

## ABOUT THE AUTHOR

Dr. Maxey graduated cum laude from Wake Forest College, was elected to Phi Beta Kappa, matriculated at Bowman Gray School of Medicine and his subsequent surgical training led to certification by the American Board of Surgery and fellowship in the American College of Surgeons.

He is a Certified Flight Instructor, Multiengine Airplane and Instruments. His Electronic Moving Map/Collision Avoidance System was presented at the 1973 Air Line Pilot's Association Air Safety Forum.

He has spoken on biophysics at the 1973 First International Psychotronic Conference in Prague, at Moscow University in May 1973, at the Civil Aviation Medical Symposium in Guadalajara in October 1973, at the May Lectures, Brunell University, London, May 1974, at the John Taylor Lectures, King's College, London in May 1974 and at the University of Florida sponsored by the State Department of Health, and the American Academy of Parapsychology and Medicine in June 1974.

In May 1974, Mr. Kotaro Kasamatsu, Director General of the Secretariat, Aircraft Accident Investigation Commission and members of his staff heard Dr. Maxey in Tokyo.

More recently he lectured before the Eleventh Annual Cancer Convention in Los Angeles and at the International Festival of Esoteric Sciences in Toronto.

## DEATH BY BIOENTRAINMENT?

by E. Stanton Maxey, M. D.

A January 1974 issue of the Miami Herald quotes a spokesman for the Air Line Pilot's Association as follows:

"It seems like more of last year's accidents were related to the weather than to any inadequacy in landing approach equipment"

The weather, and the mechanisms whereby it influences all members of the genus homo sapiens, including pilots, is the topic before us. The concepts to be presented rest upon foundations plotted by great men of science such as Nikola Tesla who gave the world alternating motors and generators. He was responsible for the world's first A.C. hydroelectric plant. The myriads of transmission towers and power lines here and around the world are his memorial. Dr. Barney Crile talked about the electrical nature of human cells, and is remembered for founding the Cleveland Clinic. A. P. Krueger has for years written extensively on the biological effects of ions. S. W. Tromp heads the Biometeorological Institute in Leiden, Netherlands. His masterpiece collation "Medical Biometeorology" references the work of over 4,000 authors. Dr. H. Konig of Hamburg, Germany, studied how terrestrial EM waves of 3-5 Cycle/Second frequency caused a 40% prolongation of reaction time in over 230,000 subjects. I submit that is a large number of people.

Death by Bioentrainment?

E. Stanton Maxey, M.D.

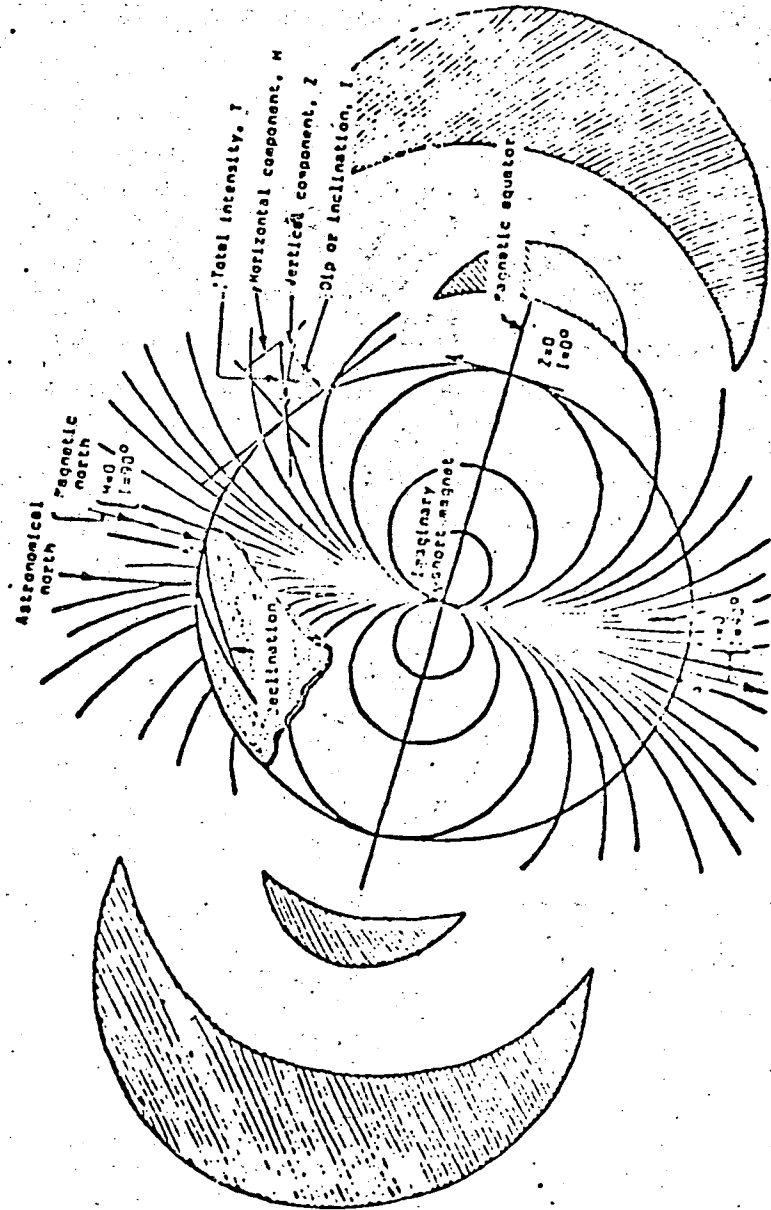
It is time the world listened to such men for applications of their knowledge will predictably prolong many of our own lives.

Using intellectual spectacles provided by such scientists let us examine the Grand Engineer's work in four parameters; magnetic fields, electrostatic fields, modulations of these two fields and serions.

Mother Earth has a magnetic field of 0.3 to 1.6 gauss density which extends half way to the moon. The lines of force from this field do not run from the north to the south pole, but emanate from the surface as if a short bar magnet were secreted deep in the center of the earth. Excepting at the poles and the equator lines of force flow about a 55° to 60° angle from the surface.

(illustration)

Perhaps the longest magnetic field modulation is about 11.1 years in length being associated with sun spot activity. Current studies associate this period to astronomical configurations of the three inner planets but why the incidence of infectious hepatitis has a similar period remains a mystery. Shorter continuous low magnitude pulsations of from 0.1 to 100 Hz, peaking at about 10-11 Hz and known as the Schumann resonance, are mimicked by similar frequencies detected in the human electroencephalogram suggesting that man's brain evolution was influenced by his magnetic environment. Between these two frequencies lies that magnetic variation



Schematic diagram illustrating magnetic field produced by an imaginary bar magnet at the Earth's center plus Van Allen belts, inner protons and outer electrons.

Death by Bioentrainment?

E. Stanton Maxey, M.D.

associated with moon phasing which is also accompanied by variations in leukocyte and red blood cell counts, increased bleeding with the full moon, more births and more crimes of violence. The term lunacy derives from this relationship as the rate of mental hospital admissions peaks with this lunar period. There is also a diurnal modulation.

The second parameter, that of Mother Earth's electrostatic field, is associated with the accumulation of positive electroparticles (positive aerions, protons) in the innermost van Allen belt. The normal electrostatic field out of doors averages 120-230 volts per meter but may, with thunderstorms, reach 15,000 or more volts/meter. This field, like the magnetic field, has variations associated with celestial events; for instance the diurnal variation peaks as our Sun passes the meridian of the magnetic north pole. Lunar, yearly and eleven year periods also are observed suggesting that related biological events may be due to electrostatic factors, magnetic factors, or a combination of both these.

Fortunately, air at sea level pressures is too poor a conductor for us to get shocked but high gradients are associated with a decreased surface tension of water. Fill a capillary tipped burette with water and let as much water as will run through. Then place the burette in an electric field and more water will run out.

Exploiting the Earth's electrostatic field via sensors at the nose, tail and wingtips of aircraft has evolved into

Death by Bioentrainment?

E. Stanton Maxey, M.D.

a very cheap and effective automatic pilot. You will agree that if an aircraft can be kept straight and level something has to be there.

How do positive electrostatic fields effect humans? Well for one thing they cause a decreased viscosity of the blood which results in blood flowing more freely through the vascular tree. If you happen to have hemophilia, the free bleeding disease, you should avoid intensely positive electrostatic fields for they may precipitate a bleeding crisis. Do such fields effect mentation? You had better believe they do. Dr. Andrija Puharich in the late 1950's had subjects in Faraday cages (boxes designed to shield out EM energy) sending ESP messages back and forth over a distance of a few miles. He then put electrostatic field devices inside these cages and found the incidence of receipt/sending of ESP data improved over 10 times.

ESP! I can almost feel my scientific peers squirming in their seats. I'm trespassing on, to some of them, some very forbidden territory.

Let me go on to point out that Dr. William Gray Walter of the Burden Neurological Institute in England demonstrated characteristic electrical brain activity accompanying decision making. He, in fact, via computer linking, turned a T.V. set off and on without moving a muscle. The British Aircraft Corporation ran similar experiments using navigators and guess what? Navigators made decisions ten seconds before panel instruments displayed data requiring those decisions. In ESP language this would be called precognition, i.e. knowing ahead of time.

Death by bioentrainment?

E. Stanton Maxey, M.D.

The Germans have their scientists too. Dr. C. Cristofv recognized the beneficial effects of positive electrostatic fields on mentality, years before Dr. Puharich did his experiments. In fact, some WW II Luftwaffe bombers were equipped with positive electrostatic field devices. They were called antifatigue devices since they promoted mental alertness.

More than twenty years later, Dr. C.J. Barron in 1964 working for the Lockheed Aircraft Corporation showed that positive electrostatic fields plus negative ion air (aerions) improved test pilot visual discrimination by over 10 times. No current production aircraft, to my knowledge, has any such device aboard.

Let us try our scientific spectacles on a third parameter; that of aerions. Aerions are particles in the air with unbalanced electrical charges. If minus one electron they are called positive aerions and are found naturally in the Santa Ana winds of California, the Föhn winds of Bavaria and Shirov winds of Israel. They cause a decreased ciliary action in the respiratory tree, a decreased oxygen pulmonary exchange, a release of serotonin into the blood stream, and are associated with migraine headaches and heart attacks. As Benjamin Franklin showed with his kite, the higher one goes the more dense is the positive ion concentration. It goes along with Mom Earth's positive electrostatic field. Aluminium absorbs positive charges from ions like a sponge. Aircraft metals sap them up when planes ascend and bleed them off during descents. Though not to my knowledge actually measured, physics dictates that jet airconditioning systems blow these cockpits Santa Ana winds on descending pilots.

Death by bioentrainment?

E. Stanton Maxey, M.D.

Negative aerions are air particles with an extra electron. They increase respiratory ciliary action, improve oxygen pulmonary exchange and favor a shortening of human reaction time; i.e. response time. Only 10 years ago Lockheed's Dr. Barron showed these negative aerions helped test pilots see ten times better. Negative aerions are commonly found around fountains, waterfalls and cold showers. They are good for you.

Normally, at the surface in clean outside air, positive to negative aerion ratios approximate 1.2 to 1 with total aerion counts ranging from 1500 to 4000 per  $cm^3$ .

Let us now examine some field modulation effects. Infra waves with wave lengths of 6-100 Km and a frequency of 3-5 Hz are notably present with the approach of deep weather depressions and storm centers. R. Roiter, examining 53,000 subjects with over 210,000 observations, found a statistically significant prolongation of reaction time associated with these waves, and H. König reporting on 230,000 observations showed this prolongation ranged to 40%.

Curiously, the human brain has a normal electrical rhythm of 3-5 Hz called the theta rhythm. This rhythm is found in certain meditative states and near deep sleep. It is associated with a trance like state in which the human being will be perceiving dream like visual and auditory imagery. It seems reasonable to posit that the restlessness and daydreaming of school children observed to be coincidental to infra waves, and the 20-25% increase of industrial accidents occurring coincidentally with these 3-5 Hz waves may relate to the brain's rhythm following the terrestrial EM modulation; no wonder the reaction

Death by bioentrainment?

E. Stanton Maxey, M.D.

time is prolonged.

There are other evidences for bioentrainment. Tesla once gave Westinghouse an explosive diarrhea with an adversely modulated EM field device and race car drivers have become nauseated when inadequately shielded field devices picked up ignition noise. Starke produces a "repose" mood with a 3 Hz modulation. Surely if artificially generated fields produce such biological effects terrestrial electrical events must act likewise.

The exact modus operandi of such biological effects is not agreed upon. Physics declares that ion rich air can act as an electrical current carrier. Since acupuncture points are localized pin point areas on the skin surface with decreased electrical resistance it is logical to propose that subtle body vs environmental electric currents are induced by way of the Schumann resonance effecting a/ion/body-electron exchanges at these acupuncture points. Such subtle currents seem observationally, at times, to act as pace setters for cerebral electrical activity.

However one looks at it, light is the sustainer of life. Were it not for photosynthesis in plants we'd simply have no food. It's as simple as that.

Nobel Laureate, Albert Szent-Gyorgyi, using electron spin laboratory devices, revealed the light released mechanism inside cells. He stated,

"The fuel of life is the electron or, more exactly, the energy it takes over from photons in photosyn-

Death by bioentrainment?

E. Stanton Maxey, M.D.

thesis; this energy the electron gives up gradually while flowing through the cellular machinery."

Must not electric and magnetic fields, of terrestrial origin, modulate Szent-Gyorgyi's flowing electrons?

It is a curious matter of physics that those various fields are intertwining in their relationships; light being bent by gravity for instance. Light similarly is affected by magnetic fields. The so called Faraday effect, named after Michael Faraday of course, is that of rotation of the polarization axis of light in a magnetic field. It has been estimated that all telephone conversations in the United States could be transmitted simultaneously on a single laser beam encoded via the Faraday Effect. Electric fields similarly modulate the axis of polarized light by way of the Kerr effect. If, or in what way, internally generated or extracystemic light may be information carrying to cellular systems is unknown but John Ott has accumulated considerable data indicating the deleterious effect of abnormal artificial lighting. Henry Conway has shown that light from the exterior penetrates deeply to within cellular systems and thus the cellular environment must be modulated by our Sun, and Earth with its fluctuating electric and magnetic fields. Possibly the known toxic effects of radio energy on cellular genetic links is related to that very EM modulation of light. One may also look with interest on the filtering effects of skin coloring. Balanced statistical studies of negroes, American Indians and whites have shown negroes learn rote better than whites but that whites excel in abstract problem solving. Indians fall between the two groups. Could this be in some way linked to the skin filtering of incoming

Death by bioentrainment?

E. Stanton Maxey, M.D.

light? Maybe the hot tempered redhead simply has a brain receiving more highly charged light than the rest of us.

So we see that life is fueled by light which is tied into electrons, and electrons are tied into our atmosphere via aeration exchanges at acupuncture points, and aerions are modulated by Earth's magnetics and electrostatics, planetary configurations and solar flares. Obviously, the human being is a system which incorporates lesser systems while at the same time functioning within a greater solar, if not cosmic system. Systems, within systems, within systems ...

Now lets recapitulate a bit to see if we can discern what may be happening to pilots. Four points may be emphasized.

Nature's positive electrostatic field, which aids mentality and improves circulation, is shielded out by aircraft metals. Aeronautical engineers have yet to absorb this lesson learned by the Luftwaffe in WW II.

Secondly, descending aircraft flow deleterious positive aerions into cockpit working spaces. Cockpit Santa Ana wind dis-ease should result.

Thirdly, magnetic infra waves of local terrestrial origin penetrate aircraft hulls freely. I'll personally eat any ten dollar transistor radio which plays outside the cockpit window and goes dead in the pilot's lap; terrestrially originated radio must also penetrate cockpits.

Death by bioentrainment?

E. Stanton Maxey, M.D.

Fourthly, a Schumann magnetic resonance of 3-5 Hz will be just as depressive to human pilots inside cockpits as to any of the also human 230,000 subjects studied by M. Konig.

Had you happened to be aboard the Southern Airways DC-9 which crashed in Huntington, W. Va. in November 1970, or the Yugoslav Tu 134 which smashed at Rijeka in May 1971 or the Boeing 737 which missed the runway in Chicago in December 1972 or the EAL 11011 which landed in the Florida Everglades in December of the same year, or the British jet which carried 104 to death at Basel in April 1973, or the Delta DC-9-31 which struck the Boston seawall in July 1973 you would probably be dead. Psychobiophysical logic depicts your death as the sequence of your pilots' brains being bioentrained into a theta rhythm by local terrestrial 3-5 Hz magnetic phenomena. These pilots would have first sustained the subtle deleterious effects of absent positive electrostatic fields and then the less prolonged effect of cockpit Santa Ana wind dis-ease.

S. W. Tromp beautifully anticipated the answer over ten years ago stating,

"It seems reasonable to predict that air ion control of living and working spaces will become routine practice, finding acceptance as an important element in promoting health and comfort. It may well prove to be a vital factor in establishing optimal environmental conditions for occupants of submersibles and sealed space cabins."

Death by Bioentrainment?

E. Stanton Maxey, M. D.

Quite obviously we may, as human beings, be unable to decipher all the psychobiological implications of these myriads of intertwining physical systems. We can within critical working spaces, easily engineer aerion/magnetic/electrostatic factors favoring bodily health and mental acuity. The paradigm may be taken from electrical observations of mother Earth's good out-of-doors days.

Air conditioning in hospitals, offices, factories and automobiles will one day surely include control of these electrical factors but the critical aspect of bioentrainment lies within the aviation community. That is where ignorance leads to death by bioentrainment.