

RANDI DAZZLES SAN FRANCISCO AUDIENCE
by Yves Barbero

[After a tour of China and Australia, James "The Amazing" Randi made an unscheduled stop in the Bay Area April 8th to speak about his investigations into the paranormal.]

Randi reminded a jammed meeting house that although some impact has been made against the phony faith healers, they are still in business. Peter Popoff, for instance, was taking in one and a quarter million dollars a month at his peak, and declared himself bankrupt shortly after the publication of Randi's book, "The Faith Healers" (Prometheus, 1987). Despite the fact that Popoff's electronic tricks were exposed on national TV (the Johnny Carson show), he's now beginning to re-emerge via the radio.

Randi said that the danger of faith healing is two-fold. One, it takes people from real medicine and two, it gets them into the habit of magical thinking.

"Magic doesn't work!" he pointed out with emphasis. In a humorous allusion to his stagecraft he observed, "Cheating works better."

Next he discussed the Chinese parapsychologist he met there who used children to demonstrate psychic powers. Although the man had great sincerity, a simple, double-blind experiment showed how easily the various claims could be disproved. There were ample opportunities for the children, who wanted to please their mentor, to cheat. The Chinese, he said, have had little experience with elementary precautions such as the double-blind method, and were so pleased with his demonstration of the technique that they invited him to return. He smiled and added, "...and I haven't even finished high school."

In one setup, Randi demonstrated that when a traditional healer was not in the same room as his patient, despite the fact that he claimed to be able to control his patient's movements, there was no apparent correlation between their actions even though the healer claimed that the healing method, based on the pseudo-scientific meridian acupuncture system, a form of sympathetic magic, would work even if he were "half a world away."

Moving on to Australia, and with the connivance of the Australian version of "60 Minutes," he brought in "Carlos," an alleged

channeler, who in fact was a gentleman named Jose Alvarez. They did everything to make the ringer seem unpalatable, including the growth of a "bandito" mustache and a stooped walk. They made outrageous claims about his background, claims that even a rudimentary check would have exposed. The object was to test the press's gullibility.

They fell for it, hook, line and sinker. "Carlos" was an instant hit. They packed the Sydney Opera House with channeling believers. Great amounts of money were offered for his services and, Randi added, they could have sold his "crystals" (actually lucite) for thousands of dollars.

Only the Australian Skeptics decided to check up on him, but, due to their almost nonexistent budget, the reply to their letters of inquiry to the United States about this "Carlos" didn't arrive until after "60 Minutes" exposed the hoax.

"Nobody checked anything!" Randi said, despite the fact that Australia had already been hoaxed by Steve Turbot, a.k.a. Bob Steiner, a few years before in much the same manner.

He concluded his talk by saying that people have a choice. They can be dragged back into the cave by psychics who offer superstition or they can take part in the great adventure of science which will someday take us to the stars.

CREATIONIST COUNTER

by Everett Peterson

[Mr. Peterson is a devout Christian and articulate defender of creationism. He has followed the creation/evolution debate for many years and has written extensively on this and Christian apologetics in general. "BASIS" welcomes his rebuttal.]

The April 1988 issue of "BASIS" carried an article titled, 2nd Law vs. Creationism, by Jim Ardini and Dick Kidd. They wrote, "Scientific creationists claim the 2nd Law denies the possibility that a closed system can spontaneously become more `organized'. Since life forms are more highly organized than their inanimate precursors, it could not have arisen without divine intervention, they say."

In order to enlighten us with information that the creationists supposedly do not know, or at least do not admit, they made the following statement: "The earth's surface has never been an isolated system because it has always received energy from the sun. Therefore, there can be local decreases in entropy at the earth's surface while, at the same time, the entropy of the sun-earth system essentially an isolated system, increases."

However, if they had done a little more research, they would have

found this statement by Dr. Henry Morris, in the book, "Scientific Creationism", p.33, which says the same thing.

"Although it is true that the two laws of thermodynamics are defined in terms of isolated systems, it is also true that in the real world there is no such thing as an isolated system. ALL systems in reality are open systems and, furthermore, they are all open, in greater or lesser degree, directly or indirectly, to the energy from the sun... There do exist a few types of systems in the world where one sees an apparent increase in order, superficially offsetting the decay tendency specified by the Second Law. Examples are the growth of a seed into a tree, the growth of a fetus unto an adult animal, and growth of a pile of bricks and girders into a building."

Ardini and Kidd continued their quote by saying, "The evolution of living things is simply a local decrease of entropy and is not a violation of the 2nd law."

Let us let Dr. Morris answer this.

"Now, if one examines closely all such systems to see what it is that enables them to supersede the Second Law locally and temporarily (in each case, of course, the phenomenon is only ephemeral, since the organism eventually dies and the building eventually collapses), he will find in every case, at least two essential criteria that must be satisfied: (a) THERE MUST BE A PROGRAM TO DIRECT THE GROWTH (b) THERE MUST BE A POWER CONVERTER TO ENERGIZE THE GROWTH. The available environmental energy is of no avail unless it can be converted into the specific forms needed to organize and bond the components into the complex and ordered structure of the completed system."

Ardini and Kidd must address this last point if they are to maintain that creationists don't know what they are talking about. We all know that the sun's energy, while necessary to preserve life, is destructive. Things do NOT "spontaneously become more organized" when left to themselves, as they claimed. We must constantly work to transfer the sun's energy into a form that can be utilized for man's benefit.

Ardini and Kidd then referred to Stanley Miller's experiment in the 50s in which they say that he "produced, from simple precursors in a closed system, complex organic molecules required by life forms."

This, they say, is "rudely violating the creationist's law of entropy."

Morris already explained that when there is a program to direct the growth of something, and there is a power converter to energize that growth, then the 2nd Law is superseded. Miller devised the "program" and supplied the "power converter." The results did not happen "spontaneously." So Ardini and Kidd are hitting at a straw man.

They also are a bit in error in their explanation of Miller's experiment, which they describe as follows: "Into a closed but not isolated system -- a sealed glass bulb containing a soup of raw chemicals -- he introduced ultraviolet light and high-voltage electricity, conditions that were believed to duplicate the early earth's surface. In short order complex organic molecules were produced."

Miller's experiment was written up in "Science", vol.117, pp.528, 529, a copy of which I have before me. The energy source was NOT ultraviolet light.

"Electrical discharge was used to form free radicals INSTEAD OF ULTRAVIOLET LIGHT." (emphasis mine)

The second discrepancy is Ardini and Kidd's use of the phrase, "in short order." This seems to imply that the results were obtained while one watched and that the output was substantial. However, Miller reported that "the discharge was run continuously for a week," and, "The total yield was small for the energy expended."

Another point to clear up is that of the composition of the apparatus used, and its contents. It was NOT just a "sealed glass bulb containing a soup of raw chemicals." First, the material zapped by electrical discharge was NOT a soup, a term that implies a liquid. The mixture was a gas. Next, the apparatus was a sophisticated piece of equipment. The diagram of it is complex, and Miller describes it in these words: "Water is boiled in the flask, mixes with the gases in the 5-1 flask, circulates past the electrodes, condenses and empties back into the boiling flask. A U-tube prevents circulation in the opposite direction."

As Morris said, "We do not disparage in any way the impressive achievements of biochemists working in this field." But I must point out several things about this experiment. Its purpose was, Miller said, "to test this hypothesis," i.e., Oparin's idea of the composition of earth's primitive atmosphere. He just added the electrical discharge, saying that it "may have played a significant role in the formation of compounds in the primitive atmosphere."

The title of Miller's article was, "A Production of Amino Acids Under Possible Primitive-Earth Conditions." But while he was testing out the supposed "primitive" conditions, he added something to his apparatus that certainly was NOT primitive. And that was the U-tube which he installed to keep the circulation going in just one direction.

There were four phases in the experiment. First, the boiling water phase to produce water vapor. Second, the gaseous phase where the water vapor was mixed with the other gases. Third, the combined gases were forced into a neck in the apparatus and bombarded with electrical discharge. And fourth, the water vapor was condensed and settled into the U-tube section. Miller stated, "The acids and

amino acids formed in the discharge, not being volatile, accumulate in the water phase."

Apparently, if Miller had let the acids circulate into the boiling phase, they would have been destroyed right after they had been formed. But where in the supposed primitive Earth would there have been such a trap, to collect the acids that had been formed?

Undoubtedly there are creationist ideas that one could fault. But Ardini and Kidd did not prove that the area they were criticizing was one of them. A little more research on their part would have revealed what I found. It is hoped that they would add the above clarifications to the paper on thermodynamics that they pass out to their students.

KURTZ IN OAKLAND

Dr. Paul Kurtz, a man who needs no introduction to skeptics and humanists, is coming to speak to the Secular Humanists of the East Bay, at 411 28th Street, Oakland (Oakland Humanist Fellowship) on Saturday, May 7 at 11 a.m. There will also be a reception for Dr. Kurtz in the afternoon, at another location, at 2 p.m. for which a \$2.00 donation is suggested. Since space is limited for this gathering, SHEB respectfully requests that you 'phone for reservations. Call Marlene at (415) 486-0553.

COUNTER COUNTER by the Editor

What is the logical basis for Mr. Peterson's argument? Creationists allege that if evolution were true it would violate the 2nd law of thermodynamics because increasing complexity occurs, so evolution must be false. (As a side issue, one of the mainstay creationist arguments is that evolutionary theory is non-falsifiable, and therefore non-scientific dogma, requiring just as much faith as their belief in a 6,000-year-old universe -- and then they set about raising propositions to prove evolution is false.)

Their logic is that complexity cannot NATURALLY increase (this would be a DECREASE in entropy). Is this true? In other words, is it possible for things to go from a less- to a more-orderly state without help? The 2nd law says it cannot -- in a CLOSED system. Which implies, of course, that it can in an "open" system. Since the law clearly allows entropy decrease under certain circumstances, how do creationists deal with this exception?

The premise for Mr. Peterson's thesis appears to be that entropy decrease can occur only if some kind of intelligent direction is coupled with the available energy, even though the law does not say an open, INTELLIGENT system. They point out that a seed has DNA

software to direct solar energy to decrease its entropy as it grows, for example.

An important key to the matter lies in a subtlety that the apostle of creationism, Dr. Henry Morris of the Institute for Creation Research (ICR) tries out on us in the quote from Mr. Peterson's rebuttal: "Although it is true that the two laws of thermodynamics are defined in terms of isolated systems, it is also true that in the real world there is no such thing as isolated systems." Therefore, according to Dr. Morris, entropy cannot EVER decrease naturally, even though he does not want to come right out and say it.

The tactic is clear, and it is a polemical device. Moreover, Ardini and Kidd (April "BASIS") addressed the question of ideal systems in their article by stating that systems are "essentially isolated." The fact is that all scientific laws are formulated for ideal conditions. Boyle's law which relates temperature and pressure of a gas is only valid under ideal conditions. Because a sample of gas never exists in ideal conditions, can this be stretched to imply that all pressure and volume relations are therefore invalid? Does it mean that Boyle's Law has no application in the real world?

We know conditions are not ideal, **BUT WE ALSO KNOW HOW AND IN WHAT DEGREE THEY DIFFER FROM IDEAL SO AS TO MAKE NECESSARY CORRECTIONS WHEN WE APPLY THE LAW.** The speed of light (c) is only valid in a perfect vacuum, and since there is no such thing as a perfect vacuum, should we maintain that real-life considerations of c are without merit? This is all painfully absurd, and it demonstrates that the ICR is at least as concerned about tactics as the truth.

Can one find examples in nature in which entropy is going in the "wrong" direction, i.e. decreasing?

Ardini and Kidd gave an example to show entropy in an (essentially) open system can naturally increase. Mr. Peterson chose to attack the Miller-Urey experiments on grounds other than what the example was trying to present: simply that entropy may decrease in an open system. It is irrelevant whether or not the equipment was simple or elaborate, or whether humans manufactured and assembled the apparatus.

The point is they were trying to duplicate the earth's complex systems, and it is no small feat to duplicate those conditions by a "U-tube" or any other means. Moreover, Peterson only offers an opinion that the experiment does not replicate the primeval biosphere. While we agree it may be impossible to determine to a high degree of certainty what the primitive conditions of the earth were, that must not cause us to capitulate to ignorance and bow our heads in defeat.

To say that, since we are not **PRESENTLY** sure how life originated it was therefore supernaturally accomplished is to fold up all of

our equipment, abandon science, go home and sit in a corner and read the Bible. Thank God for our indomitable inquisitiveness. The creationist logic seems to be, "Since we don't presently know how it happened, we know: God did it."

The ICR logic is lifted to new heights of absurdity when it insists its view is scientific. There is nothing particularly wrong with believing that life originated by divine decree -- in fact it might be true, but it is not science.

The creationist bag of tricks is not empty yet, for Dr. Morris comes within a razor's edge of contradicting himself in "What Is Creation Science?", co-authored by Gary Parker, on page 166: "Entropy always TENDS to increase in ANY system. [original emphasis]" Again, this is a polemical gambit that strives to draw the inquirer away from the real problem, viz. that there can indeed be an entropy decrease by using that word "tends." The attempt of the expression is to cut the question to such a narrow ledge that the reader will fall off trying to see where the 2nd law allows natural decreases. The earth system is indeed TENDING toward increasing entropy, but that cannot erase the clear evidence that there is, if only temporarily, local entropy decrease. Morris' statement is designed to turn our attention from the present reality to the ultimate reality in hopes we will overlook the former.

Mr. Peterson wants us to clamber aboard his train when he is so sure that we collectively agree with him: "We all know that the sun's energy, while necessary to preserve life, is destructive."

Is energy, from the sun or otherwise, ALWAYS only destructive? Is there anything in the universe that can be achieved without the expenditure of energy? The supposition that energy may only sustain or destroy the existing complexity of systems is quite simply wrong. Peterson merely restates the 2nd law, which says that entropy can only (ideally) remain constant or increase, ignoring the exception in which energy can naturally build and construct.

Consider a supernova. The formation of a large star begins with the coalescence of matter most all of which is hydrogen. Through gravitational collapse, the energy is sufficient to begin a LOCAL reversal of the entropy machine to create more complex elements by fusion beginning when the star is born. Upon the death of these super-massive stars, the overall entropy cost of the exploding star to create new elements is staggering -- the star is destroyed. Even in its death throes there is creation: the so-called "heavy" elements (above iron) are formed. The 2nd law is a brutal and niggardly taskmaster; his exchange ratio is a farthing on the dollar.

For an example closer to home, when atmospheric conditions are just right, a calm, cloudless day can be turned into a seething tempest: a violent thunderstorm. Entropy has greatly decreased in going from the homogeneous calm to the storm conditions, and the increased

energy available to do work is sadly manifest in the destruction wrought by a tornado as it rips a swath across the land. (Just watch creationists miss the point of this example of decreased entropy OF the storm by jumping to the destruction produced BY the storm. They will say destruction is the only result of the entropy change, not creation.)

What is the net energy cost of these local entropy decreases here on earth? On the scale of the solar system, the most complex changes here are but tempests of the teapot variety. The earth receives less than 1% of the sun's total energy, and most of that is wasted in heat. The overall expense is billions of watts per hour squandered to make almost immeasurably tiny entropy decreases here on our minuscule orb floating in the abyss of space. The cost of life on earth could be described as a profligate waste of energy but for our self-centered anthropomorphism. There were a lot of perfectly good photons wasted over the eons while producing the most noble among us.

Nobel physicist Murray Gell-Mann observed that the notion that scientists world wide have suffered the same mental lapse in failing to notice that evolution violates the 2nd law makes as much sense as asserting that physicists have overlooked the liquid properties of water.

Creationists precipitate further problems by making a jumble of biological evolution and abiogenesis -- these are two distinct areas of study. Biological evolution is considered pretty much a closed question. Study and controversy only continue over some of the mechanisms, not whether it happened. But all evolutionary scenarios assume the existence of life. How life first originated is still very much an open question, and theories about that are as diverse as the number of researchers.

Creationists don't want to accept this important distinction because it would force them to argue against their literalist Genesis account, and they would have to recognize that the first life, however it originated, was simple and that within billions of years that simple life diversified and proliferated into the vast (some 3+ million distinct species) store that is life on earth today. Darwin recognized the formidable gulf that exists between inanimate matter and the simplest living things. He said there was at least as great a distance between elementary life and humans as there is between inanimate material and elementary life.

Ultimately, creationist must bow to the truth that complexity can indeed occur locally, but they quickly rejoin that the 2nd law is not elastic enough to allow the manifest complexity of LIFE -- it is altogether too complex. Here again is a matter quite apart from the heart of the issue. Life may be so complex and unlikely that it has occurred but once in the entire universe, or God may have sprinkled it all over the place, or animation may be an almost inevitable consequence of certain (uncommon) initial conditions. To confuse this question with the statement of the 2nd law seems

like yet another diversionary ploy -- an attempt to keep the scientifically unsophisticated off balance with scientific-sounding rhetoric.

If we peel away the last layer of this creationist argument, we find in the core the "Argument From Design": all this complexity could not happen naturally -- it requires an intelligent designer. And it is here the creationist wants to bring an end to all inquiry before we may in turn ask how the most highly organized, complex entity in the universe -- God -- came to be. Of course, sauce for the goose is not sauce for the gander; we must explain (for which we do not complain) but this creationist position is declared immune from question.

Evolution means gradual change. The FACT of evolution is the fossil record: there is a mountain of ever-accumulating data showing a world-wide progression from very simple to very complex over enormous time spans. The THEORIE(S) of evolution are attempts to explain how that increasing complexity occurred. Natural science seeks to find natural means whereby it happened.

Some religions -- and I emphasize some, because the major Christian religions have accepted the evidence of evolution -- allege divine fiat over six, 24-hour days. This is a theory, but not a scientific one, because there is absolutely no way to verify or falsify it, since any natural law may be abnegated by this fiat. There is nothing that could disprove an assertion that everything came into being 15 seconds ago, complete with a memory and appearance of a non-existent past, by a wave of Jehovah's hand. Because creationists' suppositions are not scientific, scientists (and most other religions) strenuously oppose their attempts to have their faith presented as science in the public school system.

CHIROPRACTIC: FROM THE INSIDE

J. Keating, PhD, Director of Research at Northwest College of Chiropractic and Robert Mootz, DC, Asst. Dean at Palmer College of Chiropractic, presented a revealing picture of the status of science from within chiropractic. Posing chiropractic as primarily a clinical art, the authors state that DCs only pay lip service to the role of science in chiropractic, and that the dominant chiropractic metaphors have functioned to inhibit the development of chiropractic science.

They say that many view chiropractic science as a system of knowledge which requires only the application of deductive reasoning. This view, "combined with isolation from the scientific and allied health care communities have been an important obstruction to science within chiropractic," they candidly offer. They "believe that significant increases in chiropractic research are not likely so long as the prevailing beliefs and attitudes (philosophy) in chiropractic fail to support and encourage

scientific efforts."

Five areas of prevailing attitudes which impede scientific development were identified and elaborated. They are: (1) The definition of science, (2) research priorities in chiropractic science, (3) the practitioner's role in chiropractic science, (4) interdisciplinary dialogue and research and (5) the goals of scientific research.

The authors state that "Chiropractors have good political reasons to encourage manipulation research," and that "organized medicine's continuing (and accurate) criticism of chiropractic's lack of rigorous data to support the clinical art" must be addressed if chiropractic is to make significant progress toward scientific credibility.

(Reported in "NCAHF", the National Council Against Health Fraud, Feb. 1988.)

A RATIONAL EXPLANATION FOR ONE ASPECT OF UFO BEHAVIOR by Jef Raskin

UFOs are often claimed to be either extraterrestrial or supernatural on a number of bases. One of these is the observed acceleration of the UFO. Observers such as airline pilots, whose reliability seems unimpeachable, and whose reports do not go beyond describing the behavior of a remote object (that is, do not raise the kinds of questions raised by an encounter of the third kind), have reported accelerations beyond anything that humans could survive and often beyond anything achievable by human technology.

I have observed such accelerations twice. The first occurred when I was driving across the desert with a companion. I suddenly noticed an orange light floating in the sky as I looked through the center of the windshield of my truck. As we drove on, it slowly drifted to the left, then surprisingly accelerated to the left and upwards and disappeared into the sky.

I stopped the truck a few seconds later and got out. My companion had not seen the object, and I could see nothing in the sky.

Being a skeptic, I found this very clear sighting somewhat disturbing, and decided to investigate further. After waiting a few minutes to see if it might come back, I turned the truck around, drove back a mile or so, turned around again and drove the way I had first come. All of a sudden, there was the light, and it performed the same accelerating and vanishing act. At the same time, my companion noticed a sodium vapor lamp some distance off to our right, nearly invisible except within a narrow line of sight between two hills. When I backed up, the apparent light in the sky retreated. It was a reflection of the light in the windshield of the truck, which, when it reached the smaller radius of curvature

at the ends of the windshield, seemed to move much more quickly and vanish.

I was struck with the apparent reality of what I had seen, and would suggest that any report of moving lights seen from a moving vehicle be treated with special skepticism. A very strong illusion of a remote flying object can be created by reflections darting across the window of a moving vehicle. Ripples in the glass can cause even more amazing apparent behavior of a light in the sky.

The second and more interesting observation of acceleration happened a month ago, while I was standing on my porch looking east from my house in the Santa Cruz mountains on a clear evening when there was just enough light to see the outlines of the Diablo Mountains. My house is at an altitude of 1500 feet overlooking Silicon Valley from Monte Bello ridge.

A white light was moving slowly from south to north. I took this light to be an aircraft at an altitude between 1500 and 3000 feet. I was confident in this altitude judgment since the light was lower than the peak of Mt. Hamilton (about 3600 feet) and at or above my line of sight. It is not easy to judge whether a remote object is slightly above or below your position, but I had often taken sightings on the mountains with my Suunto optical level and had a number of accurate reference points. The light seemed to be about 10 miles away.

It is nearly impossible to accurately estimate the distance to a point light source by eye. In this case, I had a maximum of 17 miles to the mountains behind the light, which fixed an upper bound: my guess was based on seeing many aircraft land at San Jose and on the ASSUMPTION that this was an aircraft with a light of typical brightness. I have no real basis for determining a lower bound to the distance except that it was at infinity as far as my binocular vision was concerned. I was amazed when the light accelerated with what seemed impossible rapidity.

Within a few seconds, the light accelerated to about ten times its former speed. At first I had thought the object was a light aircraft traveling at about 100 mph. Now, it seemed to be going about 1000 mph. I should mention that I have a lifelong hobby of plane watching. I often listen to aircraft and ground communications as I watch planes coming in and out of the three airports in my view, so I often know exactly how far a plane is from me when it is landing or taking off. I also know their speeds -- the landing speeds for airplanes are published in Jane's "All the World's Aircraft". Thus my eyes are probably better calibrated than those of the average observer. As a consequence of my experience, I was especially startled by the incredible acceleration.

I rushed to get my 8 X 56 night binoculars but the object was lost from view by the time I ran outside again. After a few minutes, I saw another impossibly sudden but somewhat smaller acceleration.

This time I was able to make out a perfectly ordinary aircraft with the binoculars: it was closer to me than I had thought when viewing with the naked eye.

The explanation turned out to be simple: Some aircraft have a fixed light visible from nearly any direction. This light is often much brighter than the flashing lights on the same plane so that the light is not immediately identifiable as an aircraft. The plane had been flying on a path nearly toward me, and its apparent motion across my field of view was very slow. Since aircraft rarely fly below 100 miles per hour, my impression was that of a plane flying perpendicular to my line of sight at about 100 miles per hour and farther away than it was. Then it turned so that its path was perpendicular to my line of sight. Since I was at about the same height as the aircraft, there is no way to tell that it had turned.

Mentally holding to the original impression of a speed of 100 mph, and assuming that its path was a straight line since it looks that way, the light seems to undergo a sudden acceleration. An illusion of deceleration is, of course, also possible.

I was thus satisfied that I had seen nothing impossible and that, in the absence of other information, there is a rational explanation for apparent sudden accelerations of lights that must be ruled out before more spectacular explanations need be considered.

It also occurred to me that my observations might explain a number of otherwise inexplicable UFO sightings, including those made by experienced observers such as pilots, who often fly at about the same altitude as other aircraft. A person on the ground might see the same illusion if a plane is descending toward him or her and makes a turn, or if it is so distant that its apparent path is close to a straight line even when it turns.

Any reports of a light suddenly changing direction and accelerating should be treated with extreme suspicion and are almost certainly instances of the illusion that would have convinced me that I had seen an eerie phenomenon were I less of a skeptic.

[Jef Raskin is best known for having originated the Apple Macintosh computer. He has been a skeptic for many years, ever since the sixth grade when he was taken on a Flying Saucer watch by family friends. On the expedition he identified aircraft and satellites where believers saw the lights of extraterrestrial visitors (he cheated by bringing along binoculars). The other thing he learned at the same time was that speaking the truth is not always welcome.]

FEBRUARY MEETING
by Ivan Linderman

The February meeting was well attended (about 50) and about one-third of those had had dealings with cults (Krishnas, EST, etc.).

The speaker, Richard Gallyot, was introduced as a Cult Buster (he counsels the families of those who have entered cults) who had come to know many of the People's Temple members while managing a nearby flower shop. Following the Jonestown deaths in 1978, Mr. Gallyot interviewed most of the surviving members.

Ironically, Gallyot became the subject of controversy to those in attendance when it appeared he believed that the whole Jonestown debacle was some sort of government conspiracy. He offered several examples he thought demonstrated the conspiracy link, but most in the audience were unconvinced. Don Henvick made a "psychic prediction" that Gallyot would run into trouble when he entered into the conspiracy notions. Don proved to be correct. In fairness, Richard prefaced his talk by saying some of his conclusions were his own, although he hedged by invoking the well-known "residual effect", claiming that if "75% of what he said was mistaken, there's still that 25% that needs looking into."

Using a 1976 videotape of a Jim Jones sermon in Ukiah (poorly prepared by Temple members), Gallyot illustrated some of the techniques used by Jones to control his followers:

1. **THE CULT LEADER HAS SPECIAL POWERS.** Jones mysteriously materializes lost objects from the ether, discloses personal facts about a cult member that could not have been previously known to him, and, the most outrageous display of chicanery, faked his own assassination and then claimed to resurrect himself. In the videotape, Jones described how he removed the nurse's fingers from the bullet holes, passed his hands over the wounds, and was made whole again!
2. **THE CULT LEADER AS GOD.** Repeatedly, Jones said things like "I, the God...shall do all the miracles your God said he'd do but never did. Modestly, Jones claimed, "It's a great effort to be God..." and offered to pass on these labors to anyone who wanted them.
3. **THE CULT LEADER DESTROYS CURRENT BELIEF AND FILLS THIS VOID WITH BELIEF IN HIMSELF.** Jones said, "I have come in the phenomenon of religion to get people out of religion." Jim Jones stomped on a Bible to remove existing belief systems, so that Jim Jones, the God, is the only remaining belief system.
4. **THE CULT LEADER IS THE ONLY SOURCE OF PROTECTION.** Jones told a member she was almost killed in an automobile accident except for his spiritual protection: "I wasn't there, but I AM there!"

The most chilling portion of Mr. Gallyot's talk concerned the murder of disaffected cult members. Many lived in hiding for a long time in mortal fear.

5. **THE CULT LEADER OBTAINS OFFICIAL PUBLIC SUPPORT.** Jones used

bribery to public officials by providing block votes and free political workers from the Temple ranks. False rumor and then blackmail were used to bring officials into line.

The power of this demonstrated that the cult then has protection. Six months before the Jonestown deaths, cult member escapees reported to officials that mass suicide was being planned and rehearsed. These were dismissed as the ravings of paranoid former cult members.

As to how and why people become cult members, Mr. Gallyot provided the following comments:

1. PEOPLE DON'T USUALLY INTEND ON JOINING CULTS.
2. CULTS CAREFULLY SELECT VULNERABLE PEOPLE FOR RECRUITMENT. Cults seek out aimless, lonely, hurting, and those without a support system.
3. CULTS TELL PEOPLE WHAT THEY WANT TO HEAR. Jonestown was billed as a paradise on earth, the solution to all problems.
4. ONCE CAPTURED, ESCAPE FROM A CULT IS DIFFICULT. The new recruit is rarely left alone. Drugs, sleep and dietary deprivation, hard physical work, and punishment combine to control every waking moment of the initiate's life. Murder may be the ultimate threat for dissention.

My conclusion was that Cult Mind Control (and perhaps Political Mind Control) is a disease that can effect anyone -- even a cult buster. All it takes is a susceptible host, a portal of entry, and a sufficiently virulent organism in sufficient numbers. Something like catching a cold. Only much worse.

[Ivan has an M.S. in cell biology, was a research scientist for about seven years, and now is V.P. of his own company in San Rafael.]

JUST WHEN YOU THOUGHT IT WAS SAFE TO TEACH EVOLUTION!

Dr. Eugenie Scott, BAS advisor and Executive Director of the National Center for Science Education, will be our speaker at the May meeting.

What has happened since the Supreme Court case in which creationists lost their bid to have creationism required in the public schools? There have been a number of interesting developments, which Dr. Scott will discuss, including a case in federal district court in Chicago filed by a creationist who asserts it is his First Amendment right to teach creationism in his class.

Eugenie has been a tireless soldier in the battle against creationist attempts for equal time in the public schools. She earned her Ph.D. in anthropology from the University of Missouri, and taught at the University of Kentucky, University of Colorado, and in the California State College system. Her special interest is medical anthropology and health fraud.

Be sure to put this event on your agenda. See the "Calendar" for directions.

Opinions expressed in "BASIS" are those of the authors and do not necessarily reflect those of BAS, its board or its advisors.

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