

# METASCIENCE

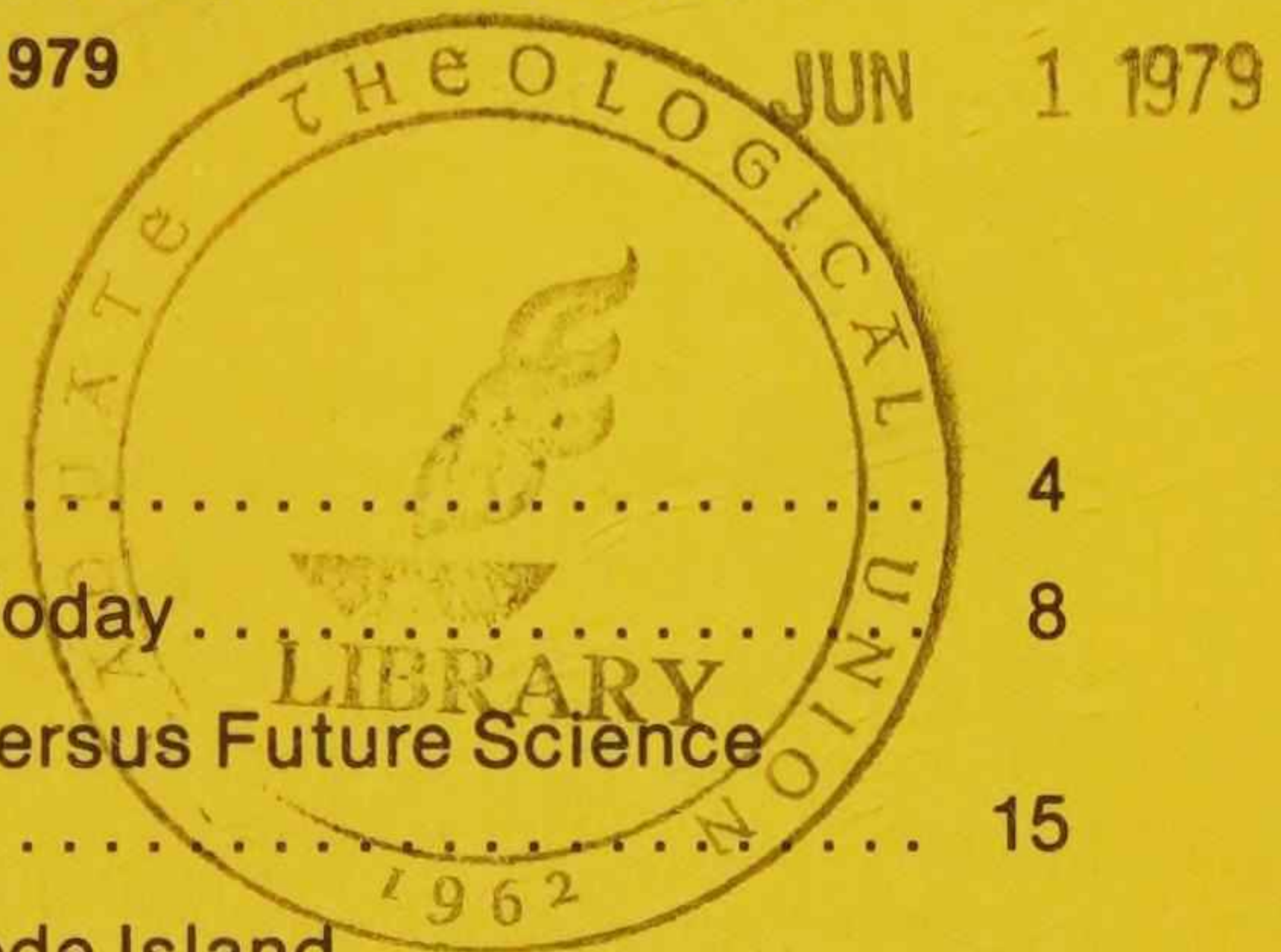
QUARTERLY

Vol. 1

No. 1

A NEW AGE JOURNAL OF PARAPSYCHOLOGY

SPRING 1979



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The MetaScience Foundation is devoted to the pursuit of scientific information in the field of Parapsychology and related areas. *MetaScience Quarterly* is designed to convey this information in an academic and professionally responsible manner in the hope that such knowledge will shed more light on the nature of man's existence.

Note: We are especially interested in empirical and theoretical papers on the following topics: telepathy, synchronicity, precognition, psychokinesis, UFOlogy, astrology, graphology, Kirlian photography, the physics of consciousness and related areas.

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A NEW AGE JOURNAL OF PARAPSYCHOLOGY  
SPRING 1979

The *Journal of Occult Studies* has changed its name! Although we have been encouraged by favorable reviews from *Alternatives*, *The Village Voice*, *Library Journal*, *Theta*, *Parapsychology Review* and most recently *ate Magazine* (Jan, 1979), we have had many requests from notable researchers and students to remove the word occult from our title. The back cover of JOS #2 was in defense of the word quoting men such as Freud, Jung and William James, however, criticisms continued. Since our aim has always been to communicate rather than alienate, we thought it best to choose a more comprehensive term which would not affect people adversely.

The goals of the journal will remain the same: *MetaScience Quarterly* will seek to scientifically investigate all aspects of parapsychology including the more esoteric areas such as UFOlogy, astrology, iridology, alchemy, Tarot, pyramidology and graphology, as well as the more generally accepted areas of telepathy, psychokinesis, precognition, ghosts, life after death, etc. The prefix *meta* means to transcend, and this is exactly our aim: to transcend present day science and leave our prejudices behind.

The aim of *MetaScience Quarterly* is not to pull ideas out of the air but to support a hypothesized theory by hard data and scientific methods of investigation. For instance, in the case of phrenology, although almost every neurophysiological text written in the 20th century claims that the study of the bumps on the head is a pseudoscience, not one of these books has supplied even one study to support their claims.

*MetaScience Quarterly* will maintain a scientific rigor as it attempts to bring to our readers the newest thinking in consciousness research. Therefore, we will also present quantum physical theories as well as straightforward scientific articles when they are relevant to this goal. Each article will be written clearly so that ideas are elucidated rather than obscured, and abstracts, bibliographies and notes will be available whenever possible.

It is time for all of us to begin this quest together. Communication of ideas is the goal as we attempt to integrate the occultist with the mystic, hypnotherapist and scientist.

## *MetaScience Quarterly*

We are including Letters to the Editor relating to the *Journal of Occult Studies* since we view *MetaScience Quarterly* as really a continuation of this periodical. Therefore, we have reprinted JOS Vol I, issues 1, 2, and 3 as one large edition with a table of contents and index, and it is available at the special price of \$7.00, a savings of \$5.00 from the retail price.

This first issue of *MetaScience Quarterly* (MSQ) contains 2 special sections, one on Kirlian Photography and one on Holography. The first is a 5 part section containing articles on the aura, the recent International Kirlian Research Association Conference, mini-histories of electricity, photography and electrography (Kirlian Photography), an attempt to photograph the aura without a Kirlian machine, and an article on our electrical physiology. The Holography section is in 3 parts, the first part devoted to the current state of the field; the second is on neurophysiological holographic model, and the third, on cosmological and metaphysical considerations. We hope you enjoy MSQ and show it to your friends and colleagues.

### A WORD OF THANKS

This 4th issue of the *Journal* contains 2 special sections: one on Holography and one on Kirlian Photography. Horex Corporation of Philadelphia and Laser Fare Ltd. of Providence, RI have donated free holograms to all JOS subscribers, and we refer you to their ad which tells you how to find out more about them. Marilyn Ferguson, editor of *Brain/Mind Bulletin* has been kind enough to offer to our readers free issues of her 'New Developments in Holography' edition. Please send a stamped self-addressed envelope to: Brain/Mind Bulletin, Box 42211, Los Angeles, CA 90042.

We are happy to announce the support of the jewelry firm The House of Collingwood whose silvered palm offers quite a bit of information in classical palmistry. We also have displays from *New Atlantean Journal*, a source journal for esoteric knowledge mainly concerning UFO's; *Phenomena Magazine*, a scientifically oriented periodical which combines astronomy and astrology into a synthesized whole; and the classic occult magazine *Gnostica* from Llewelyn Publications.

We would like to give special thanks to Jean Polson and the Heritage Store for their generous contribution. They are an extensive health food and metaphysical book shop that also stocks a vast supply of Edgar Cayce medicinal and beauty aid items. Write directly to them for more information: Box 444-F, Virginia Beach, Virginia 23458. Also special thanks to Mr. and Mrs. Seifer, Professor Jim Wheeler, C.H. Titus, Rita Bedard and Lorrain and Ronald Giordino and to all early resubscribers who have helped the *Journal* along. Your support is greatly appreciated.

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## LETTERS TO THE EDITOR

Dear Mr. Seifer,

We at *The Psychic Observer* magazine recently recieved your *Journal of Occult Studies*. We regard the periodical as excellently prepared and substantial contribution to the field.

Sincerely,  
Teresa Nagorka  
ESPress, Inc.  
Box 8606  
Washington, D.C.

Greetings Marc,

Thank you for the Journal. I think it is a number one Journal of its type and in my top five all time important ones to get each and every issue of. I would very much like to stock your JOS in my store and sell it through my catalogs.

Dennis Pilichis, Editor  
Page Research Library  
UFO Information Network  
Box 5012  
Rome, Ohio 44085

July 8, 1978

Dear Mr. Seifer;

Dr. J.T. Richards asked me to write to you and describe the levitation experiment that I witnessed at his home in Cape Girardeau, MO, in March 1972.

The experiment began in the living room, with everyone sitting by firelight around a TV-tray type table, their hands resting on it lightly. The experimenters included Dr. Richards and his wife Elaine Richards, Ann Harms, Marge Kester, two or three others, and myself. We were talking and laughing, and the table began to vibrate. It rose off the floor and went down the hall and into the bedroom. It seemed to have great power, and I don't think that all of us together could have held it down. While we were in the hall, the table rapped against the wall in the rhythm of Napoleon's theme from Tchaichovsky's 1812 Overture, and before they opened the bedroom door it pushed me against the door with the strength of a strong man or large animal.

In the bedroom, it rose so high that we could hardly reach it. It pushed me against the lamp, and Elaine Richards turned on the light to stop it, lest it damage the lamp. (The table always fell when a light was turned on.) There were raps on the floor, 23 raps then 2, for "W.B." — the entity rapping was said to be W. B. Yeats. The raps were repeated a number of times, and questions were answered through them. I was sitting on the

oor, and the table was suspended horizontally in the air, with its leg stroking my hair. Ann Harms saw Yeats standing in the room, as did several others – everyone saw him, I think except me. Dr. Richards held out his arm to show where the apparition was, or where he sensed it was, and Ann took a picture with my small Kodak camera. She aimed too low to get the head of the figure, but at the top of the picture, above Dr. Richards' arm, are two streaks of pink mist resembling the lapels of a jacket.

At the time, I was 21 years old and had had no previous experience with the paranormal, but perhaps my inexperience made me more, rather than less, skeptical. I have since participated further in psychic research, and my impression of the validity of this experiment holds up under all the criteria I have since learned to apply. I saw no indication whatever that the levitation was or even could have been produced by other than paranormal means. We took a number of pictures of the levitation, none of which showed any sign of physical support, and in one of the pictures a blown doll was also levitating in mid-air. The raps in the 1812 Overture rhythm were so rapid that I could not reproduce them by tapping with my hand, and only barely by tapping with one finger; yet the whole table was moving. I would consider that effect impossible to produce mechanically. The misty form on the picture, also, was unlike anything I have ever seen in the material world.

In my opinion, these effects could only have been produced by paranormal means. The only possible alternative explanation would be psychokinesis from a living person; however, considering the integrity and serious purpose of the investigators, the possibility of their doing this deliberately seems so remote as to be beyond consideration.

I hope that this will be of help.

Yours truly,  
Shirley D. Starke  
RR #2  
Valley City, N. Dak.

Dear Marc,

Thanks for your card in answer to my letter of inquiry. My copy of the journal arrived about a week later and I am most happy to have it and certainly wish you well.

I was quite interested to find (page 234) that the spirit or force that calls itself "John King" is still manifesting. Theodore Flournoy says in "Spiritism and Psychology" (1911) "Morselli retraces the history of his (John King's) pretended manifestations through diverse mediums, for fifty years. . . ." I have not been able to find Morselli's book, but I'm keeping my own file of spirits that endeavor to manifest from the spirit plane, through whatever medium, animate or inanimate, so I was glad to find this message. I hope experimenters really read the messages in the midst of their concern with what or who is the sender.

According to my file John King has made at least the following appearances:

1. Through Nelson and Jennie Holmes wanting to dictate his autobiography.
2. As the, or one of the, controls of Eusapia Palladino
3. As H.P. Blavatsky's control for 10 years.
4. Through H.P.B. at Irving Place, N.Y., where she defended the Holmes' in the Katie King scandal;
5. He materialized at seances of Stainton Moses;
6. To the Koons family in Ohio, the Davenports in New York, the Williamses in London.
7. Through mediums in France and Germany;
8. Mme. H.P. Blavatsky encountered him in 1860 in Russia and Circassia, talked with him in Egypt and India.

In additon to the book by Flournoy, the above information came from the following: "The Lady with the Magic Eyes" (1959) by John Symonds "The Drama of Life After Death" 1932) by George Lawton; "On the Cosmic Relations" by Henry Holt (1914); and "People From the Other World" (1975, a 1972 edition) by Henry S. Olcott. It is rather good to know King is still trying to get his message across the void! Maybe he will learn to use the tape recorder next!

When a spirit tries and sometimes succeeds in manifestations through many mediums with different methods one begins to wonder whether personality or its survival after death is really the issue; whether perhaps the great universal spirit is trying to teach us better ways to live and cope with life on the earth plane in order to achieve a spiritual life within the body right here today. What a difficult time it has if such is the case. it must identify itself or nobody will listen, and then when it does select an identity this identity gets all mixed up with the subconscious minds of mediums, investigators, sitters, et al, many of whom insist on proving or disproving the source and what happens to the message? Lost completely in the strife of minds far too focussed on the material aspects to receive the spiritual guidance attempting to be heard.

Ah well, sorry I made this so long. But I have been without this kind of mental stimulation for quite a while now and I am really happy to have access to your journal with its wide scope of interest.

Incidentally, it takes more imagination than I have to find any figures in Don Gibson's photograph. But I would not attempt to disprove the ghosts in any event! I make it a point to neither believe nor disbelieve, but I have a wealth of information stowed away in my head and files for use if I ever need it.

Best wishes for your success,  
Beatrice Collier  
5314 Argo Way  
Sacramento, CA

Dear Editor:

On page 269 of your paper on *The Aletti Psychic Photograph* (Vol. I, No. 2, Winter-Spring 1977-1978) you state that "Eisendrath (presumably David Eisendrath) . . . has openly accused Serios of fraud." I know of only one public pronouncement on Serios by Eisendrath, that in his article in *Popular Photography* of October 1967, in which, commenting on the only occasion (June 3, 1967) on which he had the opportunity to witness Serios at work, he wrote: "Was he on this occasion a true psychic or merely a clever magician and a great showman? . . . There was simply no way of telling which was the case." Charles Reynolds, speaking for himself and Charles (sic) Eisendrath in the same issue of *Popular Photography*, wrote: "One of the things we *cannot* say is that Serios is definitely a charlatan." The reason neither Eisendrath nor Reynolds could not say more than this is that neither they nor anyone else have ever obtained the evidence of fraud on Serios' part that scores of investigators have carefully looked for over more than fifteen years. No one, moreover, layman or magician, Eisendrath, Reynolds (two amateur magicians) or anyone else, has ever picked up the formally issued challenge to attempt to duplicate Serios' images by normal means without detection under the same conditions of control employed with Serios.

Perhaps the most astonishing part of your remarks is that, after giving the statement about Eisendrath accusing Serios of fraud, you go on to say that you are not "taking sides in this dispute." But taking sides where the evidence warrants so doing is the obligation of a responsible editor. Making judgements and drawing inferences from data (and the absence of data) is what science is all about. Since there is an enormous amount of data supporting the non-normal nature of the Serios phenomenon and absolutely no evidence of fraud, what you are doing by making the statements you have made is perpetuating an ongoing libel that simply grows by accretion. Thoughtless persons will no doubt use your statements (with or without attribution) as if from an authoritative source, thus providing further examples of the "ever receding horizon" in parapsychology. I think this sort of thing should be combatted wherever it turns up.

Jule Eisenbud, M.D.  
Denver, Colo.

A review of my interviewing notes found no clear cut statement by Eisendrath that he "openly accused Serios of fraud." It was my very distinct impression that both he and Reynolds were not positively impressed by the performances of either Serios or Geller. In both their investigations of these individuals they believed they had discovered the non-psychic method by which the paranormal phenomena had been produced. From my interviews I would have to conclude that neither Reynolds nor Eisendrath believe Serios is authentic although I stand corrected on the statement that they have "openly" made any accusations of fraud.

Howard Smukler

## EDITORIAL

The story of man is one of great mystery. Except for a few drawings and statues dating anywhere from 30,000 to 10,000 B.C., there is virtually no information detailing *Homo sapiens*' civilizations before 5000 B.C. As far as we know the alphabet was created at this time and thus modern man emerged. Many great civilizations have come and gone. However, in terms of technological superiority it has only been within the last 100 years that man became superman; for in this brief span of time he has escaped the confines of gravity, harnessed many of the secrets of electricity, inventing the computer, radio and television, unlocked the secrets of the atom and walked upon the moon. Yet we are still an enigma. How could we have come so far in such a short period of time? By our own scientific evidence we see that man is but an infant in his knowledge of the mystery of the cosmos.

If we look at the history of science we see an almost unbelievable resistance to new ideas. Galileo was imprisoned for stating that the earth went around the sun. Newton was chastised for believing in astrology. It took many years for Freud's or Einstein's ideas to be accepted; Wilhelm Reich died in jail in 1957 because of his controversial political and scientific work; Tesla died in obscurity for stating that he had received pulsed frequencies from the planets; and even today J.B. Rhine's work in ESP is considered by many to be fraudulent or, at best, shoddy research. The growth of science is anything but a smooth progression. I have continually been amazed that, for instance, the mass media is much more accepting of the discovery of a new sub-atomic particle that 'exists' for less than one billionth of a second and yet they won't accept the statement: man is telepathic. Which one of these facts is more a strain on credibility?

Man is ego-centric by nature. He has no real understanding of the literally hundreds of millions of years of evolutionary input that went into his being. Due to misunderstanding the gift and miracle of life, he creates a world view that meets his limited needs and then assumes that this conceptual construction is TRUTH itself. Everyone of us grows up in this tacitly agreed upon consensus reality which states various hypotheses that are assumed to be true. Some generally agreed upon beliefs by the mass media are listed below:

Man is not telepathic.

Psychokinesis is science fiction.

Kirlian photography is a pseudoscience.

Life after death is a primitive belief.

Perhaps this conservative attitude has helped stabilize society, but a dangerous precedent is also being set. John White's opening article, "The Paranormal: Pseudoscience vs. Future Science" discusses some of the

locking tactics employed by The Committee for the Scientific Investigation of Claims of the Paranormal. Their influence reaches virtually every major newspaper and magazine in the country, and they have even gone to the FCC to attack television shows on parapsychology. For a detailed account of the unscientific arguments put forth in the magazine *The Humanist* see "Irrational Rationalists: A Critique of *The Humanist's* Crusade against Parapsychology" by Theodore, Robert and J.T. Rockwell in JSPR, Vol. 72 # 1, 1/78.) However, their biggest crimes go beyond biased articles; out and out censorship of facts has also been utilized.

We are at a strange state of affairs because the leaders in parapsychology are not wasting their time trying to simply reprove the existence of ESP; they are involved in uncovering the hidden laws of the psyche. And yet the media is still crusading various 'flat earth' theories. It is not an exaggeration to say that the danger to this position actually involves national security, for the Russians are not only involved with 'normal' parapsychological research, they are also actively pursuing military uses of psi energy. The following report is excerpted and paraphrased from a front page story of the New York Times, June 19, 1977:

### EMIGRE TELLS OF RESEARCH IN SOVIET PARAPSYCHOLOGY FOR MILITARY USE

by Boyce Rensberger

Paris. An emigre Soviet physicist says that the Soviet Union has been doing secret military and police work in parapsychology. August Stern was in a secret Siberian laboratory in the late 1960's, (however) he also stated that the KGB set up an even more secret lab in Moscow. . . .

The Siberian lab Novosibirsk's Science City, a complex belonging to the Siberian branch of the Academy of Sciences, has a separate building, Special Department #8 which could only be opened by a coded lock with the code changed every week. It was referred to as a branch of the Institute of Automation and Electrometry headed by a navy officer Vitaly Perov. Stern said he thought KGB men came there and estimated that 60 people worked there. They were given unlimited equipment and funds.

Mr. Stern's work was in physics plotting different forms of energy (hoping) to create a chart like the chemical periodic table of elements. "If such a chart could be discovered for energy," Mr. Stern thought, "it might be found to have blank spaces that might lead to physical identification of particles to explain the mystery of psychic energy or 'psi particles'."

Other experiments performed at the lab included:

1. Electric shocks to kittens to see if the mother responded in another room on another floor.

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2. TV surveillance to see if people picked up telepathic signals and orders.
3. Studies involving monkeys and electromagnetic fields.
4. Photon waves and frogs' eyes.
5. Experiments to see whether a fatal disease could travel through glass and if so some unexplained form of energy — like photons might be involved.

Stern said that the lab was suddenly closed down in 1969 which was probably due to a change in attitude by the Kremlin. He also heard in Leningrad that the military and navy were also involved in parapsychological research. All of Stern's papers were confiscated before he immigrated.

This article was triggered by the arrest in Moscow of Los Angeles Times reporter Robert Toth. The story was reported by the mass media including all major TV networks and many newspapers and magazines. However, only a very few of them discussed the real reasons why Toth was picked up. To paraphrase from the same *NY Times* article:

Toth was interrogated by the KGB in Moscow accused of having received 'state secrets' about parapsychology . . . (although) Washington is aware of psychological warfare . . . there is no sign that the 25 page document handed to him in the street contained any state secrets . . . Mr. Toth was reported to have quoted from a statement made by an employee of the Academy of Sciences who had been called by the authorities to examine the documents in his possession. The statement referred to 'psi particles' and said 'this material is secret and shows the kind of work done in some closed scientific institutes of our state.'

In Toth's own article, printed in full in the June 20, 1977 issue of the *Providence Journal*, he states that he was taken to a KGB interrogation section and questioned by Major Dobrovolski, "a man in his late 30's thick black hair . . . open-necked light blue sports shirt . . . and a hard bit of fat around the middle." Toth asked the major how he could say parapsychology was secret and the major responded that on the whole this was true, "but there could be fields of science within parapsychology that are secret." Toth also stated that his major work as a reporter in Russia concerned the problem of Jewish immigration. Interestingly enough it was Anatoly Shcharansky who set up his initial meeting with the parapsychologist V.G. Petukhov.

However, when the TV networks and magazines covered the event they left out the parapsychology connection entirely. In fact when Newsweek covered the arrest not only did they not report the parapsychology connection, but in another article in the same issue they lumped parapsychology with other 'pseudosciences'. (June 27, 1977, pp

4-16). I wrote a letter to the editor about this dual point and their reply was that they felt that the parapsychology connection to the Toth affair was not important. Although they took the time to write me back, they did not print my letter.

Here is a classic case of how a myopic belief structure not only creates distorted news reporting, but actually keeps America in the dark as to the potential dangers of Russian research into this area. Stanley Krippner has reported in his book *Song of the Siren*, Harper and Row, 1975, one researcher from Czechoslovakia, Robert Pavlita, who has developed psychotronic generators that "store biological energy . . . (one) generator looked like a large pencil with a giant-size eraser. As the eraser was directed towards flies and other insects, they reportedly fell to the floor, stunned. Within a few minutes they were dead." (p.146) It is believed by some researchers that Pavlita has also developed weapons that are effective at distances in excess of 180 miles. There are also rumors that the Soviets have developed other weapons that tap hyperspace energy levels allowing for psychokinetic effects at a distance. Krippner also discussed Soviet research into the use of laser beams in stimulating acupuncture points to affect various cures, and also it was stated that there was great reluctance to share many of their findings. CBS's 60 Minutes recently aired a show on Moscow's bombardment of the American Embassy with microwaves, and they explored this 10 year tactic tying it to the onset of headaches and even leukemia.

However, the Russians are not monolithic in their belief in ESP. They have their own skeptics as well. Anita Gregory, a well known psychic researcher from Great Britain, reveals many insights into the history of parapsychology in the USSR in her introduction to the English version of the Russian text *Experiments in Distant Influence*, by L.L. Vasiliev (Dutton, 1976).

It was Bekhterev, who, in the early 1920's, had championed the cause of psychical research in Russia. Bekhterev was a reflexologist of international reputation, second only to that of Pavlov . . . in 1922 he founded the Special Commission for the Study of Mental Suggestion attached to the Institute of Brain Research, specifically in order to investigate some of the phenomena of psychical research

. . . .  
 Vasiliev joined the Institute in the early 1920's and studied telepathy for the next 40 years. There, of course, was no doubt in his mind as to whether or not telepathy was a real phenomena, but explaining it was another matter. Due to Marxist philosophy, it would have been heresy to suggest that telepathy was 'non physical' so Vasiliev was limited to a materialistic model. His favorite was based on Cazzamalli's radio-brainwave theory. However "when it became ever clearer that his results did not support the brain-wave theory, funds and encouragement withered away. The definition in the *Soviet Encyclopedia* (1956) of telepathy as anti-social . . . is uncompromising enough. During the later

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1930's, 40, and 50's all periodicals and papers dealing with psychical research sent to Russia from abroad were 'returned to sender' ".

When it was learned that the Americans were secretly performing telepathy experiments aboard their submarines and Jacques Bergier, in 1959 wrote "Thought Transmission, A Weapon of War", the Russians revitalized their interest. Vasiliev had not only established the validity of telepathy but also that unlike radio signals, psi could penetrate shielded metal enclosures. Shortly thereafter, Professor Tugrmov, head of the Department of Philosophy of the University of Leningrad, stated "all critics of telepathy are only using Marxism-Leninism to support their scientific conservatism. all who throw obstacles in the path of scientific progress should be made to suffer". So parapsychological research began to flourish once again in Russia, and eventually rumors spread that they had made important advances.

This brings us to the late 1960's and early 1970's when Ostrander and Schroeder printed *Psychic Discoveries Behind the Iron Curtain* and Moss, Krippner, Tiller and others visited Russia. Thelma Moss introduces us to another important man in this story Edward Naumov, in her chapter "Psychic Research in the Soviet Union" from *Psychic Explorations* (edited by Edgar Mitchell and John White):

Another member of this Moscow group was Edward Naumov, who is the 'PR' man, the entrepreneur of Soviet parapsychology. In addition to welcoming psychic researchers from all over the world, Naumov has developed an exhaustive bibliography of the existent Russian literature in parapsychology and bioenergetics."

Naumov was the star and gracious host of Ostrander and Schroeder's book as well, and up until his arrest in 1974, he was a guiding force in unifying the parapsychologists of the world. Krippner fills us in on the details in *Song of Siren* (paraphrased):

In 1968 Vasiliev was dead and Naumov was using stationery marked 'Institute of Technical Parapsychology' . . . Naumov had attracted 30 scientists from 10 countries at the same time Pravda attacked the psychic Kulagina (who is quite well known for psychokinetically moving objects across tables, and who worked with Vasiliev).

Naumov met Krippner and the others. At this time Adamenko showed Krippner Kirlian photography for the first time . . . and in 1972 Naumov planned a second conference. Letters were sent by Krippner to scientists all over the world. Since no money could be offered only a few people participated including Krippner who went to Russia in July.

When Krippner returned to the United States he received a letter from

the great Russian neurologist (now deceased) Alexandr Luria. It stated that he (Luria) could not support the convention because parapsychology was not a branch of science and that Naumov was 'unknown' to the Psychological Society.

Later an article came out by the Society conservatively endorsing research in ESP but warning against unqualified studies:

There also exists a category of rather clever persons who often have no serious background of any kind. These are the very people who assume the role of propagandists . . . and declare themselves to be leaders of groups . . . which have never existed in our country. The "Institute of Technical Parapsychology" is an example of such an organization. It is necessary to put an end to the . . . activity of poorly qualified but militant parapsychological 'experts' . . . whose lectures offer an unscrupulous mishmash of fantasy and fact.

Naumov was arrested 3/28/74 and sentenced to 2 years of hard labor charged with 'misuse of funds of a club that invited him to lecture on parapsychology'. Ms. Gregory fills us in on more of the details:

Dr. A. Snezhneusky, whose name has repeatedly appeared as one testifying to the psychiatric instability of ideological dissidents, gave evidence for the prosecution. He did not, however, give it as his opinion that Naumov was in any way psychologically incapacitated; but he provided expert testimony that parapsychology is a "pseudoscience based on mysticism and idealism".

There was no testimony given on Naumov's behalf; possibly in response to an international outcry, Naumov was released a year early.

The issue is quite complex because not only do certain Russians want to separate Soviet parapsychology from Western research, but also, there is some dissension there as to whether or not the field should be pursued at all. The one point which Ms. Gregory makes and which I would like to stress, however is the opening theme to this editorial: Man is a mystery. Research in this field inevitably leads to investigation of survival after death. Vasiliev constantly had to circumvent this issue (and even JB Rhine has side-stepped it). There will be no articles that address this problem in this particular volume of the Journal, however, when one wades through the endless data on the subject, one realizes that it is much more likely that we do survive bodily death — that the stay on the earth is only one trip of many, and that what we do in this dimension decides where we go in the next.

This topic is of the utmost importance when we discuss the use of parapsychology for military purposes, because we 7,000 year old infants of civilization know so very little concerning the true laws of mind. There are guideposts, however, and one sure law is that of Karma: YOU REAP

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WHAT YOU SOW. As the boxer Mohammad Ali said just recently 'Hearts, Minds and Souls have no color'. The secret that Vasiliev could not face is that on deeper levels we are all one. If we continue to see Russia as our enemy or vice versa, we will destroy ourselves. Just as American mass media has to wake up to the reality of our higher nature, Russia must also see that a greater conscious force than man is responsible for our stay here on the earth. Delving into parapsychology for evil purposes is delving in something called Black Magic. Only a fool would go that route; just as in physics, so as in the psyche: As Above, So Below: every action has an opposite and equal reaction. It all comes back to the soul. Parapsychology is only in its beginnings. If we persist in tackling only the material side of the field and neglect the soul, then we will continue to mistake the painting for the painter.

*Marc Seifer*

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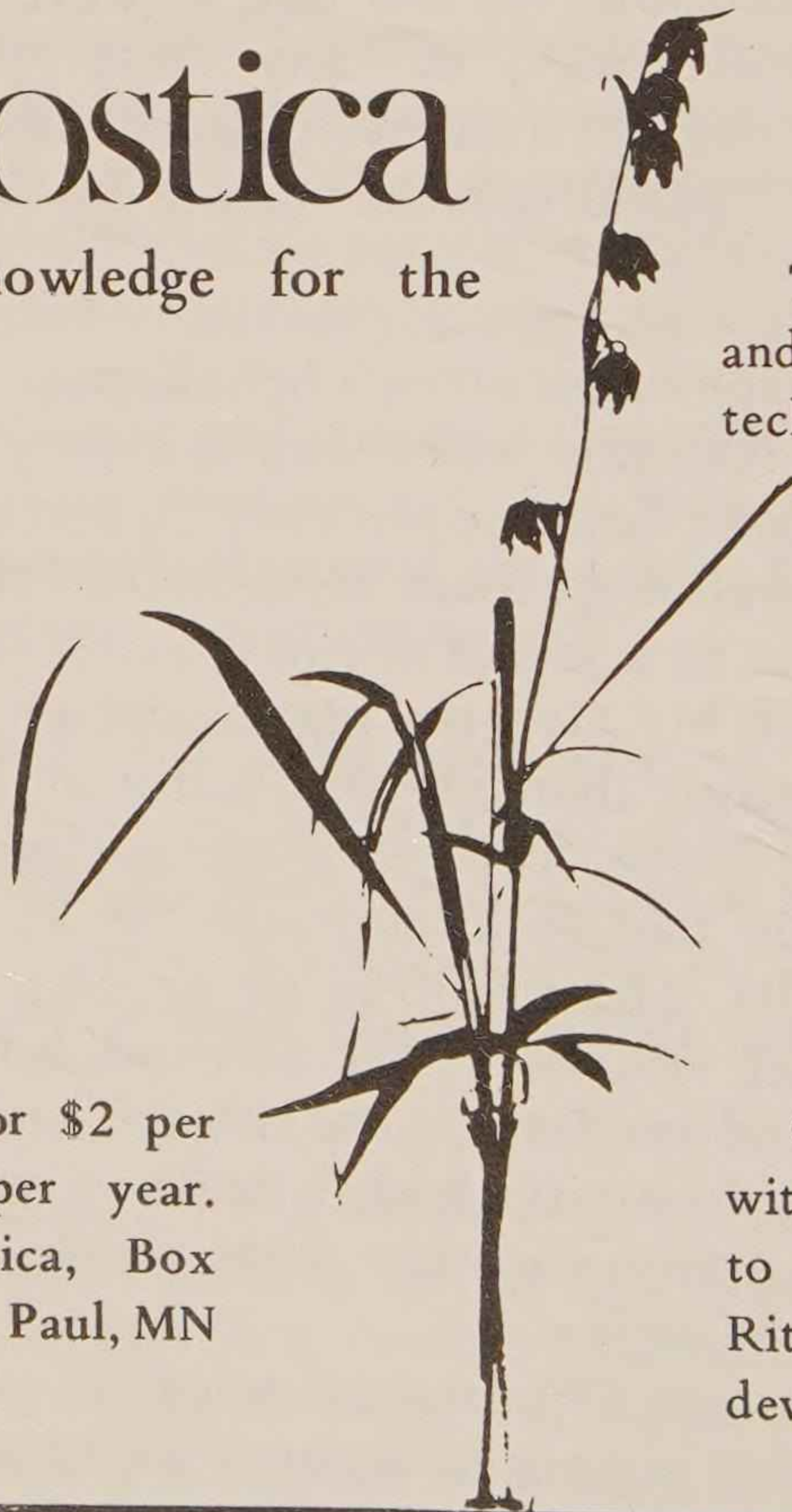
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# THE PARANORMAL: PSEUDOSCIENCE OR FUTURE SCIENCE

John White

## ABSTRACT:

Paranormal phenomena, defined as real events not explainable by present scientific theories and paradigms, are being experienced in many areas of life by increasing numbers of people. A reactionary response to this has taken formal shape in The Committee for the Scientific Investigation of Claims of the Paranormal, which is interested only in debunking such claims. A history of the committee's irrational actions and publicity stunts is given.

The expanding perimeter of human knowledge has brought pioneering scientists in many frontier areas face to face with things that cannot be explained in terms of present scientific concepts of reality. Psychic abilities, UFOs, strange energy effects from geometric devices, Bigfoot, the Loch Ness monster — these are some of the unusual phenomena that have puzzled and intrigued explorers in the borderlands of science. But upon reporting their observations, the all-too-frequent reaction by other scientists has been to disregard these unusual occurrences or to discount the reports as pseudoscience.

This regrettable attitude is a debasement of true science. It conceives of science as a body of knowledge rather than a method of knowing. In doing so, it becomes dogmatic, doctrinaire, and has been properly labelled "scientism."

From scientism's narrow viewpoint about what is possible and impossible, real and unreal, paranormal events are explained — if explained at all — as due to poor observation, uncontrolled experimental conditions, delusion, deception by the experimental subject, or falsification of data by the experimenter. Failing that, they are simply ignored or labelled "anomalies," as if so naming them disposes of them. The scientists who investigate these phenomena are dismissed as members of the "lunatic fringe" and then shunned.

Now, it is true that the history of science has documented many cases of faulty observation, uncontrolled results, irrational belief, and even fraud. But there is another theme weaving through the history of science in which the "lunatic fringe" has proven to be "the leading edge." The invention of the airplane and the electric light are two instructive examples.

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Nevertheless, in almost every sphere of its activity today, science is abutting in some way upon events that have heretofore been considered either occult nonsense or sheer fantasy. But the onrush of technological investigation has brought an ironic revelation: there are dimensions of experience known to prescientific and esoteric traditions which are now apparent and accessible to empirical objectification. The specialization of scientists, however, has for the most part kept them unaware that years of patient work by people in many countries have established the reality of a wide variety of strange — paranormal — events.

An overview is needed. That is what Dr. Stanley Krippner and I attempt in our recent book, *Future Science*. We take a comprehensive look at the physics of paranormal phenomena from a perspective that regards many so-called paranormal events as not beyond science but only beyond presently accepted models of science. Our intention is to rationalize and legitimize for research phenomena — many of which we have personally experienced — that previously have been skeptically dismissed without proper examination.

Prejudice dies hard, though. The most recent candidate for the Scientism Award, offered for outstanding prejudice and evasion of facts is The Committee for the Scientific Investigation of Claims of the Paranormal. Founded in May 1976 by *The Humanist* magazine and headed by Prof. Paul Kurtz, who teaches philosophy at SUNY, Buffalo and edits *The Humanist* magazine, the Committee is dedicated to debunking all such claims and labelling them pseudoscience.

Soon after its formation, the Committee made headlines by calling upon the media, in the words of *Fate* magazine publisher Curtis Fuller who has skirmished with the Committee, "to stop producing articles and documentaries in which opinions contrary to those held by the Committee are dominant." Or as *The Humanist* has put it, "the media penchant for the irrational."

The Committee's biggest headline came in November 1977 when it filed a complaint with the Federal Communications Commission against an NBC-TV documentary entitled "Exploring the Unknown." The program, narrated by Burt Lancaster and aired nationally on Sunday night prime time, was made by Alan Neuman, an independent producer in Hollywood. A long-time student of psychic research, Neuman has had technical guidance from many competent investigators of the paranormal. These included Dr. Glenn Olds, president of Alaska Methodist University, whose official position in the matter was that of consultant hired by NBC to keep the show on solid ground. Also lending expertise was associate producer Brendan O'Regan, director of research at astronaut Edgar Mitchell's Institute of Noetic Sciences and, a few years earlier, research coordinator for Buckminster Fuller. The program

as less than a day old when the Committee issued a blast through the news media. The formal complaint itself was filed one week after the show was aired. But that is getting ahead of the story. Let's look at the committee first.

The letterhead on which Kurtz wrote to the FCC lists such Fellows of the Committee as science writer Isaac Asimov, psychologists T.X. Barber and B.F. Skinner, magicians Milbourne Christopher and The Amazing Randi, *Time* magazine senior editor Leon Jaroff, astronomer Carl Sagan and *Scientific American* writer Martin Gardner. There were 43 committee members in all. On paper it's impressive looking. But let's look further. . .

Several months before the letter was sent, Kurtz' co-chairman Marcello Truzzi, a professor of sociology at Eastern Michigan University and editor of the Committee's journal *The Zetetic* (now retitled *The Skeptical Inquirer*), had resigned from editing the journal and from co-chairing the Committee. The magazine, he felt, was no longer a serious scientific journal and the Committee was in real danger of becoming nothing more than a latter-day witch hunt. Specifically, he charged that the Committee's executive council was interested primarily in debunking — not scientifically investigating — paranormal phenomena. He explored Kurtz' statements in the name of the Committee linking fascism (particularly in Nazi German) with interest in occultism and he also explored what had been termed "the media blitz," meaning the committee's attacks on TV and newspaper reporting of unusual phenomena. Kurtz knew all this before he wrote the FCC, of course; nevertheless he left Truzzi's name on the letterhead.\*

Kurtz also failed to consult with all the Committee members before lodging his charges. Technically, he did not have to since the Committee's by-laws voting only by its executive council. (Interestingly, the by-laws were never voted upon by anyone but the executive council.) The other 35 members can merely advise. However, shortly after the uproar over the NBC documentary began, I asked T.X. Barber, a distinguished experimental psychologist, how he felt about the situation. He was quite

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\*Truzzi has since started a new journal the *Zetetic Scholar*, which attempts to create "a continuing dialogue" between proponents and critics of the paranormal. "We will seek to balance science's proper skepticism toward extraordinary claims with its need for objectivity and fairness," he states on the first issue's editorial page. And in personal correspondence he told me, "Please don't confuse my position with that of Paul Kurtz and *The Humanist* or what is now *The Skeptical Inquirer*. I am not at all equate belief in the paranormal with irrationality. My own position is that something important is going on in psi experiments, but I am inclined to think the important contribution will come out of methodological discoveries rather than the validation of psi. I do not take the position it is all a matter of fraud and incompetence.

upset over it, he said, and was going to resign. (He has since done that and joined the *Zetetic Scholar's* editorial board.) Why was that, I asked Barber replied that he had never been consulted by Kurtz on that issue or any other, nor had he ever been asked to advise on anything. The only recognition of his presence on the Committee was xerox copies supplied to him of letters already sent.

This high-handed action by Kurtz doesn't even allow the Committee to be called a "rubber stamp." Some of the members had absolutely no knowledge of the FCC complaint, and therefore the charges are not representative of the Committee at all, but rather are the product of Kurtz alone, or at most of Kurtz and a small coterie called the Executive Committee.

Even Committee member Ray Hyman, a psychologist at the University of Oregon, recognized the excesses. "Some of the things our committee protests," *Brain/Mind Bulletin* reported him as saying, "are just senseless, pointless, a lot of noise." He also gave an insight into the motivation of the Committee. "I believe that our job is to present the skeptical point of view---responsibly. But some of the others believe that we can't get attention if we argue in an academic journal or if we qualify our statements. They feel we have to paint things in black and white or the media won't pay attention. So far they've been right in getting publicity---but at the price of embarrassing people like Marcello, who didn't want his name associated with what they're doing. It's a question of tactics."

Could the FCC letter be a tactic, a publicity stunt, an attempt to boost sales of *The Humanist*, which has acknowledged being financially beset? Look at what was said to the FCC. The Committee's letter read in part as follows:

On Friday, November 4, 1977, a specially selected panel, representing invitees of this Committee, reviewed the program in question, at a special screening arranged by NBC at their offices. . . in New York City. The panel consisted of:

Berard Piel, publisher, *Scientific American*

Martin Gardner, science author and contributor to the *Scientific American*

Dr. Martin Zinder, Professor, Rockefeller University

Dr. Paul Kurtz...

Why the Committee should invite themselves---Kurtz and Gardner---to their own panel is perhaps more a matter of literary style than scientific rigor. Be that as it may, the letter went on to state that it was the judgment of "this panel of experts" that---and I quote---:

a. The program presented a totally biased point of view in sensationalistic manner arousing gullibility in countless viewers.

b. It presented a limited number of "experts," allegedly representative of the scientific community, who, in spite of known evidence to the contrary, expressed little or no critical opinion of the material presented.

c. It ignored repeated requests on the part of the scientific community, through this Committee and by others acting on their own volition, to present the dissenting point of view by scientists who have criticized the lack of evidence for the purported "paranormal phenomena" contained in the program.

d. As one example of the dangerous nature of the material, the program presented segments on "psychic surgery" and "psychic healing" which in themselves constitute unfounded medical diagnoses and practices, which have long been criticized by responsible members of the medical community...

e. Disclaimers, in themselves, as appended by the NBC Television Network, do not overcome the preponderance of unproven (often disproven) theories, when the very effort of the entire program is to engender false expectations and magical cures. Minimal disclaimers were entirely insufficient because they were not balanced with judgment of scientific critics.

End of quote. NBC's response to the Committee expressed disappointment to learn of their dissatisfaction, especially since, in addition to the disclamatory language, an outside consultant (Olds) had been employed. Some examples of the disclaimers given to viewers:

This entertainment program presents an entertaining look at the world of "psychic phenomena," a subject that has engaged human curiosity for hundreds of years.

It is not the program's purpose to prove or disprove the scientific basis of what is shown, but to present some examples of what is currently claimed to be "psychic phenomena."

You must bear in mind that what is shown has not been conclusively established to be true.

As for the judgment of Olds, he told NBC that the program satisfied the highest possible entertainment standards. In a letter he remarked:

I commend NBC for both its wisdom and imagination in opening this important window to one of our most important and often neglected frontiers, the self. I hope there will be more. Only a hopelessly closed mind could be critical of this modest and guarded educational opener.

None of this satisfied the Committee, of course, and it undoubtedly was a great disappointment to the Committee last July when the FCC, in a four-page statement, dismissed the charges as baseless. The FCC "Fairness Doctrine," designed to prevent one-sided presentations on controversial issues of public importance, was not violated, the statement said.

Further, it said, the FCC is prohibited by statute from interfering with the content of broadcast programming. Last of all, "it cannot be concluded that NBC has been unreasonable in determining that *Exploring the Unknown* did not constitute a discussion on one side of a controversial issue of public importance, or that the network has failed on an overall basis to afford reasonable opportunities for the presentation of conflicting views regarding the matters raised in your letter. Consequently, further Commission action is not warranted on your complaint."

This decision is the only proper reply to what amounts to a mere cranial letter. For in addition to the deliberate misrepresentation that Kurt attempted to perpetrate on Committee letterhead, there wasn't the slightest substance to the charges themselves. In fact, the only substantive point offered in support of the charges was in item d, where a single sentence reads, "For example, Dr. William Nolan (sic) has done extensive research about the fraudulent character of such "surgery."

This statement refers to the 1974 book, *Healing*, by William Nolen M.D., author of *The Making of a Surgeon*. *Healing* purports to be an investigation of psychic healers, but the inaccuracies, distortions and deliberate falsifications in the book do anything but prove the "fraudulent character" of psychic surgery or Nolen's "extensive research."

This paranormal phenomenon occurs primarily in the Philippines where Filipino psychic surgeons---nonmedical native healers---purportedly demonstrate the startling ability to insert their bare hands into a living body to perform surgery, without any pain, infection or scarring to the patient who, in successful cases, exhibits instant healing. Now, it is true that some medical teams investigating this bizarre event have found, in addition to genuine psychic surgery, cases of fraud in which animal tissue and blood is substituted for human. But Nolen found no such evidence. He based his judgment largely on second-hand interviews with people who were themselves favorably impressed with the paranormal phenomenon.

One such person was Donald Westerbeke. A Sonoma, California businessman, Westerbeke had an operation in 1972 by famed Filipino psychic surgeon Tony Agpaoa that supposedly removed a tumor from his pituitary gland. He has been in good health ever since, and travels widely to show his films of psychic surgery, including his own operation.

Nolen interviewed Westerbeke for six days. Oddly, Westerbeke's story appears in *Healing* as that of "Neal Cook." Westerbeke's words are often printed verbatim, yet the ending of his story is different from what was stated to Nolen. In Nolen's account, Neal Cook has a recurrence of the tumor and has to have conventional medical surgery in the U.S. When questioned about this lie on San Francisco television, Nolen answered

variously that a) Neal Cook represents a combined medical history of two people, and b) Neal Cook is a Texas airline pilot. Nor would he explain why Westerbeke's words were attributed to Neal Cook. Last of all, he deliberately ignored reports favorable to psychic surgery by qualified medical teams such as those reported in Tom Valentine's *Psychic Surgery*.

This sort of sloppy and unreliable reporting is the *only* evidence offered by the Committee in its letter to the FCC. All the rest is unsubstantiated allegation that can properly be termed mudslinging and name calling.

As if this weren't shameful enough, *Time* magazine entered the affair in its December 12, 1977 issue, undoubtedly through its senior editor and Committee member, Leon Jaroff. Ostensibly a report on the Committee's work, the article was so lacking in objectivity and fairness that it could well serve as a classic example of yellow journalism. Ironically, *Time* was guilty of some of the very charges made in the FCC complaint. It "presented a totally biased point of view in a sensationalistic manner arousing gullibility in countless(readers)" and it "presented a limited number of 'experts,' allegedly representative of the scientific community who, in spite of known evidence to the contrary, expressed little or no critical opinion of the material presented."

Not one member of the pro-paranormal research field was quoted by *Time*. Nor was Alan Neuman or anyone connected with the program. I phoned Neuman to ask whether *Time* had solicited his reply to the Committee charges. His answer was no. Someone from *Time* had called for a picture, he said, but when he indicated that he wanted to make a statement as well, *Time* never called back.

*Time's* one-sided smear was predictable enough — in an altogether nonpsychic way — by the paranormal research community. We had seen Jaroff's hatchet job on Israeli psychic Uri Geller and the Stanford Research Institute scientists, Harold Puthoff and Russell Targ, who reported their investigation of Geller in *Nature*. *Time* had ridiculed all three in an article before the findings were even published! Saul-Paul Sirag — a physicist and journalist, had questioned Jaroff about this. He reported Jaroff's impassioned reply in *Psychic* magazine (October 1975):

"If you're the kind of person who believes that such things are even possible, then I have nothing more to say to you." It was Leon Jaroff, a senior editor at *Time*, speaking to me on the phone in response to an inquiry about Uri Geller. . . I half expected such a response because I had called Jaroff to find out what was behind his venomous attack on Geller and the physicists at Stanford Research Institute who had studied Geller for six weeks.

Before I had a chance to commit myself one way or the other on the psychic question, Jaroff launched into his lecture: "Why, if Geller can do those things just by knitting his brows, it destroys everything I hold dear!"

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How does the joke go? My mind's made up — don't confuse me with the facts.

I asked Neuman, in the absence of any attempt by *Time* to do so whether he had a reply to the Committee. Again, his answer was no. I didn't respond because I felt what they said was so outrageous and stupid that I decided not to keep the controversy going. I didn't want to provide them with an additional forum. I thought seriously of initiating libel action. But to what purpose? Obviously, *Time* isn't going to report my side. And the time and effort involved in court action aren't worth it. For the moment I've simply put the file aside."

Neuman offered one further comment on the Committee. "What I object to is their use of the term 'questionable.' Now, if they mean I'm raising questionable thoughts and ideas, that's well and good. That's exactly what I intended. But if they're saying that the means I employ are questionable, that's a lie. Frankly, I don't believe the Committee itself is qualified to judge my film. Can a philosopher run an EKG machine? Can a science fiction writer maintain the biofeedback equipment of an Elmer Green (one of the scientists in the film)? For the program, we had eminent qualified scientists acting as advisors and participants, both in front and behind the cameras in each and every segment. I would consider few of the Committee sufficiently competent to serve as such. Of the four Committee people who passed judgment on my program, there was only one *actual* scientist, Zinder, and his specialty is microbial-genetics. There wasn't a parapsychologist among them. It's a self-appointed vigilante group. You cannot knock ideas off the air because they disagree with your opinion. It's a reminder to me of the pressure tactics employed during the McCarthy era. The Committee is using such tactics, and I find it reprehensible."

Neuman isn't the only one who finds it so. In the December 1977 issue of the *Journal of the American Society for Psychical Research*, Theodore Rockwell, Robert Rockwell and W. Teed Rockwell offer a critique of *The Humanist's* crusade against the paranormal. Their article "Irrational Rationalists," contends that *The Humanist* has "so outraged the rules of rational discourse in this area that it has compromised its claim to the rationalist platform."

The Rockwells do not debate whether psychic phenomena are genuine. Rather, they are concerned with the intellectual quality of the debate. "Extraordinary claims demand not merely skepticism (which is just as cheap as credulity)," they state, "but rigorous, imaginative, dispassionate investigation (which is harder to come by)." Their judgment: "Our charge is that the evaluations it has published have abused the principles of rational discourse as often and as badly as the worst of those they seek to discredit."

The article goes on to cite numerous examples of *ad homine*

arguments against the character of various investigators based on false categorization, personal defamation and group derogation; *in loco* arguments based on unsubstantiated allegations, contradictions, non sequiturs, rumor and innuendo; and *in extremis* arguments based on the appeal to authority when logic fails and the prophecy of apocalypse unless the pernicious belief in paranormal phenomena is eradicated.

“The rationalist need not be infallible in fact or judgment: but he must be open-minded and argue rationally. . . .” they conclude. “The defense of reason is like the defense of Virtue. Its disciples must practice what they teach, or they do their cause more harm than good.”

But as the saying goes, “Man convinced against his will is of the same opinion still.” The cries of the Committee are still heard abroad in the land. Small wonder, then, that it is leaving many people, including some of its own members, aghast at its errors and excesses. What could have been a useful vehicle for drawing public attention to some of the baseless and mindless nonsense that abound in the psychic/occult field today — such as love spells and potions, simplistic astrology columns, and blood-created fortune tellers whose predictions never get beyond Hollywood romances — has apparently been turned into a self-appointed Inquisition without any claim to fairness and balanced judgment. As one critic of the Committee, the Rev. J. Gordon Melton of Chicago, who briefly debated Kurtz on television, put it, the scientific pretensions of the Committee are in reality doctrinal conflicts in which it battles for the supremacy of its religiously-held world view.

The true spirit of science is *scire*, “to know.” It is a desire for knowledge coupled with a reliable method of knowing — not just assimilation of data from others so that one can smugly wear the label “scientist” with an egotistical sense of superiority about being able to regurgitate more facts than most others.

Since human consciousness inevitably enters into the data of science, to completely describe an event there must also be a description of the consciousness observing the event. In other words, *consciousness itself* is primary — not the contents of consciousness — and the quality of our knowledge, including that of the empirical method, is dependent upon the degree to which we purify and expand our consciousness.

KNOWING, not KNOWLEDGE, is the heart of the problem, and therefore it is only proper that science should start examining the means whereby it knows what it claims to know.

#### John White — Bibliography:

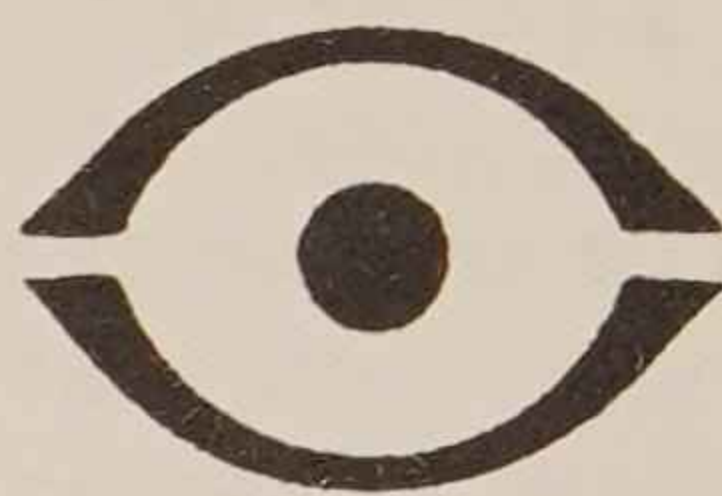
John White M.A. Yale University, is an author, editor and lecturer engaged in the exploration of consciousness. His books include *The Highest State of Consciousness; What is Meditation; Psychic Explorations* (edited for astronaut Edgar Mitchell), *Frontiers of Consciousness*; and *Future Science* (edited with Stanley Krippner). His new book *Pole Shift* will be out shortly.

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## A REMOTE VIEWING EXPERIMENT: CALIFORNIA TO RHODE ISLAND

Howard Smukler

subjects participated in a clairvoyance test from California to Rhode Island. On three separate days the author positioned himself in unknown locations at prearranged times. Across the continent three different parapsychology classes were asked to visualize where the author was. There were 6 hits of varying accuracy.

Remote viewing, a modern term for travelling clairvoyance, is defined by parapsychologists Russell Targ and Harold Puthoff as "the ability of experienced and inexperienced volunteers to view, by means of mental processes, remote geographical or technical targets such as roads, buildings and laboratory apparatus." Although their most successful subject is the well tested and extraordinary psychic Ingo Swann, they have successfully tested over 20 subjects and have concluded that:

The phenomenon is not limited to short distances; electrical shielding does not appear to degrade the quality or accuracy of perception; most of the correct information given by subjects is of a non-analytical nature pertaining to shape, form, color and material rather than to function or name, suggesting that . . . the brain's right (non-verbal) hemisphere (may be involved and that) remote viewing is probably a latent and widely perceptual ability.

Interestingly enough the use of this new term may actually enhance the ability because it somehow more accurately explains the processes involved; however, travelling clairvoyance, as a known phenomena, is at least as old as the bible. One of the most famous cases of this type involves the Swedish philosopher and scientist Emanuel Swedenborg (1688-1772) who in his later years described a fire which occurred 300 miles from where he was situated. The experience was significant because of the number of witnesses who verified the account.

The London Psychical and American Psychical Societies have reported literally hundreds of analogous spontaneous cases. Usually they are of an emotional nature. Just to cite one example involving great distances, J.B. Rhine tells us about a Dr. C. who wrote to him that "while in China she was awakened from sleep one night during the war by hearing her mother calling her name. As she later learned, the mother in New England was at that very time dying and asking for her daughter." (New World of the Mind, p.22)

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Controlled experiments in telepathy at a distance are also quite common. In the late 1880's Gurney, Myers and Podmore reported on an experiment from Australia to England in *Phantasms of the Living*, and during the same decade Janet and Richet described the hypnotic suggestion of sleep telepathically induced to a particular subject from varying distances. Warcollier and Osty stated that they were successful at small and large distances, and at the Third Congress of Psychical Research in 1927, Warcollier reported tests from New York to Paris in both directions. He claimed 5 out of 15 coincidences and concluded that the tests were successful. Upton Sinclair, in his work *Mental Radio* also described ESP successes over distances of 30 miles; and Constantinedes reported at the Fourth International Congress of Psychical Research that the Athens Society for Psychical Research conducted a large number of long distance telepathic experiments in 1925. These tests were from Athens to Paris, Warsaw and Vienna. Unquestionably, the longest distance ESP experiment was conducted by astronaut Edgar Mitchell from the moon back to the Earth. Although he used well known psychics in transmitting ESP cards, the test was unsuccessful but it was statistically significant 3000 to one odds *below* chance. (This is known as negative psi.)

From the Russian literature, Professor L. L. Vasiliev describes, in his text *Experiments in Distant Influence*, telepathy tests performed from 1,000 to 4,500 meters whereby a hypnotic subject would be induced to sleep at randomly chosen times. *Psychic Discoveries Behind the Iron Curtain* also notes similar studies. There were a number of telepathy tests performed with two subjects: Kamensky as the sender and Nikolaiev as the receiver. On four different nights over a distance of 1,860 miles Kamensky was able to transmit mental pictures of chosen items to Nikolaiev. On another occasion both these subjects' brain waves were monitored. A timing device was attached to Kamensky's eyes and would flash a strobe. "As the light pulsed on Kamensky, pulsations appeared in Nikolaiev's brain activity." (p. 30)

Targ and Puthoff's contribution mainly lies in the use of average subjects (beside Swann) and in replacing targets such as ESP cards with target pictures with actual geographical locations chosen randomly from a list of a number of possibilities. Their success rate is of vast importance because of the need of a repeatable experiment in telepathy tests.

### PROCEDURE

H.S. randomly chose three different locations in California on three different days (the choices were, however related to where he might have to be). Each experiment took place at 6:20 California time or 9:00 Eastern Standard Time. At the same moment in Rhode Island, and on three nights, M. Seifer coordinated three different parapsychology classes "tune in where Howard was located." M.S. also participated and did not

now where H.S. was. The subjects were asked to draw their impressions and later they were compared to the location and drawings that H.S. made.

### RESULTS

There were three target pictures with written impressions associated with the three locations. See figures 1, 5 & 7. Thirty-four subjects participated (M.S. counting as 'three' subjects). There were no other applications of subjects. Six of the pictures directly related to the target pictures.

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2	1	8	12.5
3	2	15	13.3

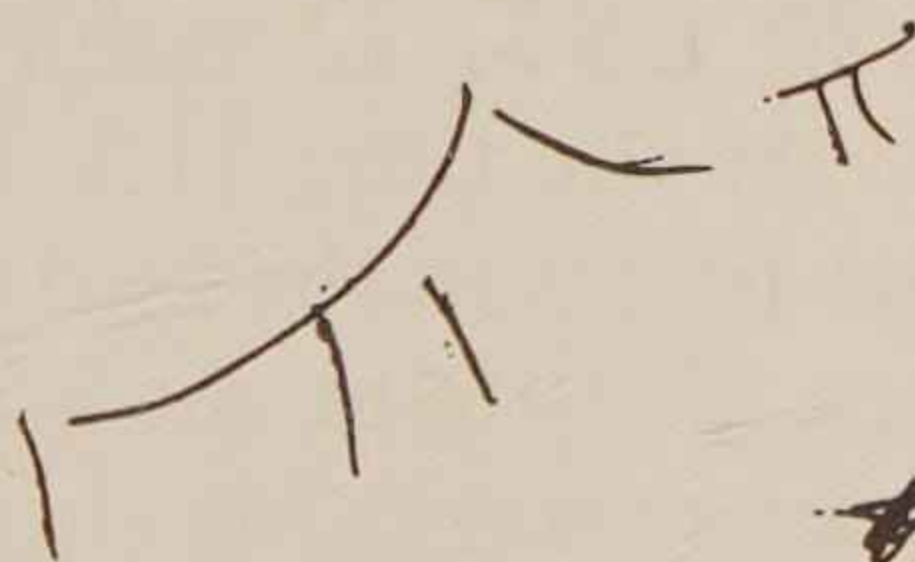
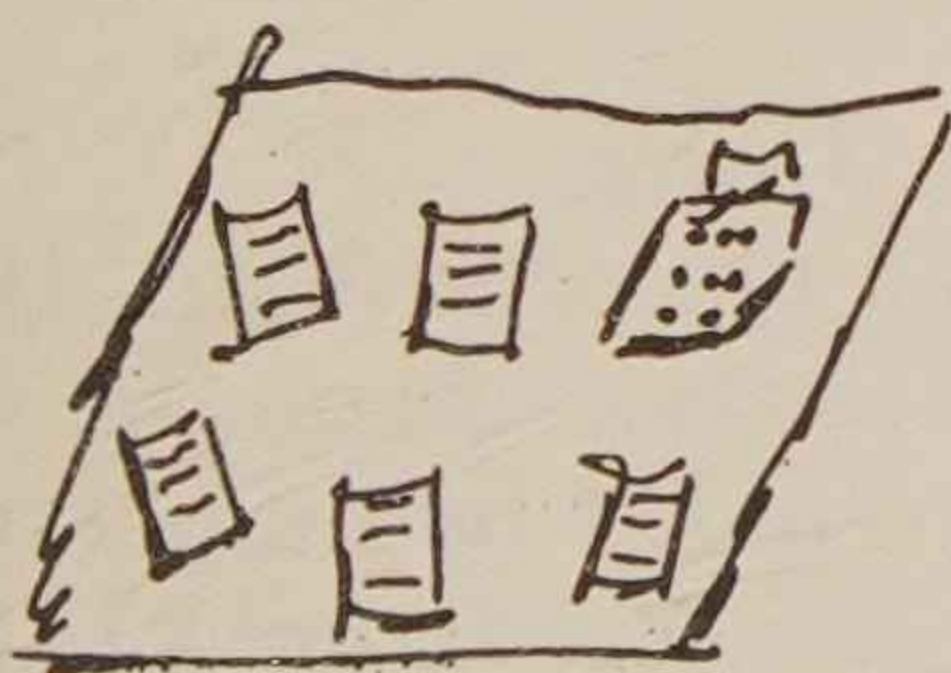
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numbers

2/27/78  
H. SIMON  
CALIF  
6:30 PM

Figure #1:

Monday 2/27/78; Taxes,

Taxes, Taxes.  
Sitting at desk  
surrounded by  
numbers.



JOE ENGLAND  
2/27/78  
RI 9:30 PM

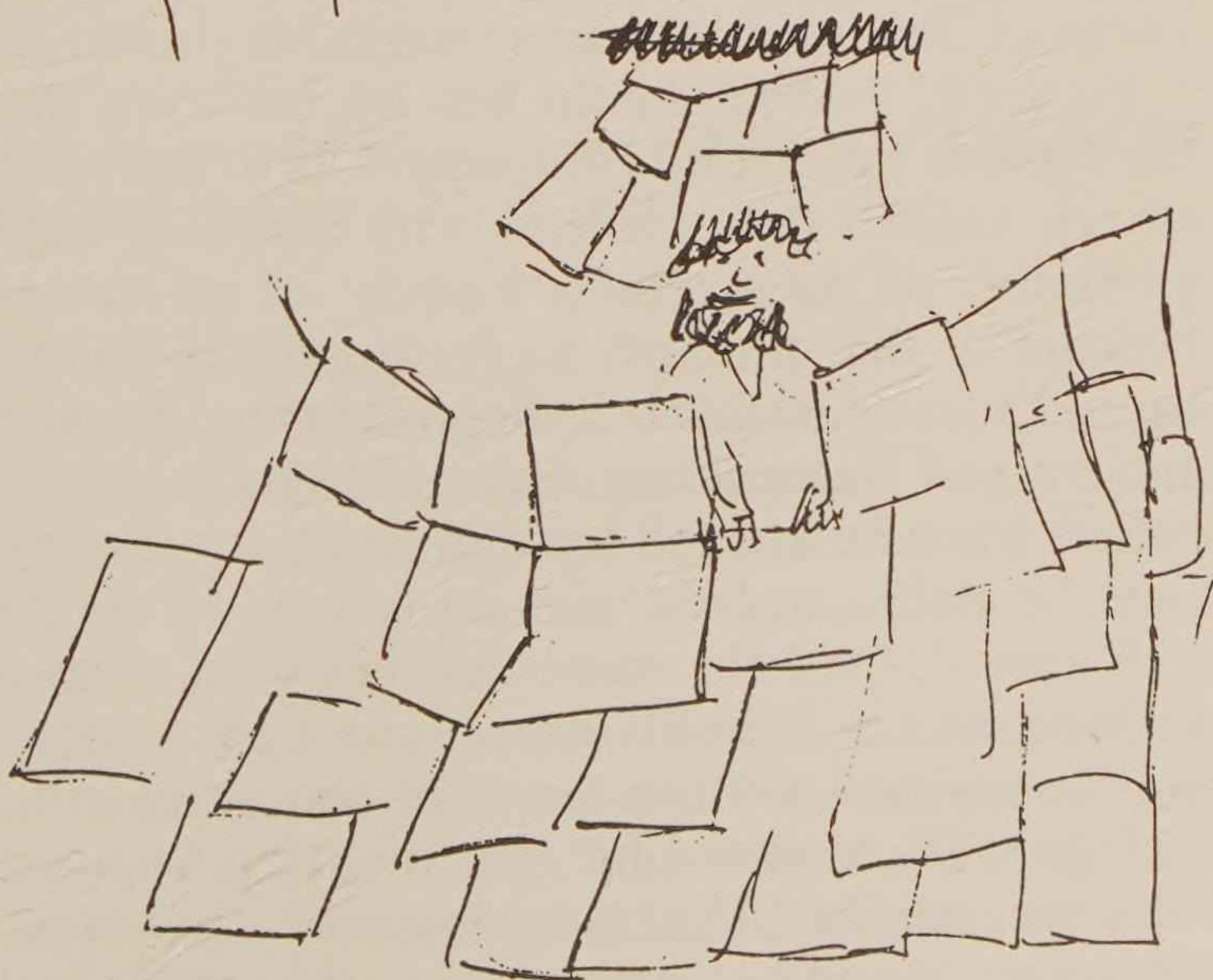
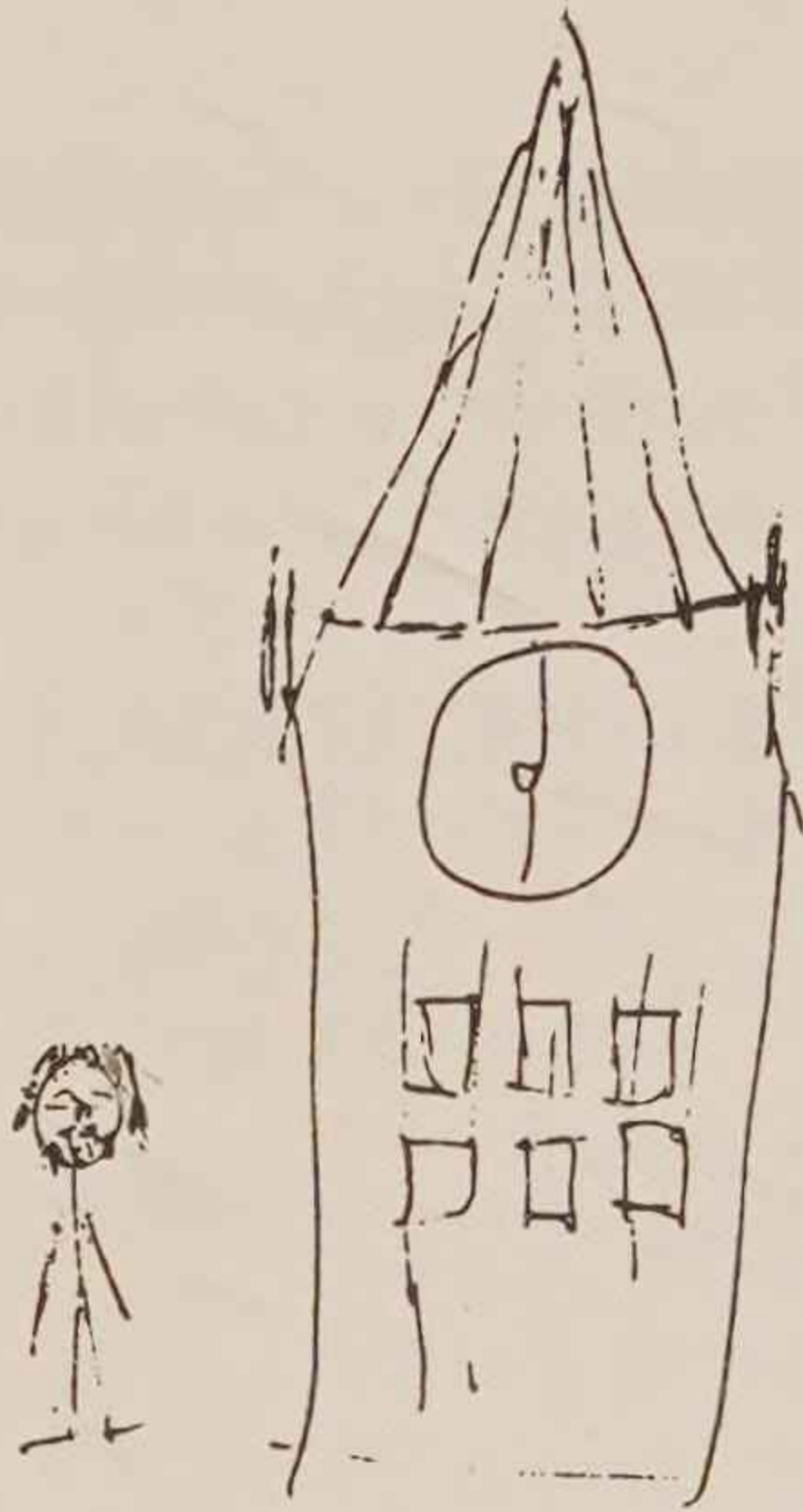


Figure #2

2/27/78

Rhode Island  
9:20 PM2/27/78  
RI 9:20 PM

Donald Ross M.D.

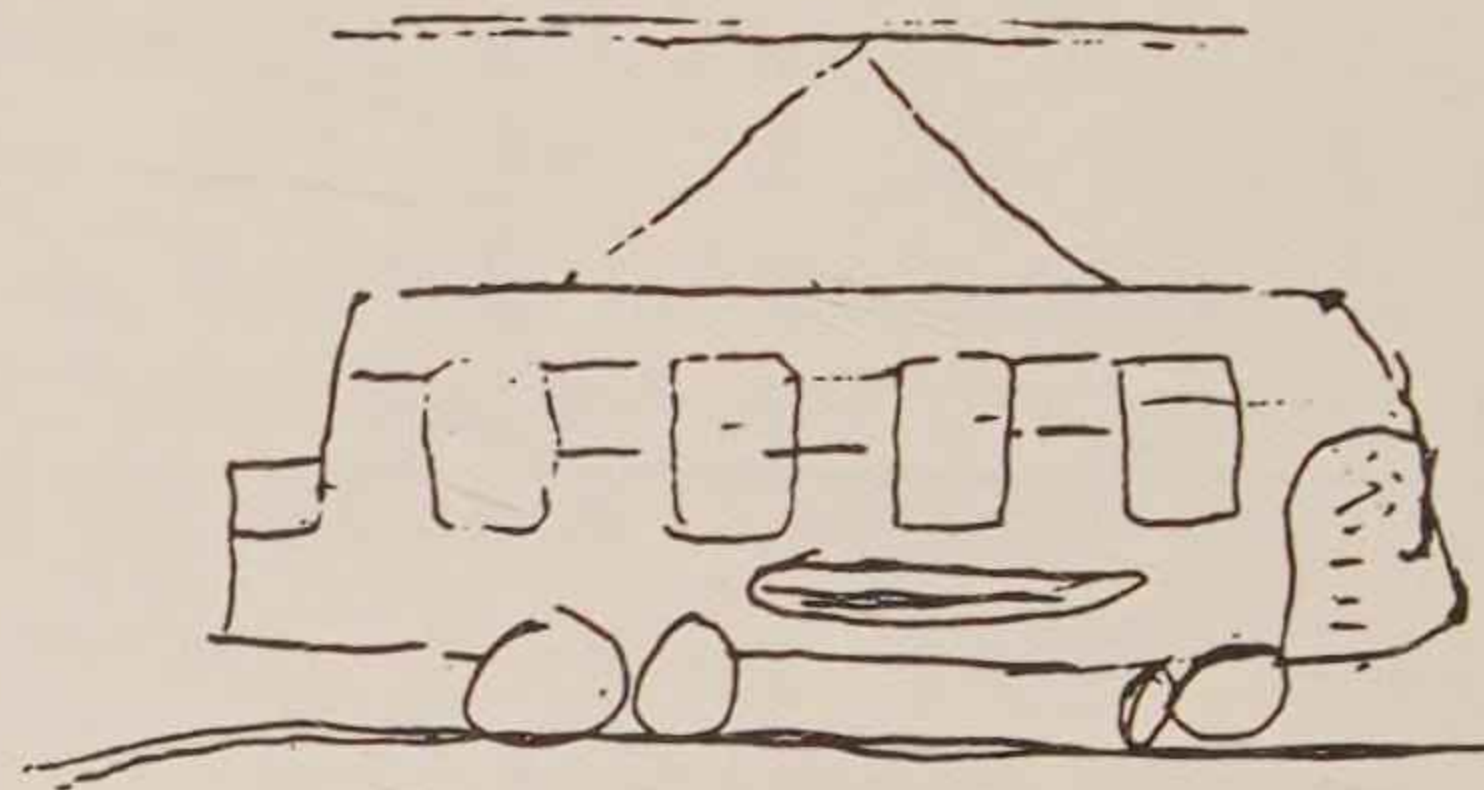
Caitlyn Thomas  
Feb. 27

Figure #3

Figure #4

## ANALYSIS

*Night #1: 2/27/78, 9:20 EST, 11 subjects, 3 hits.*

H.S. drew Figure #1. At the time H.S. was a tax consultant. He was situated at his office after hours in the midst of the tax season. He wrote Taxes, Taxes, Taxes, Sitting at desk surrounded by numbers.

Three of the drawings had remarkable similarities. See figure #2, 3, & 4. Figure #2 looked like the best hit, however, the subject, J.E. stated that the squares were stones, not papers. H.S. was sitting behind a pile of square stones. One of the problems with telepathy experiments is the inherent ambiguity of the symbolic transfer of information. A hit was recorded because of the similarity of form and the emotional similarity to being behind a stone wall and feeling inundated by piles and piles of taxes. This subject had claimed one unusual psychic experience a number of years before when he had felt healing energy streaming from his hands. At that time he claims to have given a 'shock' to the girl he was with.

Figure #3 had the same number of squares (six) placed in a similar fashion, and both had a larger square circumscribing the smaller ones. It was considered a hit in terms of similarity in form.

Figure #4, a partial hit, was included because it too had a number of squares inscribed in a larger square. However, although the forms in drawings #3 and #4 were similar to the target, both major themes, a house or church, and a bus, were wrong.

subject: X  
1 hit

H. Smulder  
3/1/78  
6:20 pm  
Calif

Wed  
INSIDE  
Ice Skating Rink  
cold lots of  
ice + space  
one or two skaters



One Man one woman

Figure #5: Wednesday 3/1/78; Inside ice skating rink. Lots of ice and space. One two skaters . . . one man, one woman.

I see him sitting at home with in a room, sitting at the end of his bed looking out the window at this; he's relaxed and just ate a heavy meal



Dennis C. Lammis

3/1/78

RI

9:20 pm

Figure #6: I see him sitting in a room, sitting at the end of his bed looking out the window at this; he's relaxed and just ate a heavy meal.

Flight #2: 2/1/78, 9:20 EST, 8 subjects, 1 hit.

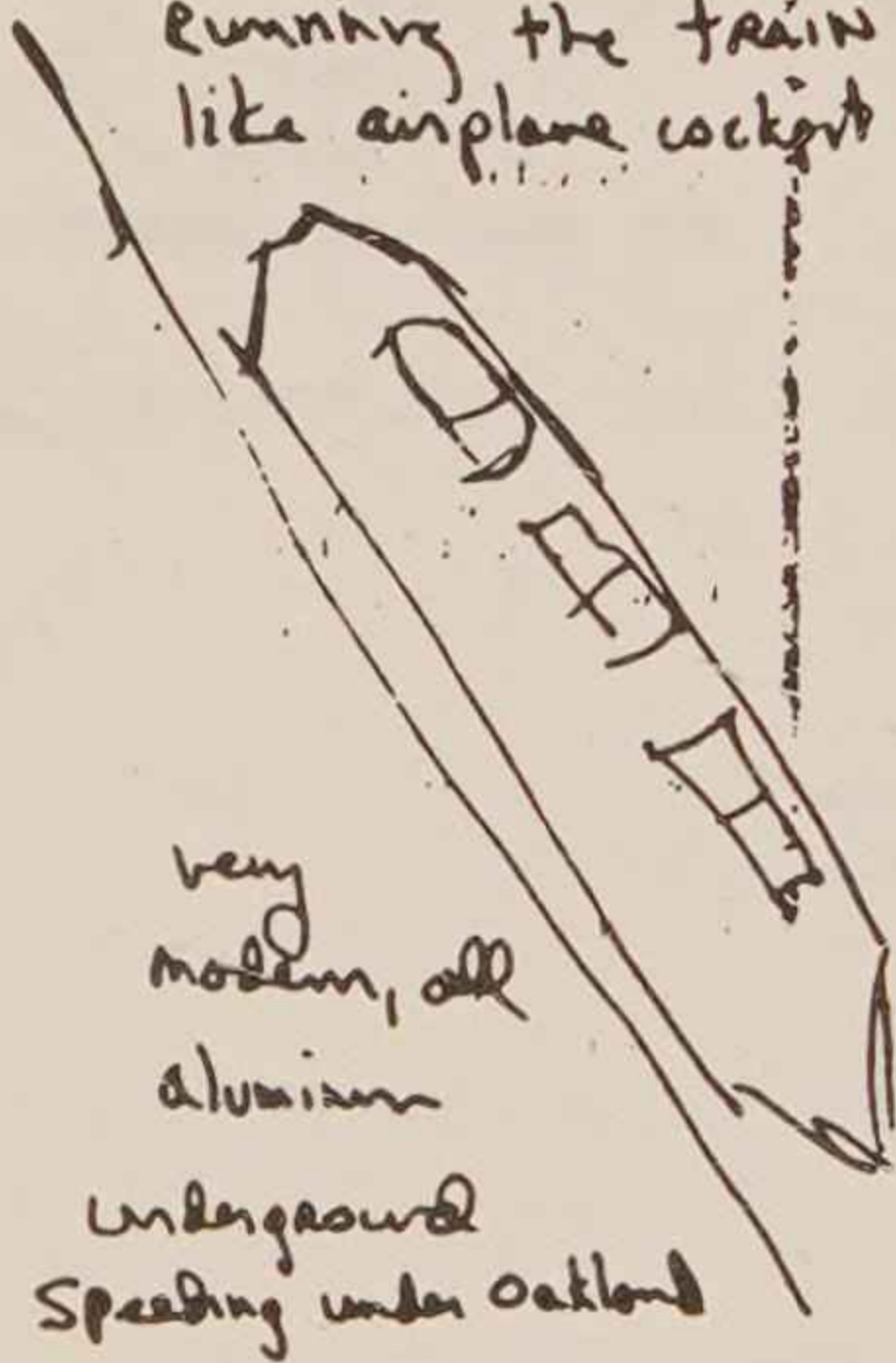
Compare figure #5, the target, with figure #6. The subject, D.L. has had a number of psychic experiences and claims to have had unusual out-of-body experiences where he 'withdraws' and can see himself from a distance behind himself as from a corner of a room. This state of dissociation occurs whenever he argues with someone. D.L. wrote 'I see him sitting in a room sitting at the end of his bed looking out the window at this scene; he's relaxed and just ate a heavy meal.' This statement was wrong. H.S. was at an ice-skating rink. It was 'cold with lots of space and one or two skaters.' However both drawings are quite similar and both contain a theme of water, i.e. ice and rain. This was considered a partial

Subjects: 15  
2 hits

H. S. S. 3/2/78  
Calif  
6:20 PM

Thursday

San Francisco Subway  
Very sleek,  
technological, fast  
speeding along looking  
out the window  
watching things speed  
by, looking at  
control panel  
running the train  
like airplane cockpit



very  
modern, all  
aluminum  
underground  
speeding under Oakland

Figure #7

Verne's View  
H. S. S. S.

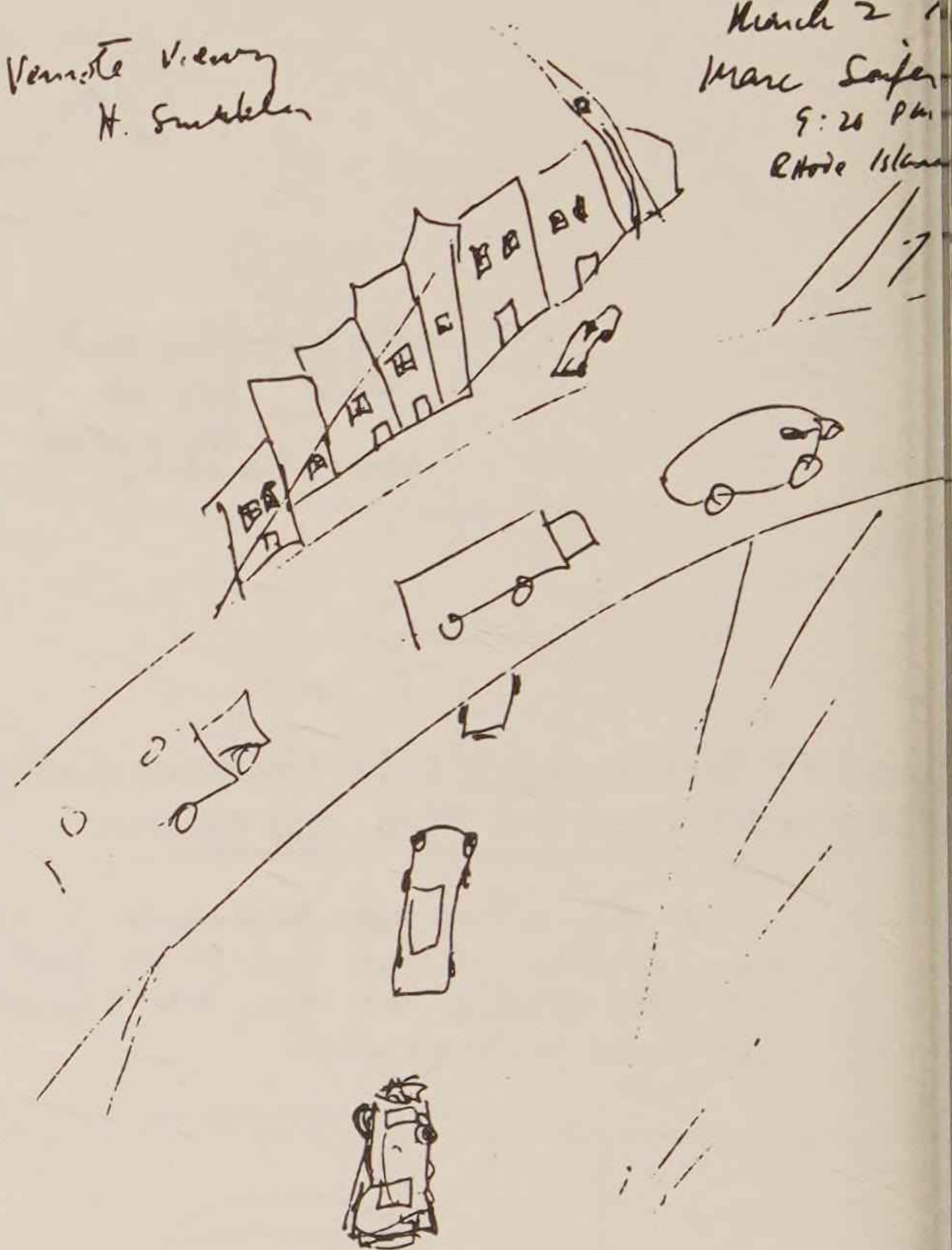


Figure #8

March 2 78  
Marc Seifer  
9:20 PM  
Rhode Island

Figure #7: Thursday 3/2/78; San Francisco subway. Very sleek, technological, fast, speeding along, looking out the window watching things speed by, looking at control panel running the train, like airplane cockpit . . . very modern, all aluminum, underground speeding under Oakland.

Night #3: 3/2/78, 9:20 EST, 15 subjects, 2 hits

H.S. wrote: 'San Francisco subway, very sleek, technological, fast speeding along looking out the window watching things speed by looking at control panel running the train like airplane cockpit. Very modern, all aluminum underground speeding under Oakland.' See figure #7.

Figure #8 was drawn by M. Seifer. He had distinct impressions of 'cars going under a tunnel.' Note the mirror image similarity of the cars going under the tunnel with the target. This was considered a hit.

Figure #9 had two or three 'cars' drawn in the same mirror angle as the two cars at the top of the drawing (one partially obscured by the traffic light) have an image of 'speeding along.' Also, this drawing has much 'technological' attributes to it. All three drawings are of the 'bird eye view' type. This was also considered a hit.

Ken D. Ramo MARCH 2, 1978

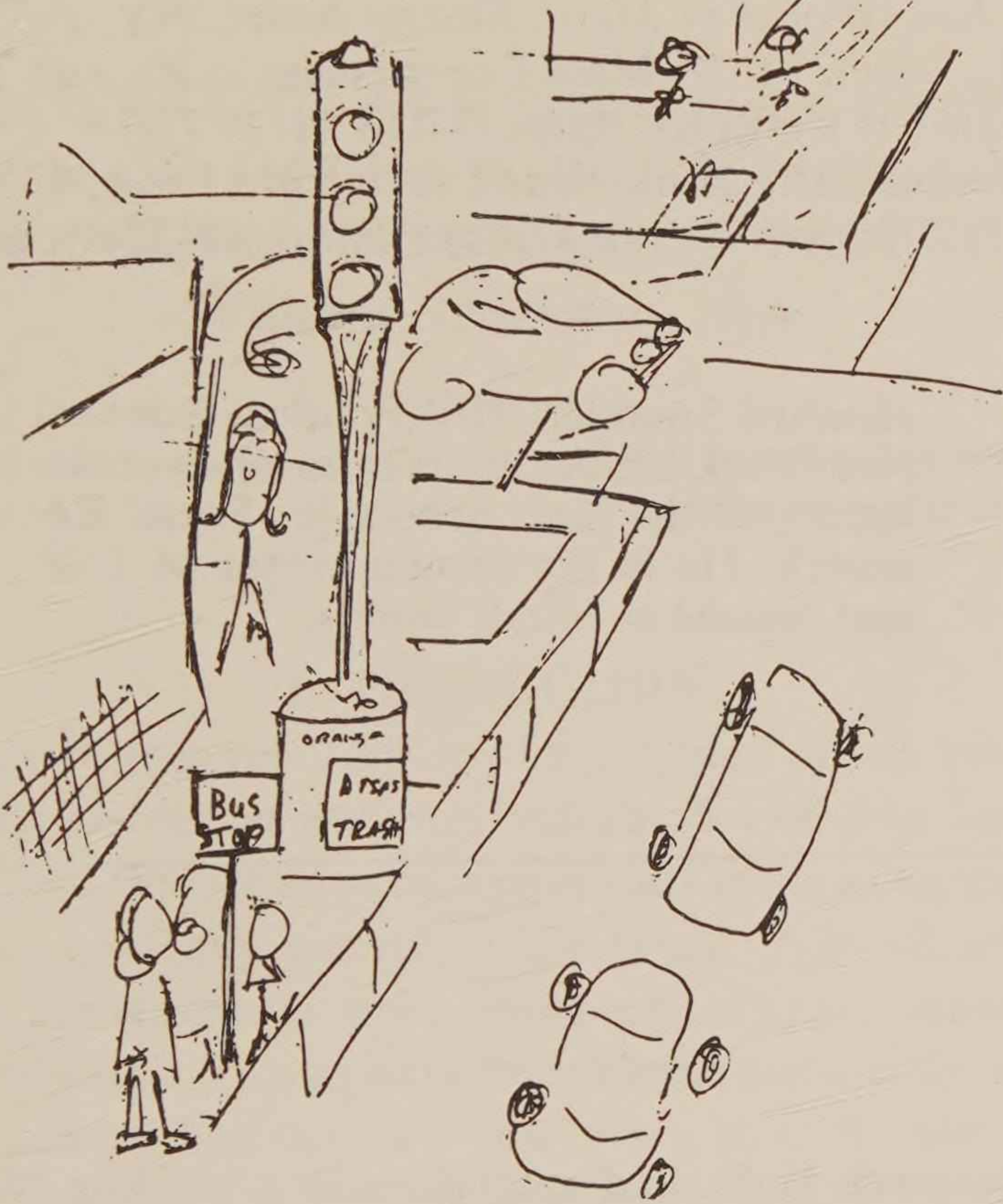


Figure #9

## CONCLUSION

There was a vast difference in the 34 drawings. Very few were similar to each other. No drawing similar to the hits occurred on any other night. For instance cars along a road were not drawn on nights one and two, nor were six squares inscribed in a larger square drawn on nights two and three. Hits on telepathy tests must contain some amount of subjective loading; blind judging could have been used in these experiments to reduce this possible criticism. However, there were striking similarities in six out of thirty-four drawings or 17.7%. Some hits were better than others. None of the hits were correct in every respect.

## BIBLIOGRAPHY

Turney, E., Myers, FWH, Podmore, F., *Phantasms of the Living*, London: Trubner & Co., 1886.

*MetaScience Quarterly*

Ostrander, S., Schroeder, L., *Psychic Discoveries Behind the Iron Curtain*, Prentice Hall, 1971.

Rhine, JB, *New World of Mind*, Sloane Assoc, NY, 1953.

Smukler, H., Seifer, M. "A Mass Experiment in PK and Telepathy at Distance with Uri Geller as Agent," JOS #1, 5/77.

Targ, R., Puthoff, H., *Mind Reach*, Delecorte Press, 1975.

Vasiliev, L.L., *Experiments in Distant Influence*, Dutton, NY, 1976.

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# THE PYRAMID DEHYDRATION EFFECT: INHIBITION OF THE NATURAL HYGROSCOPICITY OF SODIUM HYDROXIDE PELLETS

William Schramm, MA

## Abstract:

In a controlled study, a solid plastic pyramid was found to inhibit the spontaneous tendency of sodium hydroxide to absorb water from the atmosphere.

## INTRODUCTION

It has been widely reported in the popular occult press, perhaps beginning with Ostrander and Schroeder's *Psychic Discoveries Behind the Iron Curtain*, that small square pyramids made of various materials which are geometrically similar to the Great Pyramid of Egypt had remarkable preservative properties on organic matter, chiefly through dehydration. There have been numerous articles appearing in various journals within the past few years (e.g. S. Aletti, *J. Occult Studies*, 1, 1) confirming this effect observationally; however, to this author's knowledge there have not been any quantitative studies published.

It was my hypothesis that if such an effect were valid, it might tend to inhibit the natural hygroscopicity (spontaneous absorption of water from the atmosphere) of certain chemicals. Sodium hydroxide (reagent grade pellets) was chosen to duplicate previous informal work with a commercial drain opener of which sodium hydroxide was the principal constituent. The data for this experiment were collected in 1975 when the author was an Instructor in Chemistry at Garland Junior College in Boston, Mass.

## APPARATUS

The pyramid used was one sold commercially to demonstrate this effect and was furnished by the John / Dilly Company. It was constructed of clear plastic 6 mm in thickness with an interior base dimension of 21.6 cm, and was allegedly a replica (geometrically similar) to the Great Pyramid of Egypt. Inside the pyramid was a small table constructed of the same plastic material set in the center of the base at a height of

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one third the apex height, allegedly the point of maximum pyramid effect.

The control enclosure was an inverted glass cylindrical bowl of approximately the same volume as the pyramid. Mass was measured to the nearest .1 mg on a Sartorius analytical balance.

### PROCEDURE

During each run, a weighed 5ml. glass beaker containing one weighed pellet of sodium hydroxide (flat side of pellet down) was placed in the pyramid and then another such sample was placed in the control enclosure (always the pyramid first). In addition, an open dish of water was placed in both the pyramid and the control enclosure to insure 100% internal relative humidity.

Both the pyramid and the control were covered with an opaque covering and placed side by side for the duration of the run.

After each run, the beakers were again weighed (always the *control* first) and the fractional change in mass was recorded.

### ANALYSIS

In each of the runs, the pyramid sample absorbed less water per unit mass than the control. The chances of this ranking occurring randomly for all thirteen runs is  $1/2^{13}$  yielding a significance through ranking alone of  $p = .00012$ .

It was observed empirically that the fractional change in mass plotted against time yielded a nearly linear result for the pyramid and control samples separately, and that the pyramid samples plot had a smaller slope (slower rate of water accretion) than did the control samples.

Comparison of the pyramid samples with the control samples in respect to rate of water accretion, the following results were obtained:

	PYRAMID	CONTROL
Mean Rate, hr. <sup>-1</sup>	.0406	.0581
Std. Dev.	.0106	.0116

$t = 3.69$ , significant at the .008 level.

#### DATA

Run Designation	Elapsed Time (Hours)	Fractional Change in Mass	
		Pyramid	Control
1	6.25	.320	.474
2	6.0	.305	.420
3	42.0	2.312	2.706
4	.50	.0216	.0318
5	.83	.0245	.0435
6	1.8	.097	.133
7	2.4	.079	.137
8	2.8	.084	.103
9	3.3	.124	.177
10	3.3	.101	.186
11	4.0	.109	.181
12	4.0	.117	.190
13	24.0	1.18	1.52

## DISCUSSION

Unquestionably the pyramid samples showed less water accretion than the control samples to a statistically significant extent. We now wish to examine possible extraneous factors which could have caused the difference.

In theory, the rate of hygroscopicity should depend on the temperature, pressure, vapor pressure (humidity), surface area of the pellet, surface characteristics, and time of exposure.

No attempt was made to control temperature and pressure; however, running pyramid and control samples in pairs assured that in each run the ambient temperature and pressure were the same for pyramid and control sample. Humidity differences were minimized by placing an open container of water in each enclosure.

Surface area was not measured; however, there was an effort to assure that the pyramid and control pellets were of the same size and shape for each run. There may have been a difference in surface characteristics, as pellets tend to react over time with carbon dioxide in the air to form a sodium carbonate coating. This coating tends to develop after the reagent bottle has been opened. However, since pyramid and control pellets were withdrawn from the bottle at the same time, this difference would be minimal, and in any case should be randomized.

In each run, the pyramid sample was weighed initially before the control sample, the run allowed to proceed, and then the control sample weighed finally before the pyramid sample. Thus the pyramid sample in each case had a few minutes longer exposure time to the humidity rich environment, which if anything should have caused them to have greater, not less fractional volume change.

It is possible that differences could be accounted for in terms of convective transfer differences for water vapor within the two enclosures; however, an effect of the observed magnitude seems doubtful.

## CONCLUSIONS

There is a statistically significant inhibition of hygroscopicity (water accretion) in sodium hydroxide pellets placed under a pyramid as compared to a cylindrical enclosure of approximately the same volume under the same ambient conditions. The author has no speculation on the cause of this effect, and has no basis for asserting any paranormal or metaphysical powers inherent in the pyramid are responsible for the observed effects.

## REFERENCES

- Aletti, Stefan "The Effect of Pyramid Shaped Object on the Aging Process in Tomatoes" *Journal of Occult Studies*, 1,1
- Ostrander, S. and Schroeder, L. *Psychic Discoveries Behind the Iron Curtain*. New York, Bantam, 1970.

## AUTHOR

William Schram holds BA (Wesleyan) and MA (Boston University) degrees in Chemistry and has a background of industrial research experience and teaching on a junior college level. He is currently pursuing further graduate work in electronic instrumentation at the University of California, Santa Barbara.

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## KIRLIAN PHOTOGRAPHY

Marc Seifer

**ABSTRACT:** Kirlian Photography, less than a decade old in this country has already established that biological systems have a second energy body distinct and separate from the physical. The phantom leaf effect whereby the aura of the entire leaf is present even after part of the leaf is cut away and Kirlian photographs of the acupuncture system help substantiate this claim. This field also has many other medical and technical uses.

**INTRODUCTION:** There is controversy surrounding Kirlian photography which naturally is unwanted by the scientists in that field, a category which typifies virtually any related area grouped loosely into a category called parapsychology. Whether it be UFO's, Uri Geller, acupuncture, astrology, Kirlian photography, psychokinesis, telepathy, or even telepathy, there inevitably remains a powerful group of people writing reports critical of the findings and another group quite active in discovering hidden laws and other secrets involved in the study of the phenomena. As with all of these areas, Kirlian photography has its occult beginnings although many scientists involved in the field try quite hard to play down this connection. One major controversy deals with whether or not Kirlian photography is measuring an 'aura' or simply an electrical corona. Behind this question is whether or not man (or leaf or coin) even has an aura, and if so, what exactly is it. However, there are a number of people who *see* the aura so the question of its existence, for them, is a rather absurd one.

Up until a few years ago, as with most individuals, I had been aware of the auras in paintings from the Renaissance period, but beyond those stereotypic golden half circles, I had never thought much about it until I had the following account in *The Third Eye* by Lobsang Rampa:

"All ready? Let us start now, the sun has just set." He pressed the instrument to the centre of my forehead and rotated the handle...Suddenly there was a little 'scrunch' and the instrument penetrated the bone. Instantly its motion was arrested by the very alert operator. He held the handle of the instrument firmly while the Lama Mingar Dondup passed him a very hard, very clean sliver of wood which had been treated by fire and herbs to make it as hard as steel. This sliver was inserted in the 'U' of the instrument and slid

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down so that it just entered the hole in my head... Then at a nod from the Lama, the operator, with infinite caution, slid the sliver farther and farther. Suddenly I felt a stinging, tickling sensation apparently in the bridge of my nose. It subsided, and I became aware of subtle scents which I could not identify... there was a blinding flash, and at that instant the Lama said "Stop!" For a moment the pain was intense, like a searing white flame. It diminished, died, and was replaced by spirals of colour, and globules of incandescent smoke. The metal instrument was carefully removed. The sliver of wood remained, it would stay in place for two or three weeks until it was removed. I would have to stay in this little room almost in darkness... As the projecting sliver was being bound in place so that it could not move, the Lama Mingyar Dondup turned to me and said: "You are now one of us, Lobsang. For the rest of your life you will see people as they are and not as they pretend to be." It was a very strange experience to see these men apparently enveloped in golden flame. Not until later did I realize that their auras were golden because of the pure life they led, and that most people would look very different indeed.

As I later found out many other psychics and normal people have seen the aura and described it. The following two quotes are from Eileen Garrett and Matthew Manning, both well tested psychics:

The secret of personality was revealed externally and physically through the blinded lights of the nimbus-like covering (which surrounded the body) and it was from this that I caught impressions and know how far from real were the pretended peace and piety of relationships...p21

I am convinced that every living organism has its own type of external being by which it contacts other energies... This nebulous outer substance not only protects and feeds from the forces of life but it shields the form within from intense and impacting forces. From studying this enveloping substance, I conceive of its role as being that of a condenser of experience, sifting through its mesh, as it were, all atmospheric radiations of light, color and movement and in consequent becoming the receptor of all external sensation. This 'magnetic' mesh then is a map through which illness of the body and mind can be reached and studied by those who understand its principles and its functions. p173

*Adventures in the Supernormal*, E. Garrett.

I discovered that I could switch myself 'on' or 'off' like an electric light switch. If I switched myself 'on' as though I were going to write, but without actually doing so, I could see auras surrounding people. I can not describe in words how I achieve this switching on and off.

Certain colors in an aura appeared to denote particular traits in a person's character. I distinguished six basic colors: blue, green, orange, purple, red, and yellow. If someone had a predominantly fiery or temperamental character, then the predominant color in their aura was red. If they were also kind and generous, they might have this red bordered by blue or purple...I have noticed that a darker colored shadow surrounds an area of a person's body that is diseased or affected by illness. p78

*The Link* | M. Manning.

After reading passages such as those few sighted above I began to look at the aura myself, and found, to my surprise, it was quite an easy thing to see. One of the first auras I remember seeing was that of Father Stephen Barham, a well know Mind Control teacher from Pawtucket, Rhode Island, and Toronto, Canada. His was a brilliant forest green. In his class we looked at the aura by simply dimming the lights and standing various objects up in front of a white background. I have continued to do this in my own parapsychology classes and have found that approximately 3/4 of each class sees the aura.

Having looked consciously at auras for about 5 years, I'd like to describe some of the more interesting effects that I have seen, but which have yet to be substantiated through photographic documentation:

**HIGH AURA ABOVE THE SHOULDERS:** Olga Worrall, the great psychic healer's aura was rich yellow and very high above the shoulders.

**SURROUNDING ENTIRE HEAD LIKE AN ELECTRICALLY CHARGED ENERGY GRID.** Perhaps the most spectacular aura that I had seen surrounded the medium Elwood Babbit. It was light yellow, had main branches and finer branches and looked quite like a helmet of light completely encasing the entire skull.

**THE TOTAL BODY ENCASED IN AN EGG—SHAPED SURROUND OF YELLOW.** I have seen this only once. It was 'on' a research student in occult literature.

**AN AURA EXTENDING ABOUT 2 FEET FROM THE BODY AND AN ETHERIC BEYOND THAT EXTENDING FROM 2 - 6 FEET FROM THE BODY.** (They both pulsated). When Moshe Dayan spoke at URI auditorium, this effect was quite visible.

**A HALO.** I have seen halos, the stereotypic ring, above the head on at least 2 occasions. Once was on rock star Jerry Garcia of the Grateful Dead, and once above the psychic Matthew Manning. In the first case, when Garcia marched to another spot on the stage, the aura remained where he had been.

**A LINGER EFFECT.** I have seen this linger effect on many occasions, most recently with Sister Nicole, the subject of Don Durand's study. She popped into class one day and when we stood her up against the wall she popped up into a bright golden flame that was so evident, that one student, Raymond Boulay, a retired photographer, said clearly that he now

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believes in the aura because he has seen it with his own eyes. When she moved from the wall the aura stayed there so we tried to have her 'jump back' and see her own aura, but this attempt was unsuccessful. (Some people have suggested that this is an after image, but I have found that this is not the case.)

7- ENERGY VECTORS RISING 2 - 6 FEET STRAIT UP OVER THE HEAD.

8- A RAINBOW IN THE AURA AS WELL AS MANY DIFFERENT COLORS. Often times the aura reflects the color of the clothers being worn.

9- A DOUBLE OF THE PERSON RIGHT NEXT TO HIM.

10- FACES IN THE AURA seen in Issac Asimov's at a lecture.

11- SPARKS EXPLODING 2 - 6 inches AROUND THE HEAD.

12- TRIANGLES OR PYRAMIDS OF ENERGY GENERATING ABOVE THE HEAD.

13- BALLS OF LIGHT ABOUT 2 - 3 INCHES IN DIAMETER APPEARING BY EITHER HEMISPHERE OF THE BRAIN.

This list is included in this discussion not as proof that these effects exist but as guideposts for further research into what to look for in the human aura.

### MINI-HISTORIES

**ELECTRICITY** — from the Greek elektron, which means amber.

600 B.C. Thales of Militus Greece

noticed that after rubbing a piece of amber with cloth it attracted bits of feathers.

13th century Petrus deMaricourt French

Discovered north and south poles and lines of force on a lode stone.

1501-76 William Gilbert English

Saw the earth as a great magnet.

16th century William Gilbert English

Saw electrical energy as a fluid. He noticed that amber attracted light objects while lodestone attracted only iron.

1646 Sir Thomas Brown English

Used the word **ELECTRICITY** for 1st time.

1729 Stephan Gray English

Discovered electrical conductors.

1733 Charles du Fay French

Discussed repelling and attracting forces.

1666 Pieter van Musschenbroek Dutch  
Leyden Holland—received recognition for perfecting the Leyden jar—a conductor and wire.

1700's  
Many experiments killing birds and small animals with a Leyden jar and passing charges long distances across rivers and lakes, melting thin strips of metal with Leyden jar.

1746 Ben Franklin USA  
Introduced the terms positive and negative but saw electricity as a single fluid. Proved with kite and key that lightning was a form of electricity.

1767 Joseph Priestly English  
Found that if a hollow conducting metal is electrified, there is no electric force acting on its interior. He also stated that electricity diminished proportional to the inverse square of the distance.

1786 Luigi Galvani Italian  
Noticed that electrical sparks caused a dissected frog's leg to contract.

1800 Alessandro Volta Italian  
Built the first battery by sandwiching two different metals (such as copper & zinc) between a wet cloth. This caused a chemical action which produced a steady current.

1820 Andre Ampere French  
Measured the magnetic effect of an electric current. Just as 2 magnets attract and repel each other 2 parallel wires do as well. If their currents run in the same direction, they attract each other, if running in opposite directions, they repel each other. By 1822 he had worked out the laws that laid the foundation for the basis of a science of electricity.

1820 Hans Christain Oersted Danish  
Discovered electromagnetism by discovery that a current moving through a wire produced a magnetic field.

1826 George Ohm German  
Formulated the laws of electrical resistance.

1826 Thomas Seeback German  
Discovered thermo electricity: heat can produce electricity.

1831 Michael Faraday, Joseph Henry English  
Independently they both found that a moving wire could produce a current in a coil of wire. This induction principle is used in all generators and transformers. Faraday also realized that if electricity could produce magnetism then magnetism could produce electricity. His discussion of the lines of force greatly influenced Maxwell.

1866 William Weber German  
Determined that the ratio of electrical magnetic units almost equaled the velocity of light.

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1860's James Maxwell Scottish

Synthesized electricity, magnetism and optics into one whole. He predicted that electromagnetic or radio waves would propagate at the speed of light and formulated the exact mathematical equations for the laws of electricity. With Maxwell's equations physicists were equipped with a complete description of an electromagnetic field.

1880's Heinrich Hertz German

Produced electromagnetic waves.

1887 Nikola Tesla Croatian

Successfully converted direct current into an efficient alternating current. Tesla also was able to generate electrical currents through a polyphase system over hundreds of miles, and later generated current through principles of resonance (without wires).

1896 J.J. Thompson, J.S.E. Townsend English

Identified a cathode ray as a stream of negatively charged particles. Thompson, who later became vice president of the British Psychological Society, received a Nobel Prize for realizing that all atoms contain particles of electricity. His term 'corpusele' was changed to the electron. Electromagnetism was now realized to be inseparable from the structure of matter.

1900 John Fleming English

Built a vacuum tube that could detect electrons.

1900 Max Planck German

Laid the basis for quantum physics by stating that the propagation of electromagnetism was in quanta (wave packets) of energy.

1905 Albert Einstein German

$E = MC^2$ ; there was an equivalence between light, mass and energy.

1907 Lee DeFrost USA

Invented a vacuum tube that amplified electrical signals and made the radio possible.

## PHOTOGRAPHY

1500's

The CAMERA OBSCURA was utilized to draw sketches from. It was a large box, sometimes as big as a small room with a pinhole in one wall. The image would come through and be reflected upside down onto the opposite wall.

1727 Johann Schulze German

Discovered that silver salts are sensitive to light. He made images but could not fix them.

1802 Thomas Wedgwood English

Recorded images on leather sensitized with silver nitrate.

0's Joseph Niepce French  
 Photographer, Niepce made the first permanent image with a camera  
 obscura, so that an artist would not have to trace shadows. His inven-  
 tion was to replace the loss of this son who was drafted into the army.  
 He used light sensitive metal plates and fixed the images with an  
 etching process.

1829 Louis Da Guerre French  
 Famous scene painter, formed a partnership with Niepce and after  
 his death in 1833, continued the partnership with Niepce's son. In 1839  
 Da Guerre developed images with mercury and fixed them with salt.

1839 William Talbot British  
 Announced development of a light sensitive paper coated with salt and  
 silver nitrate. He produced a negative from which positives could be  
 printed. Talbot, having heard of Da Guerre's process, rushed to  
 announce to the British Royal Society 6 months before Da Guerre and  
 the French government made their own announcement.

1848-60 Nicéphore Niepce's grandson French  
 Produced color photographs but couldn't fix them.

1851 Fredrich Archer British  
 Used darkroom techniques designing a glass plate coated with light sen-  
 sitive material and then developing the image after the photo was  
 taken. In 1856 he switched from glass to metal.

1861 Ernst Mach German  
 Photographed shock waves of bullets breaking the sound barrier.

1888 George Eastman USA  
 Developed the Kodak camera which made simple snapshots and con-  
 tained a roll of film.

1891 Harold Egerton USA  
 Invented an electric flash attachment.

## ELECTROGRAPHY\*

1822 W. Carsten, British  
 Made first electrical photographs.

1835 George Lichtenberg German  
 Found that electrical discharges produce varying patterns on film. By  
 passing a charge through 2 wires, one above and one below a plate  
 sprinkled with powder, and taking photographs, Lichtenberg discovered  
 that different patterns were created by the direction and intensity of charge.  
 For instance, positive charges produced flowered shaped patterns and  
 negative charges produced circular patterns.

1868 B. Navratil Czech  
 Developed good electrical photographs and coined the term  
 'electrography'.

1890's Narkevitch Jodko Polish  
 Produced Kirlian type photos. Jodko showed such photos in Moscow  
 in 1898.

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1890's Nikola Tesla Serbian-American

Invented the alternating current electric motor and passed hundreds of thousands of volts through his body at a very low amperage (pressure and an artist enhanced the sparks produced.

1900's Walter Kilner British

Observed the human aura by looking through glasses stained with dicyanine dye. He wrote the book the *Human Aura*.

1900 F. E. Nypher American

Published Kirlian type photos in Proc. Acad. of Sciences of St. Louis Mo.

1911 Wm Coates American

A member of the American Society for Psychical Research, Coates took photographs of so-called N-Rays which emanated from the body. Their structure revealed the state of health of the subject. He wrote *Photographing the Invisible*.

1910 H Baraduc French

Made electrographs with D.C. current whereas others had used A.C.

1921 Du Bourg de Bozas French

Photographed psychic subjects who produced 'tubes of force' emanating from their bodies and which penetrated 5 inches of lead.

1924 J. Peters American

Utilized Lichtenberg's techniques to create an instrument called a Klydonograph. By using film instead of powder he was able to photograph the polarity of lightening discharges striking electrical lines

1939 Samuel Prat, George Schlemmer Czech

The Journal of Biological Photography published their article on photographs of electrical patterns emanating from medals, coins, and plant leaves.

1939 Semyon and Valentina Kirlian Russian

Seeing a demonstration of high frequency electrotherapy, Seymour duplicated the equipment but placed a photographic plate in between. This was the beginning of modern electrography. 75,000 to 200,000 electrical oscillations/second were generated with extremely low amperage (pressure) to produce the effect. No camera was used. The image was created directly on the film. They noticed that diseased leaves have a smaller corona than healthy leaves.

1948 Joseph Qahradictek Czech

Utilized film to prove that Maxwell's high level currents were not constant. He made photographs with photosensitive plates inside a high voltage condenser.

- 0's V. Ademenko Russian  
 produced the first phantom leaf effect. He also detected acupuncture  
 points with Kirlian photography and at EXPO '67 in Montreal he  
 played a topiscope, a device similar to a wheatstone bridge which also  
 detected acupuncture points thus cross-correlating his findings.
- 5 Kirlians Russian  
 and government sponsored use of a laboratory.
- 0's Dumitrescu Rumanian  
 produced computer edge enhancement and background subtraction  
 photos directly from Kirlian-like apparatus; microscope hookup to  
 Kirlian device.
- 0's Moss, Johnson, Wagner American  
 phantom leaf effect duplicated.
- 0's Pook, Hulstrunk American  
 movie camera hook-up to Kirlian device.
- 0's V. Inyushin Russian  
 developed 'bioplasmic body' concept and took Kirlian like photos  
 without electricity.
- 0's V. Adamenko Russian  
 defended his doctorate thesis concerning cold electron emission.
- 4 S. Kirlian Russian  
 received 'Honored Inventor of USSR' award.
- 6 J. Pehek, R. Kyler, D. Faust American  
 article in *Science*, Oct 15, 1976.
- 6 L. Koniekievitch American  
 showed in 100 families that corona is zig-zagged with cystic fibrosis  
 carriers; also noticed differences in corona corresponding to women's  
 monthly cycles.
- 6 D. Malikarjan American  
 showed a cyclical variation in Kirlian brightness (about 15-30 minutes)  
 in non-cancer people, compared with strong continual brightness in  
 cancer patients.
- 7 J. Calise American  
 developed 3-minute Kirlian test for E-coli.
- 7 A. Pilevsky American  
 developed 8-day Kirlian test for cancerous plants when they can still be  
 used.
- 8 S. Krilian Russian  
 passed away 8/1/78

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Many thanks to Douglas Dean for aid in the research of the history of  
 Kirlian photography.

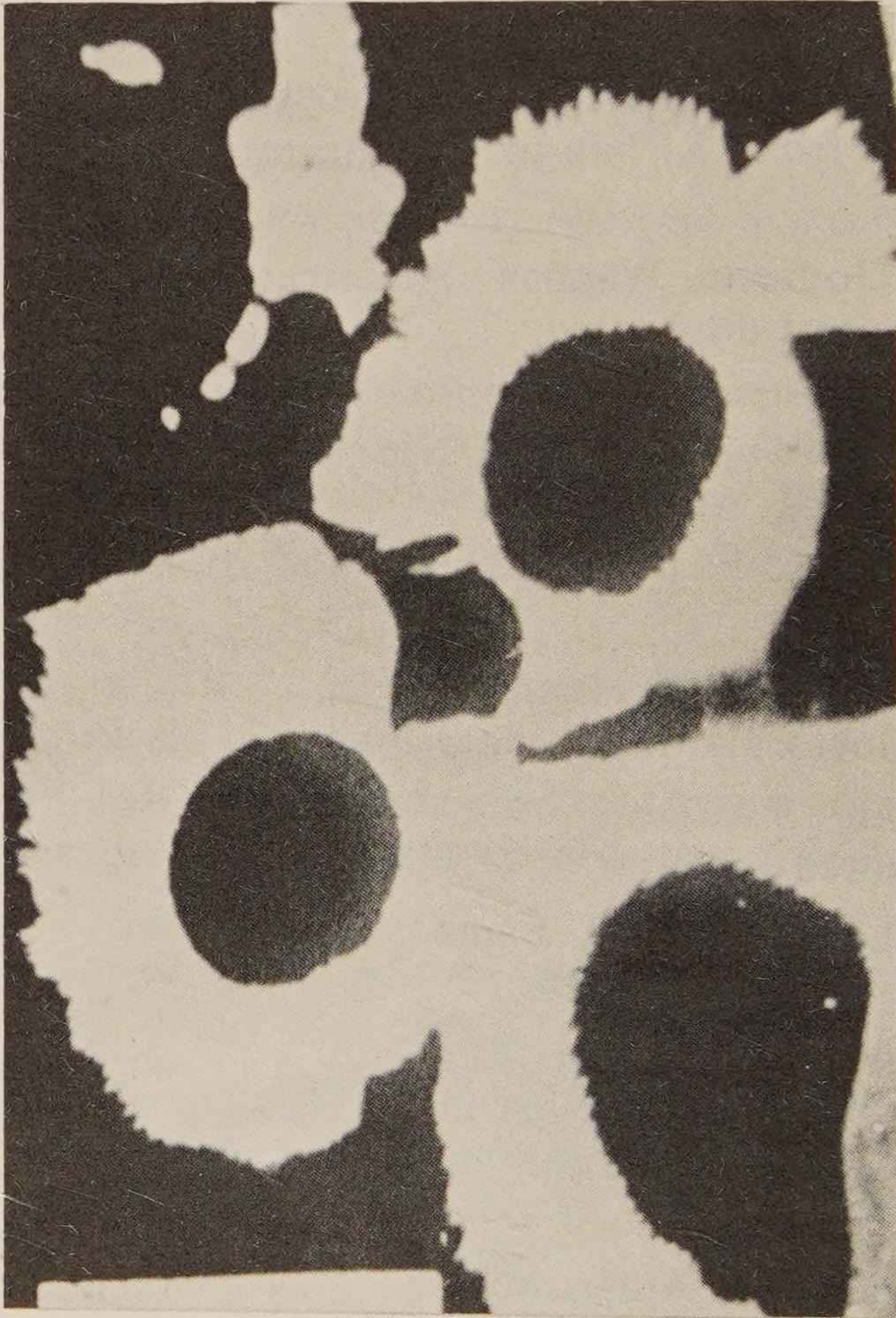
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Figure #1: This is a family portrait. The fore finger of the father is bottom right, the mother, bottom left, the son is on the top left and the daughter is top right. Notice how the auras of the father and mother blend together. This shows much affection for one another. The mother's aura is repelling the daughter's whereas the father's is 'reaching out' to the daughter. Classical oedipal complex overtones are evident. The son's aura is barely apparrent. Although the son may be dominated by the family, the disappearance of an adolescent male's aura in family portraits is so common that it seems best to attribute the effect to some heretofore unknown genetic electrical phenomena instead. However, the auras of very aggressive young men and adopted sons will appear.

## SECOND ANNUAL INTERNATIONAL KIRLIAN CONFERENCE

The International Kirlian Research Association (IKRA) held their second annual conference June 2-4 at Harriman College 40 minutes north of NYC. The Association is headed by Ed Graff a hospital laboratory supervisor from Brooklyn and their current president Dr. Benjamin Shafiroff a well known surgeon and teacher. The speakers included Thelma Moss, Ph.D., Department of Psychiatry, School of Medicine, University of California, Douglas Dean, the well-known parapsychologist, David Faust, Department of Physics, Drexel University, Al Hulstrunk, Ph.D., Department of Environmental Conservation, New York State, M. Mallikarjun, Ph.D., Physics Department, Monmouth College, Shiki Omura, MD, director of Heart Disease Research Foundation and Director of Acupuncture and Electro-Therapeutics, (Pergamon Press, 800 Riverside Drive (8-1), NYC, 10032), David Sheinkin, MD, psychiatrist, Mountain View Medical Building, Nyack, NY and 4 science award winning high school students. Also in attendance were quite a number of interesting professional and lay people including science authors, medical doctors, parapsychologists, a holographer, psychics, nurses and of course other Kirlian researchers. The conference was set up to maximize ability to meet and talk with others, and personally, I must say that I talked with many creative and friendly individuals.

Thelma Moss opened the conference Friday night with a bright array of Kirlian photographs. Although originally "just" a parapsychologist interested in the relationship of emotions to telepathy, Thelma got her start in Kirlian photography after visiting Russia in 1971 and bringing home electrographs presented to her by some Soviet researchers. By showing slides of fingerprints, leaves, etc., to her class, one student, Kendall Johnson, a bizarre insurance salesman, got turned on and built probably the first Kirlian machine in current use in the United States. Quoting from the forward of his book *Photographing the Non Material World*, 1975, Hawthorn Press (see review in JOS #3, p. 293) Moss says:

... suggested. . . to Ken (that) he read some of the Russian literature in Kirlian photography that I had had translated. . . As it turned out Ken (I received) only one article, an early one that had been published in 1938 in the American Journal of Biological Photography (presented to me interestingly, in Moscow by the Soviet biophysicist Victor Adamenko). This article contained a primitive schematic diagram of the "electrograph", as it was called at the time. It was fortunate that the diagram was so elementary, for Ken. . . knew just about enough electricity to interpret the drawing.

A few weeks later, Ken surprised Thelma with a Kirlian photograph of a leaf he had taken in his father-in-law's garage. Several weeks later she invited him into her laboratory and their extensive research was born.

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It should be pointed out that at the conference, Thelma stated that the Russians would not release schematic drawings of their equipment; the above article had already been published in America. American scientists were also not allowed into the Russian laboratories so that all meetings and interviews had to take place either in restaurants or hotel rooms. (See editorial.)

Dr. Moss stressed that different Kirlian machines would take different types of coronas. As with Dr. Sheinkin, she noted that some of the best photographs have been taken with \$50.00 machines whereas the thousand dollar plus machines have often been disappointments. The non-standardization of Kirlian photography has been a 2-edged sword. On the one hand many interesting effects are seen on one machine and not on another (and vice versa), and greater randomization leads to more creativity; but lack of the use of a single device has also caused confusion and added to controversy surrounding the 'Kirlian effect'.

Besides the difference in machines, altering the frequency also changes the corona. In a beautiful (in color) article by Dr. Moss in *The Osteopathic Physician*, 12/77, a creeping charlie leaf is photographed twice. at 32,000 Hertz the aura looks bright and full, but at 22,000 Hertz there is almost no discharge at all. Moss speculates that the electrical parameters within the same machine or between different machines *resonates* with varying characteristics within the object photographed. Note the different types of coronas in the various photos of the fingertips in the diagrams above. The different type of coronas are caused by different types of Kirlian machines.

Moss showed Kirlian photos of plants and rat tails with and without cancer. The healthy subjects invariably displayed clear auras, whereas the cancer ridden subjects displayed broken and distorted auras. 70% of the cancerous rats had "blob" effects in their auras.

She noted that when people are compatible their auras merge into a single one, and when there is dissension between people the auras repel each other. See the family portrait in figure #1. Moss said that these family portraits give one a great deal of insight into the relationship of the individuals towards each other. If one aura is much brighter than another this may mean that the person is overbearing or dominant. Red auras can show anger whereas white ones can mean the person is in meditation. Interestingly, Dr. Moss has discovered that in a family, of a mother, father, sister (optional) and son (in puberty) the aura of the son is non-existent in almost 80% of the cases! Since she says that she has noticed this in literally hundreds of cases, one is lead to suspect that this effect may be a peculiar genetic electromagnetic relationship between a son, father and mother. The times the son's aura does appear has usually been associated with adopted children or aggressive type natural sons. It has also been found that the female adolescent's aura rarely disappears.

The first night Moss also showed us healers' auras with energy flowing from finger tips and 'ectoplasmic' energy patterns surrounding the hand or finger of the healer. Figure #3 is a picture of two of Olga Worrall's fingers. Note electromagnetic energy emanations coming from her middle finger. She has stated that this finger is where she feels the energy flowing from. Later in the conference on Sunday, Dr. Moss showed us Figure #8 which again is connected to healer Olga Worrall. This leaf was cut and Worrall prayed and placed her hand over the picture. Note the waves of energy surrounding the leaf.

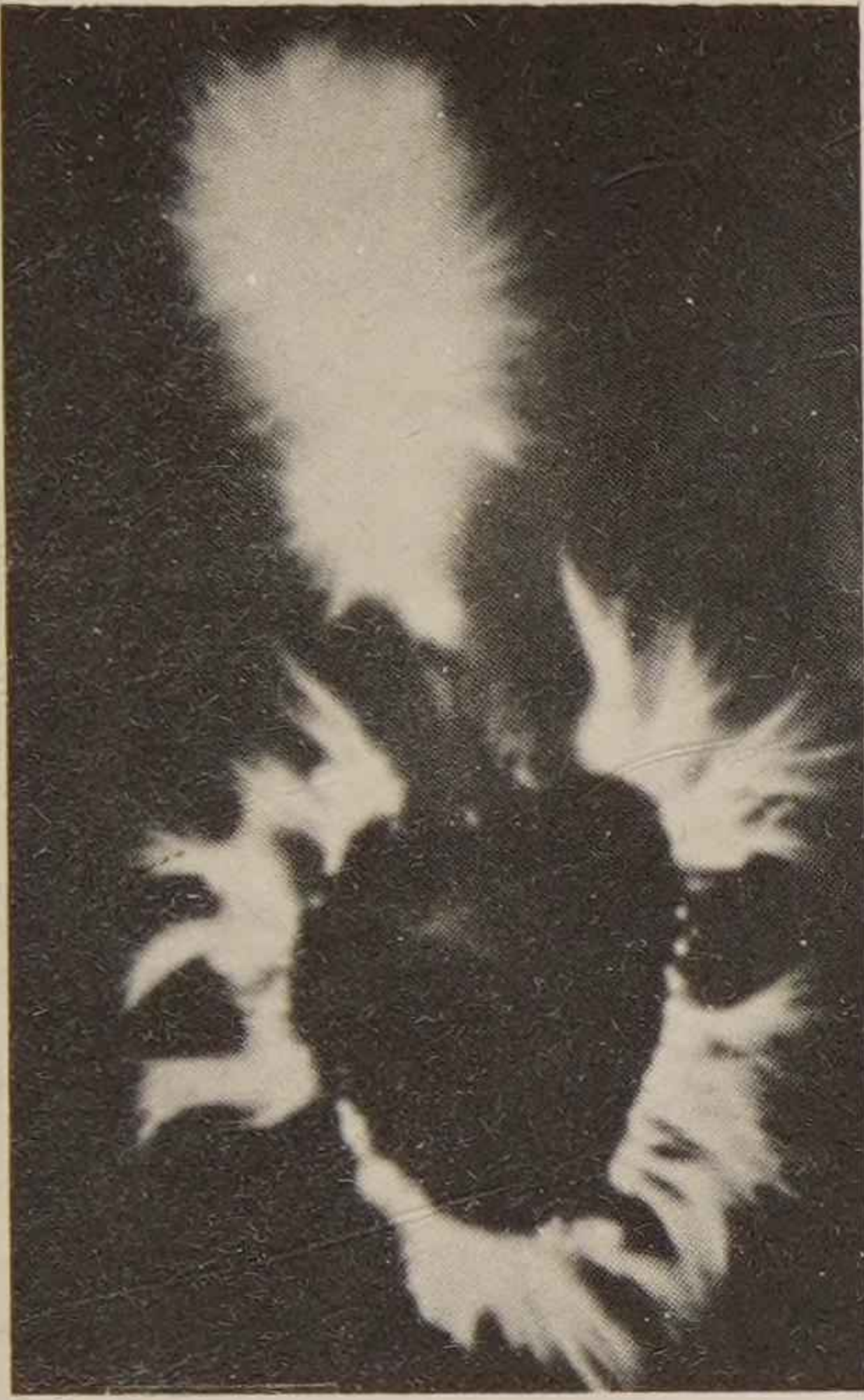


Figure #2.

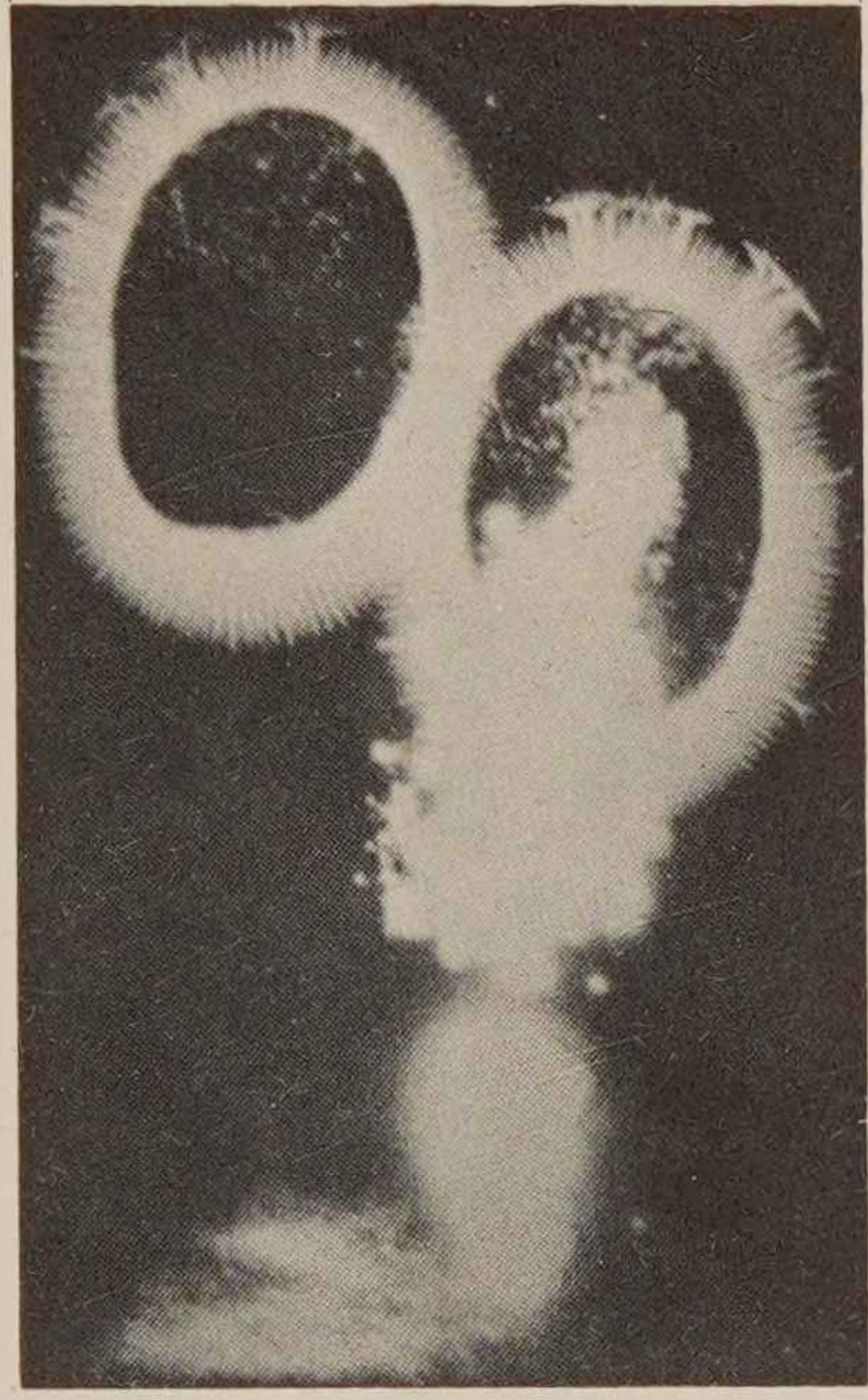


Figure #3.

Figure #2: Uri Geller's finger literally explodes with psychic energy as he tries to bend his psychokinetic powers to a key (not in photo) in order to bend it with mental energy. This Kirlian photo was taken at Dr. Moss' lab.

Figure #3: Two fingers of psychic healer Olga Worrall are evident in this photo. Note the psychic energy emanating from the center of her middle finger. She claims that the middle finger is the channel from where the energy comes from. Note also the qualitative differences in the auras of Worrall and Geller. In the Worrall picture the aura of each capillary ridge can be seen. The main reason for the differences in these two coronas is due to the fact that they were taken with two different types of Kirlian machines. Standardizing Kirlian devices is still a problem in the field. However, it is a two edged sword, for each machine shows a different effect.

well as the phantom effect on the left side. Moss also showed photos with spots of energy completely separate from the finger tip which some researchers have associated to mediumship ability.

On Saturday morning Douglas Dean described the history of electrography (which we have amplified in part 2 of this section). Dean stated that in the 1820's Michael Faraday postulated that there was a relationship between light and electricity. Faraday also noticed that an electromagnetic field could change the polarization of light. During Dean's discussion, the topic of the electric chair also arose. (See back flap concerning this topic and the great inventor Nikola Tesla). Dr. Ben Shafiroff, President of IKRA followed with a physiological discussion of the electrical nature of the body, most naturally the finger tip. He stated that most, if not all of the cell's processes were electrical in nature. In 1930

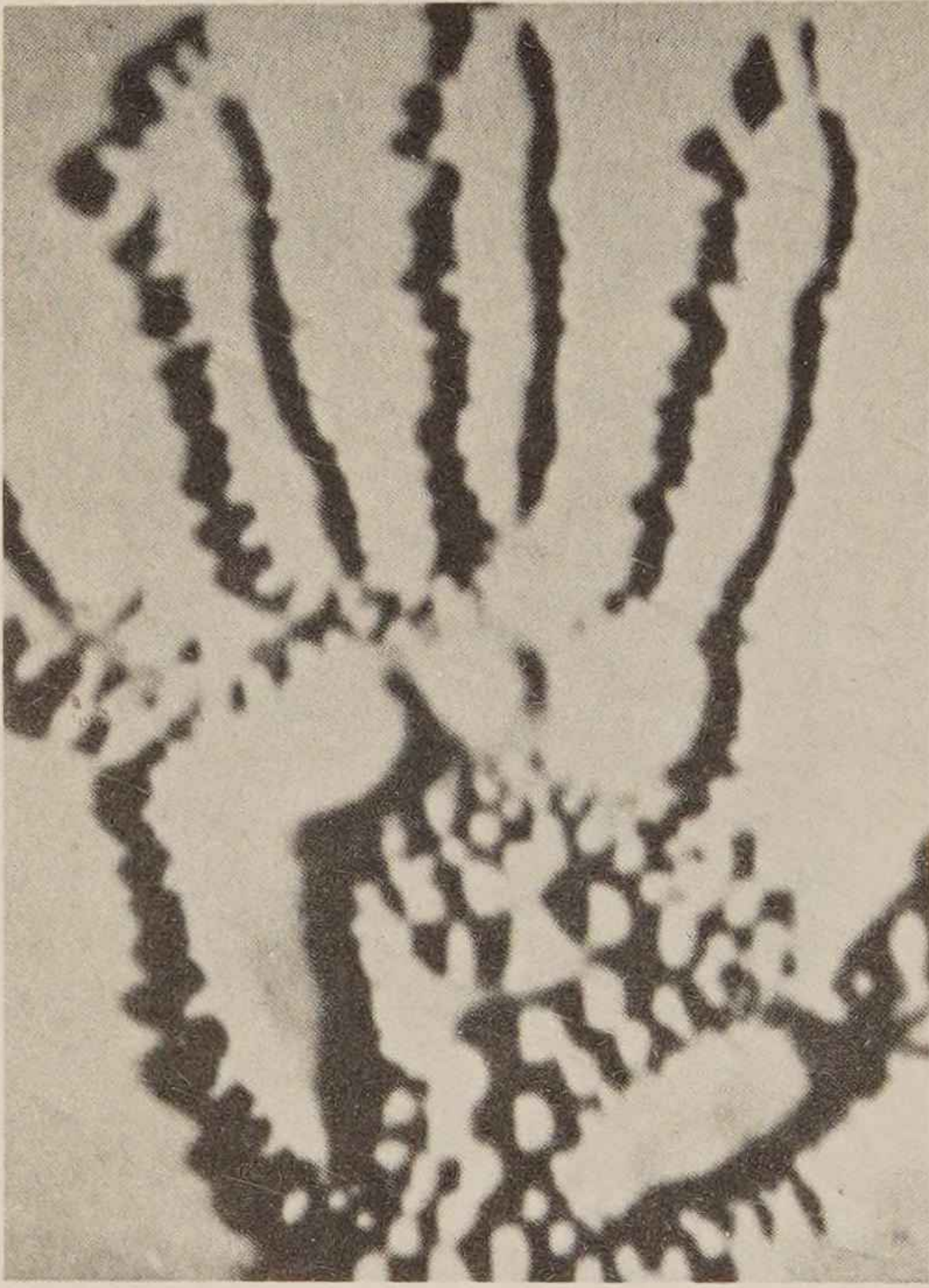


Figure #4

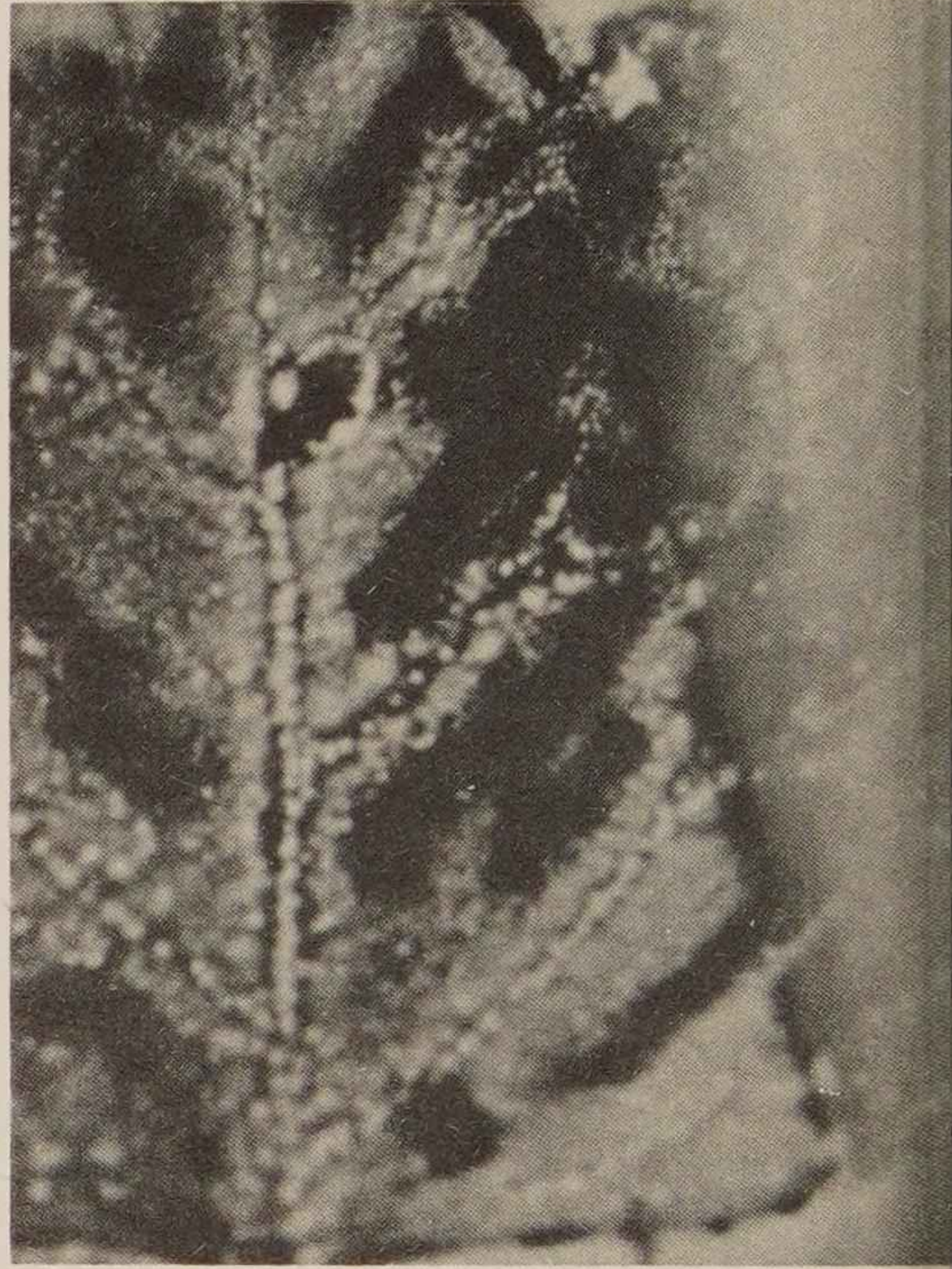


Figure #5

Figure #4: Romanian researcher Dr. Ioan Dumitrescu has taken this photo. He has created an analytic computer process which is attached directly to the Kirlian device. This technique enhances the edges of the corona and drops out areas that are not electrically charged.

Figure #5: This is one of the first phantom leaf pictures ever taken by the Americans. The dark line down the center of the photo delineates where the leaf ends. Even though part of the leaf is cut off, the aura of the entire leaf is present thus indicating the presence of a second 'non-physical' energy body separate and distinct from the material leaf.

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Dr. John Fuller studied finger tips as an indicator of disease. The fingertip has sweat glands, electrical potential gradients, etc., and it is neurologically controlled. Since electricity can easily pass through the finger, it is logical to assume that the state of its corona reflects the health and emotional condition of the subject. Dr. Shafiroff concluded by stating that Kirlian photography is a safe, "non-intrusive" means of examining the health of a patient.

David Faust, a staff researcher at Drexel University followed. Mr. Faust's topic, 'Kirlian Photography, Myth, Fact and Applications' was an excellent account of some of the more technological instrumentation that can be utilized in Kirlian research. He stated that the corona discharge is a bit outside the visual range and also showed that the amount of moisture present can change

ically the nature of this discharge. However, this innocent sounding comment, coupled with Faust's two articles on the subject in Science Magazine and the Journal of Applied Physics are greatly responsible for controversy surrounding the non-acceptance of this field by mainstream scientists. Two major culprits in this controversy are Scientific American and Newsweek magazines.

The problem concerns the idea that what is photographed in this process is an aura at all, but merely an electrical discharge caused by the Kirlian device. It has been argued that pressure and/or moisture changes are completely responsible for all of the effects discussed above. What is more absurd is that many scientists unfamiliar with the details of this work believe this wholeheartedly. Notice the poisoning-the-well tactics in Scientific American's issue of December 1976, p. 53 entitled "Sweaty Palms".

... the pseudo scientific procedure referred to as Kirlian Photography. . . . The images received somehow show an indication of the emotional and 'psychic' states of the person being photographed. . . . the general conclusion reached by . . . Faust, Pehek and Kyler. . . is that 'a principle determinant of the form and color of Kirlian photographs of human subjects is moisture, presumably a product of sweaty palms. . . .' The use of Kirlian photography could be for the detection of moisture in animate and inanimate specimens.

Needless to say, this study which seems to be the only one to get such widespread coverage by the National News Media has created a 'Faustian' state of affairs for the field. As far as I know (and in general), except for "Osteopathic Physician" Kirlian photography is still considered by the press to be a sham. I am continually amazed at how many scientifically minded people agree with this conclusion. So fortunately or unfortunately the field has been lumped into parapsychology, which pleases some of the researchers and causes others to keep a low profile.

This is why Robert Wagner's picture #9, was a crowning point for the reference, for it seemed to seal the fate of the moisture theory and the simplistic use of the term 'electrical corona'. In this photo the phantom effect continues to appear on the other side of an opaque plexiglass divider which was placed within the area where the phantom appears. If the photo holds up, it is conclusive proof that this energy body can pass right through gross forms of matter. This does not necessarily prove that it is 'nonmaterial' but it shows that it is of a sufficiently high enough frequency to be able to permeate more material forms of energy.

Leonard Konikiewicz, M.A., a medical photographer at Polyclinic Medical Center in Harrisburg, Penn., followed with a rather interesting discussion of Kirlian photography as a detector of various physiological states. Konikiewicz studied woman's menstrual cycles and determined that on the day of ovulation (near the center of the cycle), the aura is the brightest. Women taking birth control pills, menopausal women and prepubescent girls do not record a discernible pattern. One should realize, however that emotional parameters must be carefully controlled. L.K. also discovered that weather changes greatly affected some results.

Konikiewicz then discussed his rather extensive studies with cystic fibrosis. He found that both carriers and diseased people can be detected by Kirlian

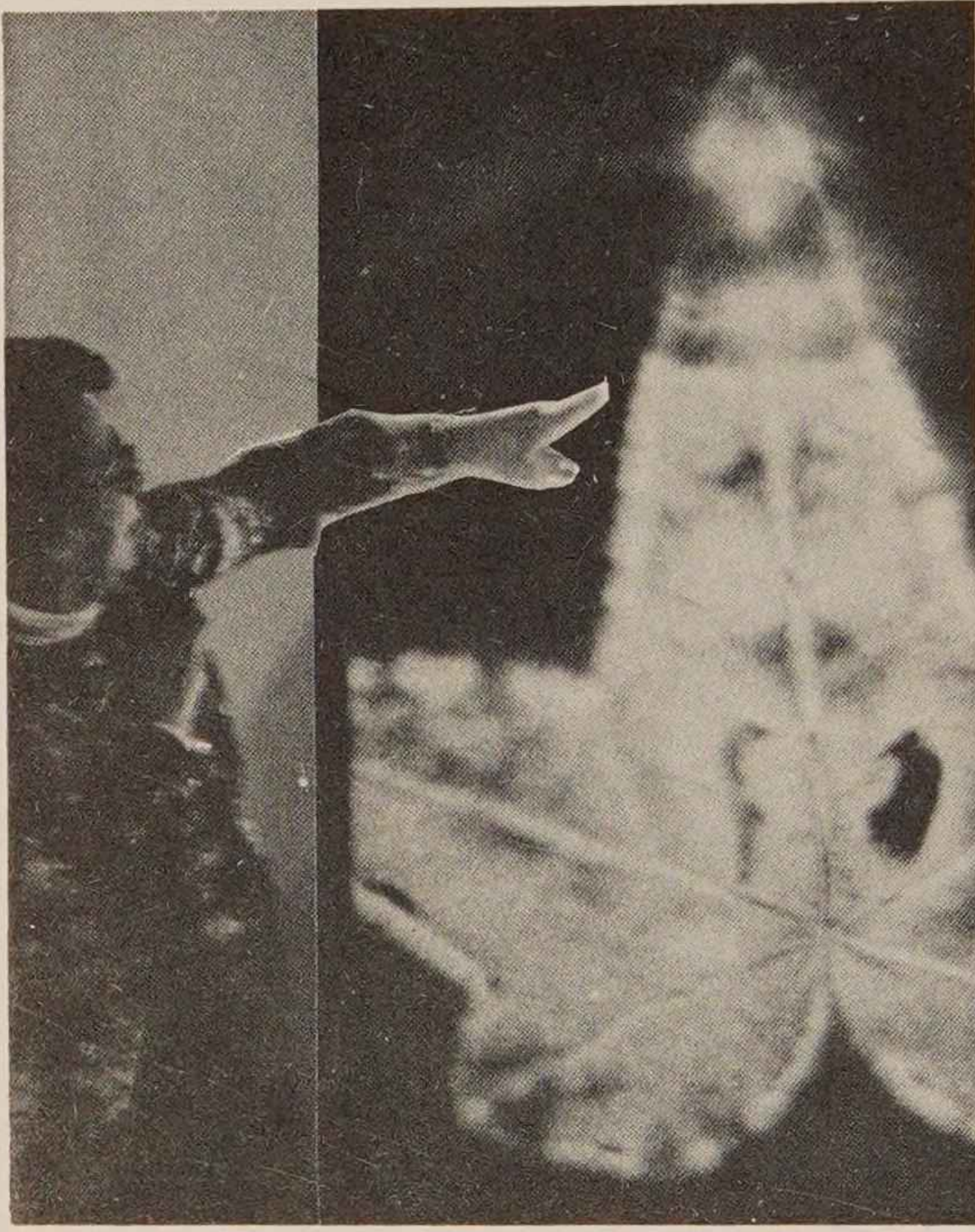


Figure #6.

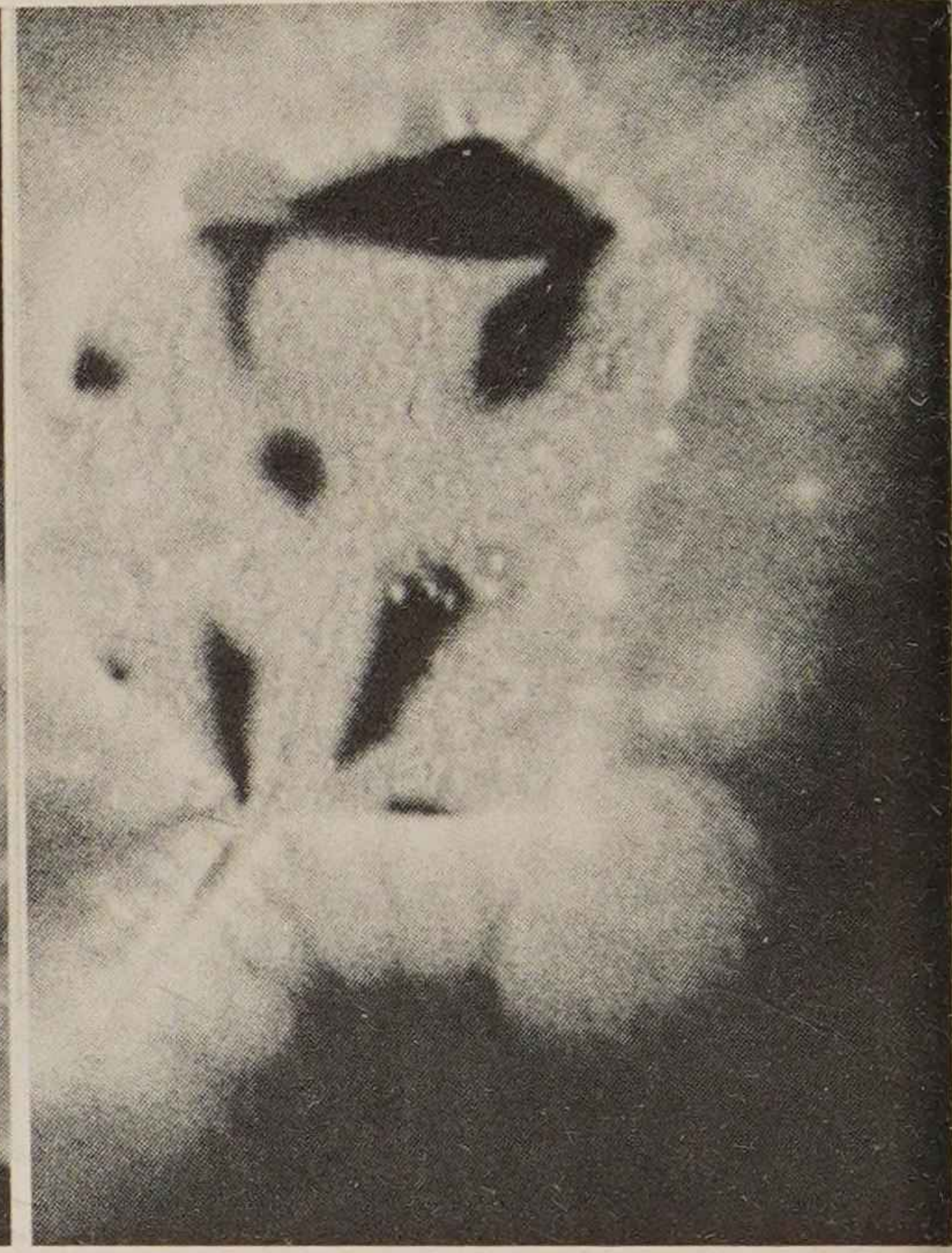


Figure #7.

Figure #6: Thelma Moss points to another phantom leaf in this Kirlian photo. There are theories relating holographic concepts with the structure of the aura in that any part of the leaf still has a code for the entire leaf. There is also a belief that the so-called phantom limb experienced by amputees may still be present in this second energy state although no one has been able to photograph it as of yet.

Figure #7: This leaf was soaked in ether, a section cut away on the right side and then electrically photographed. We can see that the phantom effect is achieved. Dr. Moss stated that the combination of plucking a leaf at the right time of year coupled with dowsing it in ether facilitates the capturing of the phantom effect.

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photographic diagnosis. In one blind study of 33 persons some with the disease and others normal, Konikiewicz claimed a 96% accuracy achievement in prediction. He was able to diagnose 2 'normal' children who had the disease and did not know it.

Al Hulstrunk Ph.D., showed myriad colorful Kirlian photos of leaves. They were displayed mainly for their beauty. He also displayed motion pictures and stated that motion pictures gave a more accurate description of the process. "If you had a photo of a runner in motion, does that show what he really is doing?" he asked.

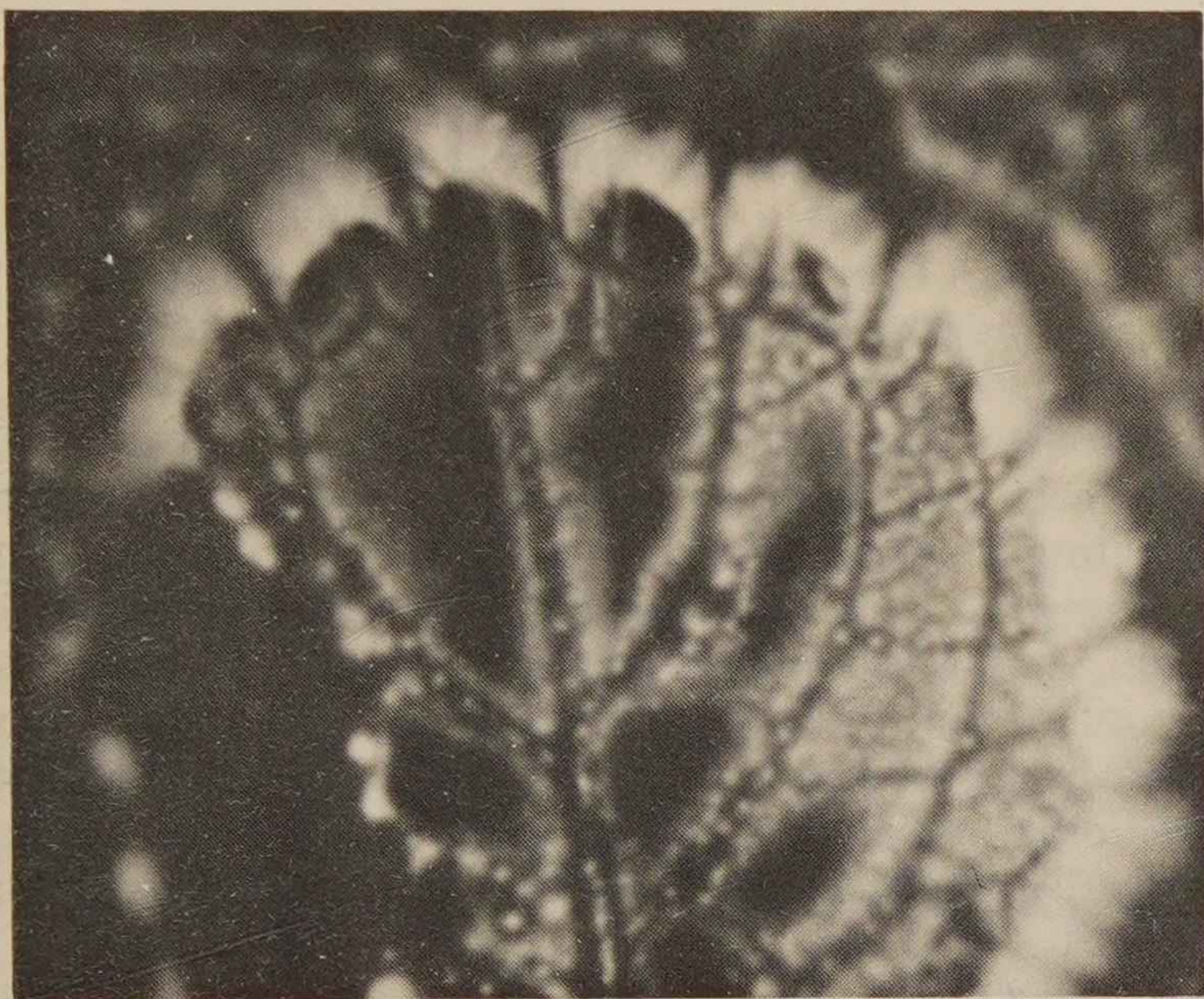


Figure #8: Psychic healer Olga Worrall placed her hand above the leaf and prayed while sending healing energy into the leaf. Even though the left portion was cut away, the aura for the entire leaf is present. Notice also the waves of energy beyond the initial corona.

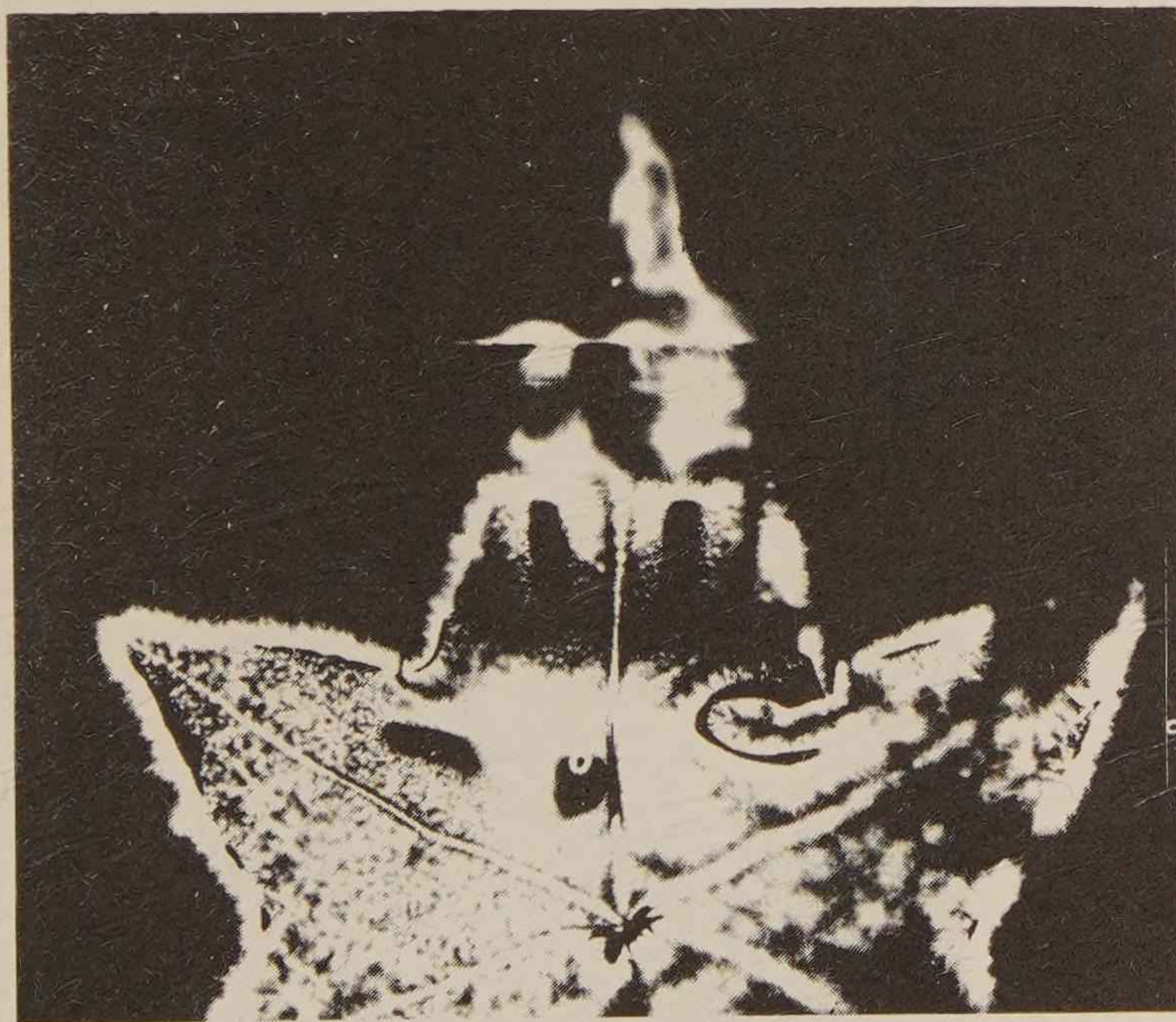


Figure #9: Kirlian researcher Robert Wagner took this photo after literally hundreds of attempts. Trying to prove that the corona was not merely a moisture effect as had been hypothesized by some scientists, Wagner decided to try and prove that the phantom aura could go through solid matter. Therefore he placed a sheet of plexiglass above the cut-away portion, but in the midst of where the phantom should appear. It shows up as a straight line through the phantom aura. As occultists have maintained, this is quite conclusive proof that the aura can pass through solid matter!

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S. Mallikarjun Ph.D., from Monmouth College followed with a discussion of his work with cancer patients. He discovered a highly unusual finding in that he found that the corona of normal people is dynamic and pulsates over time; whereas cancer victims have static unchanging corona discharges. As with so many of the other findings at the conference, this may turn out to be a rather important study for it shows permanent electrical changes in cancer patients. If they are cured, their aura returns to that of a normal changeable one. He concluded by stating that "if the intensity of discharge remains constant, then there is something wrong. . . a uniform discharge over 3 hours is a bad sign."

Saturday night there was a dance and a movie starring Thelma Houston where I spoke to many interesting people. One lady, Cecile Ruchin, stands out in my mind because she has combined holography with Kirlian photography. She has taken a Kirlian holographic picture of her own skull. We did not see the photo, but it supposedly distinguished electrical changes between the 2 hemispheres of the brain.

Sunday morning Dr. Yoshiaki Omura went into an in-depth technical discussion of various types of Kirlian apparatuses. He stressed the need for reproducible results and noted that he had discovered a 'snowflash pattern' in some cases of rheumatoid arthritis. Dave Faust also spoke that day describing the computer enhancement processes of the Romanian researcher Dr. Ioan Dumitrescu. However, the details for Dumitrescu's apparatus, which can in one process take a Kirlian photo and analyze it by computer, has not been released by the Romanian.

Dr. David Sheinkin, a psychiatrist, followed with a discussion of the aura's breakdown in schizophrenics as compared to normal subjects. He also told an interesting story concerning the arrival of a new Kirlian device to his laboratory.

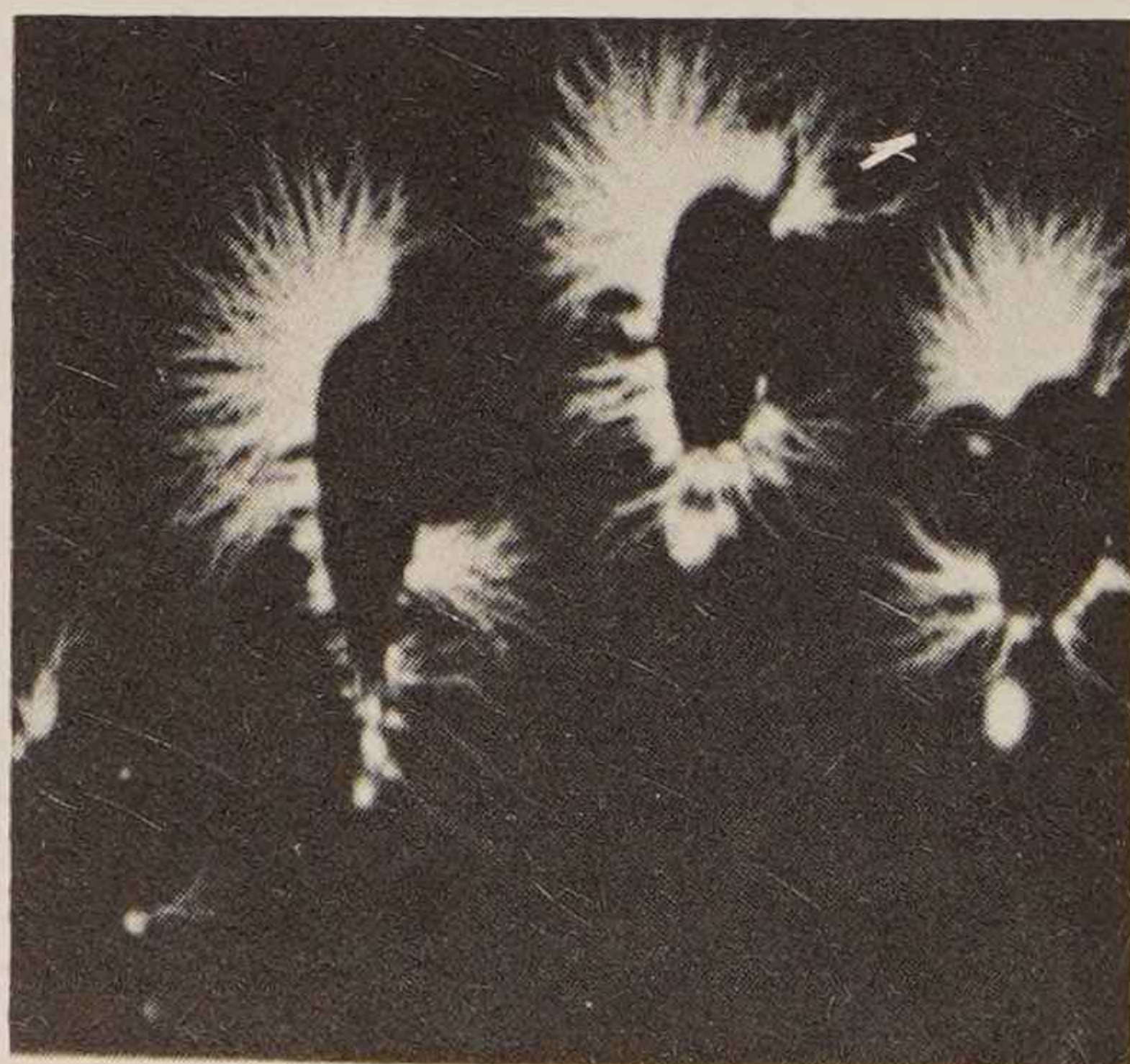


Figure #10: Taken by Dr. David Sheinkin and his group, this photo is conclusive proof that acupuncture is not really a strange form of hypnosis (as some doctors have maintained) but an actual physical effect. These four auras are four fingers of a left hand with an acupuncture needle inserted in the forearm positioned in such a way so as to 'turn off' the aura of the pinky. Notice that the effect was achieved. Other Kirlian photos show typical flare patterns where acupuncture points are supposed to be located.

ing a bit excited by its arrival he found much disappointment in the rather faint photos it was producing. As it turned out, the machine had never been plugged in! Dr. Omura attributed the Kirlian like photos (without any outside electrical input) to static electricity, but Sheinkin noted that he was wearing sneakers at the time.

Sheinkin also discussed acupuncture points and Kirlian photography. It has been discovered by the American parapsychologist William Tiller and the Russian Ademenko, that acupuncture points can be detected as a drop in electrical resistance, and a number of researchers have photographed these points with electrographic techniques. As further proof that acupuncture actually is causing physical (rather than hypnotic) changes, Sheinkin was able to 'turn off' the aura on the pinky of a hand by placing an acupuncture needle in the appropriate meridian point on the forearm. See Figure #10. The only time this acupuncture detection was successful was when the needle was twirled and the hand placed on the film from the beginning. If the needle was inserted and not twirled or if the hand was lifted and then placed back on the paper, the effect was not seen.

Douglas Dean then introduced 4 highschool Science Fair winners, some of whose findings were comparable to the elder researchers. Kenneth Hunt, 17 years old from Chicago, winner of a Navy science award, worked with the color emulsions on the photosensitive paper. He noted that the film had 3 layers of color emulsions: blue, green and red. by manipulating the air gap beneath the film, yellow and red bleeding can be accomplished. Flipping the film over one gets blue bleeding. Hunt suggested standardizing these processes to reduce the variability.

Matt Chalfant, 14 years old and from New Albany, Indiana, spoke next. He had built his own Kirlian device for about \$32. He described basic experiments with paper clips noting that the aura was larger when it was magnetized and diminished greatly when painted. Andre Pilevsky, 15 of Brooklyn, followed with a creative study in advanced cancer detection. By injecting bacteria that induce tumors in plants and photographing the results, Pilevsky, discovered a regular aura and a jet-like discharge at the sight of the tumor in the cancer ridden plants. Anti-biotics cured the plants, and this was also reflected in the Kirlian photos. He noted that 'this information is helpful when trying to predict where secondary tumors will form'.

Julie Calise, 17 also from Brooklyn, hooked up a microscope to a Kirlian machine and has a patent pending on her device. By using antibiotics on various bacteria, she was able to tell, with Kirlian photography which bacteria were sensitive to the antibiotics. The importance of her finding is as a time saver. Normally, a regular test for bacterial sensitivity would take 8-10 hours, whereas this only takes minutes.

Sunday afternoon Douglas Dean gave a brief history of parapsychology and Melma Moss described its relationship to Kirlian photography. She showed electrographs of Uri Geller's finger radiating energy as he tries to bend a key without touching it. See Figure #2. Geller also had Kirlian photos with a huge (OOBE) red corona above the finger. Moss also showed another photo that she said might be an out-of-body experience of a leaf, for the energy body was quite separate and 'floating' above the physical leaf. This OOBE type picture was achieved by accident when the grounding wire glanced off the stem and landed on the film. She showed a number of phantom leaf effects, see Figures 5, 6, 7, 8 &

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9, and noted that using ether on a leaf (and taking the picture at the right time of year) facilitated the photographing of phantom effects.

The proof that a second energy body remains, even if the physical part is gone, may have long range beneficial effects for regeneration of severed limbs. In an article entitled "Direct Current Neural Systems" (Psychoenergetic Systems, Vol. 2, pp 190-191) Dr. R. O. Becker discusses an electrical current that is connected to the nerves but somehow independent of them. This second electrical system parallels closely the nerve circuit and carries information by displaying slow rhythmic fluctuations and by changing polarity. In discussing healing, regeneration and current changes Becker states:

While healing is a controlled process, animals differ in the efficiency with which they heal. Amputation of an arm in the frog results in simple scarification of the remaining stump, while in the salamander, a completely new extremity is regrown by a process called regeneration. If the current of the injury was the signal in our theoretical healing control system, would it not be different in animals capable of regeneration compared with those lacking this capacity? Our experiments done in 1959 utilized these two species of amphibians. Measurements of the current of injury at the amputation site showed remarkable differences between the two during the healing process. That this electrical potential is the actual signal was shown by subsequent work which artificially duplicated the salamanders' current of injury in frogs, resulting in the complete regeneration of a new extremity. More recently, we have been able to produce partial limb regeneration in rats by a similar technique and some clinical applications are under study in human beings at this time.

Kirlian photography is an exciting new field of investigation. In a very visual way it has helped substantiate such controversial areas as acupuncture, astral bodies, auras, out-of-body experiences and psychic healing as well as pioneer new means of metallurgical and medical analyses and diagnoses.

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# AN EXPERIMENT IN PHOTOGRAPHING THE HUMAN AURA WITH INFRA RED, RECORDER, HIGH SPEED AND NORMAL B/W FILM

Donald Durand

**ABSTRACT** - A subject with an allegedly bright aura was placed against a neutral wall and photographed with a variety of films. No aura was detected.

## INTRODUCTION

Every living organism supposedly produces an effect known as an aura. The aura appears as a shimmering glow surrounding the organism and can change both color and shape, depending upon the mood and movement of the organism. The intensity of the glow itself can change from a whitish, nearly invisible haze to a rather striking gold red, or other color halo effect.

There are various theories as to what an aura actually consists of. The outpouring of an individual's soul has been advanced as one possible explanation. Excess amounts of psychic energy may account for it or it may simply be the visualization of the organism's own electrical field. (Every piece of organic material generates an electrical field to some degree.) Whatever its origin, the aura is an elusive entity. Most people (myself included) find it difficult to see an aura. The lighting has to be correct in order to optimize the visualization. In most cases, a dim or subdued natural light with the subject placed against a white or neutral colored wall seems to work best.

The major problem with the aura is that it can only be described subjectively. An individual who can not see a given aura has to accept the description given by an individual who supposedly can see the aura. If there is a group of people viewing a subject and one person sees the aura and begins to describe it, other people in the group will begin to see the aura in the same manner. This may merely be the power of suggestion at work.

I myself have seen what could be an aura surrounding different people. Usually I have seen this effect when not looking for it. Being somewhat skeptical, I find it hard to firmly convince anyone (including myself) that what I saw was indeed an aura. It could have been a trick of my eyes. In any event, I would be hard-pressed to argue the point in a court of law, mainly due to the subjectivity of the experience.

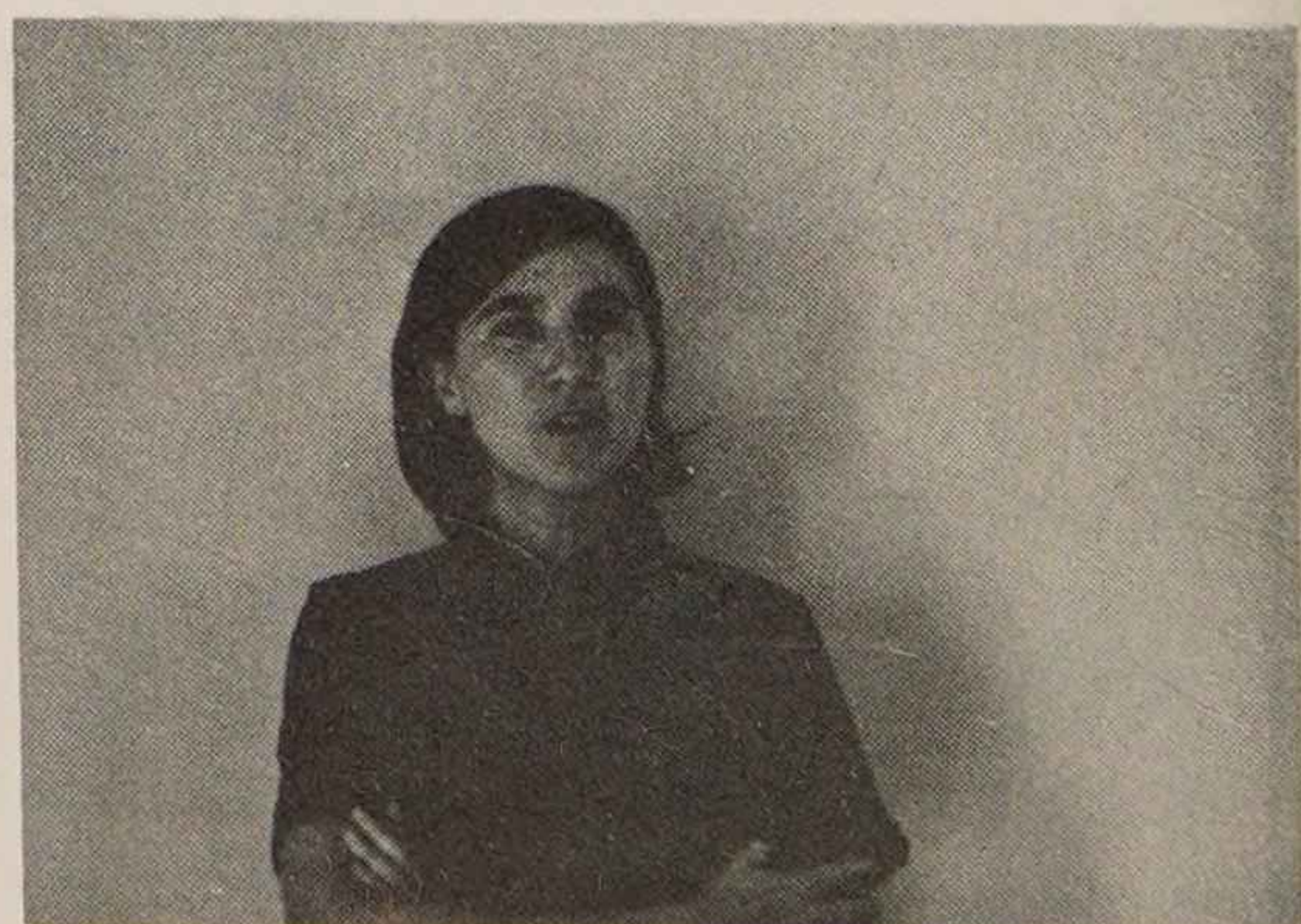
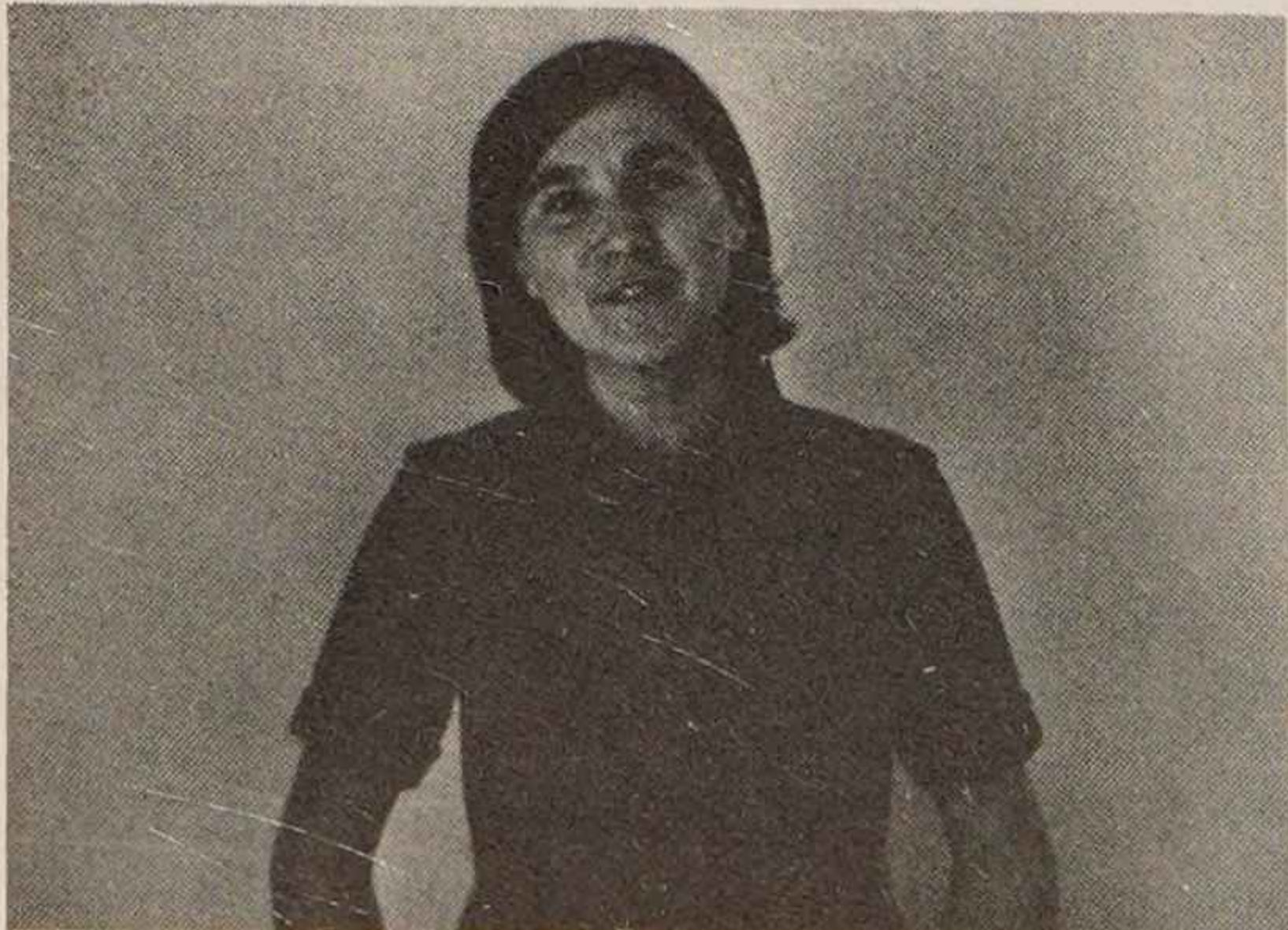
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What we attempted to do in this experiment was to take the aura out of the realm of subjectivity and place it in the area of scientific objectivity. The purpose of our experiment was to definitively capture the aura on film.

There is a possibility that auras have been captured on film using the Kirlian method. In a nutshell (see other article in this issue) Kirlian photography involved running an electrical charge through a given organism or part thereof. One end of the circuit is connected to the photographic plate, the other end is connected to the organism itself. The resultant image is very impressive. Some claim that what is in the picture is the organism's aura. I personally feel that what is happening is that the organism is merely completing the circuit and that the image is merely the 'circuitry'. Whatever the case, this is the best photographic evidence available which might (and I stress the word might) relate to auras.

In order to conduct our experiment, we had to make several assumptions about auras. The first of these is that all living organisms do, in fact, generate an aura. The second was that if indeed an aura can be seen by the human eye, it might be able to be photographed. Thirdly, since an aura is supposedly visible, it must generate its power somewhere on the fringes of the visible light portion of the electromagnetic spectrum. I feel that if there is such a thing as an aura, it lies somewhere just beyond the visible portion either towards the ultraviolet or infrared. Our experiment attempted to capture an aura during a period of visibility.

We chose to use a human subject for the experiment. Mr. Marc Seifer, who helped design the study, found a subject who he felt had a particularly bright and highly visible aura. Sister Nicole, a nun from New Jersey had stopped into M.S.'s parapsychology class one evening. While engaged in conversation relating to religion and specifically Jesus Christ, the entire class witnessed her aura. M.S. stated afterwards that it was one of the most brilliant and visible auras that he had ever seen. We asked her to participate and she agreed.



## EQUIPMENT

We shot 5 different types of black and white film:

Recorder film with ASA 1200 (i.e. a very high speed and therefore light sensitive film).

Tri X - ASA 400 (a fast film).

Plus X - ASA 120 (this was the control film, i.e. 'normal' film).

Slow - ASA 32 (we hoped that a slow film would provide the delineation and sharp contrast that would be necessary to capture fine changes in lighting since it would be exposed for a longer period of time).

Infra-red - We used three 35 mm cameras: 2 Pentaxes and one Yashica. One Pentax and the Yashica were on tripods. The third cameraman besides myself and Marc Seifer was Mark Nicholas, a semi professional photographer.

## LIGHTING

Lighting consisted of an unblocked large picture window on a light grey overcast afternoon, two lamps, 25 watts, and a large mirror on the floor to supplement the window light.

## PROCEDURE

The procedure was quite simple. We simply engaged Sister Nicole in conversation about religion and Jesus Christ and photographed her when we thought her aura was brightest.

## RESULTS

After carefully reviewing the negatives and prints we were unable to detect any 'halo' effect or any other lighting effect that could be construed to be an aura.

## ANALYSIS AND CONCLUSION

Unfortunately, we were unable to study the ultraviolet region at this time. While any piece of unshielded film is sensitive to any form of radiant energy, some forms of energy are easily attenuated. In the case of U-V radiation, glass, such as that found in a camera lens, will sufficiently screen out the rays and thus prevent the film from being exposed by U-V energy.

At best, the results of the experiment were inconclusive as to the existence of the aura. Not one of the pictures taken contained anything that can be definitively described as being an image of a human aura. It should be noted however that the Sister's aura did, in fact, become visible to the three of us. Independently each of us all saw her aura projected to her left above her head and shoulders. We agreed, without any coercion, that the color ranged from a rather neutral white (which was indistinguishable from the wall behind her) to a subdued golden hue.

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Although we were unsuccessful this does not rule out either the existence of the aura nor the possibility that it could be photographed. Certainly we did not exhaust all the possibilities. Although I feel that the slow speed film is the best film for capturing an aura, it is conceivable that other speeds would be more advantageous. Since we obtained no evidence even remotely suggestive of an aura on the infra red films it is probable that the aura does not lie in that range. It is more likely that it lies within the ultraviolet range. Unfortunately, if this is true, it will make photographing it more difficult.

On the basis of our results, I and my colleagues feel that further study of the existence of the aura is warranted. We feel that another attempt to photograph the aura using different films, different camera settings and different lighting may produce concrete results. Without hard, objectively obtained proof, such as with photography, the phenomenon of the aura will continue to exist as a purely subjective experience, neither provable nor disprovable.

### AUTHOR

Donald Durand is a registered X-ray technician at Kent County Hospital and a full time student in Education at Providence College.

## **OUR ELECTRIC FORCE: A KEY TO PARAPSYCHOLOGICAL PHENOMENA\***

**Don Wilson**

Practically every day the world turns, the human race witnesses wonders that are hard to believe let alone understand:

- Remarkable individuals like Uri Geller, psychically bend metals and move objects with some power of the mind.
- Amazing psychics like Ingo Swann, have startling clairvoyant and ESP powers along with other abilities that border the unbelievable.
- Other rare individuals like Ted Serios, project photographic pictures on completely enclosed and protected film by merely willing it to happen.

\*Portions excerpted from the author's book with the publisher's permission: *The Force In Your Life*.

What powers lie hidden in the inner recesses of man and his mind that can make possible the seeming impossible? Unfortunately for a long time the scientific world along with the masses have in general been skeptical about what is frequently labeled "occult bunk". Now more and more scientists and scientific research organizations are recognizing the reality of these unreal happenings and incredible phenomena, trying to scientifically understand them.

However, if we want answers to these parapsychological mysteries, perhaps instead of just pushing blindly forward, we should look back at some theories of the past for clues to the many riddles such as the few outlined above. One great thinker from the turn of the century was Webster Edgarly who wrote a score of books on what he called "animal magnetism", the "psychic fluid" which was also discussed by such researchers as Baron von Reichenbach and Anton Mesmer.

Edgarly stated that thought is magnetic and thus electric. Therefore this force, (as with electricity), has positive and negative sides to it. Depression, pessimism and nervousness causes a breakdown of the magnetic vitality, whereas optimism, confidence and purpose cause an increase in magnetism. To teach modern man about how to uncover the hidden laws involved in psychic phenomena Edgarly wrote:

All creation is connected by natural and not by supernatural influences. There is nothing supernatural. Every law that is at work at the farthest corner of the starry system is at work on earth and within the range of human life. This proposition is the basis of the larger system known as the Universal Philosophy. It gives the solution of all problems. If it were not true there would be no plan, no unity in the purpose of creation.

A natural law is based upon a process that the human mind is able to grasp and to understand. Thus gravity is called a natural law, although it is one of the most mysterious of all the processes at work in the Universe.

Of course modern scientists are also seeking the hidden laws involved. One such scientist is John Taylor, physicist of King's College (London) who became interested in the metal bending capabilities of Uri Geller. Like a good scientist with an open mind Professor Taylor began to seek out legitimate scientific explanations to these phenomena. In his fascinating book *Superminds* this distinguished British educator and physicist-mathematician investigated all the possibilities, systematically discussing each in turn. Some of his considerations were:

1. a temperature gradient across the metal. If one side is hotter than the other it will expand and the metal will bend.
2. use of a chemical or even Geller's perspiration.
3. vibrations caused by an "intentionality field". Rapid oscillations

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could be responsible for separating the bonds that hold the various atoms together. "This seems a more plausible mechanism", he stated.

4. focused starlight.
5. focused electric or magnetic fields (although no evidence to this field has been detected).
6. interaction with strong or weak nuclear forces.
7. a hypothetical "psi field".

Taylor finally concludes, however that:

the most satisfactory explanation contemporary science can offer for the telepathic and metal-bending powers of numbers of people, including Uri Geller is that it is achieved by an electromagnetic field of force...The longer wavelength (lower frequency) radiation is particularly appealing since it would appear to have a dimension close to that of the earth. Very long waves can travel right around the earth with little loss of energy.... pg. 37.

It is conceivable that energy could be absorbed by the electrons in the metal at the natural frequency of their oscillations in the metal. This is called the plasma frequency, and is usually in the ultraviolet region of the electromagnetic spectrum.... pg. 131.

The resulting oscillations could then be transferred to the (distortions in the lattice structure or grain of the metal)...Once enough dislocations were in close proximity to each other they would begin to coalesce, initially producing bending, then cracks and finally fracture.... pg. 132.

To support this hypothesis Taylor noted that every human being is electric. The life of every living thing is electric. That may be a hard concept for the masses to grasp and an even harder one to understand, but there is no question anymore that life in humans as well as plants and animals is electrical in operation, if not in essence. It can be measured by voltmeters of the most sensitive type and has been for many decades. Geller apparently focused the electromagnetic energies that all individuals generate, but to a remarkable degree. Dr. Taylor maintains that the basic truth to man's electrical nature may be the key not only to an understanding of life and the biological sciences, but also to the parapsychological understanding of man himself.

Many other scientists have contributed to this mind-shaking "electric" knowledge. It is impossible to review all, but here are (in capsule form) a few of these dramatic discoveries that have been laying bare this secret of life.

\*In the 18th century Dr. Luigi Galvani, professor of anatomy at Bologna University chanced upon the discovery that life is electric when he accidentally touched a dissevered frog's leg to dissimilar metals that produced a slight charge of mechanical electricity through it. Galvani noted that the frog's legs "resumed all activity of their accustomed motions". After extensive experiments Galvani wrote in his notebook: "The electric field ought to be considered simply as a means designed to excite the nervo-muscular force".

\*In the late 19th century Dr. Webster Edgerly carried out over 100,000 experiments proving that man was electrical and that in fact the nerve cells were tiny electrical batteries interconnected with the biggest battery of the human body, the brain, through a complex network of electrical wires, the nerves.

Dr. Edgerly claimed that every person has a varying electrical charge, a few high, most low. Those with a high electric charge were in perfect health and full of vitality or energy. Those with a low charge were on the verge of illness; those with a high could avoid disease and illness. (LIFE ELECTRICITY) plus a score of other writings.)

\*Dr. Harold Burr of Yale University Medical School proved through sensitive voltmeters (much like Edgerly's) that life was electrical. Life in general generates an electrical energy field that surrounds and permeates all living things. The conclusion of a series of experiments he and colleague Dr. Leonard carried out with a voltmeter indicated that 95 out of 102 women who showed significant shifts in their voltage gradient (out of a thousand tested) proved to have uterine cancer.

\*Medical researchers of the International Kirlian Research Association have evidence that *before* the onset of the physical symptoms of disease (like the flu, for instance) there is a breakdown of the electrical field. This appears on Kirlian photos taken 24 hours before the flu hits, even at a time when the subject feels fine.

Soviet studies appear to back up these findings. Reports coming out of the Russia indicate that illness is always preceded by definite and measurable changes in the energy field that surrounds and permeates all living things. This strikingly parallels American Kirlian findings, as well as Burr's and Ravitz's.

that the life force within man is electric, and that in fact life in general generates an energy field that surrounds and permeates all living things. That it is electric is without question, for it has been measure with voltmeters of the most sensitive kind.

One of the most dramatic and practical conclusions of Burr's revolutionary studies measuring and mapping the electrical "fields of life," as he called them, was a study in which 50,000 tests were performed on 500 different people. The conclusion of that study indicated that everyone's natural electrical charge varies. Those, it was discovered, who possessed a *high* electric charge, felt invariably great--"on top of the world," as Burr and Ravitz put it--full of dynamic energy.

Remarkably a full half century before this (and indeed closer to a full century before the present era) Dr. Edgerly maintained the same thing. He claimed as early as 1876 that if a person could conserve energy through simple natural techniques in everyday living he would generate a *high* electric charge, and would be full of electric vitality. The surprising thing is that Edgerly discovered that the conservation of body electricity is to a great extent through nervous habits wasted in daily living. To accumulate a high electric charge, one can perform simple exercises such as maintaining correct posture and by breathing deeply. This generates a high electric charge that will make anyone feel like they were on "top of the world"--full of vim, vigor, and vitality.

Even more surprising Dr. Edgerly actually taught his system of "mastering" this electric life force to many of the prime movers of his day--men like Henry Ward Beecher, Dwight Moody, and Cardinal James Gibbons, all of whom were great leaders in the religious field. He also taught this "electrical" system to political leaders, who ranged from senators like Charles Sumner of historic fame to the great prime minister of England, William Gladstone.

Nor were actors and actresses denied the privilege of his secrets. Many flocked to his private courses of instruction. Perhaps Edgerly's most famous pupil was an actor named Edwin Booth, brother of John Wilkes Booth, notorious assassin of Lincoln. Because of his brother's dastardly deed Edwin Booth found himself being booed and hissed, and at times even pelted off stages. He turned to Dr. Webster Edgerly who helped him to become one of the most magnetic actors of his day, earning for himself the title "Prince of Players."

But perhaps his greatest students were Winston Churchill, Teddy and Franklin Roosevelt and Douglas MacArthur. The last living student of the great Edgerly, Dr. George Hall of London, England, co-founder with Dr. Maxwell Maltz of Human Cybernetics, recently told me that he was a student of Edgerly's at about the same time that young Churchill and Franklin Roosevelt were. Unfortunately the world knows little about this great man who helped to shape the leadership of a former generation of greats. And his unique and powerful system is long forgotten.

Obviously psychic phenomena and life's energies are more complex

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Yet another researcher is Harvard's Dr. Eric Ball who proved back in nineteen forties that every person every moment of living uses enough electricity to at least light a 100-watt electric bulb. Dr. Ball's study indicates that the human body obtains this energy through a process that involves the flow of electric current from the living cells. The electrons of these cells generate a flow of electricity which in all the body cells, according to Ball, totals about 86 amperes with charges up to 1.7 volts. In short each of these electric generating components which lie in the nerve cells are a battery and they are connected "in series". ("Body Electricity Could Light A 100-Watt Lamp", SCIENCE DIGEST, Aug. 1947).

Your body has about 100 billion such nerve cells. Another 12 billion more lie between your ears in the remarkable organ--the largest selective battery in your body--called your brain. Together the nerves of your body and brain are, in a manner of speaking, a wet-cell battery, generating a direct current of about a tenth of a volt. That is about one-hundredth or one-fortieth as much as the battery of an ordinary flashlight. Collectively this is enough to carry out the extensive functions of life, including the tremendously complex computer-like, creative activities of the brain, which makes our world go around.

Thus the human is in fact a great battery of electrical energy, a fantastically complex organism of billions of electrically-operated cells linked together like a vast computer into an almost endless number of combinations that would require a book of hundreds of pages merely to print the numbers alone!

Remarkably, long before Ball's study, or others like the great Dr. Harold Burr at Yale, another researcher Dr. Webster Edgerly was carrying out experiments proving that man was electrical and that in fact, "life electricity," as he called it, was the spark of life. Edgerly predicted in some of his earlier 19th century writings:

"The day will come when scientists will understand fully the fact that the ganglionic cells in the human body are storage batteries of actual electricity that is more closely allied to the mechanical kind than we now dare assert; for it is discharged and travels along the nerves which are electrical wires. The central batteries are well-known in physiology; the nerves are well understood to be wires; and the discharge of currents can be measured, as they have been measured thousands of times," (LIFE ELECTRICITY)

All of these "wires" were connected to the greatest battery of all, the human brain. His remarkably prophetic analysis was to be supported largely through the work of Dr. Harold Burr, neurophysiologist and anatomy expert of the Yale University Medical School who worked with colleagues like Dr. Leonard Ravitz for nearly a half century, they showed

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than electric current that turns on lights on and runs our car batteries. However, by realizing that life systems run electricity we safely conclude that they are therefore subject to its laws. By integrating occult and related research in electric fields in biological systems many of the secrets to life become less mysterious.

*The Force in Your Life*, written by Don Wilson, reexamines Dr. Edgerly's system in light of present day scientific findings. It is available for \$7.95, Universal Press, Box 653-JO, Plymouth, Mich., 48170. If ordering it directly by mail please include 75¢ for postage and packaging.

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## BOOKS RECEIVED

*The Super Natural-* Robert Clarke, publisher, The Danbury Press, division of Grolier Enterprises, 1976, editorial consultants Colin Wilson and Uri Geller. This 21 volume (approx. \$160) encyclopedia of the occult is nothing short of magnificent. There are superb photos and other visuals which accompany well written articles on virtually every area of parapsychology and related fields.

*Life Concealed and Revealed-* Florence Varley, Dorrance and Co. Phil., Pa., \$5.95. A very personal biography of a bacteriologist's excursions into the world of seances, materializations and other bizarre phenomena (mostly from the 1950's).

*Secrets of the Stones-* The story of astro-archaeology, by John Michell Penguin Books, N.Y., 1977, \$2.95. A very thorough discussion of Stonehenge and related megalithic structures. Myriad photos, drawings and schematics relating the positions of these ancient monuments to astronomical data in this concise work.

*Extra Sensory Powers-* A century of psychical research - by Alfred Douglas, Overlook Press, Woodstock, N.Y., 1977, \$15.00. One of the most complete histories of classical parapsychology ever written. A very important and detailed addition to the field and a must for any occult library.

*Holography in Medicine-* Applications in the biomedical sciences - Paul Grefuss (ed), with an introduction by Dennis Gabor, IPC Science and

chnology Press, England, 1975, \$20.00. Acoustical holography  
 microscopy, applications of holography to radiology and nuclear  
 medicine, associative information storage, etc. A highly technical work  
 commended for the hardcore scientist.

*Weird America*- A guide to places of mystery in the United States - by  
 m Brandon, EP Dutton, N.Y., 1978, \$4.95. In the manner of Charles  
 port, this state by state listing locates anything from haunted houses to  
 FO flap areas to unusually large crocodiles.

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# HOLOGRAPHY: STATE OF THE ART

Terence Feeley

**ABSTRACT:** A holographic model is evolving as a valuable tool in several disciplines. The inertia for this emergence stems from the fundamental aspect of holography that a part contains information for the whole. An understanding of the mechanism of holography may be achieved by working with optical holography to offer a structure representative of the whole. This article will offer "how to" information by means of schematics to clarify the concept and enable the reader to gain some understanding of how holograms are made. A brief history will be presented, then a discussion of the mechanics for several types of holograms, followed by a survey of the state of the art.

## INTRODUCTION

The introduction is in the form of questions and answers.

Question: What is a hologram?

Answer: A hologram is actually a photograph of the light waves that reflect from an object illuminated with laser light. The hologram is recorded on film in such a way as to store all the visual information in the reflected object light waves. After the hologram is developed, coherent light is passed through. (In the case of a white light hologram, normal light is used.) The hologram then causes some of this light to be reshaped into a waveform identical to the reflected object light waves. An observer looking at these reformed or reconstructed waves 'sees' in complete and full dimension, the original object. Holography differs from regular photography in three ways: (1) It does not use a lens. (2) It uses coherent light. (3) It uses a reference beam.

- What are the various types of holograms?

- Depending upon the exposing conditions, several different kinds of holograms can be made. The standard type, the transmission hologram, reconstructs an image which appears to be behind the hologram. The image is seen by looking through the hologram as though it were a window. Another type of hologram, the focused imaged hologram, creates a full dimensional image about the plane of the hologram. A third very exciting type is the projected real image hologram. Using this hologram an image can be reconstructed which appears to be hanging out in space in front of the plate. In addition other types of holograms can be made which change color as the observer changes his angle of view varying from violet through the entire spectrum to deep red.

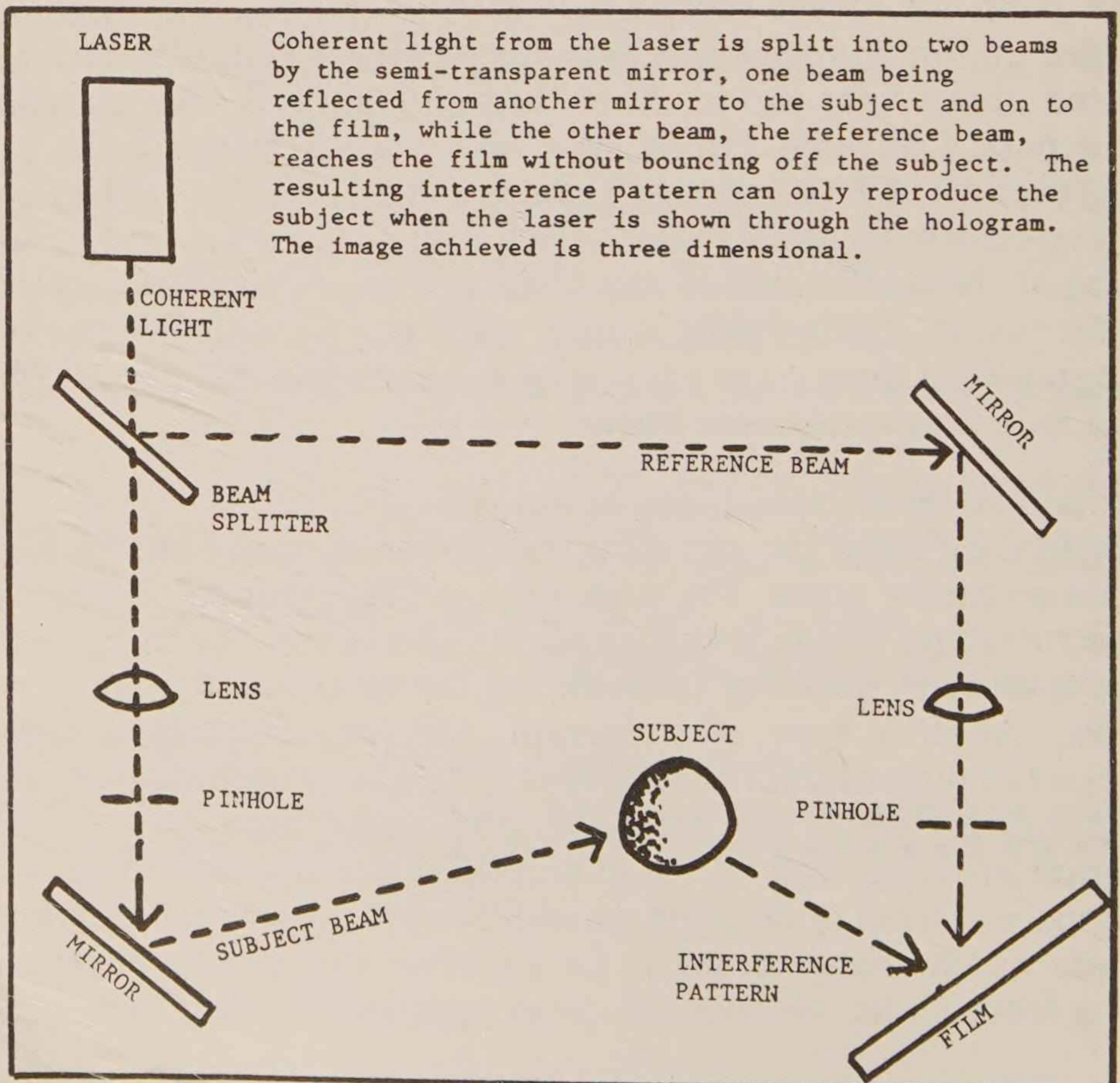
- Can holograms be made with white light?

A- Yes. White light holograms are possible using something called a Fresnell Zone Diffraction Grating which compensates exactly for the non-coherence of the light source. Each wavelength is focused independently.

Q- Can holograms be made in color

A- Yes. A process developed by Gabriel Lippman can also utilize white light and produce color holograms. This technique makes use of mercury backing behind the emulsion side of the photosensitive plate. As each wavelength passes through the emulsion it gets reflected off the mercury back out through the way it came. This causes an almost perfect interference pattern. White light shining through the plate recreates the original image which will be in full color. Coherent light holograms can also be made in color by using three different wavelengths for each primary color and using a process discovered by the Russian scientist Y.N. Denisyuk whereby the original beams are then reflected off the object and back onto the plate, thereby being their own reference beam.

### How To Take A Hologram



## HISTORY

Holography began with the work of Dr. Dennis Gabor, a Hungarian electrical engineer who did much of his initial work at the manufacturing facilities of British Thomson Hourton. Today he still spends a good deal of time in England as Professor Emeritus at the Imperial College of Science and Technology, London University. At the time of his discovery of holography in 1947, Dr. Gabor was searching for a possible method of enhancing the resolving power of the electron microscope. His hope was to be able to 'see' individual atoms with it. He attempted to accomplish this utilizing the technique of wavefront reconstruction which is the essence of holography. Gabor describes the discovery in *Holography In Medicine* (see review in books received section):

A quarter of a century has passed since I first conceived of the basic idea of holography. At that time, in 1947, I was concerned with the problem of improving the resolving power of the electron microscope, which, tantalizingly, had stopped short of resolving atomic lattices. We know that electric lenses could not be made perfect, so what about taking a bad confused picture with an electron microscope and restoring the image by optical processing? But of course, if one opens up the aperture of an imperfect lens beyond a certain point, the picture is only a hopeless blur. It does not contain the whole information on the object because on half of the information, the phase, has dropped out of it; the picture contains only the intensities. No wonder the phase information was lost, because there is nothing to compare it with. So the first step was to add to the object beam a second beam which at that time I called the 'coherent background'; now it is called a 'reference beam'. Before me Fritz Aemike had already reached this conclusion. The essential new step was the discovery of the *principle of reconstruction* which came to my mind one Easter day in 1947.

The notion of wavefront reconstruction is beautifully described by the biologist Lyall Watson:

If you drop a pebble into a pond it will produce a series of regular waves that travel outward in concentric circles. Drop two identical pebbles into the pond at different points and you will get two sets of similar waves that move towards each other. Where the waves meet they will interfere. If the crest of one hits the crest of another they will work together and produce a reinforced wave of twice the normal height. If the crest of one coincides with the trough of another they will cancel each other out and produce an isolated patch of calm water. In fact all possible combinations of the two occur and the final result is a complex arrangement of ripples known as an interference pattern."

The most familiar form of holography is essentially the same procedure. Coherent light produced by a laser is separated into two beams by means of a beam splitter. One beam, the object beam is used to illuminate a subject and parts of the beam reflected from the model fall on a photosensitive plate. The other beam is directed at the photographic plate by means of a front service mirror. This beam, the reference beam, interacts at the photographic plate with the light reflected from the subject to produce a complex interference pattern. The plate is then developed using relatively standard darkroom techniques and the resultant interference pattern is the hologram. When this type of hologram is reilluminated with the reference beam alone, the selective transmission and absorption of the coherent light passing through the plate produces in the emerging beam a reproduction of the original light waves that were reflected from the object at the plate in the hologram formation process. It appears as if one is seeing the object itself in its full three dimensionality. This is what wavefront reconstruction is. George Dowbenko describes this process in more detail in his excellent book *Homegrown Holography*, AmPhoto Publ., Garden City, NY, 1978.

Holograms can be considered to be diffraction gratings since they also diffract light. Diffraction in a hologram occurs throughout the depth of the emulsion. Inside the emulsion the internal boundaries that guide incoming light through the holograms are the planes of silver deposited at the time the hologram is developed. These planes of deposited silver act like perfect mirrors in reflecting or diffracting the light. (p. 62)

Initially the hologram had to be played back with the same quality of light that it was produced with, that is, highly coherent light. However, in the past years, many brilliant researchers have shown that making a hologram or viewing it is not dependent on highly coherent light. A few of the key figures here are Juris Upatnieks, Emmett Leith, Stephen Benton, and Lloyd Cross. These men worked from Dr. Dennis Gabor's original concept and made it accessible to a larger group of people by eliminating some of its technological restrictions.

Dr. Gabor did his initial work in the 1940's and won a Nobel prize for it in 1971. He labored without completely coherent light source, i.e. the laser, but utilized instead the quasi coherent light of a mercury lamp. In practicality, however, it was not until the introduction of the laser in the early 1960's that holography began to achieve a high profile. It was at this time that Upatnieks and Leith intergrated several innovations such as an off axis reference beam and use of highly coherent light. These two innovations served as a turning point in the development of holography.

## STATE OF THE ART

**Data Storage:** One of the more useful applications of the holographic techniques is data storage especially for computer use. The information optically stored may be colored or coded, graphic, letter or number based. It may be stored on the surface of a hologram or spatially separated and stored throughout a volume hologram. It may be a permanent record or an erasable one. Components of the data may be unrelated or associative. In other words, holographic data storage offers a great deal of flexibility and some of the early trade offs in efficiency that were the log jams of the late 60's and early 70's are now being overcome.

An excerpt from *Optical Holography* by Collier, Burckhardt and Lin (Academic Press 1971) sums up the situation in the early 1970's and this can be compared with the present situation.

We shall be concerned with the assembly of a multitude of holograms into a file memory or storage unit peripheral to the central processor of a computer. Rapid access to the file system is an essential requirement. It is not difficult to show that holographic storage methods have decided advantages over other optical methods such as microimage records, but their real and formidable competitors are the well-entrenched magnetic memories: the core, the tape, the disk and the drum. The last three represent prime targets for the holographic optical memory. With comparable capacity, e.g.,  $10^8$  bits, and cost e.g., 0.01 cent/bit, the holographic memory can effect information retrieval in microseconds while the magnetic tapes, disks, and drums require tens of milliseconds. As a counter advantage a magnetic memory is erasable and can be written as fast as it can be read. Fast-write and erasable holographic storage is still in its early experimental stages with only untried possibilities to exhibit.

The rate of information input, density of data storage and speed and integrity of information retrieval are the central concern here and the following passages may show why holographic techniques are developing an edge. The effectiveness of optical data storage is a function of the angle and wavelength of the light source and the nature of the recording matrix. The edge that magnetic storage had, primarily that of data density was given to optical data storage recently by the occurrence of two events, 1) the development of a crystal with the proper structure and subsequent storage characteristics and 2) the development of the tunable dye laser.

### The Crystal:

Many materials assume different characteristics under different conditions, for example, water is a solid at one temperature, a liquid at another temperature and a gas at still another temperature. Each condition: ice, water, steam is described by the symbol  $H_2O$  but the relative closeness or tightness of packing of one molecule to another is different.

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Some materials are said to assume a crystal structure under certain circumstances, i.e. table salt has a regular and orderly arrangement of its atoms one to another that is repeatable when the crystal is formed under the same conditions. Their characteristics of repeatability and stability are very convenient when the crystal can be made photosensitive, i.e. responsive to light. There are a great many crystals that are photosensitive and because of their particular crystal structures allow for high density data storage. One such crystal that has achieved a good deal of publicity is the so called "banana" molecule. The potentialities of this material are very clearly explained in the *Frontiers of Photography* volume of the Time/Life series.

The cube-only one centimeter in size-theoretically can store as much information as is contained in a 50,000-volume library; what is more, it can deliver any portion of that information in 20 millionths of a second, or less time than it takes to blink. The laser and the cube store desired information-photographic views or photographic copies of printed material-that have been reduced to fractions of a centimeter in size. These images are thrust by a laser beam into the cube, where they remain packed like oranges in a crate until a laser fetches them out.

The cube is a colorless synthetic crystal that looks like glass and is made of either lithium niobate or barium sodium niobate, the latter dubbed banana because of its chemical formula, which is  $Ba_2NaNb_5O_{15}$ . A laser-borne image entering the cube alters electrons within the banana molecules, establishing a pattern, an electrically charged hologram corresponding to the image. But the electron pattern is unstable, can be read out only once and would shortly self-erase if left to itself. Heating the cube to a temperature of more than  $200^\circ$  converts this pattern of electrons into one composed of ions-electrically charged groups of atoms. This ion pattern stays put to be retrieved by laser light, which is affected by an emulsion pattern in a holographic plate. Theoretically, the cube's capacity to store holographic images is all but unlimited. In practice, however, the scientists have some bugs to work out; for example, the ion patterns, though relatively permanent, actually tend to fade away after a few months.

The versatile laser referred to here is the tunable dye laser which is a laser that can be manipulated to produce discrete laser lights of many wavelengths or colors.

In the August 14, 1978 issue of *Computerworld* an article entitled *Tunable Dye Laser May Prove Aid as Data Storage Method*, appeared.

Four scientists at IBM's San Jose Research Laboratory have been awarded a patent for a tunable dye laser that may have future application to optical storage of data.

The patent, entitled "Frequency Selective Optical Data Storage System," was granted to George Castro, Dietrich Haarer, Roger Macfarlane and Peter Trommsdorff and is based on a photochemical process called "hole burning." The technique is a unique method of increasing the amount of data that can be packed into a given space, according to IBM.

In the system described by U.S. patent 4,101,976, each bit is identified by its location in the frequency spectrum as well as by its location in two- or three-dimensional space. Using the technique, hundreds or even thousands of the "frequency-coded" bits could be stored in a single, microscopically small region of space. The size of this region could be as small as  $1/25,000$  in., or one micrometer, which is the diffraction limit of a laser beam. With 1,000 bits stored in each element,  $10^{15}$  bits - estimated to be the total storage capacity of the human brain - could fit in about one square meter of area.

Work on the new storage technique is still at a very early stage of research. "We have a long way to go before this can be made into a technology," according to Dr. George Castro, manager of the San

The invention depends on the use of a laser that can be tuned - similar to adjusting the station selector on a radio - so that it emits light of various colors, but whose light rays at a particular setting of the dial all oscillate within an extremely narrow frequency band. The tunable dye laser is itself an IBM invention.

The highly monochromatic light from such a laser is directed onto a sample of a photoreactive material that is cooled to a few degrees above absolute zero. This action produces a chemical change in a very small percentage of the material's molecules - just those whose spatial environment enables them to absorb energy at the frequency of the laser light.

As a result of the chemical reaction, the frequency-selected molecules are changed into a new compound and none of the original molecules are then left to absorb light at the frequency that produced the reaction. The phenomenon is observed as the forming of a gap, or "hole," in one of the material's optical absorption peaks - hence, the name "hole burning."

In experiments performed to test the feasibility of the hole-burning technique for data storage, the IBM scientists were able to burn a hole whose width (in frequency units) was less than one thousandth the width of the absorption peak in which it appeared - one of the narrowest optical features ever observed in a solid.

By implication, the peak is wide enough with respect to the laser frequency to allow burning of one thousand holes side by side. This could be done sequentially simply by tuning the laser beam to one thousand different colors, or frequencies.

The "ones" and "zeros" by which information is encoded in a computer could then be represented by the presence or absence of holes in the absorption peak at particular frequencies.

**Holographic Movies:**

The true 3-D movie in the cinemagraphic sense is still a few years away but its foundation has been laid in what is known to the holographic community as the Multiplex.

Lloyd Cross and Hart Perry and a handful of other people played a key role in this innovation. In the multiplex process itself, a short film is made of the desired subject and then each frame of this film serves as the object for hologram formation on a film plane. The film plane is a section of sensitized acetate with each successive frame producing a sequential hologram across the acetate. Each hologram is about one millimeter wide and when recorded side by side and rotated gives the illusion of motion.

This is quite a time consuming process but the results are well worth the effort expended. The most famous Multiplex is *The Kiss* featuring holographer Pam Brazier. Pam is an accomplished artist and has greatly influenced the growth of the art.

Reportedly a true holographic movie using holographic film has been produced in the Soviet Union, however the mechanics of the breakthrough are not currently available in the literature.

The most obvious impact of the Multiplex technique will be in advertising with point of purchase displays. Already several companies have used them on a limited scale with success. Custom Multiplexes can be commissioned through the Museum of Holography.

The next step after holographic movies will be holographic TV and holographic videotelephones.

Bell Labs has already proven that a combination of lasers and fiber optics is a highly efficient method of communications. Therefore the video telephone is not far away. Compared to copper cables, glass fibers are much more efficient in virtually every way. They are lighter, take up less space and are spaced more efficiently.

**CONCLUSION**

Holography has many uses beyond just three dimensional photography. Eventually movies, computer storage, video phone, holographic television and other untold discoveries will be surfacing. The potential for the field is limited only by our imagination. Holography is here to stay.

If the reader has further questions refer to the Museum of Holography at 11 Mercer Street, New York City, in the SOHO district which is firmly established and is run by a highly professional and enthusiastic staff.

Mach came closest to explaining the enigma of the fundamental structure of space by going beyond Newton to say that the mass of any material body such as the Earth was dependent upon some type of supergravitational force from *all* the stars. Whereas Newton was (also) stating that motions could be intrinsically absolute, Mach, influenced in part by Buddhist thought, said that all effects in the Universe were related to all others. This unconventional statement greatly influenced Einstein's Theory of Relativity, and Einstein even wrote Mach to say as much.<sup>5</sup> Therefore, Mach was proposing an interconnectedness of all things (stars) so that each part of the system was a microcosm which in turn reflected the macrocosm. Written in a different form, this was in essence Leibnez's monad theory. However, questions remain as to the structure and composition of this interconnectedness.

To understand the enigma of the ether we not only need an historical perspective, but also a synthesis of the modern knowledge that is available to us. This new data combines parapsychological advancements with the technological achievement of holography. Man can give more than lip service to the statement that the microcosm reflects the macrocosm, he now has a physical apparatus that can duplicate this metaphysical axiom.

### THE HOLOGRAM

One of the more intriguing features to holography is that once the interference pattern is created on the photosensitive plate, any section of that plate contains information capable of reproducing the entire image. To illustrate this graphically, if one were to cut out the left corner of a normal photograph and throw the rest away, all that would remain would be that tiny section. However, if the same corner were cut out of a hologram, and a laser beam (or appropriate light source) was shined through this tiny piece, the entire image would still appear!<sup>6</sup> One can see that movement from 2-dimensional photography to 3-dimensions also changes our notion of the very structure of those three dimensions.

This holographic concept whereby *the part contains information about the whole* however, is not new to nature. We know from cloning experiments that each cell of a living system contains information (in the form of DNA) for the entire organism. It is also believed that memory and other neurological functions are coded in the brain via a holographic method (see this issue, "Towards a Holographic Theory of Mind," McKenna & McKenna).

The creativity involved with the inception of holography, therefore, not only instigates new forms of technology, but also changes man's views on the structure and properties of the universe. This implies, as David Bohm, a theoretical physicist, states, "a new notion of order... This order is not to be understood as an arrangement of event (e.g. in a series). Rather a *total order* is contained in some implicit sense in each region of time and space".<sup>7</sup> The possibility that the universe may be constructed on holographic properties alters radically our conception of the world.

**THE GALAXY IS A HOLARCHY**

Dane Rudyar, the philosopher/astrologer, has coined a more complete term which he calls *HOLARCHY*. He defines it to mean a hierarchical structure where each level in the hierarchy is a whole, and all wholes interpenetrate each other. Each 'lesser whole' is part of the 'greater whole'. I would like to add to the definition a holographic conceptualization whereby each strata of the hierarchy can code (in some derivative sense) every other strata and that different levels are separated by threshold barriers which have, respectively, their own set of laws. However, the principle "As Above, So Below" still applies.

For instance, if we look at the structure of an atom we see many similarities to the structure of the Solar System. Wilhelm Reich, in his book *Cosmic Superimposition* has pointed out the startling similarities between the structure of hurricanes with that of spiral galaxies. Similar principles such as symmetry, rhythm, polarity, form, aesthetics, and synchronicity seem to prevail at microcosmic and macrocosmic dimensions.

Rudyar points out that new discoveries of incomprehensibly distant galaxies, quasars, black holes and white holes have bewildered man, and he asks if we really have accepted the knowledge of the vastness and complexity of the cosmos. "New facts demand a new dimension and interpretation of reality". He says we need a holistic approach to solve the enigmas that are being revealed to us. Just as man realized that the Earth revolved around the Sun, we must now realize that the Sun is only one star of billions in the galaxy.

The essential factor is this transformation of man's consciousness is the transmutation of the 'solar' I into the 'galactic' WE. In this WE-consciousness the principle of *interpenetration* operates...everything not only is related to everything else, but...every entity, every mind interpenetrates every other entity...As the consciousness of an individual begins to operate in the spiritual dimension.. (man enters) the level of spirtual mind or supermind.<sup>8</sup>

Rudyar separates the ether into three hierarchical interpenetrating realms:

*BIOSPHERIC SPACE* - the space within which living organisms enter into relationships with each other.

*HELICOSMIC SPACE* - is space within which planets and other material entities relate to each other.

*GALACTIC SPACE* - is space within which stars are related to one another.

Throughout modern history occultists have emphasized the relationship of the Universal Mind and the Akashic Records to the ether, whereas the physicists have searched for the medium by which light and gravity could travel through. From the writings of Madame Blavatsky we learn that:

The parent space is eternal, ever present cause of all - the incomprehensible DEITY whose 'invisible Robes' are the mystic root of all matter, and of the universe...it is without dimension.<sup>9</sup>

She says that spirit and matter derive from THAT and it is neither a limitless void nor conditioned fullness, but both.

Thus the 'Robes'...undifferentiated Cosmic Matter...is not matter as we know it, but the spiritual essence of matter, and is co-eternal and even one with space in its abstract sense...The Hindus call it Malaprakriti, and say that it is the primordial substance which is the basis of the Upadhi or vehicle of every phenomena, whether physical, mental or psychic. It is the source from which Akasa radiates.<sup>10</sup> (The Akashic Records are a theoretical mental structure that contains the entire history of the world. They can be 'read' by psychics such as Rudolf Steiner and Edgar Cayce . Editor's note.)

This paper attempts to state that the ether exists. It is multidimensional and organized according to the principles inherent in a holarchy. The ether contains the interrelatedness of all things, both mental and physical, and every local region within the ether contains information for the totality. Even though it may have its own set of laws they are subservient to higher and more complete tenets.

Conceptually we can see the necessity for the mental realm infiltrating the structure of space, not only because quantum physics has begun to include the observer, and because such realms as precognition, telepathy, PK and synchronicity are proven phenomena, but also because *the mere realization that we are in a galaxy* extends our consciousness out into the galaxy in proportion to this realization.

### QUANTUM PHYSICAL THEORIES

By 1900, the ether theory was abandoned mainly because it could not be detected. In fact Einstein's Theory of Relativity stated that by its very nature, it could not be detected. (see footnote #3) If light is considered to be a wave, then it must pass its vibration through a medium (i.e. the ether). However, if, as Planck and Einstein discovered light is also a quantum of energy, it need not pass through a medium, and so will move through empty space. This described light and other forms of electromagnetic energy as being made up of photons - wave packets that had both the properties of waves *and* particles. Because a

theory of how light could travel through empty space was devised, the concept of the all pervading ether faded away and man began to look at the sky as being comprised of a vacuum. However, this abandonment of the ether theory presented many problems to the fundamental structure of space itself.

Dirac postulated that empty space, the vacuum, was not really empty, but filled with electrons in negative energy states...Space is thus like the 3-dimensional ocean in 4-dimensional space/time.

What is below this surface (antimatter) is not normally observable.<sup>11</sup>

E Gora also points out that 'space is never quite empty. Light is partially absorbed, primarily by random atoms and particles'...<sup>12</sup>; and parapsychologist Andrija Puharich tells us that an extension of Dirac's original conceptualization implies infinite negative energy states equivalent yet opposite to the myriad positive ones.<sup>13</sup>

Einstein's theory...says that 3-dimensional space is actually curved, and that the curvature is caused by the gravitational field of massive bodies. Wherever there is a massive object, e.g. a star or a planet, the space around it is curved and the degree of curvature depends on the mass of the object.<sup>14</sup>

Capra goes on to point out that the gravitational field *is* the curved space. It does not curve the space. "In general relativity the gravitational field and the structure or geometry of space are identical."<sup>15</sup>

Dr. H.C. Dudley, professor of radiation physics at the University of Illinois Medical Center has suggested that the so-called 'ether' may be a ubiquitous sea of neutrinos,<sup>16</sup> and Arthur Koestler tells us that these neutrinos are not subject to gravitational attraction nor do they have any mass or electric charge.

The absence of 'gross' physical properties in the neutrino, and its quasi-etheral character, encouraged speculations about the possible existence of other particles which would provide the missing link between matter and mind. V.A. Firsoff suggested...that there must exist a modulus of transformation analogous to Einstein's famous equality  $E = MC^2$ , whereby 'mind stuff' could be equated with other entities of the physical world.<sup>17</sup>

## OCCULT THEORIES

Occult writers such as Gurdjieff and Ouspensky tell us that it is the *Will* as an entity unto itself, that provides the transformation from the mental realm to the physical realm whereas other writers such as Carl Jung describe a collective unconscious, or Universal Mind, from which all individual minds spring and from which all are still connected. Thus every person's thoughts exist at deeper levels (beyond the personal unconscious) in every other person's mind, i.e. in the collective psyche, and through exercise of the will this domain can be tapped.

The idea of a collective psyche is a holarchic structure for each thinking mind contains information for the whole. The Universal Mind explains telepathy quite simply. Since each person is interconnected with all, mind reading is merely opening up one's own psyche to what is already present. It is the realization of the inherent self-transcendent qualities within.

Louis Acker, a well known Boston astrologer, in an unpublished paper entitled "Mind: A Holographic Computer", sets out to explain how the One God split himself into 2,3,4...and so on to create the multitudes. This splitting was created similarly to how vibratory patterns can interfere with each other. Just as there are set notes on the scale, there are common 'nodal points', or 'fundamental carrier frequencies' in the creation of the multitudes, so that a transference of energy from higher dimensions to lower ones can be facilitated by means of principles of resonance and through laws of harmonics (note for example the hexagonal form inherent in the carbon ring.) This can be proved on the physical plane with simple tuning forks. All forks in a room with the same dimensions will vibrate if only one of this is rapped. This is the principle of resonance. Also, if any tuning fork is in the proper geometric proportion to the rapped fork, it too will begin to vibrate.

Thus holograms or thought forms existing in the higher frequencies, or, the superphysical octaves or dimensions (the Akashic Record and/or the Universal Mind), can reflect themselves down to their sub-harmonic carrier frequencies on the mental astral (man's) levels...where they can be picked up by a human mind sufficiently organized and calm enough to receive them.<sup>18</sup>

Physical space may itself be curved, contain anti-matter, house a sea of neutrinos and may also be related to the invisible realm of the psyche known as the astral plane. Therefore with the discovery of holography and a new order to the universe, the conceptualization of empty space must be re-evaluated.

### CONCLUSION

Just as the room you are sitting in contains the electromagnetic energy from every radio station in the area, so too does the space within the galaxy contain the light from all of the stars within that region. On the physical level Dr. Gora points out that:

according to relativity, only information from a limited region of space/time can reach a particular point in space/time - only what is within the so-called "event-horizon". But the more important difficulty comes from the uncertainty relations. The transmission of information is subject to limitations...There is no such thing as a 'point' in space. There are only fuzzy domains.<sup>19</sup>

However, in continuing the radio wave analogy, it is quite possible that although your radio only has a range of roughly 1,500 miles, the information from all of the stations around the globe may also be present in some fainter rate of vibration. So too, may the EM waves from all of the stations from history also be present as some distant echo. E.

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Gora points out that much of the information would be lost in background noise, but he also states that the first incredible explosion that gave birth to the Milky Way can still be detected! If we conceive the space between the stars to be composed of the intersecting electromagnetic energy from all the stars set up in a holarchical sense, Gora also tells us that depending upon where one is within the galaxy, i.e. by cloud formations, black holes, near the periphery (like the Sun) or near the galactic core, the structure of the space will vary accordingly. However, space is multi-dimensional housing in some way the mental astral dimensions. Gora would like to place these unknowns in *hyperspace* nevertheless, by definition, this area will also be part of the holarchy.

There is a concept of hierarchy of spaces; and space, during a period of cosmic manifestation, actually represents the manner in which all the organized systems of activities operating in any region of the universe are interrelated and interacting. Space is not an empty container into which material substances are poured; it is the interrelatedness of all (bio-cosmic, intra-stellar, and galactic) activities. As these activities are operating at different levels of organization or planes of existence - the quality of their interaction and interdependence varies with each level.<sup>20</sup>

One other point to consider is the concept that each man's mind may be a microcosm of the universe. Due to the holarchical structure of the world we can see that the energy (light) from every star (barring various forms of obstructions: may be present in varying intensities at every sector in space, so that each area can not only code for every other, but also a map of the structure of the galaxy (universe) is present at any region in space (including the region that our brains occupy).

We can discover...a new frame of reference for our new experiences (and technology)...in the holistic and hierarchical universe we are coming to know. This kind of universe is being revealed to us because it is the mirror-image of what in us, though still at the stage of potentiality is on its way to actualization. Man always discovers outside himself what he is about to become.<sup>21</sup>

Just as DNA codes for the whole organism throughout every cell within it, so too may each sector within the galaxy code for the whole. When man learned to place the Earth in its proper relationship to the Sun many secrets of the Universe were revealed. As we progress in our knowledge of our environment, we see that the Solar System is part of a larger whole which permeates every level of the biosphere and points us towards a more holistic and self-transcendent view of the galaxy.

## FOOTNOTES

1 - Kepler noticed that the time it takes a planet to circle the Sun squared divided by the distance from the planet to the Sun cubed was the same for all planets. This is harmonic law  $P^2/D^3 = K$  where  $P$  = the period of revolution around the Sun,  $D$  = distance to the Sun and  $K$  = a constant. He also noticed that the planet will sweep out equal areas between itself and the Sun in equal times even though it moved at varying speeds and distances (depending upon where it was in its orbit).  $P^2/D^3$  led to Newton's Law of Gravity;  $M_1M_2/D^2 = K$  where  $M_1$  = Mass of one body and  $M_2$  the mass of another,  $D$  = the distance between them,  $K$  = a constant. It should also be noted that Kepler's discovery of equal areas being swept out under a curve led Newton to his formulation of calculus. Einstein comes in because he noticed that  $P^2/D^3$  did not work for the planet Mercury. Einstein realized that Mercury's speed would be a factor. Before his interest, the anomaly was basically ignored. This helped him proving his Theory of Relativity.

2 - Roemer had noticed that eclipses of Jupiter's moons differed depending on where the Earth was in its orbit around the Sun. When it was farther from the Sun the eclipses were found to occur at a later time. This could only be attributed to the possibility that light had a finite speed and took longer to reach the Earth at that time. The differences in the distance compared to the different times of the eclipses enabled him to calculate light speed.

3 - Since it was known that the Earth was travelling through space at approximately 19 miles/second it was believed that the ether would effect the two light beams in different ways. An analogous situation would be to sit on top of a moving car and throw 2 balls out at equal speeds at right angles to each other. Obviously the motion of the car moving on the road through the air will effect the trajectory and ultimate speed of each of the balls. In the same sense, the ether, if it existed, should effect the two different light beams. However, they both arrived back at the same time. This experiment helped various theorists to disprove the existence of the ether; however, just as Newton stated that it was impossible to tell whether or not a ship is moving through the water by any experiment performed inside the ship, Einstein stated in his Theory of Relativity that the ether by its very nature could *not* be detected. He said we can only measure relative motions, i.e. one motion as compared to another; we can not measure absolute motion. Einstein did not disprove the existence of the ether. He only stated that it could not be detected by its very nature, and that whether or not it existed, light would always travel at the same speed regardless of how fast or slow the Earth moved. As Dr. Gora has mentioned, Dirac said in the 40's that Einstein did not destroy the ether theory, but created a 4-dimensional or relativistic ether. (see *Relativity For The Layman* by James Coleman, Mentor Books, NY, 1954.)

4 - Arthur Koestler, *The Sleepwalkers*, MacMillan, 1959, p. 503, quoting Newton: "That gravity should be innate...and essential to matter, so that one body may act upon another, at a distance through a vacuum, without the mediation of anything else,...is to me so great an absurdity...but whether this agent be material or immaterial, I have left to the consideration of my readers."

5 - Mach's principle that the influence of all the stars is causally related to the stability of matter in a local system derives directly from Newton's own words:

If a vessel hung by a long cord is so often turned about that the cord is strongly twisted, then filled with water and held at rest together with the water thereupon by the sudden action of another force it is whirled about the contrary way...the surface of the water will at first be plain, as before the bucket began to move...(eventually, however) and the swifter the motion becomes, the higher will the water rise...This ascent of the water shows its endeavor to recede from the axis of motion. See *Ernst Mach - His Work, Life and Influence*, by John T. Blackmore, Univ. of CA Press, 1972, pp 101-102, 248.

6 - However, Dr. Gora states that interconnectedness does not necessarily imply information exchange, although this paper will argue that it does.

7 - From Brendon O Regan quoting David Bohm in *Psychic Explorations*, edited by John White and Edgar Mitchell, Putnam, 1975, NY.

8 - Dane Rudyard, *The Sun Is Also A Star*, Dutton, NY, 1975, p 24.

9 - Madame Blavatsky, *The Secret Doctrine*. Quest Books, Wheaton, Ill. 1973, opening paragraphs.

10 - *ibid.*

11 - E. Gora, letter to the Editor, JOS, vol I issue 3, p. 208.

12 - E. Gora, private correspondence.

13 - "The Puharich Interview", by H. Smukler and M. Seifer, *Gnostica* #46, Fall, 1978.

14 - Fritjof Capra, *The Tao of Physics*, Shamballah Press, 1975, p. 64.

15 - *Ibid*, p. 208.

16 - Bulletin of Atomic Scientists, Vol XXXI, #9, 11/75.

17 - Arthur Koestler, *Roots of Coincidence*, Vintage Press, NY, 1972, p 6

18 - Louis Acker, "Mind: A Holographic Computer", Unpubl, 1978.

19 - E. Gora, private correspondence.

20 - Dane Rudyard, *op cit* p. 24

21 - *ibid.*

## BIOGRAPHY

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