of homeopathic remedies selected through a precise system of tuning. At the start of World War II, Dr. Richards gave up using his rather elaborate system, and employed the pendulum for carrying on his work.

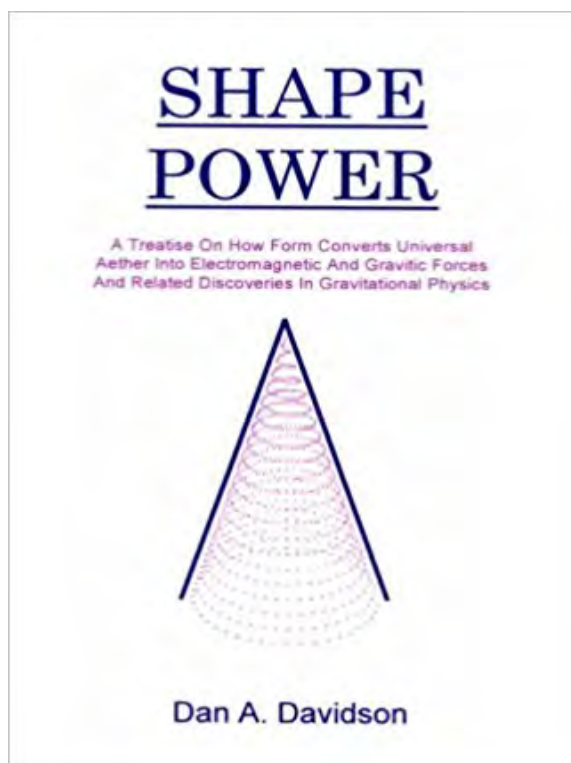
It was at this time that Vernon Wethered began studying the pendulum, and by degrees, he developed his own technique described in detail in this book. Following a close study of radionics, he discovered a simple method of utilizing a radionic diagnostic instrument in conjunction with his technique, whereby the field of investigation for both diagnosis and treatment is greatly extended.

This book deals with Wethered's later researches, including the possibility of aluminum poisoning being one of the primary factors in some diseases that are common today. And he describes radiesthetic techniques for diagnosis and treatment affording excellent precision in the assessing the function of organs, the severity of disease, and the determination of proper treatment. In addition, Wethered deals fully with the psychological aspects of disease from the radionic point of view.

(Extracted and edited from the book jacket;) The TOC is shown on the next page.

CONTENTS

		<i>page</i>
Foreword		9
Prefaces		10
Chapter 1	The Meaning of Radiesthesia	18
2	Simple Pendulum Tests	17
3	Reichenbach and Baines	26
4	Polarity	34
5	Homoeopathy	45
6	Energy Content of Homoeopathic Remedies	56
7	The Preliminaries of Case-Taking	63
8	Radionic Instruments	74
9	Broadcast Treatment	82
10	Treatment	90
11	Testing for 'Deficiencies'	110
12	Further Notes on Treatment	115
13	Psychism in Radiesthesia	127
14	Harmful Earth Radiations	133
15	New Aspects of Physiology	141
16	Radiesthesia and Orthodox Medicine	149
17	Practitioner and Patient	155
18	Psychology and Radiesthesia	162
19	The True Meaning of Health	166
20	A Summing-Up	178
	Index	183



SHAPE POWER. A Treatise on How Form Converts Universal Aether into Electromagnetic and Gravity Forces and Related Discoveries in Gravitational Physics.

By Dan A. Davidson

Paperback: 154 pages

Publisher: Rivas Pub (June 1, 1997)

Language: English

ISBN-10: 0962632155

ISBN-13: 978-0962632150

Package Dimensions: 8.9 x 5.9 x 0.5 inches;

[Available from Amazon.com](https://www.amazon.com/dp/0962632155) (The lowest price on Amazon is \$90.00 for a used copy and

\$174.00 for new copies. These are outrageous prices, but fortunately, USPA has a copy that it will be able to lend to members.)

This excellent book is the result of 35 years of personally funded research by Dan Davidson into finding how shapes and different materials convert universal aether into other forces and energies. Dan has broken the code on how the process works; how nature manifests from the virtual particle soup of the aether into matter. Dan has also defined a unified field theory which puts all this into perspective, complete with the mathematical physics and a morphology of atomic structure. He defines the embryonic basis for a new branch of physics and chemistry. The implications of the breakthrough discoveries elucidated in this book have far reaching implications in every area of our lives.

The very detailed Table of Contents of this book is on the following pages:

TABLE OF CONTENTS

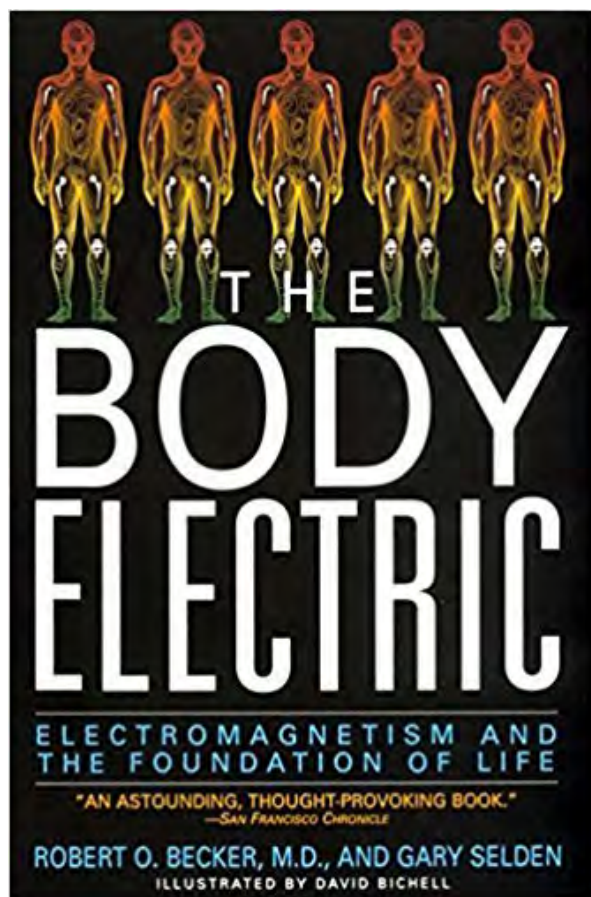
Preface xi Introduction xvii

1.	AETHERIC PHYSICS OF SHAPE POWER	1
1.1	The Aether	1
1.1.1	Historical Terms For Aether	2
1.1.2	Aether And Its Conversions.....	3
1.1.3	Characterization Of The Aether	3
1.2	Nuclear Physics	3
1.2.1	Charge, Electrons, And Nuclear Particles	4
1.2.2	Atomic Structure	4
1.2.3	Magnetism.....	5
1.2.4	Gravity	6
1.3	Engineering The Aether	7
1.4	Shape Power And Aetheric Stress Waves.....	8
1.4.1	Shape Power Of A Point	8
1.4.2	Shape Power Of A Line	9
1.4.3	Shape Power Of Two Parallel Lines	10
1.4.4	Shape Power Of Two Intersecting Lines	11
1.4.5	Shape Power Of Multiple Intersecting Lines.....	12
1.4.6	Shape Power Of A Triangle	14
1.4.7	Shape Power Of A Tetrahedron	15
1.4.8	Shape Power Of A 12 Pointed Tesseract.....	16
1.4.9	Shape Power Of A Circle	17
1.4.10	Symbol From Mary.....	18
1.5	Natural Energy Flows	19
1.5.1	Energy Of Spiral	19
1.5.2	Modified Triangle Energy Flow	21
1.5.3	Planar Shape Power Lens.....	21
1.5.4	Why Drawn Lines Cause Aetheric Disturbance.....	22
1.5.5	Shape Power Symbol Combining	23
1.5.6	More Planar Pattern Energy Observations	23
1.6	Blocking Energy Using Rule Of Four.....	24
1.7	Summary Of Shape Power Physics.....	25
1.8	Bibliography.....	27
2.	BACKGROUND HISTORY OF SHAPE POWER	29
2.1	Shape Power History.....	29
2.2	John Ernst Worrel Keely	31

2.2.1	Brief History of Keely	31
2.2.2	Keely's Discoveries	32
2.2.3	Verification Of Keely's Discoveries	33
2.2.3.1	Duplication Of Water Aetherialization	34
2.2.3.2	Physics Of Aetherealization	35
2.2.3.3	Levitation Of 4 Ton Iron Sphere:	36
2.2.4	Summary Of Keely's Research	36
2.3	Orgone Energy	37
2.3.1	Brief History Of Wilhelm Reich	37
2.3.2	Introduction To Orgone Energy	38
2.3.3	The Oraccu	38
2.3.4	Constructive Biological Effects Of Orgone Energy	40
2.3.5	Shape Power And Orgone Energy	40
2.3.6	Dangerous Orgone (Dor) Energy	41
2.3.7	Summary Of Orgone Energy	41
2.4	Implosion Physics	41
2.4.1	Brief History Of Viktor Schauberger	42
2.5	Summary Of Implosion Physics	45
2.6	Bibliography	46
3.	EARTH ENERGIES	47
3.1	Earth Energies	47
3.2	Ley-Lines	47
3.3	Energy Grids	48
3.4	Ancient Shape Power Use Of Earth Energies	50
3.5	Earth Energy Experience	51
3.5.1	Initial Tests With Clairvoyants	51
3.5.2	Substance Transmissibility Tests To Green Energy	52
3.5.3	Earth's Aetheric Energy Grid	54
3.6	Pranayama, Chi Gung And Tai Chi Exercises	54
3.7	Feng-Shui, The Chinese Method Of Chi Control	55
3.8	Summary Of Earth Energies	55
3.9	Bibliography	56
4.	PYRAMID ENERGY	57
4.1	Introduction To The Pyramid	57
4.2	Great Pyramid Was Not A Tomb	59
4.3	Mathematical Relationship Of The Great Pyramid	59
4.4	Pyramid Energy	60
4.5	Pyramid Energy Research Summary	60
4.6	Copper Pyramids Experiment	62
4.7	Electrostatic Power Generation	63
4.7.1	Les Brown's Shocking Experience	63
4.7.2	Spiral Energy Off Apex Of Pyramid	64
4.7.3	Electrostatic Energy At The Great Pyramid	65
4.7.4	Static Pyramid Electrostatic Power Generation	66
4.8	Theory Of How Pyramid Spiral Energy Is Created	66

4.8.1	Intersecting Lines	67
4.8.2	Concentrated Forces	67
4.8.3	Dessication Effects	67
4.8.4	Magnetic Orientation	68
4.8.5	Magnetic Generation	69
4.9	Summary Of Pyramid Energy	70
4.10	Bibliography.....	71
5	SHAPE POWER AND "SACRED GEOMETRY"	73
5.1	Sacred Geometry.....	73
5.2	Geometrical Figures Of Sacred Geometry	74
5.2.1	A Point.....	74
5.2.2	A Circle	75
5.2.3	A Sphere	75
5.2.4	Platonic Solids	75
5.3	The Mathematics Of Sacred Geometry	77
5.3.1	Pi.....	77
5.3.2	The Golden Mean (Phi)	78
5.3.3	Perfect Right Triangles	78
5.4	Shape Power And Sacred Geometry	79
5.5	Shape Power, Sacred Geometry, And Consciousness	79
5.6	Summary Of Shape Power, Sacred Geometry	80
5.7	Bibliography.....	82
6.	SHAPE POWER FROM CRYSTALS	83
6.1	Introduction.....	83
6.2	Crystalline Structure And Shape Power	84
6.3	Atomic Crystallography.....	84
6.3.1	Platonic Solids.....	84
6.3.2	Crystalline Structures	85
6.3.3	Lattices As Shape Power Energy Containers	85
6.3.4	Crystals As Aetheric Energy Healing Tools.....	85
6.4	Macro Crystallography	86
6.4.1	Macro Lattice Structures	86
6.5	Summary Of Crystals As Shape Power Collectors	87
6.6	Bibliography.....	88
7	EXPERIMENTAL RESEARCH ON SHAPE POWER ENERGIES.....	89
7.1	Gravity Energy Detectors	89
7.1.1	Detection Of Gravity Stress Using Dielectrics	89
7.1.2	The Do Nothing Coil.....	92
7.1.3	The Physics Of Aetheric Stress (I.E., Gravity Flow) Detectors.....	93
7.2	Joe Parr Pyramid Energy Bubble Discovery	94
7.2.1	Shape As An Energy Sensor.....	94
7.2.2	Dynamic Pyramid Es Generation	95
7.2.3	Joe Parr Gravity Wheel Experiments	98

7.2.4	Force Fields Of The Gravity Wheel Experiment	100
7.3	Duplication Of Gravity Wheel Experiments	101
7.3.1	Gravity Wheel Experimtal Setup And Results	101
7.4	Astronomical Corellations With Great Pyramid	104
7.4.1	The Taurus/Pleiades Connection	104
7.4.2	The Orion Connection	106
7.5	Clairvoyant & Dowser Examination Of Joe Parr Experiment	08
7.6	Aluminum Pyramids And Jp Energy Observations.....	108
7.7	Critical Parameters Of The Pyramid Gravity Experiments...	109
7.8	Summary Of Experimental Effects Of Shape Power	110
7.9	Bibliography.....	111
8.	NUCLEAR STRUCTURE - BASIS OF SHAPE POWER	113
8.1	Introduction	113
8.2	The Torroidal Electron	115
8.2.1	Physics Of The Torroidal Electron	120
8.3	Atomic Structure.....	126
8.4	Magnetism	128
8.4.1	Gravity.....	128
8.5	Summary Of Nuclear Structure	130
8.6	Bibliography.....	131
9.	EGYPT RESEARCH EXPEDITION	133
9.1	1997 Shape Power Research Expedition To Egypt.....	133
9.2	Egyptian Expedition Overview	133
9.3	Sonic Creation Of The Pyramid Force Fields	134
9.3.1	Acoustic Analysis Of The King's Chamber	134
9.3.2	Finding The Pyramid Forcefield Frequency.....	134
9.3.3	Interstellar Beacon	135
9.4	Magnetic Field Measurements At The Great Pyramid	136
9.5	Evidence For Advanced Technology In Ancient Egypt	137
Appendix A. SACRED ENERGY MOVEMENTS.....		141
Appendix B. TRUNCATED TABLE OF NUCLIDE DATA		147



**The Body Electric:
Electromagnetism And The
Foundation Of Life, 1st Edition**

**by Robert Becker, M.D., and Gary
Selden**

Paperback: 368 pages

Publisher: William Morrow Paperbacks; 1
edition (July 22, 1998)

Language: English

ISBN-10: 0688069711

ISBN-13: 978-0688069711

Product Dimensions: 6.5 x 0.9 x 9.2 inches

[Available from Amazon.com](https://www.amazon.com/dp/0688069711) or free
lending from the USPA Library (USPA
Membership required)

The Body Electric tells the fascinating story of our bioelectric selves. Robert O. Becker, a pioneer in the field of regeneration and its relationship to electrical currents in living things, challenges the established mechanistic understanding of the body. He found clues to the healing process in the long-discarded theory that electricity is vital to life. But as exciting as Becker's discoveries are, pointing to the day when human limbs, spinal cords, and organs may be regenerated after they have been damaged, equally fascinating is the story of Becker's struggle to do such original work. The Body Electric explores new pathways in our understanding of evolution, acupuncture, psychic phenomena, and healing.

Contents

Acknowledgments	7
Co-author's Note	9
Introduction: <i>The Promise of the Art</i>	17
Part 1 <i>Growth and Regrowth</i>	23
1 <i>Hydra's Heads and Medusa's Blood</i>	25
Failed Healing in Bone	29
A Fable Made Fact	32
2 <i>The Embryo at the Wound</i>	40
Mechanics of Growth	42
Control Problems	47
Nerve Connections	55
Vital Electricity	60
3 <i>The Sign of the Miracle</i>	68
The Tribunal	69
The Reversals	71
Part 2 <i>The Stimulating Current</i>	77
4 <i>Life's Potentials</i>	79
Unpopular Science	82

	Undercurrents in Neurology	85
	Conducting in a New Mode	91
	Testing the Concept	94
5	<i>The Circuit of Awareness</i>	103
	Closing the Circle	103
	The Artifact Man and a Friend in Deed	106
	The Electromagnetic Brain	110
6	<i>The Ticklish Gene</i>	118
	The Pillars of the Temple	118
	The Inner Electronics of Bone	126
	A Surprise in the Blood	135
	Do-It-Yourself Dedifferentiation	141
	The Genetic Key	144
7	<i>Good News for Mammals</i>	150
	A First Step with a Rat Leg	152
	Childhood Powers, Adult Prospects	155
Part 3	<i>Our Hidden Healing Energy</i>	161
8	<i>The Silver Wand</i>	163
	Minus for Growth, Plus for Infection	163
	Positive Surprises	169
	The Fracture Market	175
9	<i>The Organ Tree</i>	181
	Cartilage	187
	Skull Bones	188
	Eyes	190
	Muscle	191
	Abdominal Organs	192
10	<i>The Lazarus Heart</i>	196
	The Five-Alarm Blastema	197
11	<i>The Self-Mending Net</i>	203
	Peripheral Nerves	206
	The Spinal Cord	207
	The Brain	213
12	<i>Righting a Wrong Turn</i>	215
	A Reintegrative Approach	219
Part 4	<i>The Essence of Life</i>	227
13	<i>The Missing Chapter</i>	229
	The Constellation of the Body	233
	Unifying Pathways	238

14	<i>Breathing with the Earth</i>	243
	The Attractions of Home	250
	The Face of the Deep	255
	Crossroads of Evolution	261
	Hearing Without Ears	264
15	<i>Maxwell's Silver Hammer</i>	271
	Subliminal Stress	276
	Power Versus People	278
	Fatal Locations	284
	The Central Nervous System	284
	The Endocrine, Metabolic, and Cardiovascular Systems	288
	Growth Systems and Immune Response	292
	Conflicting Standards	304
	Invisible Warfare	317
	Critical Connections	326
	Postscript: <i>Political Science</i>	330
	Glossary	348
	Index	353

USPA Generous Donor Recognition Page

The USPA would like to give special recognition on a continuing basis to people making generous donations to the United States Psychotronics Association. To do this, we are creating this special “USPA Generous Donors Recognition Page” that will be carried in each issue of the **USPA Journal & Newsletter**, beginning with the December, 2016, issue and going forward. New names will be added as other generous donations are received.

**We wish to recognize the following individuals for their generosity:
(in alphabetical order)**

Mary Hardy

Michael Leger, ([Homeodynamics, LLC](#))

John H. Reed

Arnold Reinhold

Eric Rowley

The USP wishes to extend our thanks and gratitude for their generosity.

To make a tax deductibe donation to the United States Psychotronics Association (USPA) online, please go to the [USPA home page and scroll down to the “Donations” tab](#), where you can make a donation using your credit or debit card. **For those who wish to make a donation by check**, please make your check payable to USPA and mail it to the **USPA treasurer, Scott Beutlich, 525 Juanita Vista, Crystal Lake, IL 60014.**

USPA Periodicals Library Update

In order to do good psychotronics research of any kind, whether it involves radionics, radiesthesia, psionic medicine, dowsing, subtle energies, biophotons, or any other subject covered by psychotronics, one needs access to as much of the periodical literature as possible on these subjects.

To address this issue, the United States Psychotronics Association has resolved to identify and acquire every psychotronics related periodical that has ever been published anywhere in the world, and to retain copies in the USPA Library.

As a first step, we have developed the following list of periodicals that focused on or frequently had articles on psychotronics related subjects. But this is only a preliminary list, and we know that there are probably more psychotronics periodicals that have been published, but that we do not yet know about.

So please look over the following list and check your own personal physical libraries and your computers to see if you have any issues of the periodicals on this list. Even if you just have one issue, please let us know, because that may be the one we need to complete all the issues of a particular periodical. **Please write to me (John) at: joreed43@gmail.com, since I am the USPA librarian and archivist coordinating this effort,** and tell me what periodicals you have.

As a whole, the members of USPA have a huge “library” of periodicals, but it just happens to be “distributed” among its members at this point in time. However, we can work together, and if you would be willing to loan, donate, xerox, or as a last resort, sell copies of your periodicals for the USPA Library, then we will be able to build a large centralized library of all psychotronics periodicals. And all USPA members will then be able to use these periodicals in their research or for their reading enjoyment.

American Journal of Electromedicine: Daniel Kirsch Ph.D., developer of Alpha-Stim Craniotherapy Electrical Stimulation (CES) was the first editor; **The USPA Library needs all issues.**

American Radio Therapy Society Journal: This was a periodical published in Hollywood, California, by the American Radio Therapy Society, which had been founded by Dr. Ruth Drown in 1949. This periodical began with vol. 1, no. 1 in June, 1949, and continued to be published for a period of time. However, it is not known when it ceased publication or how many issues were published, but presumably it ceased sometime before Dr. Drown's death in 1963. This journal focused on radionics psychotronics subjects, and had no interest in ionizing radiation therapies, such as x-ray therapy, which were also known as "radio therapy" at that time. The only library in the world that has copies of this periodical is the National Library of Medicine in Bethesda, Maryland. **The USPA Library needs all issues of this periodical.**

BEMI Currents: BEMI Currents was a quarterly journal published by the Bio-Electro-Magnetics Institute in Reno, Nevada, from 1989-1993. The editor was Dr. John Zimmerman. This journal began with vol. 1, no. 1 (Spring, 1989) and continued through Vol. 3, no. 4 (March, 1993), after which it ceased publication. **A total of 12 issues were published, and the USPA Library has all 12 issues in its collection.**

Bioeffects Newsletter: This was a periodical that was published by the "Physiology Program", Office of Naval Research, in Arlington, Virginia, and focused on the biological effects of electromagnetic fields. It probably began sometime in the 1977, because it is known that Issue #5 was dated April, 1978. The Bioeffects Newsletter is believed to have ceased publication when the Bioelectromagnetics Society (BEMS) was formed in 1978, because it was edited by Thomas Rozzell, who served as the editor of the BEMS Newsletter for the Bioelectromagnetics Society. This periodical is not found in any library of the world, but is undoubtedly in a number of private collections. **The USPA Library needs all issues of this periodical.**

Bioelectric Medicine: Journal founded in 2014, Kevin Tracey, M.D., President of the Feinstein Institute for Medical Research, which has established a Center for Bioelectronic Medicine; **The USPA Library needs all issues.**

BioElectroMagnetics: Published by John Wiley and Sons from Vol. 1, No. 1 (1980) to present. It is the **Journal of the Bioelectromagnetics Society**. We need all issues. All articles are freely available online at Johns Hopkins, back to 1980; **The USPA Library needs all issues.**

Bridges: This was the newsmagazine of the International Society for the Study of Subtle Energies & Energy Medicine (ISSSEEM) from 1990 through the present. **The USPA Library has a complete set of this periodical from vol. 1, no 1 (Spring, 1990) through the present.**

British Journal of Radiesthesia and Radionics. Published by the British Radiesthesia Association, 1953-1963. The original title was British Journal of Radiesthesia. **The USPA Library needs all issues.**

DeLaWarr Laboratories Newsletter: published by George and Marjorie DeLaWarr, and later their daughter Diana Di Pinto, from 1964-1986. **The USPA Library has a complete set of these, unless you know of any issues published after 1986.**

Dowsing Today: The journal of the British Society of Dowsters, published from 2000 to the present. Original title was Radio Perception, which began in 1933. **The USPA Library needs all issues.**

Earthpulse Flashpoints: This periodical was edited by Dr. Nick Begich and published by Earthpulse Press, Inc. In Anchorage Alaska. It focused on such subjects as Patrick Flanagan's neurophone, biohazards of ELF, living cells as electromagnetic units, and other psychotronic related subjects. It began with Series (Volume) 1, no. 1 in 1996, and continued until at least 1999, when the last known issue, Series 2, no. 3, was published.

Only one library in the world has this periodical in its collection, the UAA/APU Consortium Library in Anchorage, Alaska. **The USPA Library needs all issues of this periodical.**

Electro and Magnetobiology: Published by Taylor and Francis from 1993-2002. Title was changed to Electromagnetic Biology and Medicine. **The USPA Library needs all issues.**

Electromagnetic Biology and Medicine: Published by Taylor and Francis from 2003-present. Former editor, Dr. Abe Liboff; **The USPA Library needs all issues.**

Electronic Medical Digest: published in San Francisco, California, by the College of Electronic Medicine, and then the Electronic Medical Foundation from 1946 - 1955, edited by Fred J. Hart. **The USPA Library needs all issues.**

Electrus Newsletter: This periodical was published by the American Institute of Archives located in Keene, Texas, in the early 1990s. It was edited by Mark Simposi, author of the book, The Rife Way III, and focused on Royal R. Rife research and bioelectromagnetics. It began with Issue #1 (August, 1990) and published at least two issues, with the second being Issue # 2 (November, 1990). However, it is not known if any other issues were ever published. According to WorldCat, it is not held by any library in the world. **The USPA Library needs all issues of this periodical.**

Energy & Character - Journal of Bioenergetic Research: This was a periodical published by Abbotsbury Publications, Dorset, England, UK, and focused on psychotronic related subjects, especially orgone energy and Wilhelm Reich's research. It began with vol. 1, no. 1 (January, 1970), and continued publishing 3 times per year for 38 years, but ceased publication with volume 37 in 2009. **The USPA Library needs all issues of this periodical.**

Experimental Special Data Bulletin: This was a monthly periodical published in Kansas City, Missouri, by the Radiation Laboratories, Inc., headed by T. Galen Hieronymus. It began with Vol. 1, No. 1 (January, 1948) and continued through at least Vol. 2, No. 7 (July, 1949), but it is uncertain if any issues were published after that date. **The USPA Library needs all issues of this periodical.**

Extension Bulletin, Electronic Medical Foundation: This was a series of bulletins published by the Electronic Medical Foundation of San Francisco, beginning in 1950. Thomas Colson was the editor, and at least three issues were published. It is not known if additional issues were published. **The USPA Library needs all issues.**

Information Service Newsletter: This was a quarterly periodical published in Oxford, England, by the Delawarr Laboratories, Ltd., and the Radionic-Magnetic Centre Organisation. It focused on radionics, subtle energies, and related subjects. This periodical began with Vol. 1, No. 1 (Spring, 1973) and continued through at least the Winter, 1980, issue, but it is uncertain if any issues were published after that date. **The USPA Library needs all issues of this periodical.** No libraries in the world have this periodical in their collections. If any readers happen to have copies of this periodical in their personal library, it would be greatly appreciated if you would xerox these issues

and send them to the USPA Library. Please write to the editor (John Reed) ahead of time if you are willing to help: joreed43@gmail.com;

Interdimensional News: This periodical was edited by Peter Kelly, who founded what is now [Kelly Research Technologies \(KRT\)](#), and published by Interdimensional Sciences, Inc., in Lakemont, Georgia. It focused on radionics, energy medicine, effects of EM waves and fields, and other psychotronic related subjects. It began with Volume 1, no. 1 (Fall, 1983) and continued on until the final issue, Volume 3, no. 3 (May-June, 1986). **Through the generous donation of Ed Kelly, USPA Board member, and current CEO of Kelly Research Technologies (KRT), the USPA Library has a complete set of this periodical.**

Journal of Advanced Therapeutics: Published in New York, New York, by the American Electrotherapeutic Association. It began with Vol. 20, no. 1 (January, 1902), and continued to be published under this title through Vol. 33, no. 10 (December, 1915), when the title was changed to the American Journal of Electroherapeutics and Radiology. Editorship continued under William B. Snow, M.D., and journal numbering was also retained under the new title. The prior title of this journal had been Journal of Electrotherapeutics; **The USPA Library needs all issues of this periodical;**

Journal of Bioelectricity: Published by Taylor and Francis from 1982-1992. Title was changed to Electro and Magnetobiology. **The USPA Library needs all issues.**

Journal of Bioenergetic Research (JBR): This periodical was being published by the Royal Rife Research Society (RRRS) in Carlsbad, California, in the early 1990's. It is not known for certain when the JBR began publishing, but is believed to be in 1992, since vol. 1, no. 3 was for November, 1992. By 1995, it was no longer being published, and in correspondence by John H. Reed with the RRRS in August, 1995, the RRRS stated that no back issues were available. **The USPA Library needs all issues of this periodical.**

Journal of Electroceutical Medicine: founded by Richard Markoll, MD, PhD, Port d'Andratx (Majorca), Balearic Islands, Spain; **The USPA Library needs all issues.**

Journal of Electronic Medicine (Kirksville, Missouri): This was a periodical that was published by the Kirksville, Missouri, McManis Branch of Albert Abrams' College of Electronic Medicine, which was headquartered in San Francisco, California. This very rare journal focused on Albert Abrams' radionic methods of diagnosis and treatment, as well, as other energy and electronic methods of medical treatment. It began with Vol. 1, No. 1, probably in January, 1923, because it is known for certain that Vol. 1, No. 5 was dated May, 1923. This periodical ceased publication later in 1923, when the McManis Branch was closed, and it is not known whether there were any other issues published after issue No. 5. This journal is not listed in Worldcat as being held by any library in the world, but a single issue was recently discovered by John Reed and Daniel Taylor in the archives of the Museum of Osteopathic Medicine at A.T. Still University in Kirksville, Missouri. **The USPA Library has issue Vol. 1, No. 5, but needs issues Vol. 1 No. 1, 2, 3, and 4, as well as, any issues of this periodical that may have been published after No. 5 in 1923.**

Journal of Electronic Medicine (San Francisco, California): This was a continuation of Physico-Clinical Medicine, and ran from 1939-1945, published by Fred J. Hart and the College of Electronic Medicine. **The USPA Library needs all issues.**

Journal of Electrotherapeutics: Published in NY, New York, by the American Electrotherapeutic Association. It began with Vol. 1, no. 1 in 1883, and continued to be published under this title through Vol. 19, no. 12 (December, 1901), when the title was changed to the Journal of Advanced Therapeutics (see following title). Editorship continued under William B. Snow, M.D., and journal numbering was also retained under the new title. **The USPA Library needs all issues of this periodical;**

Journal of Paraphysics/International Journal of Paraphysics: Benson Herbert started his Paraphysical Laboratory in Downton, Wiltshire, England and began publishing the Journal of Paraphysics with vol.1, no.1 in 1967, and the name was later changed to International Journal of Paraphysics . Herbert published the Journal from 1967 until around 1989, with the last volume being vol. 23 in that year. Since the Journal and Lab were mostly the project of Herbert, they fell apart as his health failed and have become defunct. **The USPA Library needs all issues of this periodical.**

Journal of the American Electronic Research Association: Vol 1, No. 1 (January, 1924) through Vol. 13, No. ??? (1936), when it ceased publication; The USPA Library needs all issues.

Journal of the Bioelectromagnetics Society: see BioElectroMagnetics, above;

Journal of the British Society of Dowsters: Published by the British Society of Dowsters from 1956-2000. Prior title was **Radio Perception**. Succeeding title: **Dowsing Today**. **The USPA Library needs all issues.**

Journal of the United States Psychotronics Association. Published by the United States Psychotronics Association. Only six issues were published, and **the USPA Library has a complete set.**

JPI News: This periodical was being published by the Japan Psychotronics Institute in Tsukuba-shi Ibaraki, Japan, in the 1990's. It is known that there was a September, 1993, issue of this periodical, but it is not known when it was first published, or if it is still being published. **The USPA Library needs all issues of this periodical.**

Little Farm Journal: This periodical was published by Lutie Larsen and Little Farm Research in Pleasant Grove, Utah, and focused on agricultural radionics and related subjects. It began sometime before the first issue of The Radionic Homestead Report, which was published in May, 1988, because that issue referred to the Little Farm Journal. It is not known when it began publishing, how many issues were published, or when it ceased publication. This periodical is not found in any library of the world, but is undoubtedly in a number of private individuals' collections. **The USPA Library needs all issues of this periodical.**

Mind and Matter: published by George DeLaWarr of the DeLawarr Laboratories in Oxford, England from 1957-1967. **The USPA Library has a complete set of these very rare journals.**

NeuroQuantology: (ISSN: 1303-5150) This is a quarterly peer-reviewed journal published in Bornova, Turkey, by Suktan Tarlaci, M.D., a Turkish physician. It is published in English and focuses physical and quantum explanations for consciousness, psychic phenomena, entanglement, non-locality, mind-matter interaction, and related subjects. It began with Vol. 1, No. 1 in 2003 and has continued to be published through the present, with Vol. 15, No. 2 being published in 2017.

The USPA Library needs all issues of this periodical. Many issues are freely available to readers at:

<https://www.neuroquantology.com/index.php/journal/issue/archive>

Newsletter of the Institute of Psionic Medicine. Published by the Institute of Psionic Medicine only from 1978-1979. **The USPA Library needs all issues.**

Newsheet of the Psionic Medical Society. Published by the Psionic Medical Society in the England only from 1975-1977. **The USPA Library needs all issues.**

New Zealand Society of Dowsing & Radionics Journal. Published by the New Zealand Society of Dowsing & Radionics from 1988-present. **The USPA Library needs all issues.**

Pathometric Journal (Sometimes called the Pathoclast Journal): This was a periodical published in Chicago, Illinois, by the Universal Society of Pathometrists. It focused on issues related to the Pathoclast instrument, radionics, psychotronics, and related subjects. This periodical began with Vol. 1, No. 1 in 1929 and continued through at least Vol. 18, No. 3 (April, 1946), but it is uncertain if any issues were published after that date. In the late 1930s and early 1940s, it was called "Journal of the Universal Society of Pathometrists". **The USPA Library needs all issues of this periodical.** No known libraries in the world have this periodical in their collections. If any readers happen to have issues of this periodical, it would be greatly appreciated if you would xerox these issues and send them to the USPA Library. Please write to the editor (John Reed) ahead of time if you are willing to help: joreed43@gmail.com;

Physico-Clinical Medicine: This journal was started in 1916 by the father of radionics, Dr. Albert Abrams, and continued to be published up through 1938, by Fred J. Hart, who took over the College of Electronic Medicine after Abrams died in 1924. **The USPA has all issues of this periodical, the only complete collection in the world.** The name was changed in 1939 to Journal of Electronic Medicine.

Psionic Medicine (ISSN: 0033-2585). This was a periodical published in Hindhead, Surrey, England, by the Psionic Medical Society. It was originally edited by Dr. Aubrey Westlake, and focused on psionic medicine, and related subjects. This periodical began with Vol. 1, No. 1 (Winter, 1969) and continued through at least Vol. 16, (2000), but it is uncertain if any issues were published after that date. The USPA Library needs most issues of this periodical. Only one library in the world has this periodical in its collection: The British Library, London, England. If any readers live near this library, it would be greatly appreciated if you would xerox these issues and send them to the USPA Library.

Please write to the editor (John Reed) ahead of time if you are willing to help:
joreed43@gmail.com;

Psychic Research Newsletter (Marcel Vogel): Volume 1, No. 1 (May-June, 1984) through Vol. 5, No. 4 (July-August, 1988) This is the periodical that Marcel Vogel published in the 1980's as part of his research organization, Psychic Research, Inc. in San Jose, California. The title of the periodical is really a misnomer, as is the name of his research organization, because the periodical deals almost exclusively with Vogel's and other's research on crystals and their use in healing, and very little with psychic matters. **The USPA Library has all known issues.**

Psychoenergetic Systems : This periodical was published by Gordon & Breach Science Publications in New York City, and focused on psychotronic related subjects. It began with vol. 1, no. 1 in December, 1974, and continued with this title until 1981, when the title was changed to "**Psychoenergetics**" (ISSN: 0278-6060) with the April, 1981, issue. It then continued under this title until 1988, when the title was again changed to "**Theoretical Parapsychology**" (ISSN: 0894-2528). However, only one issue (vol. 6, no. 1) was ever published under this title, after which it ceased publication. **The USPA Library needs all issues of this periodical.**

Psychotronik: This periodical was published in Innsbruck, Austria, and focused on radionics and psychotronics related subjects. It began with Vol. 1, No. 1 in 1977, but ceased with Vol. 3 in 1979. **The USPA Library needs all issues of this periodical.**

Quantum Medicine: This periodical was published by the Association of Eclectic Physicians in Savannah, Georgia, and focused on quantum related treatments of medical disorders. It began with vol. 1, no. 1 in 1988, but only a few issues were ever published before it went out of business. **The USPA Library needs all issues of this periodical.**

Radiesthesia. Published by the Dowser's Club of South Australia, and began in 1992. **The USPA Library needs all issues.**

Radio Perception. This was the original title of the Journal of the British Society of Dowsters, which began in 1933 and was published under that name until around 1956, when its name was changed to the Journal of the British Society of Dowsters, and continues today under the name, Dowsing Today. **The USPA Library needs all issues.**

Radionic - Magnetic Centre Newsletter: This was a quarterly periodical published in Oxford, England, headed by the Radionic-Magnetic Centre Organization, also known as the Radionic Centre Organization. It focused on radionics, subtle energies and related subjects This periodical began with Vol. 1, No. 1 (Autumn, 1967) and continued through at least Winter, 1978, but it is uncertain if any issues were published after that date. **The USPA Library needs all issues of this periodical.** Only one library in the world has this periodical in its collection: The British Library. If any readers live near this library, it would be greatly appreciated if you would xerox these issues and send them to the USPA Library. Please write to the editor (John Reed) ahead of time if you are willing to help: joreed43@gmail.com;

Radionics Journal: Published by the Radionics Association in England from 1954 through the present. **The USPA Library has a complete set of these from Vol. 1, no. 1 (1954), through 2005, but needs all issues published after 2005.**

Radionics Network Newsletter: Vol. 1, No. 1 (January-February, 1993); Last Known issue: Vol. 4, No. 6 (November-December, 1996); Published by the Radionics Network, New South Wales, Australia; **The USPA Library has Vol.1, No.1 (Jan.-Feb., 1993) through Vol.5, No.1 (Jan.-Feb., 1997), but needs all issues published since then.**

Radionik Newsletter: This periodical is published by the German School of Radionics (GSR), an organization founded by Claudio Romanazzi in Germany in 1994. It is a monthly, and began with issue No. 1 in 2006, and has been published continuously since then. **The USPA Library needs all issues of this periodical.**

Resonance: Newsletter of the Bioelectromagnetics Special Interest Group (BEM SIG) of American Mensa during the 1980s and 1990s. **The USPA Library has a complete set of this rare periodical;**

Subtle Energies: (ISSN: 1084-2209) This was the original title of the periodical, **Subtle Energies and Energy Medicine**, when it began publishing in 1990. The title was changed to Subtle Energies and Energy Medicine in 1996.

Subtle Energies and Energy Medicine: Published by the International Society for the Study of Subtle Energies and Energy Medicine (ISSSEEM) from 1990 through the present, with some interruptions. **The USPA Library needs most of the issues of this periodical;**

The Radiant News: Vol. 1, Issue 0 [zero] (March, 2001) through Vol. 1, No. 12 (May, 2002), after which it ceased publication. Published by Peter Lindemann of Clear Tech, Inc. **The USPA Library has all 13 issues.**

The Radionic Homestead Report: This periodical was a periodical published by Lutie Larsen and Little Farm Research in Pleasant Grove, Utah. It began with the first issue being May, 1988. It is not known how many issues were published, or when it ceased publication. **The USPA Library needs all issues, except the first issue (May, 1988) and vol. 3, no. 4 (August-September, 1990), which are the only two issues in the USPA Library.**

USPA Newsletter: Published by the United States Psychotronic Association from 1977 through present. **The USPA Library needs most of these issues.**

Visible Spectrum Researcher: This was a periodical published by the Visible Spectrum Research Institute in Malaga, New Jersey, USA. It was edited by Dinshah P. Ghadiali and was published monthly, focusing on color and light therapy. It began with vol. 1, no. 1 (January, 1955), and published issues through at least vol. 3, no. 1 (January, 1957). It is not known if any issues were published beyond that date. **The USPA Library needs all issues of this periodical.**

Zeitschrift fuer Radiaesthesie und Harmoniefindung (Journal of Radiesthesia and Harmonization) (ISSN: 2191-0103) This journal is published in Munich, Germany by

Herald-Verlag, and focuses on radiesthesia and related subjects. It was founded in with Vol. 1, No. 1 in 1950 by Dr. Franz Wetzel (1888-1956), and continues to be published at present. The former title from 1950-2010 was: **Zeitschrift fuer Radiaesthesie** (Germany) (0044-3425). **The USPA Library needs all issues of this periodical.**

Zeitschrift RGS (Radiesthesie - Geopathie - Strahlenbiologie); (Journal of Radiesthesia, Geopathy, and Radiation Biology): This was a radiesthesia and radionics periodical published by the Schweizerische Gesellschaft für Radiästhesie (Swiss Society of Radiesthesia) in St. Gallen, Switzerland. It began publishing around 1949, although the date is uncertain, and the title was changed at some point to "Schweizerische Zeitschrift für Radiästhesie, Radionik, Geopathie, Strahlenbiologie" (Swiss Journal of Radiesthesia, Radionics, Geopathy, and Radiation Biology). It was still being published in 2014, with issue No. 291 being published during that year. **The USPA Library needs all issues of this periodical.**

USPA Local Groups and Affiliates Update

As mentioned in the May, 2016, USPA Newsletter, one of our goals is to reactivate all of the former 24 USPA Chapters that once existed across the US and Mexico. In addition, we plan to establish new local groups of people interested in psychotronics and related subjects in other major cities in the US and other countries as well. All such local groups and affiliates will be independent, but will work together with the USPA in a mutually beneficial relationship to achieve our goals of advancing research and applications in psychotronics, radionics, subtle energy, and related fields.

So I would like to invite all of former USPA Chapters leaders and members to contact me (John Reed) at: joreed43@gmail.com and let me know if you would like to help reactivate your local chapter. In addition, if you are a leader or member of a psychotronics or related organization which was never a chapter of USPA, and we would welcome you as a USPA affiliated organization as well.

We will be establishing a USPA affiliated groups as traditional organizations and also via the Meetup.com online group platform. This will enable current and former members to more easily have local get-togethers, meetings, and other activities, and those activities, times, and other details can be posted online. So please let me know if you would like to be the leader of a group in your area.

If you do decide to use Meetup.com to establish your local group, you could do it quickly and easily by going to www.meetup.com , and clicking on the big red word “**Start**” in the upper left, and then just following the step-by-step procedures.

You can give your local group any name you want, but it should probably have a name that relates to psychotronics in some way. And if you need any help, please let me know, and I will help you in any way I can. Perhaps the most important thing is enthusiasm and determination, so write to me, even if you don’t know any other USPA members in your area, and I will help you set up a local group: joreed43@gmail.com

Exchange Corner and Advertisements

The “Exchange Corner”, is a place where people can advertise to buy, exchange, or sell items of interest, or request information or other help in relation to something wanted. So if there is anything you want to buy, sell or trade that has to do with psychotronics, radionics, subtle energy, or related subjects, please contacted the Classified Ads manager at: joreed43@gmail.com. Advertisements are free of charge to USPA member within certain limits, but non-members will be charged for any classified or display ads. So please send your ads and wanted requests to: joreed43@gmail.com.

Wanted: Any articles, periodicals, books, devices, or other materials on psychotronic related subjects that you can donate or lend to the USPA for its library, archives, and museum. **The USPA is a nonprofit, 501(c)(3), tax exempt organization, and as such, you are able to make tax deductible donations to the USPA. Please email the USPA at: joreed43@gmail.com to make shipping arrangements. Thank you for your generosity.**

Kelly Personal Analyzer for Sale

Mariette Picket has a friend that has a brand new unused Kelly Personal Analyzer that she paid \$2100 for, and is offering it for sale at only \$1600.00 Anyone interested call Mariette at: [317-773-0061](tel:317-773-0061)

Bruce Copen MARS III for Sale

I am a current USPA member and have a **Bruce Copen MARS III** for sale. The system is about 7 or 8 years old and in original, excellent condition. Sale includes original SCOPE analysis, database and broadcast software, HP laptop, comprehensive training manual and program disc, interconnects and boxes. I have always run it on XP with no issues; everything original as supplied by Copen.

All operations can be automated and multiple broadcasts can be run simultaneously, although Copen saw to develop this device so it could be used in many radionic styles and without computer control. The price is \$8500 USD roughly half the original cost. I prefer to not ship to a destination outside the USA. A limited amount of training by me, as I understand it, is available to a confirmed purchaser, as time and distance reasonably permit. Please contact: **Dr Robert Dixon, robertdixondc@gmail.com or call (304) 259-9439** Berkeley Springs, WV.

KRT Experimental Agricultural Radionic Analyzer for Sale



For Sale:

USED EXPERIMENTAL AGRICULTURAL RADIONIC ANALYZER

Manufactured by KRT (Kelly), this machine is a predecessor to their current Workstation model. The machine is clean and in good condition. For more information please see KRT's website:

<http://www.kellyresearchtech.com>

Asking a very reasonable \$2499.00 plus \$100.00 shipping to the lower 48 states.

Please contact saminox@hotmail.com.

United States Psychotronics Association (USPA)

Officers and Board Members

Officers:

President: Beverly Rubik, Ph.D. email: brubik@earthlink.net

Vice President: John Klimo, Ph.D. email: JonKlimoidealism@gmail.com

Vice President: Lutie Larsen email: lutielarsen@mac.com

Vice President: Linda Lancaster, N.D. email: drlinda@lightharmonics.com

Secretary / Treasurer: Scott Beutlich email: contact@psychotronics.org

Executive Secretary: Daniel Taylor email: dnltlr@hotmail.com

Conference Consultant & Membership Coordinator: Phyllis Weiland
email: phylkat@ameritech.net

Board Members:

Chairman of the Board: Marty Lucas email: marty@everyadvantage.net

Member: Beverly Rubik, Ph.D. email: brubik@earthlink.net

Member: Lutie Larsen email: lutielarsen@mac.com

Member: Linda Lancaster, N.D. email: drlinda@lightharmonics.com

Member: Ed Kelly email: ed@kellyresearchtech.com

Member: Glen Rein, Ph.D. email: reinglen@gmail.com

Member: Daniel Taylor email: dnltlr@hotmail.com

Member: George Kuepper email: georgekuepper@yahoo.com

Member: John Reed, M.D. email: joreed43@gmail.com

WHAT IS PSYCHOTRONICS?

The United States Psychotronics Association defines psychotronics as the science of mind-body-environment relationships, an interdisciplinary science concerned with the interactions of matter, energy, and consciousness. Psychotronics involves the study, research, and applications of the physics and technology of the mind, brain, spirit, consciousness, and the underlying forces of life and nature – hence the term “psychotronics”.

We believe that a true understanding of the universe must include the spiritual, as well as, the technical, and provide an opportunity for amateur researchers to present their findings along with the professionals. We stress research, with documentation of results, and practical applications, rather than personal experience and unsupported hypotheses.

Some Prominent People in the history of psychotronics research and application: Albert Abrams, Thomas Bearden, Robert C. Beck, Robert O. Becker, Jacques Benveniste, David Bohm, Harold Saxon Burr, George W. Crile, Ruth Drown, T. Galen Hieronymus, Vlail P. Kaznacheyev, Georges Lakhovsky, Wilhelm Reich, Royal R. Rife, Rupert Sheldrake, Nikola Tesla, Marcel Vogel, and others.

Some of the forces, fields, waves, and energies studied and researched in psychotronics include: bioelectromagnetism, biophotons, biopotentials, electromagnetic wave pollution and harmful effects; coherent emanations of DNA, emanations of matter, “free energy”, morphogenetic fields, non-hertzian waves, orgone energy, pyramid energy and power, qi (chi), quantum fields, scalar waves, subtle energies, ultra-weak radiation of living matter, zero-point energy, and others.

Some of the phenomena believed to be produced or involved with the above fields and energies: action-at-a-distance, the aura of the body and other living things, bioinformation, bioluminescence, chakras, consciousness, distant intercellular interactions, meridians of the body, mind-body interactions, non-locality, the placebo effect, quantum consciousness, spontaneous remission of cancer and other diseases, water memory, water structure, and others.

Related fields of study and research covering the above forces, energies, and phenomena of psychotronics: bioelectromagnetics, bioenergetics, biophotonics, biophysics, psionics, psychoenergetics, psychoneuroimmunology, quantum biology, radionics, scalar electromagnetics, and others.

Some practices, techniques, and applications related to psychotronics include: acupuncture, biogeometry, brain entrainment, clairvoyance, dowsing, energy healing and medicine, extrasensory perception, feng shui, homeopathy, kirlian photography, magnetic therapy, pendulum use and methods, prayer effects, psionic medicine, psychic healing, psychometry, qigong, radiesthesia, radionics, remote viewing, shamanism, sound and sonic healing, telekinesis, telepathy, and others.

Membership Benefits

So if you are interested in any of the above subjects, then the USPA is the place for you, where you can interact with, exchange ideas, and collaborate with other people who are interested in the same subjects. So sign up now for membership in the USPA using the form on the following page and start enjoying all of your membership benefits. These benefits include, but are not limited to:

1. **USPA Psychotronics Library:** Free access to copies of certain articles, periodicals, books, audio tapes, videos, and other materials in **USPA Psychotronics Library**. Please write to joreed43@gmail.com for whatever item(s) you are seeking;
2. **Your free subscription to the USPA Journal & Newsletter;**
3. **Your right to freely publish articles in the WISE Journal - The Journal of the World Institute for Scientific Exploration (ISSN 2381-1536),** enabling the world to see your ideas or research, and thereby enhance your resume and credentials;
4. **Your right to use the USPA Literature Research Service,** whereby we will find any article, book, or other item you are seeking on the above subjects, and provide it to you;
5. **Your right to participate in the USPA "Research Assistance Program",** especially useful to professors, authors, and other researchers, who need extra help on their projects. USPA will help find volunteers to help you with your research project(s).
6. **Your right to be part of the USPA Project Participation Program,** whereby you can volunteer to help on numerous available USPA projects, or help researchers who are conducting research on psychotronics and related subjects.
7. **Your right to make oral or poster presentations at the annual USPA meeting,** with the approval of the Annual USPA Meeting Planning Committee.
8. **Your right to discounts** on the purchase of certain items and services made available for sale or provided by the USPA and its members.
9. **Your right to freely advertise in the WISE Journal,** which goes out to thousands of people.
10. **Your right to participate in the USPA Psychotronic Literature Preservation Program (UPLPP).** The USPA, via its Library and Archives, has established a "Literature Preservation Program" to preserve your personal papers, files, records, and collection of articles, periodicals, books, and devices on psychotronics and related subjects, noted above. You may no longer need or use some of these items that you have, and you can send them to the USPA, and we will preserve them in our library and archives, so that they can be of use to other researchers.

MEMBERSHIP INFORMATION

The U.S. Psychotronics Association (USPA), was incorporated in the District of Columbia in August, 1977, and is a nonprofit, 501(c)(3), tax exempt organization, and as such, you are able to make tax deductible donations to the USPA. It is empowered to enroll members in the parent organization throughout the United States, Canada, and other foreign countries. Membership is open to all people who wish to join with the USPA on the new frontiers of science in working constructively for the qualitative improvement of man and his environment. **Please remember the USPA in your annual charitable giving, especially if you want to advance research in the above subject areas, which can greatly benefit humans, animals, plants, and the environment.**



United States Psychotronics Association Membership Application

Please print the page, and complete the following information:

Date _____

Name _____

Email _____

Mailing Address: _____

City _____ St _____ Zip Code _____

County _____ Country _____

Phone _____ Cell Phone _____

I am interested in the following Fields:

☐ General ☐ Healing ☐ New Age Physics ☐ Radionics
☐ Dowsing ☐ Subtle Energy Research Other Interests (Please specify) _____

Do you want to be listed in the USPA Membership Directory? ☐ Yes ☐ No

Type of Membership desired:

☐ One Year @ \$35 ☐ 2 Years @ \$60 ☐ 3Years @ \$85

☐ Full Time Student @\$20

☐ Member of the Military @\$20

☐ Family Member Membership @\$30 per Person

2nd Family Member _____ Email _____

3rd Family Member _____ Email _____

4th Family Member _____ Email _____

Fees Payable to USPA in U.S. Dollars only:

Amount Enclosed: \$ _____ Check or Money Order Number _____

☐ Send via PayPal to uspsychotronics@yahoo.com

☐ Receive a PayPal Bill (Your PayPal email) _____

Visa or Master Card # _____ -- -- -- Exp. Date _____ CVC Code _____

Name on Card _____ Signature _____

Billing Address _____

If you wish to register online, you may go to <https://uspsychotronics.configio.com>

Please complete, scan and email document to Membership@psychotronics.org
Or Mail to USPA c/o Phyllis Weiland, 535 Michigan Ave, Apt. G Evanston, IL 60202

Thank You!

USPA Catalog of Conference Lectures, 1978-1994

Now Available

A compilation of nearly 300 lectures given at the first 17 years of the United States Psychotronics Association (USPA) conferences, from 1978 through 1994 is [now available in a 30 page catalog \(click here\)](#).

There are talks by some of the most well known scientists of our age, including Andrija Puharich, Thomas Bearden, Marcel Vogel, Lynn Surgalla, Robert Beck, T. Galen Hieronymus, J.G. Gallimore, Elizabeth Rauscher, Christopher Bird, and many, many more.

There are also lectures specifically about radionics from some of the top practitioners: Robert Beutlich, Lutie Larsen, Jerry Fridenstine, Frances Farrelly, and others.

If you have an interest in the paranormal, the life of plants or zero-point energy, there are speakers here who are experts in the fields. How about dark-field microscopy, scalars, magnetic fields, or the Philadelphia Experiment? Yes, they are in here in this catalog too. Homeopathy, color-healing, use of crystals, structuring water, water memory, and Tesla's work are some of the other topics covered in this catalog.

As of this date, (April 15, 2017) they are available only by direct contact with USPA, but soon, they will be available online. The USPA home page is at <http://www.psychotronics.org> and we will have a linked site where purchase will lead to immediate download of the MP3, and payment can be made through Pay Pal.

Please note that [in the Catalog \(click here\)](#), most of the lectures are standard MP3s, are 30-45 minutes long, and priced at a very reasonable \$5.00 each. These have no marking in the right-hand column of the catalog listing. Other MP3s are one hour or slightly longer, and are marked "Prime" in the right-hand column, with a price of \$8.00 each. And a few of the MP3s are 90 minutes or longer, and are marked "Double", with a price of \$10.00 each. USPA members get 40% off.

However, if you just "can't wait," for the online order website, email us at uspsychotronics@gmail.com or contact our USPA Treasurer by snail mail at:

Scott Beutlich
USPA,
525 Juanita Vista
Crystal Lake, IL 60014
Email: uspsychotronics@yahoo.com

Until the online order site is ready, you can print out the last page of this PDF and fill it in. You can scan it and email it to us, or send it via snail mail. For now, payment is by Check, Money order, or Pay Pal.

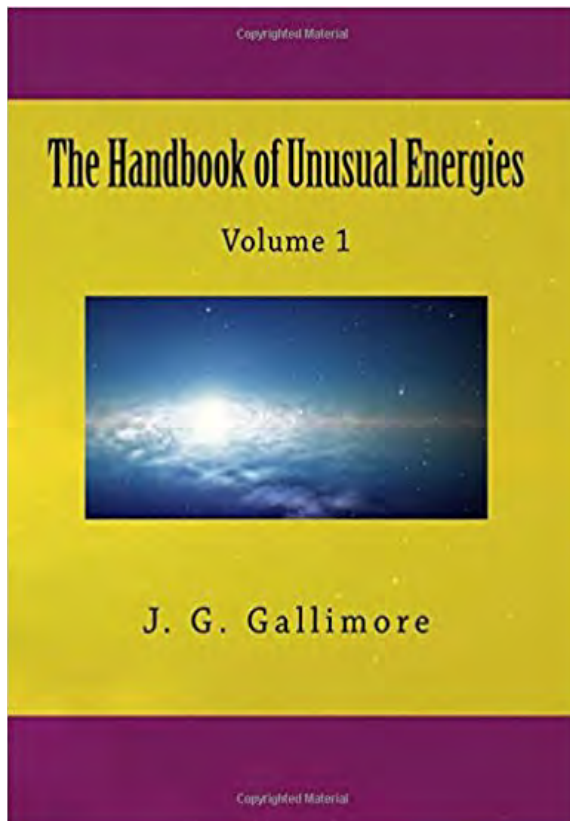
Thanks for your interest, and good luck with your research.

The Board and Officers of USPA
USPA is a fully registered, 501 C(3) Non-Profit Organization
Donations are Gratefully Accepted, and are fully tax deductible

J.G. Gallimore's Five Rare Books Now Available for Sale

All five of J.G. Gallimore's rare books on psychotronics subjects and unusual energies have been reprinted by the United States Psychotronics Association (USPA) and are being made available at a fraction of the cost that used copies were being sold at online. So rare have these books been, that only a few libraries in the entire world had them in their collections, and some of Gallimore's books were being sold for several hundred dollars each online. However, with these newly reprinted volumes, each will be available for less than \$30.00. Each of Gallimore's books is described below with links to Amazon.com.

Jerry G. Gallimore was one of the founders of the USPA in 1975, and was a leading researcher in psychotronics and unusual energies until his untimely death in 1989.



The Handbook of Unusual Energies: Volume 1

by J. G. Gallimore

Paperback: 484 pages

Publisher: CreateSpace Independent Publishing Platform (March 22, 2017)

Language: English

ISBN-10: 1543024998

ISBN-13: 978-1543024999

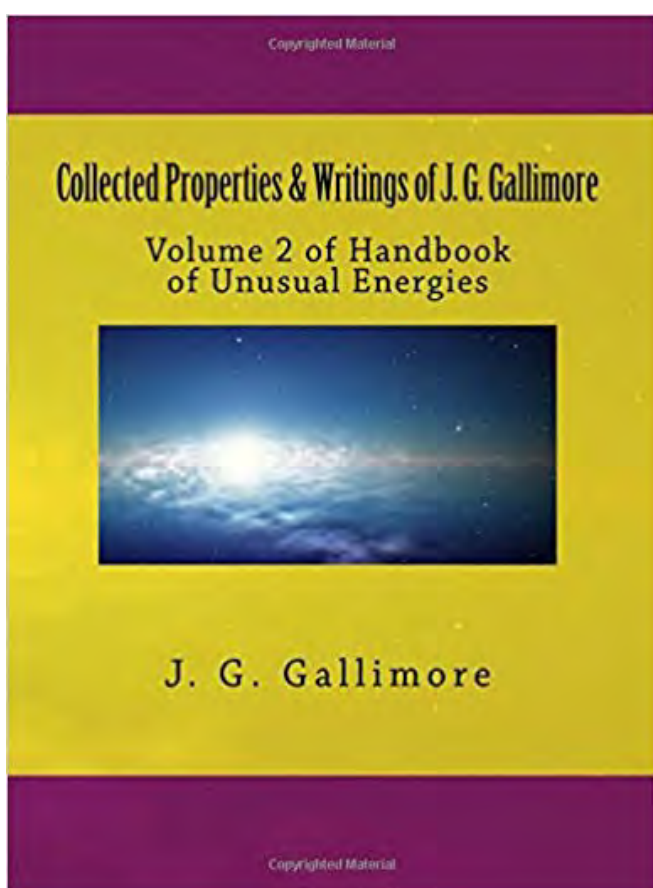
Product Dimensions: 8.5 x 1.1 x 11 inches

[Available at Amazon.com](#)

This is J.G. Gallimore's first book of three volumes on unusual energies, and at 468 pages, it is a magnificent work. In this book, Gallimore discusses in depth the research, discoveries, and

inventions of all the major researchers in subtle energies, the aether, biological

fields, pyramid energy, radiesthesia, radionics, crystal transduction, and related subjects. These include the works of Baron Von Reichenbach's and his odic energy, Dr. Wilhelm Reich's orgone energy, Dr. Harold Burr's biological life fields, Kozyrev's time mirror, Edgar Cayce's transmission of energy, and related research done by many others. Of particular importance is Gallimore's 127 page chapter on radionics. In this chapter he discusses in depth the research and devices of Ruth Drown, T. Galen Hieronymus, Rho Sigma, Dr. L. P. Corte and other prominent people in the radionics field. But in addition, Gallimore provided diagrams showing how such devices are made and how they actually work.



Collected Properties & Writings of J. G. Gallimore: Volume 2 of Handbook of Unusual Energies

by J. G. Gallimore

Paperback: 258 pages

Publisher: CreateSpace Independent Publishing Platform (March 22, 2017)

Language: English

ISBN-10: 1543025048

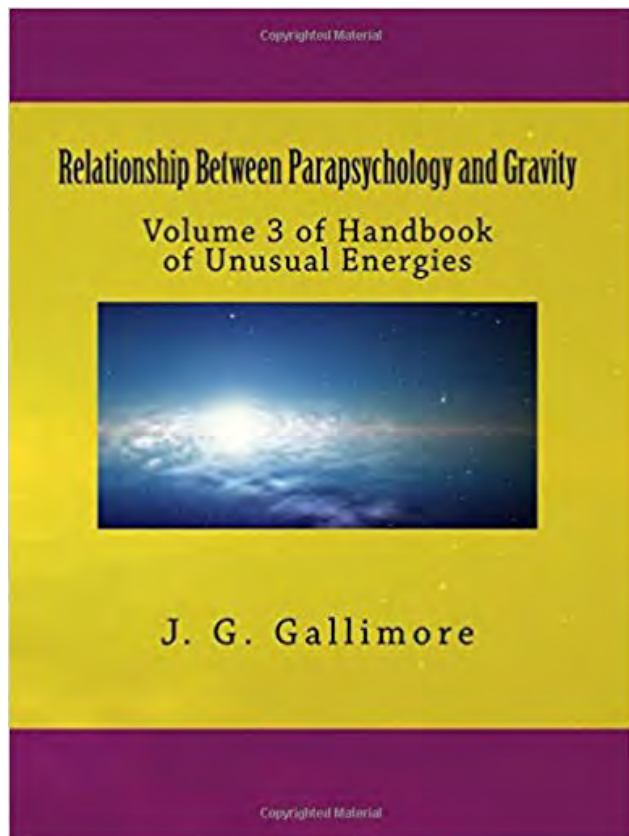
ISBN-13: 978-1543025040

Product Dimensions: 8.5 x 0.6 x 11 inches

[Available at Amazon.com](https://www.amazon.com/dp/1543025048)

This is the second book in the “Unusual Energies” series that J.G

Callimore published. It covers Gallimore's research on Albert Abrams, the founder of modern radionics, psychological physics, psychic energy, thought resonance, subtle energies, crystals, and related subjects. In addition, a number of radionics devices are discussed, such as the De La Warr Diagnostic Instrument. And very helpfully, the rates are provided for substances, body organs, and medical diseases and disorders. A very interesting interview of Christopher Bird, conducted by J.G. Gallimore is provided, as well as a discussion of Walter Russell and his research.



Relationship Between Parapsychology and Gravity: Volume 3 of Handbook of Unusual Energies

by J. G. Gallimore

Paperback: 228 pages

Publisher: CreateSpace Independent Publishing Platform (March 22, 2017)

Language: English

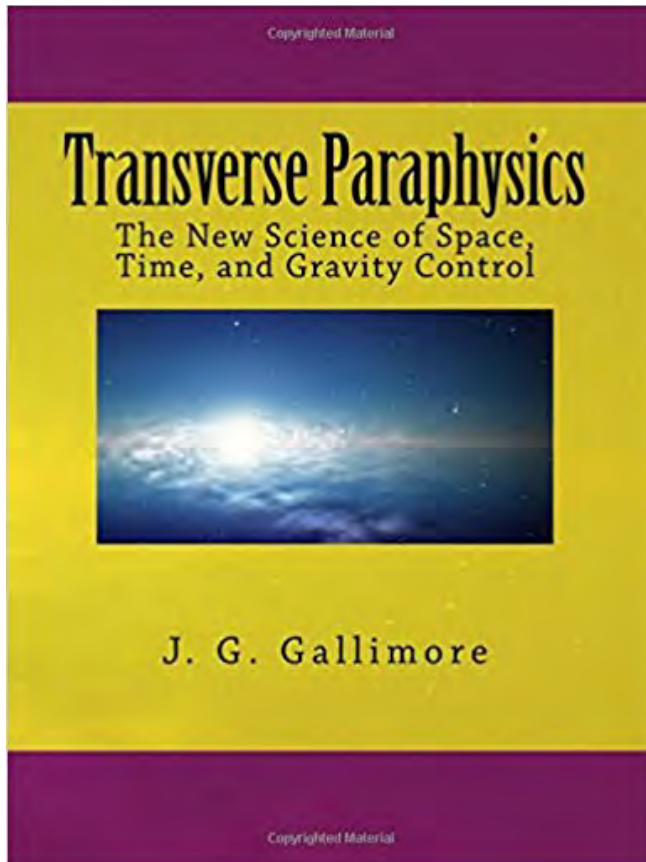
ISBN-10: 1543024947

ISBN-13: 978-1543024944

Product Dimensions: 8.5 x 0.5 x 11 inches.

[Available at Amazon.com](https://www.amazon.com/dp/1543024947)

The Relationship Between Parapsychology and Gravity is Volume 3 of J.G. Gallimore's series of three handbooks of unusual energies. This book describes in depth the research and theories of J.G. Gallimore into the question of "parapsychology transmission" --the question of how such things as telepathy, remote viewing, ESP, and similar phenomena can physically occur. Gallimore discusses various explanation on how they occur, including the possibility that gravity waves may play a role. He also discusses the various emanations, radiations, and energy fields of all matter and life. This includes the ancient Chinese energy called "chi" (qi), the ancient Indian's prana energy, Reichenback's "odhic force", Gurwitsch's "mitogenic radiation", Wilhelm Reich's orgone energy, and other subtle energies of life and matter. Gallimore shows how all of these energies are the same or similar, how they interact, and how they are related to gravity. He also discusses crystals as transducers of these energies, and provides diagrams of devices that could potentially be used to harness or control these energies.



Transverse Paraphysics: The New Science of Space, Time, and Gravity Control

by J.G. Gallimore

Paperback: 374 pages

Publisher: CreateSpace Independent
Publishing Platform (March 21, 2017)

Language: English

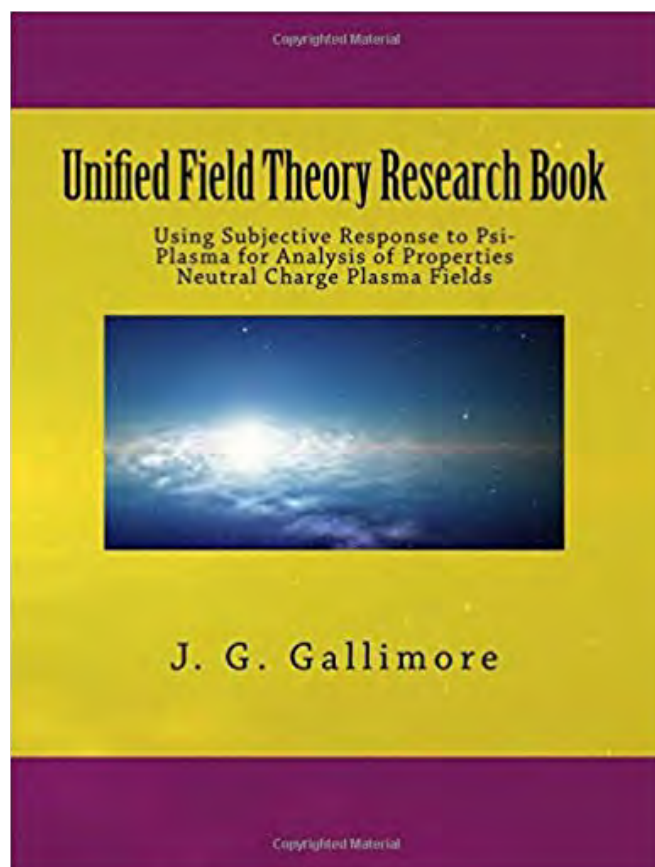
ISBN-10: 1543024920

ISBN-13: 978-1543024920

Product Dimensions: 8.5 x 0.8 x 11
inches

[Available at Amazon.com](https://www.amazon.com/dp/1543024920)

This book covers the visionary research and theories developed by J.G. Gallimore about anti-gravity, space, time, and biophysics. He discusses in depth the dimensions of space, time, and gravity, and new discoveries in each of these areas. In addition, he covers research being done on anti-gravity and then discusses anti-gravity patents that have been obtained. He also discusses the intriguing concept of aura energy fields surrounding humans and other living things, and how extra-sensory perception (ESP) might be explained through biophysical principles.



Unified Field Theory Research Book: Using Subjective Response to Psi-Plasma for Analysis of Properties Neutral Charge Plasma Fields

by J.G. Gallimore

Paperback: 134 pages

Publisher: CreateSpace Independent
Publishing Platform (March 21, 2017)

Language: English

ISBN-10: 1543024831

ISBN-13: 978-1543024838

Product Dimensions: 8.5 x 0.3 x 11
inches

[Available from Amazon.com](https://www.amazon.com/dp/1543024831)

This book is about psychotronics, radionics, electromagnetic fields and waves, psi-plasma, plasma fields, subtle energies, bioelectromagnetic energy, and other unusual energies emitted by living and non-living things. It also is about how living things interact with and are affected by these energies, which may enhance health or harm health. The book covers the research of Wilhem Reich on orgone energy, of Baron Reichenback on the odic forces, as well as research done by Cazzamalli on brain radiations and Lakhovsky on using high frequency radiations to successfully treat cancer in humans. In addition, Lakhovsky used similar methods to enhance the growth of plants. Gallimore shows how these energies, forces, and fields are all inter-related and provides hypotheses and ideas on their possible unification.