

National Capital Area SKEPTICAL EYE

• encourages critical and scientific thinking • serves as an information resource on extraordinary claims
• provides extraordinary evidence that skeptics are cool



Vol. 9, No. 2
1996

Randi Foundation Simply Amazing

by *Jamy Ian Swiss*

James Randi's lifelong dedication to the cause of critical thinking and scientific education recently took a giant leap forward with the creation of the James Randi Educational Foundation (JREF). The renowned magician, lecturer, author of ten books, and recipient of a MacArthur Foundation grant for his work as an investigator of paranormal and pseudoscientific claims, announced the creation of the Foundation on April 2, 1996, which began operation on June 1, 1996, in its new headquarters in Fort Lauderdale, Florida.

The Foundation, made possible thanks to a generous sponsorship by an anonymous donor, assures that Mr. Randi's rational message will be spread even further and that his life's work will continue beyond the boundaries of his own lifetime. "I look forward to using this great opportunity which has been entrusted to me for the purpose of educating the public," said Mr. Randi.

The chief goals for the Foundation include the development of a library of skeptical and paranormal works in print and on video, along with extensive on-line resources; basic parapsychological and paranormal research; and the awarding of educational prizes and scholarships. The Foundation's new facilities, in addition to providing suffi-

cient administrative and office space, mirror this trinity of purpose with an existing library space, ample room for a soon-to-be-constructed auditorium for lectures and other public and educational presentations, and a research area for designing and conducting parapsychological and other paranormal research.

The library facilities will be equipped with state-of-the-art technology and will be prepared to supply copies of photographic, video, audio and printed materials to persons who request their use at low-or-no cost, via fax, telephone, Internet, mail or direct loan. The on-site library will include multilingual resources, with a special emphasis on Spanish sources to serve the needs of the local Hispanic populace. The video library begins with Mr. Randi's personal archive of more than four hundred hours of recorded material concerning paranormal subjects, which will be completely digitized for long-term storage and high quality copying and use. Plans are currently underway to equip the Foundation's video facility, including high-quality dubbing capacities with full compatibility between all standard international video formats.

Work is also in progress to design and purchase the latest available technology to service the Foundation's computer resources, including extensive material to be made available on the Web. Comprehensive materials will be available on-line from the Foundation, ranging from the complete text of Mr. Randi's latest book, *An Encyclopedia of Claims, Frauds, and Hoaxes of the Occult and Supernatural* (1995; St. Martin's Press) to the use of



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Letters

Only today, belatedly, did I have the opportunity to read the account of L.B. about the strange ball of light that appeared to enter her room [*SEye* Vol. 9, No. 1] and the prosaic explanations offered by Chris Ragaisis and Chip Denman.

I would like to suggest another--based on L.B.'s recollection that there had been a "huge electrical storm" earlier in the evening. I'm inclined to suspect that what L.B. saw was "ball lightning," a freak atmospheric electrical phenomenon for which science as yet has no fully acceptable explanation.

My moderately large collection of Ball Lightning reports includes one from a USAF pilot who was flying a tanker loaded with highly inflammable fuel in a rainstorm when a ball of light popped through the windshield, without breaking it. The ball proceeded through the open cockpit door until it encountered a wing spar, turned and ran along the spar, passing through the metal fuselage and ran along the wing to its tip and into the air.

Another case involves a suburban housewife who reported that a grapefruit-size ball would appear in the living room of their new house during a thunderstorm. Initially this occurred while her husband was at work, prompting him to fear that his wife was losing her mind or becoming an alcoholic. One night it occurred when both were in the living room which reassured the husband. When he

contacted a Raytheon scientist whose hobby was ball lightning, he learned that the scientist had never before heard of ball lightning appearing repeatedly in the same location. When the scientist visited the house he noted that small trees in the front yard were located in a curved path whose focus was the living room and suggested they be replanted. The family was reluctant to do so until the ball lightning again appeared in the living room, made contact with the woman's body and temporarily paralyzed her. After the trees were replanted, the ball never again returned.

If L.B. wishes to contact me, I can supply her with more details and accounts of ball lightning incidents.

Phil Klass
Washington, DC

Re: "The Electric Skeptic," in Vol. 9, No. 1, I wonder whether the light L.B. describes might not have been St. Elmo's fire. I have seen St. Elmo's fire just once, in a storm in the North Atlantic. A ball of light the size of a softball came down a stay to within my reach and eventually dissipated. I have no idea whether such static electricity could go through closed doors. Anybody know?

Captain John L. Bender
Bethesda, MD

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recycled paper

I enjoyed *Skeptical Eye* Vol. 9, No. 1. You had articles on a subject that is very important but rarely talked about: how far from science our minds are, even “sane” minds. People often think you are intimating they are clowns, or even crazy, if you point out something they see is an illusion or some belief from personal experience a fallacy. In actuality, they are only being human. We are not scientific in our daily lives; we are not born scientists. Even scientists have to work hard to be scientific, and can still fall into the traps of nonscientific thinking very easily.

I enjoyed Ray Hyman’s article too, but I have a question. Why, if we do not know the cause of something: a card reading, a remote map reading, a spoon bending: does that make it magical, mystical, psychic? Science is based on evidence one way or the other. We just do not know, that is all. I get the impression that this originated as an idea of Aristotle’s that has been taken out of its logical context and plopped down in the modern world. It made sense in a world of four elements and occult virtues; it makes no sense in a world of telescopes, microscopes and atom smashers. The sooner we get to a 20th Century perspective the better. Even a 17th Century perspective would be better.

Rich Dengrove
Alexandria, VA

I read with interest *Skeptical Eye* Vol. 9, No. 1. It is a publication of which there is much to be proud.

I offer one important suggestion. When describing the results of a skeptical examination of a topic, I would recommend that the magazine attempt some degree of balance by offering the opportunity for the opposing side to offer its views. This allows the skeptical reader to judge for himself. For example, Ray Hyman’s evaluation of remote viewing experiments would have been more credible if the views of Jessica Utts had been invited. One might even do a point-counterpoint format.

Certain of Ray’s statements caused my antenna to go up. He asserted, for example, that “it takes a shakedown period and at least three years of public scrutiny before the

problems with any new experimental procedure become obvious.” On the contrary, I think it would be a very simple matter to design a remote viewing experiment that would be definitive immediately. The key components would be 1) that the correctness of the view being received be determined by an objective measure so that “judging” cannot be a subjective factor, 2) that the test be double-blind so that no information could be communicated inadvertently, and 3) that the results be interpreted afterwards by a skeptic and an advocate working together. Very elementary statistics could tell whether a sequence of views were viewed remotely with a probability significantly greater than chance; three years would not be needed to examine experimental procedure.

If the experiments Hyman reviewed did not follow this type of design, that would seem to be a legitimate area for Hyman to criticize.

Don’t you agree that your readers are capable of making up their own minds?

Walter Warnick, Ph.D.
Laytonsville, MD

Much of the debate through the years has centered on whether parapsychological experiments have met appropriate criteria such as these. Consensus has been difficult to achieve. For a technical overview written jointly by an advocate and a skeptic, see “A Joint Communique: The Psi Ganzfeld Controversy” by Charles Honorton and Ray Hyman, Journal of Parapsychology 50 (December 1986), 351-64. Full text of Jessica Utt’s evaluation of remote viewing may be found on the World Wide Web at <http://www-stat.ucdavis.edu/users/utts/air.htm>. Ray Hyman’s critique may be found at <http://darkwing.uoregon.edu/~uocomm/newsrel/Hyman.html>. Utt’s response to Hyman may be found at <http://www-stat.ucdavis.edu/users/utts/response.html>. — Editor

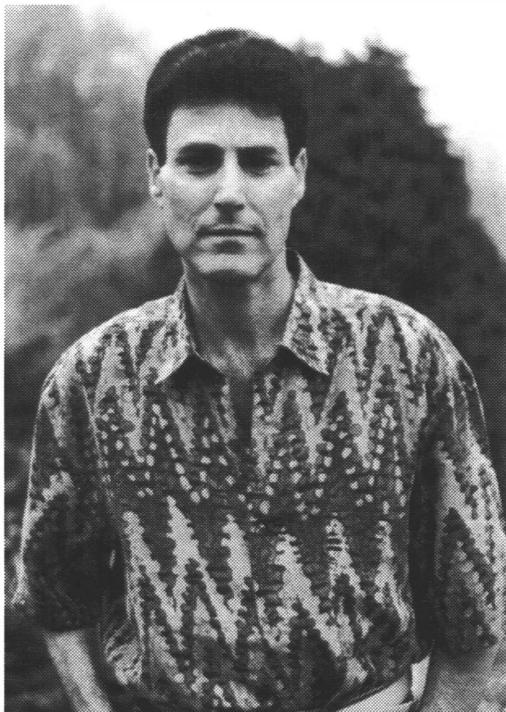
Uri Geller: A Skeptical Perspective

by Simon Jones

This interview originally appeared in *Spark*, the Reading University newspaper in the United Kingdom. Reprinted with permission of the author.

“Hi Simon! You wrote to me asking for an interview.”

I am talking on the phone to internationally renowned Israeli “psychic” and spoon-bender extraordinaire, Uri Geller. Just one day has passed since I wrote to him, and by the end of the week I am interviewing him in the sun lounge of his large house in a village near the town of Reading, England. The irrepressible Mr. Geller is riding his exercise bike opposite me (he claims to ride 80 miles a day, although his press release says 50). He has been a strict vegan for 17 years, and he looks remarkably young considering he is now aged 49. Geller’s wiry frame belies his strength, and his long bony hands gave me a crushing handshake as I introduced myself.



Uri Geller.

Photo by
Jenny O’Reilly.

So what does Uri Geller do with his time, now that the public awe seems to have faded somewhat?

“I did a big TV show with Sir David Frost called *Beyond Belief*, seen by 13 million people. What amazed us there was that 2.6 million people called up the station describing their experiences [when] I did a telepathy test. I’m writing books, I’m doing TV shows worldwide and I’m doing many strange things— almost bizarre.”

Such as?

“It’s all very secret. I’ve created a telephone... actually, a telephone company has created a very strange telephone for me.” Geller points to a rather ordinary phone on the table behind me. “This is a prototype, it’s not really there for you to see. It will do very unusual things — keep it a secret.” Damn, now I’ve gone and spoiled the surprise.

“I’m going to do a line of clothing with positive messages on. My biggest thing, excluding the movie [*Mindbender*, directed by Ken Russell], is to take my car and drive it around the Middle East, to those countries which still don’t have peace treaties with Israel. So, I think I’ll be busy.”

Geller’s range of leisureware is something of a mystery in itself. It is one of a number of ventures which he claims has already made him a wealthy man. Surely a genuine psychic could make millions on gambling —does he play the National Lottery for instance?

“I personally don’t, but my children do. I keep away from that. It’s tempting to see whether my psychic powers can guess the numbers. I don’t think I can. I am not a gambler.”

This is all very odd. Geller has claimed that he was paid by mining companies to psychically search for minerals, but he balks at winning the lottery! Stranger still, he has also refused to take up any of the lucrative challenges to reproduce his “powers” under conditions which would exclude fraud. In 1988, British businessman Gerald Fleming offered to give 250,000 pounds to charity if Geller could perform a spoon-bend under such conditions. Why hasn’t Geller responded?

“Never heard of him, and I’m not interested in him either,” he responds rather tersely. I persist — the money does go to charity, after all. Geller pretends he hasn’t heard properly: “Tell him that he can offer a billion dollars — I’m not interested. Tell him to find other psychics who might. There are many other psychics who are poor, who don’t have money.”

But it’s for C-H-A-R-I-T-Y, Uri!

“Still, I’m not interested in challenges. All my life I’ve kept away from challenges — do you understand?”

No, I’m afraid I don’t. Geller has always responded to challenges when the conditions are “right.” Wasn’t his participation in the 1972 tests at Stanford Research Institute (SRI) a challenge? The results of those tests (published in 1974 by physicists Russell Targ and Harold Puthoff in the science journal, *Nature*) rejected the metal-bending results. Geller, of course, has an excuse for this:

“Well, in my opinion... there were some bendings and some film. Except that it wasn’t good enough for them. Scientists want full proof under laboratory conditions. And the answer is very simple: when I’m put under pressure, I can’t perform. Even the phenomenon I’m most known for. When I’m on stage, I’m not under pressure and it happens. In other important places, it happens. But in a laboratory where I really want it to happen, it’s very hard for me.”

Geller seems to be less keen to perform metal bending these days, and this may be due to several disastrous incidents where observers claimed to have seen him physically bend objects with his hands. And Geller’s 90-minute performance at Reading’s Hexagon theater in 1987 was reviewed by the *Reading Evening Post* under the headline “Uri Branded Fake At Show” (a skeptic, Mike Hutchinson, had briefed the *Post* journalist on the techniques which Geller is alleged to use). Geller now puts more emphasis on his other psychic claims.

“I think that the label of spoon-bender stuck to me, and I just somehow wanted to get away from it. Maybe that’s the reason, that I was sick and tired of trying to prove myself all

the time to people, especially with the metal bending. Maybe because it looks trivial and not important — although many scientists think that it’s very important and can’t explain it. Sure, there are magicians who can duplicate it through trickery, but the real ones — there’s no explanation for it.”

Many of Geller’s claims are outrageous. For example, take his assertion that he has achieved the philosopher’s stone: transmutation of a base metal into gold.

“I have said that, it is true. First of all, I worked on it for five hours, but I still don’t have proof that it was gold. But something did turn yellow, and I totally believe that it was gold. After that I went and bought lead bars, and I sat for hours... I realised what a stupid and ridiculous thing I was trying to do.”

Ridiculous indeed. As are his ostentatious attempts to claim the credit for all manner of newsworthy events. A recent example was his assertion that Reading Football Club (his favorite team) was helped to reach a crucial play-off last season by his psychic intervention.

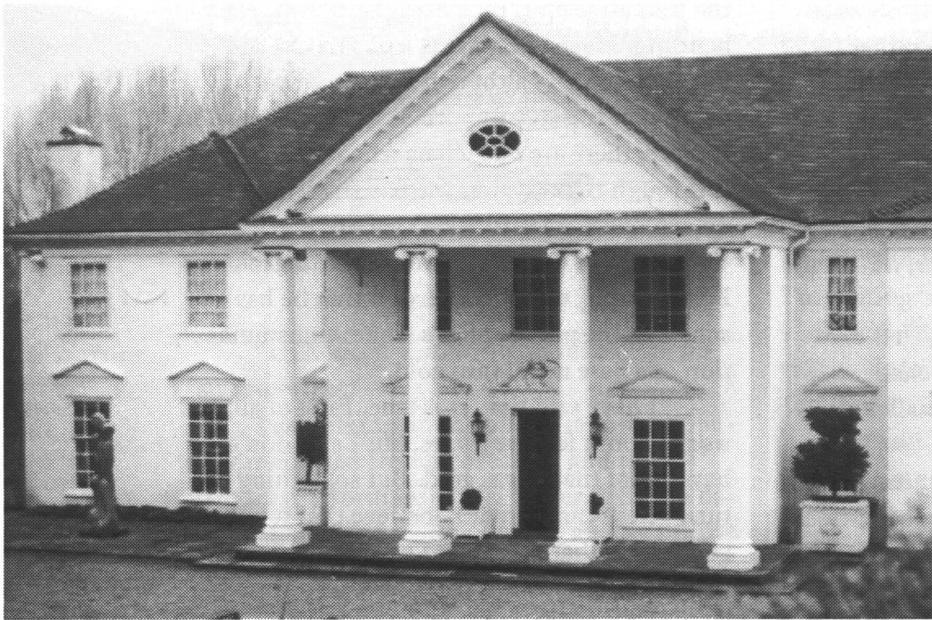
“I believe so, because [of] the synchronicity that, after 124 years, to almost get to the Premiership... I really started that year helping John Madejski [Chairman of Reading Football Club]. What I do is just sit there and concentrate. So I believe, yes, that I contribute some kind of enthusiasm into the crowds.”

They didn’t quite make it, though, did they?

“Well, that’s life. If you look at the numerology, maybe this year they will, because 125 years is a special number. But nevertheless they did come to the top, and I’m trying my best now to get them somewhere, because I go to every game at home.”

Geller’s egotism doesn’t stop there, either. He has suggested that if he were allowed to address the worldwide audience for the Sydney Olympics in 2000, he could psychically initiate world peace.

“I’m doing my best. It doesn’t have to be me, it could be anyone. As long as the message is created there. Nowadays even presidents, vice-presidents, and heads of big agencies are



Geller's home near Reading, England.

Photo by Jenny O'Reilly.

opening their minds to accept psychic phenomena, because they know it works.”

Not content with mere psychic phenomena, Geller also claims to have been in contact with aliens. According to his account, a being called “IS” (Intelligence in the Sky) from the planet “Hoova” thoughtfully left some messages on his tape recorder.

“This certain entity, or whatever, did use very strange words, like ‘Hoova’ and ‘IS’ and ‘Spectra’. These names came from a tape recorder. Now I knew on many occasions that the tape was empty—I mean, I checked it myself. So what was happening? Whose voices were they?”

Did he meet this alien?

“No... I’ve seen lights in the sky, I’ve seen UFOs, I’ve even seen something on the ground that I can’t explain, but I’ve never actually seen a being. I wish I had.”

It appears that Geller has a lot of belief systems: psychic phenomena, UFOs, space aliens, numerology, astrology, and pantheism are just some of the things which mark him out as overly credulous. Does he believe that his “powers” are a gift from God, I wonder?

“I’m lying to myself when I say “No, it’s not a gift from God, it’s energies from under” — I’ve said that many a time. But if you really go deeply into it, I have to say [that] everything comes from God.”

Over the last five years, Geller has brought (or threatened) many legal actions against those who have dared to criticise him in print. He has abandoned most of them. In 1993 a Florida court ordered him to pay \$20,000 to Prometheus books, and in early 1995 he was forced to pay \$120,000 to the CSICOP organization, after a four-year court battle which also involved the magician and psychic sleuth, James “The Amazing” Randi.

“The case was thrown out of court, [and] I was ordered to pay X amount. It wasn’t my fault, it was all on technicalities. My lawyer didn’t file something on time. I don’t think there were losses.”

Does he have any regrets about his litigation?

“I don’t regret anything; I’m trying to tell you what I feel. I feel that, at the end of the day, whoever sues whoever, only lawyers make money. That’s basically it.”

At this point Geller says, “there’s one thing I don’t want to go into.” He then picks up my dictaphone and starts playing with the buttons.

Alarmed by this manoeuvre, I leap out of my seat (the dictaphone was hidden from my view by Geller’s side). I quickly help him to find the stop button, and he examines the machine very carefully to ensure that it cannot restart. Reluctantly I let him hold on to the recorder, and sit back down again.

I am now trying to listen to what Geller is saying, as well as for any sounds of rewinding or other tampering of the dictaphone. None are forthcoming, but I cannot relax while he is

holding it. My concern was to become justified minutes later. He tells me that my line of questioning is too skeptical for his liking. I shift uneasily in my chair, but try to hold Geller's penetrating (and by now, rather fierce) gaze. With the tape stopped, he proceeds to go into the various claims made about him in books, including James Randi's *The Magic of Uri Geller*, and Victor Stenger's *Physics and Psychics*. Quoting the alleged instances of libel in these books, he rants on about how these comments have hurt him, damaged his reputation, etc. However, Geller's litigation has never required him to demonstrate that his "powers" are genuine, and he appears to be unwilling to legally challenge the accusations that he uses simple trickery.

After getting this off his chest, Geller smiles and tells me that we can continue. However, he has just performed an outrageous breach of interview protocol under my very nose, which has me leaping to my feet again in protest. Below my line of sight, Geller has been secretly and (in my opinion) deliberately rewinding the tape. He has just pressed the "record" button, which threatens to wipe out a large chunk of the interview, when I grab hold of one side of the dictaphone, and tell him firmly that I will deal with it. For a few seconds there is a bizarre tug-of-war between Geller and myself, over who will gain control of the machine. Clearly, Geller is trying to stop me from uncovering his blatant act of attempted sabotage. Finally, I pull the dictaphone from his grasp, and find to my disgust that he has indeed wound the tape back a great deal. (Why couldn't he psychically wipe my tape? After all, he claims in his press release that he has erased computer tapes with his mind). Geller is looking very fierce now and, with my heart pounding almost audibly, I do my best to recover some semblance of normality to the proceedings.

With the interview at an end, Geller dismounts his exercise bike and says in a low voice "I now want you to be honest with me — where did you get your information from?". I reply that my research material came from a range of sources, including the pro-Geller work published in *Nature* by Puthoff and Targ.

He doesn't believe me: "Show me it then," he says defiantly. I delve into my bag, and pull out the article. Seizing my opportunity to further mollify him, I mention his interview in *Fortean Times* (Dec 94/Jan 95), despite the fact that I considered it to be depressingly sycophantic. "Ah, you buy the *Fortean Times*!" he exclaims happily.

As a parting show of good faith, Geller cautiously agrees to bend my spoon, on the condition that it isn't a heavy duty one. This is what happened. First, I hand the spoon to Geller, and gather up my papers. He moves across to a radiator, claiming that the effect "works better near metal." I watch very closely, and the spoon appears to be bending very slightly at the point where the bowl meets the handle. All the time he is joggling it about. He proudly holds up the spoon, which has definitely bent by about 10 degrees. Not much, certainly, but he then turns around to the table behind him, and as I move round to see, the spoon appears to have bent further still. As we walk outside to take some photographs, the bend has almost reached a right angle. He autographs the spoon, and the show is over.

So what really occurred? Although I thought that I had not taken my eyes off the spoon, I realised later that Geller may have had several brief moments when I was distracted. Considering his previous record in these matters, I am sure that I was fooled. His joggling of the spoon may have given me the false impression that it was bending before my eyes, and his constant moving about provided the distraction. As The Amazing Randi says, "If Uri Geller bends spoons with divine powers, then he's doing it the hard way."

Geller holds up the bent spoon for the camera, and encourages me to keep in touch. Despite the earlier acrimony, I've regained his trust. The feeling ain't mutual, Uri.





Continued from page 1

digitized images of well-known personalities in the skeptical field. Thorough links will be provided from the Foundation Web page to related on-line resources.

“The Foundation will both support and seek the cooperation of all existing organizations around the world that share our goals,” Randi declares. “The battle should be with pseudoscience, superstition, quackery, nonsense, and misinformation — not with one another.”

The Foundation is actively soliciting materials concerning all aspects of the paranormal, pro or con, to help establish and expand its library holdings. All donations are welcome including printed media such as books, journals, photographs, etc., as well as video and audio in all languages. To encourage donors to come forward, Randi points out that since the James Randi Educational Foundation is a 501(c)3 educational organization under the tax code, it will provide donors with a valuation for purposes of tax deductions.

“With your help,” says Randi, “this can become the most complete such specialized library in the world.”

In addition to serving as an information center, the Foundation is prepared to conduct and/or finance original, basic research in areas of paranormal, occult, and supernatural claims. The objective is to both encourage the work of and garner support from competent scientists, academics, technicians and engineers in the design of experimental protocols, as well as publicize the results of pertinent inquiries. The Foundation is already considering requests to provide partial grants to qualified independent parapsychologists for conducting basic, paradigmatic research of fundamental paranormal issues and will be prepared to conduct some basic research at its own facilities, such as Zener (ESP) card trials, dowsing tests, remote viewing studies, and the like.

These same research facilities will also be used to demonstrate how such experimental work is designed and conducted. Classes and seminars will be offered to students, teachers,

the media and the public. In addition, the Foundation will award prizes, scholarships, and grants to encourage quality work in critical thinking, especially on the high school level. Scholarships will be presented to students in the United States and abroad who will be invited to compete by creating projects or writing essays dealing with subjects or claims generally classified as paranormal. This work will be evaluated by referees outside the Foundation based on the quality of the preparation, implementation, and reporting of the results — but not on the conclusions arrived at by the students.

Randi explains that all of these efforts are simply logical extensions of work he has long been engaged in. “I’m already doing this in Hungary, where I give \$300 a year to a little fund there for students doing exactly that, and I thought that would be a grand idea to carry over. And then I was notified by the people in Hungary that if I could give them an additional \$300 a year then they could buy a substantial number of subscriptions to the leading Hungarian science magazine, which would then be distributed to schools. Each one that got to a school would get an awful lot of handling and reading, and it would really go a long way, and I think that’s a very, very good investment of \$300 a year. And so we intend to foster a lot of these kinds of efforts, and we’re just waiting for applicants for funds of that nature.”

While Randi scrambles to get the Foundation up and running, there are already plenty of tasks to go around. A Foundation newsletter seems inevitable; whether that will develop into a printed journal remains to be seen. In the mean time, an on-line publication should be expected by the end of this year. Although Randi’s legal and financial troubles now seem to be at an end, the James Randi Legal Defense Fund will continue to operate. The fund currently amounts to just under \$15,000, and will be available, upon application, to individuals being sued by psychics, parapsychologists and others who may attempt to use the legal system as a weapon to stifle rational discourse. Randi adds that offering such aid is “the best way I can make use of that

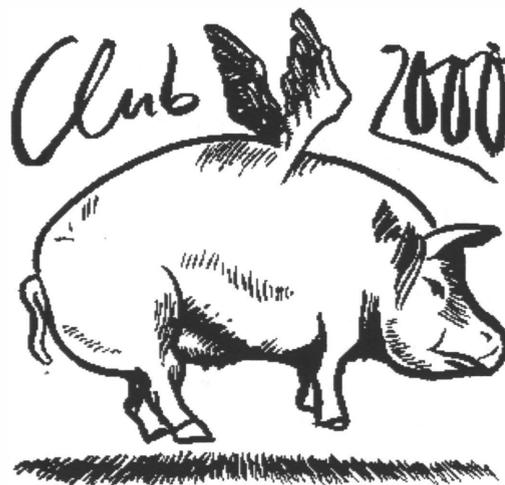
money, which was given for that purpose originally.”

The Foundation will also administer the 2000 Club and its associated “Pigasus” Prize. For many years Randi has carried with him a cashier’s check for \$10,000, to be awarded to anyone able to demonstrate a paranormal phenomenon or ability under proper test conditions for which Randi is unable to provide a reasonable explanation. Some months ago Randi mused in a note to his regular e-mail correspondents that if people were asked to pledge money to be paid along with the \$10,000 in case the prize was ever awarded, then skeptics would have a strong response when critics complained that the amount was insufficient to lure serious challengers to the prize. The reaction was completely unexpected and dramatic. The responses came pouring in, and the 2000 Club was formed, with the potential prize now totalling over \$630,000, pledged by over 200 individuals in 15 countries. That number continues to rise as additional pledges come in. The award will be paid to “anyone who proves a genuine psychic power under proper observing conditions.” (Further details of the conditions of the award can be found on-line via the Foundation’s Web page; see information below.) Randi notes that “the money that is actually in the bank is my original \$10,000 which, according to the agreement in the current posting of the challenge, will be paid immediately upon the challenge being met.” At the same time, formal notice will be made to the 2000 Club pledgers to provide the money they have previously guaranteed. And for those cynics who may suspect that the chances of someone winning the prize are comparable to the chances of seeing pigs fly, rumor has it that a glimpse at the Foundation’s Web page may include (digital) sightings of the soaring sow, Pigasus, the Club’s mascot.

Considering the ambitious goals ahead in the coming months, assistance in a myriad of specialties will be welcome. Interested parties with skills in computer and Web programming, graphic design and layout, audio/video and so on, are encouraged to contribute their

services in getting the Foundation’s fledgling efforts underway. Most importantly, Randi says that despite substantial funding by its initial sponsor, the Foundation hopes to be financially self-supporting within two years. “That is, I believe, a realistic expectation. We will need to depend upon grants and other such funding to a large extent, since our purpose is to act as an information source available to all, at absolutely minimal cost to the client. Therefore, we are looking for ideas and systems to help develop our fund-raising efforts. We’re neophytes at this and any advice from interested and experienced supporters will be much appreciated. I look forward to hearing from those of you who might wish to offer me your skills and your valued opinions in what I see as a great challenge, a fearsome responsibility —and a glorious opportunity.”

As the dust barely settles on recent years of legal struggle and the resulting financial strains, now all things of the past, how does the view ahead look to the “Amazing One?” “I’m very excited! But of course I also feel the enormous responsibility. This opportunity will enable me to do what I’ve been doing all these years, but now I’ve got some help. I can turn my attention to things other than trying to repair the computer or put in a new phone line by running the wires through the walls



myself. I won't be working any less, I'll be working more, but getting much more done."

True to form, even as this article goes to press, Mr. Randi is off to France and Holland to film a series pilot entitled "Scams, Scoundrels and Swindles," to air later this year on the A&E cable network.

No doubt further developments and surprises will be coming out of Fort Lauderdale in the near future — stay tuned. Since the birth of the Foundation, Randi has even had an asteroid named after him (see note below)! So keep your eyes toward the heavens; if you don't see an asteroid named Randi whizzing by, you might just spot a flying pig.

To contact Mr. Randi or to send books videos, etc., write or call:

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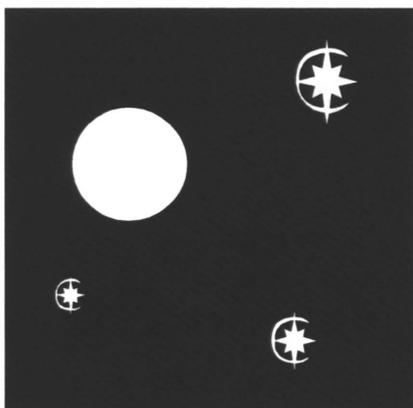
Jamy Swiss is a professional magician and one of the founders of NCAS.

Center For Inquiry Celebrates One-Year Anniversary

By Ron Jones

Paul Kurtz, founder and chairman of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP) and his staff members at the year-old Center for Inquiry (CFI) have taken little time to rest since the 20,000-square-foot facility opened in June 1995 in Amherst, New York.

Among the many projects they are organizing, enlarging or creating are a media watch committee, programs to attract youth to the scientific method and skepticism, a school for skeptics, and new regional offices. "We're happy, but our work is cut out for us," Kurtz says, referring not to the Center For Inquiry's hectic schedule, but to the never-ending battle against irrationalism.



SKEPTIC GETS STAR TREATMENT

The International Astronomical Union has honored James Randi for his unparalleled work by naming an asteroid after him.

Asteroid 3163 Randi, which was discovered on August 28, 1981, by C. Kowal at Mt. Palomar in California, is visible in the constellation Pisces (morning sky). It measures about 12 kilometers in diameter and is currently approximately 228 million kilometers away from Earth.

"I'm busting with pride," said Randi.

The Center for Inquiry is home for both CSICOP and the Council for Secular Humanism (CSH). The building — adjacent to the Amherst campus of State University of New York at Buffalo — features a library with 15,000 skeptical books and journals, audio-visual studios, seminar and conference rooms, and more office space. “Quite a lot nicer to have an office,” says Joe Nickell, a senior research fellow with CSICOP. “I’m excited about the possibilities and the things we’ve already accomplished. We have a permanent, trained staff, so hopefully CSICOP is becoming more efficient.”

Nickell says that without Kurtz’s vision and determination, the Center For Inquiry would not exist for skeptics. “Some people had thought that CSICOP should not spend time and money on a new building because the organization was then facing lawsuits by Uri Geller and others,” he says. “But those fears have been proven wrong,” Nickell says. By building the Center, he notes that Kurtz has ensured the future of CSICOP and CSH. “I realize now that, in retrospect, if Paul Kurtz had died or if one of the lawsuits had been successful, then that could have been the end of CSICOP.”

The center’s current and future programs include:

Media contacts: CSICOP and CSH can now respond more quickly to news stories that

are inaccurate or uncritical about pseudoscience, the paranormal, scientific creationism, UFOs and new age oddities.

A media watch committee on a national scale is in the works, too. Kurtz says the panel will be officially announced later this year. CFI officials also hope to eventually produce radio and television programs and run a broadcast station or cable channel.

Education: The Center for Inquiry Institute is being beefed up. Plans include bigger and better workshops nationwide. Along with developing training programs, Center For Inquiry officials are designing a school that would offer courses in examining paranormal and pseudoscientific claims, communication skills, skeptical ethics, magic tricks and other subjects.

Joe Nickell, who is associate dean of the Institute, says he hopes the school will eventually become accredited. The Institute would also like to put together elementary and high school educational packages about the paranormal. However, the Center For Inquiry needs a grant to fund the program.

Regional offices: Two Centers for Inquiry have opened in the past year — CFI Midwest in Kansas City, Missouri and CFI West in Los Angeles. The Los Angeles branch opened July 7, 1995, and serves California, Oregon, Washington and Nevada. The Kansas City office serves Missouri and the adjacent

Center For Inquiry,
Amherst, NY.

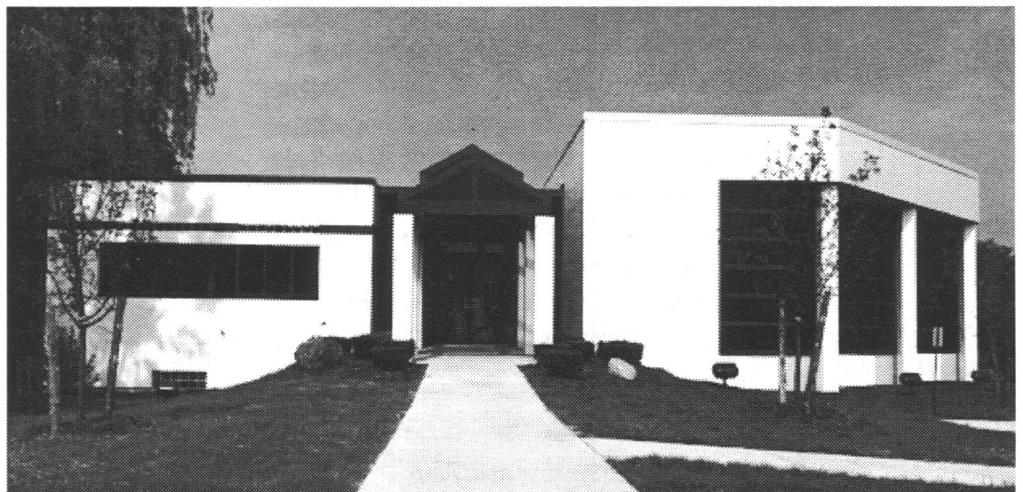


Photo by Ron Jones.

states. A third regional office, CFI Rockies, will open this year in Boulder, Colorado. It will serve Colorado and adjacent states. A British CFI branch recently opened at Oxford University as well. CFI officials say they have no immediate plans for opening a regional office in the Washington, D.C., area. "But we would welcome any concrete proposals from interested parties," Kurtz says.

"We need to work more with local groups," Nickell says. "So while we're establishing this (Amherst, New York) campus, we're also trying to branch out. There's lots of stuff on the drawing board."

Fund for the Future: CFI officials say their goal for this drive is to collect \$10 million in five years for endowments and bigger programs for CSICOP and CSH.

As of press time, CSICOP officials also are scrambling to prepare for the World Skeptics Congress and the organization's 20th anniversary celebrations from June 20 to 23.

"Science in the Age of (Mis)Information" will feature approximately seventy speakers, including: Stephen Jay Gould, Harvard professor and author of *Dinosaur in a Haystack*; Steve Allen, author, songwriter and entertainer; Leon Lederman, emeritus director of the Fermilab and a Nobel Prize winner in physics; and Chris Carter, creator of the paranormal TV series, *The X-Files*. Allen also will perform music and humor Saturday evening (June 22).

Other speakers will include UFO debunker Phil Klass, author and magician James Randi, Eugenie C. Scott of the National Center for Science Education, and Theodore Schick, Jr., co-author of *How to Think About Weird Things: Critical Thinking for a New Age*.

Conference highlights include "The Role of the Mass Media in (Mis)Informing the Public" and "The Growth of Anti-Science." Other sessions delve into issues such as homeopathy, therapeutic touch and self-deception. Kurtz hopes 600 to 1,000 persons will attend.



Ron Jones is a Washington area journalist and NCAS member.

By The Numbers

by Chip Denman

"And if the blind lead the blind, both shall fall into the ditch." Matthew 15:14

...which is usually better than driving headlong into oncoming traffic.

Blinding Insight

My phone in the Statistics Laboratory rang recently.

The callers had a device that they thought might improve fuel economy, and they had collected data for more than a year from trucks with and without the device to determine how well it worked. Could I, they asked, do whatever it is that statisticians do to their numbers?

A large part of my job as a statistician is to coax data through appropriate mathematical analysis to see whether the results are meaningful or misleading. But which analysis, if any, is useful is determined by how the data are collected.

In the best case, a statistician participates in the design of the experiment from the get-go. Unfortunately, all too often, I'm brought into the problem after the data have been collected, when the statistician must play diagnostician, asking questions and looking for signs.

Perhaps a carefully chosen analysis can save the day. In the worst cases, the statistician pronounces the data dead on arrival and conducts an autopsy, hoping that a new study can be made healthier.

These were the main questions I wanted to ask about the truck experiment:

“Did the drivers know whether their rig had the device?”

“How was it decided which trucks would get it and which would not—a coin toss or a judgment call?”

The first question deals with blinding; the second concerns randomization. A randomized, double-blind study is the gold standard against which all other experimental tests of new products or procedures are measured. Both techniques try to overcome enemy No. 1 of research—unintended human bias.

Randomization may seem odd at first. It sounds so haphazard. Over the phone, I had the feeling that the caller wanted to tell me that the trucks were selected by sound judgment, perhaps from a sage mechanic. After all, a coin toss hardly sounds scientific. But the very randomness of the toss eliminates bias. The coin would be oblivious to the truck’s past performance.

Think about it this way. A savvy mechanic might know which trucks needed a little extra boost. If the mechanic wanted to help the fleet and picked only the deficient trucks for the mileage booster, their performance might improve enough that they looked about the same as the other trucks. The final data could hide the very effect we sought.

“Blinding” usually refers to hiding certain information about the study from those involved. Expectations, positive or negative, by experimenters or those being studied can cause unintended changes in behavior or perception.

What if the truck drivers had expected the device to work? Might they subconsciously have driven a bit differently to squeeze a few more miles from every gallon?

Some might have, but if the drivers were blind to the test condition, we wouldn’t have to worry about it. If the drivers and the folks collecting data were kept in the dark, that

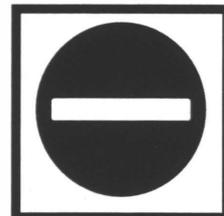
would be even better. We’d have what statisticians call a double-blind study.

When expectations create their own self-fulfilling prophecy, it’s called the “placebo effect,” from the Latin for “I shall please.” We need to know about this because our minds play a very important role in what we perceive. For example, if I mention an itchy neck, I’ll bet it won’t be long before you scratch.

Properly done, medical studies minimize the bias of patients’ expectations by comparing an experimental treatment to a placebo, a seemingly similar but neutral pill or procedure. Many a quack cure has been reported to work simply because the patient expected good value for good money. These effects are so well known that the medical profession is rightly skeptical of anything that has not passed many such double-blind, randomized trials.

Conventional wisdom is that about one-third of the patients in a control group will improve solely because of placebo effects. The improvement is often real because the power of suggestion or expectation can influence bodily processes, but it would have happened no matter what was done “for” the patient.

Unfortunately, many so-called “alternative” or “unconventional” medical treatments are difficult to test this way. How would you blind a patient to the needles of acupuncture? What would be an appropriate control for testing the curative power of “the laying on of hands?” These



This article originally appeared in *The Washington Post Horizon: The Learning Section*. Copyright © 1996, Daniel W. Denman.

studies can be done, but satisfying skeptics and supporters that the experiments are legitimate is a challenge.

A related problem is that people who know that they are being watched in a study tend to ratchet up their performance, regardless of other factors.

For example, studies conducted in the 1920s and 1930s at the Western Electric Company's Hawthorne plant in Cicero, Illinois, tried to determine whether the performance of shop workers was linked to such factors as lighting and frequency of rest periods.

The findings were ambiguous because the business of conducting the experiment changed social interactions among the workers, confounding the factors under study. This result is known as the Hawthorne Effect.

Although recent reanalysis of the Hawthorne data by Stephen Jones of McMaster University casts doubt on the strength of these effects in the original research, the term endures in social science, business management and experimental design. Those who design studies and analyze data prefer to avoid such maybe yes/maybe no worries.

A pet peeve of my physicist friends is the superficial resemblance of the Hawthorne Effect to the Heisenberg Uncertainty Principle of quantum theory. In some circles, it has become trendy to dabble in physics-speak, claiming as a law of nature that the act of conscious observing forever alters the observed.

The uncertainty principle tells us only that we cannot simultaneously measure certain pairs of quantities—such as the position of an electron and its momentum—with the same precision. If we insist on higher precision for one, we must settle for less for the other. Psychological effects are worrisome but not a consequence of a physical law.

One of the most spectacular examples of the necessity of blind testing is the case of Clever Hans, a horse who astounded Germany a century ago with its ability to answer questions by tapping its hoof, even when its handler was not present. Arithmetic, spelling,

multiple-choice questions were no problem! Hans seemed to have the intellectual prowess of humans and, in a way, did.

Skeptical investigations by Oskar Pfungst in 1904 eventually found Hans's secret. The horse had no idea what was being asked but had somehow learned to watch for subtle, unintentional body language of observing humans. When people knew the correct answer to the questions posed, their muscle tension shifted as they watched the horse's taps with anticipation. Body language changed when Hans reached the correct number of taps, so the horse simply stopped tapping.

The "aha!" of Pfungst's investigation had been his realization that the horse succeeded only when he could see a person who knew the right answer. The people testing Hans were not blinded to the experiment.

What about the truck data? It had been collected without blinding or randomization. Could anything be learned?

In this case, we had data on each truck before the experimental device was installed. A comparison showed no obvious bias in selection of trucks that ultimately would be outfitted with the gizmo. Statistical testing showed overwhelming evidence against improvement.

I concluded that we could have confidence in this result because we could reasonably suppose that any pesky biasing factors would tend to enhance rather than hide the hoped-for improvement in fuel economy.

Proper experimental design determines how much we should trust any findings. Here we could be confident of the negative conclusion. But if the results had looked positive, what then? Here no definitive conclusion could have been drawn, and a new, better experiment would have been necessary.

Without proper blinding and randomization, no kind of clever analysis can reliably separate a hoped-for signal from the noise always present in experimental data.



Chip Denman is manager of the Statistics Laboratory at the University of Maryland and teaches "Science vs. Pseudoscience" for the University Honors program.

Don't Try This at Home

(because we already did)

by David G. Shaw

There is money to be made by selling a piece of metal wrapped in a scientific principle. As we saw in my last column, an aluminum slab and the laws of thermodynamics can be combined to thaw frozen food. Let's investigate how a slab of aluminum and rudimentary electrochemistry can be combined to clean silverware.

This issue's miracle product claim is made by Silver Lightning, touted on television by none other than Robin Leach. An inspired choice: the voice of the "rich and famous" exhorting you to clean all that silverware you've got lying around the mansion! (Unused marketing slogan: Let Silver Lightning *leach* your tarnish away!) According to Mr. Leach, Silver Lightning enables you to clean silver merely by dipping it in water.

Rather than purchase a Silver Lightning of my own (I'm still stuck with a Miracle Thaw™), I examined the display model at the local K-Mart. \$19.95 buys a piece of brushed aluminum about 5 by 7 inches and 1/16-inch thick.

According to the accompanying instruction booklet, the plate of aluminum is placed in a glass container full of boiling water to which a teaspoon of baking soda has been added. You then dip the tarnished silver into the container, making sure that it makes contact with the plate. A few minutes later the silverware is removed free of tarnish.

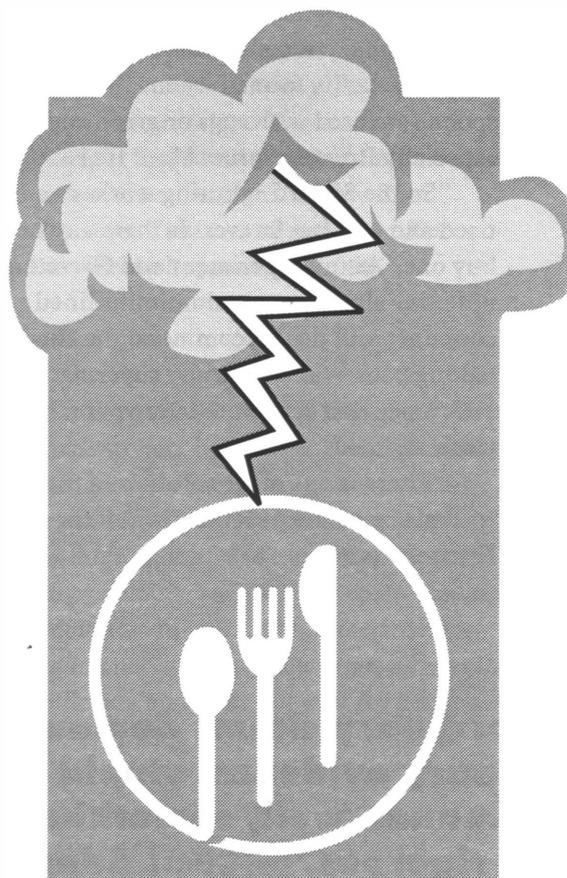
The product was simulated in the Skeptical Eye Research Kitchen by placing a piece of aluminum foil in the bottom of a glass baking dish. The Silver Lightning instruc-

tions were followed to the letter — hot water, baking soda, contact with plate — with results as advertised. Up to a point. The tarnish was removed only from the area of silver submerged below the water line, and the time for removal increased as the water cooled. There was also a noticeable rotten-egg smell.

Where did the smell come from? I consulted a chemistry text (*Chemistry: The Molecular Science* by John Olmstead III and Gregory M. Williams, 1994, Mosby-Year Book) for the answer, and found the following information on page 828:

"The tarnish that collects on objects made of silver is silver sulfide, a black solid. Tarnish forms from trace amounts of hydrogen sulfide present in the atmosphere. The redox equation is: $4\text{Ag} + 2\text{H}_2\text{S} + \text{O}_2 \rightarrow 2\text{Ag}_2\text{S} + 2\text{H}_2\text{O}$."

So the odor is hydrogen sulfide gas being released as the tarnish is dissolved, but how do the aluminum and baking soda contribute to



“Health: Insurance companies have never been big on herbs or homeopathy, and most would rather pay for a course of medication than a course in meditation. But economics could change all that.”

You don’t have to read much beyond a quote early in the story to get the point: “As one HMO executive puts it, ‘Three visits to a chiropractor are a lot less expensive than an MRI or back surgery.’” There is a box revealingly labeled “Body, Mind, and Pocketbook” that contains the following among its comparisons:

For heart disease: Have bypass surgery for \$30,000 to \$40,000, or have one-year diet-and-lifestyle therapy for \$5,500.

For middle-ear infection: Take full course of Ceclor for \$65.00, or take warm garlic oil for \$3.75.

For hay fever: Use Seldane at \$103.80 per 100 capsules, or use freeze-dried nettles at \$9.50 per 90 capsules.

The authors conclude, “Their benefits may be unproven, but alternative procedures are often cheaper than traditional treatment.”

This is truly a theory that can apply to everything medical. Carrying the logic a bit further, it would be even less expensive, and perhaps no less an unproven cure, if the sick were to do absolutely nothing. Insurance companies would avoid the huge costs that so often outstrip premium payments. In recognition of that saving, shouldn’t insurance companies offer payments to anyone, otherwise eligible to buy health insurance, who notifies them of an illness and the intention to let nature take its course? Of course, the payments should be made quickly.

Newsweek, June 26, 1995

Seattle also plans to make alternative medicine more broadly available. The governing council of the greater Seattle areal “has voted unanimously to establish [a] naturopathic health clinic, in which diet, exercise, vitamins, and treatments such as acupuncture take precedence over drugs and the tools of traditional medicine.” A university president

supported the idea and discounted criticism, claiming, “Fundamentally, if you can teach people to take care of themselves, they don’t need doctors and that’s seen as a threat by many people.”

“Natural medicine, long considered to be on the fringe of health care, is reaching the mainstream, and to no greater extent than in Washington state. The new clinic will put the alternative treatments, which have been the province of better-educated and more affluent Americans, within reach of the poor.” Now there’s a concept... equal opportunity to be taken by quacks, regardless of economic status. It evidently played well in Seattle.

“Still, establishing the nation’s first taxpayer-subsidized natural health clinic has not been easy,” the article says. But visions of at least some reason in Seattle vanish when the article cites as the toughest problem, “Officials have yet to figure out whether state, federal, or county money will be used to pay ... the operating costs.” Naturally, “the council hopes to use state or federal money for a two-year pilot project beginning some time this year.”

The skeptical view was represented in a single short sentence at the end: “Some medical doctors say that many claims of natural medicine are overblown, unproven or even outright fraud and that it is a mistake for governments to subsidize it in any form.”

New York Times, as carried by the *San Francisco Chronicle*, January 1, 1996

In case you don’t yet feel far enough out of the mainstream, be advised that there are veterinarians offering holistic care for “companion animals of every persuasion,” although perhaps there should also be clinics for stray walk-, fly-, or slither-ins who happen to be no one’s pet at the moment. The veterinarians can provide holistic care magazines for you to read while you and your pet wait for a range of services, including acupuncture (“been in existence for at least 4,000 years”), homeopathy, and nutritional therapy. “Most holistic veterinarians maintain that diet plays a

tremendous role in maintaining good health,” according to the insightful article.

Washington Humane Society News, 9/95

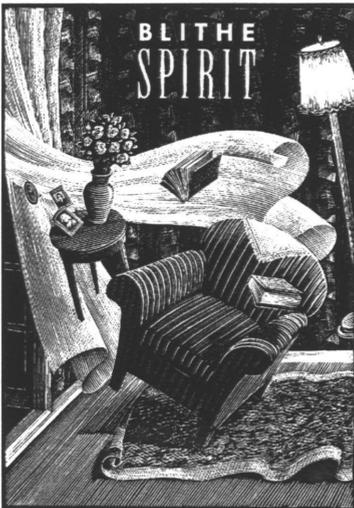
to be fired for teaching that humans evolved from apes as a fact rather than a theory.”

The Washington Post, March 29, 1996



The *Eye* is happy to offer regular reminders that reason occasionally prevails. “Tennessee’s Senate rejected a bill that would have made it illegal to teach the scientific principles of evolution as a fact. The bill, had it become law, would have allowed educators

Contributions are welcome to make this a regular feature of the *Skeptical Eye*. Send articles, ads, tapes -- whatever will make a good skeptic cheer, chuckle, or choke -- to Joe Himes, 3731 Prosperity Avenue, Fairfax, VA 22031. Be sure to indicate the source and date.



Spirited Theatrics

Review by Grace Denman

Blithe Spirit, written by Noel Coward in 1941, just closed its production by the Arena Stage at the Kreeger theater in Washington, D. C. I was excited as I made plans to see *Blithe Spirit*, remembering vaguely images from the film version that I encountered in part many years ago. I was sure that it would

be a romantic comedy of true love and happy endings with the fun of a dash of the supernatural. I was wrong! The play was very well presented with impressive sets and staging and admirable work from the cast, but it was no romantic comedy! In fact, there was nothing romantic about it. The story concerns a writer, who has his wife arrange an evening seance with another couple and the local neighborhood psychic. The psychic accepts the invitation believing it is offered in good faith, when in actuality the rest of the party is filled with ridicule for her and only interested in acquiring some tricks of the trade for the story our hero is writing. The psychic amuses all, with a ludicrous process rather than the quietly spooky ritual one might expect, but also manages to conjure up the ghost of our hero’s first wife. What follows is tight, well-written sarcasm with no character earning our support or respect with the possible exception of the misused psychic.

Rather than being a story of romance with a happy ending, it is a story of three selfish souls, not all of them on our astral plane, who take pleasure in hurting each other.

Noel Coward’s use of a ghost and the supernatural as a plot device was not new or unusual in 1941. There are numerous movies from that era with romantic ghost figures such as *The Ghost and Mrs. Muir*. During the 1940s there were several B-movies about soldiers killed in action who came back to protect their loved ones in their hour of need. In addition to ghosts, we have other unearthly characters. Who can forget the lovable angel Clarence from *It’s A Wonderful Life*, or Cary Grant, also an angel, in *The Bishop’s Wife*? There is also the more terrifying application of these themes as seen in *The Haunting of Hill House*. The trend continues today with the incredible popularity of films such as *Ghost* or in children’s films such as *Angels in the Outfield*. Since the earliest days of Spiritualism, it has been a populist movement very accessible to the general public and often considered an entertainment as the world tours of the Fox sisters and the Davenport brothers evidence. It is not unexpected that the themes which were so compelling in the nineteenth century that a religion was formed would continue to touch people today.



Grace Denman is a founder of NCAS and is the current president.

Medjugorje in Marlboro?

by Harley Newman

Marlboro, New Jersey is a few miles inland from Asbury Park, a town once known as the “Jewel of the Jersey Shore.” It is a small township, primarily middle class, where you can buy a helicopter ride at the local airport.

Marlboro is also where Joseph Januszkiewicz lives. In 1988, Januszkiewicz visited the Medjugorje, Yugoslavia shrine of the Virgin Mary. He claims to have been cured of a back injury and hearing loss concurrent with this visit and says the Virgin Mary appeared to him and told him he was chosen to do hers and Jesus’s “work.” After his trip, he prayed often and claims to have been rewarded with a vision in May 1989. He then reported a visitation every day for a year and a half, after which he says Mary told him she’d only show up on special occasions like Christmas. Then he claims she told him she’d visit on the first Sunday of each month. At this point, he began to erect a shrine in his backyard and invited people to gather and pray.

He would typically say mass with his family in his home, come out the back door, pray at the shrine, go inside again, and then return to the crowd to announce his message. Her messages were typically simple and short, such as “Follow the teachings of the church” and “My son and I are pleased with all the prayers.”

Januszkiewicz’s local priest, the Rev. Eugene Roberts, distanced himself from the situation. “At this time, there’s no validity to Mary actually appearing or speaking in any way related to Joe.”

People flocked to the shrine, despite the lack of endorsement from Januszkiewicz’s local clergyman. Crowd sizes on visitation days grew as high as 10,000 per day. The township’s two-lane roads became traffic-snarled, and local authorities began charging

five dollars for parking in an empty field to offset the costs to the township. Overtime costs surged for local law enforcement. Neighbors cashed in, selling t-shirts, soda, and snacks.

I visited Marlboro on one of the non-visitation days. Driving down Januszkiewicz’s road, I noticed cardboard and stick signs that advertised parking up to a mile away from the shrine.

The shrine was a brick patio with a Virgin Mary statue as the centerpiece and a crucified Jesus off to one side. There were bouquets and baskets of flowers all over. About fifty people were at the shrine, most praying, and some reading the list of messages posted to the Virgin on a bulletin board set up nearby. Little notes were posted all over the yard, imploring us to leave the family alone and to stay out of the toolshed. Financial contributions were discouraged.

People kept arriving by ones and twos, by car, van and even a bus. One woman with a bruised face was shuffling back and forth in front of the statue, tears streaming down her face. She told me she was praying for her alcoholic, abusive husband. The majority of the worshippers were women, and said they were there “for healing.” I watched as several women touched the face of the statue, as if to wipe symbolic tears from her face, and then make the sign of the cross close to their chests, heads bowed.

A restraining order was instituted in December 1993 to prevent trespassers from visiting the Januszkiewicz family’s backyard without invitation. Four people were subsequently arrested for violating the order, three of whom were found guilty of creating a public nuisance and one who was charged with disorderly conduct.

The reason I went to Marlboro was to debunk the Januszkiewicz shrine. I wanted to

talk to Joe and his family, but they were unavailable. When I spoke with the locals, they seemed divided into two distinct camps—believers and skeptics. Some neighbors claimed he liked all the attention, others said he and his shrine were a nuisance, while others were supportive. Yet another claimed she didn't know of anyone who had been healed.

I came away from the experience skeptical and convinced there was nothing to Januskiewicz's visitations. In the meantime, I remember a lady who wore gold, sparkly shoes, who came all the way from Illinois to "see a miracle." I don't think she was trained to see what was really happening. She might still be waiting.



Harley Newman is a performer from Allentown, Pennsylvania whose shows include walking barefoot on swords, eating and spitting fire, beds-of-nails, straightjacket escape while riding a unicycle, and more.

Coming Soon...

Meetings for 1996-97 are currently scheduled in the Bethesda Branch of the Montgomery County Library, 7400 Arlington Road, a short walk from the Bethesda Metro station. Meetings begin at 2 pm and last about one and a half hours. The schedule for the next year is:

- September 21, 1996
- October 19, 1996
- November 16, 1996
- December 21, 1996
- January 18, 1997
- February 15, 1997
- March 22, 1997
- April 19, 1997
- May 17, 1997
- June 21, 1997

Suggestions for topics or speakers are welcome. Call us at 301-587-3827 or send email to ncas@cs.umd.edu.

Let's Get Metaphysical

by Ron Jones

Those old-time fairs and expositions of my youth remain with me as strange and surrealistic memories: stale cotton candy; burnt hot dogs; rickety roller coasters manned by characters out of a William Faulkner novella; the rancid smell of sweat, fair animals, cheap perfume and cigars; poorly-carved crafts and toys; and tawdry sideshows with woman-headed snakes and geeks.

But these memories aren't as colorful or as disturbing as a psychic carnival I visited one Saturday last summer.

Held at the Holiday Inn in Gaithersburg, Maryland, the "Metaphysical Expo" featured astrologers, tarot card readers, palmistry, numerology, angel experts, an odd assortment of so-called health foods and vitamins, and numerous tables filled with other new age products.

I had to plunk down four dollars to enter, but it could have become worse for my wallet once I was inside. Apparently, expanding your consciousness or reaching a higher psychic plateau comes with a material price in this natural realm called an expo.

The first booth I visited was brimming with homeopathic products. A plump and cheerful woman manned it, and I soon discovered almost every item I pointed to had been sampled by her. Among these were tablets that she said would burn away the fat without any need for exercise. She told me she was quite confident they were working for her.

Another product the Cheerful Lady was selling was a Chinese tea that apparently could cure anything. She offered a free sip, so how could I refuse? It looked like silvery gray paint and tasted like a flat soda, but it wasn't too objectionable. About twenty minutes later, however, I started suffering from what seemed to be a caffeine overdose.

Did the tea cause it? I'm not sure. Maybe my spirit guide was just giving me a little jolt of adrenaline for attending the fair.

Folks at one booth were promoting — believe it or not — “Zodiak Shampoo.” I picked up a green index card that read: “Select your personal astrology shampoo, specially scented and formulated with ancient ingredients to give your hair luxurious body and radiant shine!”

So, I thought, if I pick a shampoo designed for a sign different from mine, would it mean that my hair would remain dirty? Would this be true even if each “personal astrology shampoo” had similar or identical chemicals? Good Gemini, I thought, what's next? Astrological enemas? Zodiac zit remover kits? Charts to tell you what condoms to buy?

A woman at another booth claimed she could talk to my guardian angel. She told me that everyone has a guardian angel, even folks with bad attitudes — like Adolf Hitler. She was quite friendly and gave me a pamphlet about these celestial beings. In the pamphlet, she quotes from angels with such names as Shephtha, Unzer, Simon, Renoir, Kerianis, Cornucopia, Moonbeam and Ralph. Ralph?!? With so many angels, I guess there must occasionally be a shortage of exotic names.

I discovered, however, that a little devilish humor doesn't fly with the Angel Lady. When I said in a light-hearted manner that Howard Hughes' angel probably lived like a hermit, she first gave me a blank look and then gave me a long and serious explanation about angel etiquette with human beings.

Another table was operated by representatives of the D.C.-based National Spiritual Science Center. The organization seems to be a cross between a church and a college. “The Center seeks to provide demonstrable teachings for all who feel drawn to the path of spiritual development and understanding,” one of its pamphlets says. The center also offers a four-year curriculum with such classes as “First Steps

in Unfolding Awareness” and “An Examination of Death, Dying and Post-Earthly Life.”

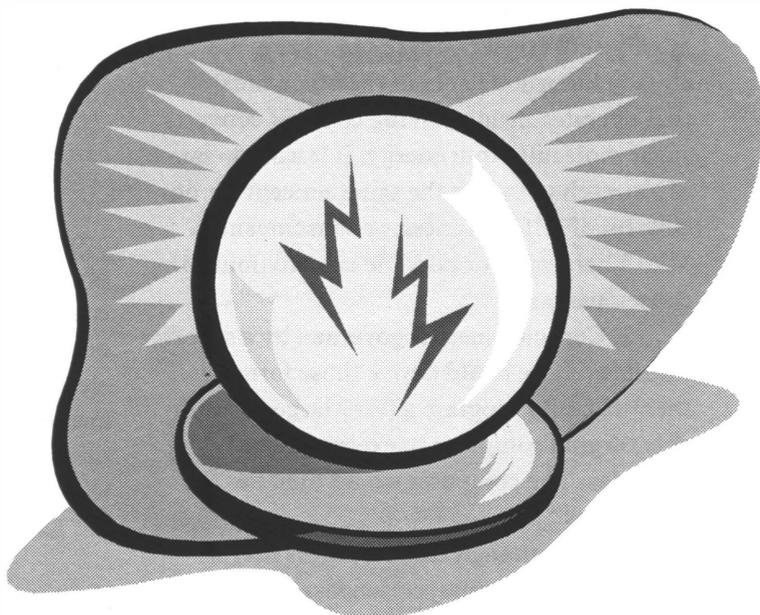
Besides a list of courses and a section explaining the center's academic policy, the back page of the pamphlet offers a prayer that “is especially important for practicing psychics and mediums.” I see the modern Western canon is alive and well in the District.

A major feature of the fair was: crystals, crystals, crystals. They were everywhere and in all shapes, sizes, and colors. I walked into a lecture room to get away from these rocks and I found a half-dozen people talking about — crystals.

During the discussion, an elderly man talked about an ancient crystal skull found in Mexico (or maybe New Jersey, I forget now). The group was quite animated about this skull and its possible psychic powers.

When someone mentioned that another crystal skull was featured at a UFO conference, another person jokingly said that that particular skull may not be real if it was displayed at such an alien bash. Everyone laughed and either nodded or gave each other a knowing look.

Apparently, outer space visitors are too weird for some obscurantists visiting this event. Maybe alien abductors will be more accepted if they stop by the next Metaphysical Expo and buy some rocks and shampoo.



The Mathematics of Consciousness

by Marv Zelkowitz

Note to the reader. The announcement caught my eye: a talk by Roger Penrose, Rouse Ball Professor of Mathematics, University of Oxford, titled "Shadows of the Mind: Consciousness, Computation, and the New Physics of the Mind" was to be presented at the National Institute of Standards and Technology on March 12, 1996. From the description of the talk, it was not clear if the subject matter was science or pseudoscience, so I decided to attend. The following is my review of that talk. — MZ

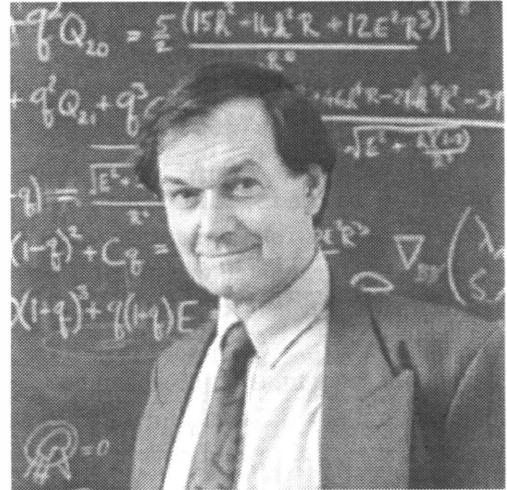
Roger Penrose is a name well known in the world of mathematics and physics. He is also known to the lay reader of physics, since he was an important collaborator with Stephen Hawking in developing the theory of black holes and on the cosmological origins of the universe. He is now interested in the mathematical basis of consciousness.

His basic argument is quite obvious once you think about it. All physical reality is governed by the laws of quantum theory, including the birth and death of stars, the energy that makes my 1994 Buick Regal with its 3.8L V6 engine operate, and the operation of the LCD display on my digital watch. If consciousness is a physical concept, then it too must be governed by these same laws. We already know much about the biochemistry that operates inside a living cell that converts sugar molecules into energy. It is not too much of a stretch to expect the same concept for our concept of self awareness, or consciousness.

There are four possible explanations for consciousness:

1. Consciousness is governed by a set of formulas. If we could derive those formulas, then we could program a (very large, presumably) digital computer to execute those formulas. The computer would then be "conscious."

2. Even though consciousness may be governed by formulas, consciousness is the



Roger Penrose

presence of those formulas in a living body. Therefore, a computer program would not be conscious even if it executed the correct program. Penrose used as his example chess programs. Even though they seem to make correct moves, they are not conscious. He used as an example a simple chess position that would be obvious to a good human chess player, but fatal to a chess program.

3. We know that there are mathematical functions that cannot be computed. These results were proven by Gödel, Post, Turing, and many others around 1930. As a simple example, we know that there are many programs that always compute some answer. You could write a computer program that when fed in data about an automobile (engine size, gas tank capacity, weight of car, etc.), it could compute how far the car would go before it ran out of gas.

However, assume you had a program that was supposed to compute an answer for some problem, and you wanted to know if that program would ever write this answer or just continue to compute forever. You could not buy a program which when fed in the parameters of this program, would give you the answer. This so-called "halting problem" has no solution. You cannot write a program which will tell if another program will or will not halt in all cases. From this one result,

many other functions can be proven to be non-computable.

Penrose believes that consciousness is one of these non-computable functions. Therefore, we could not "execute" consciousness on a computer since we do not have the proper function.

4. Consciousness is part of a new form of physics outside of the realm of quantum theory. This is the world of ESP and parapsychology.

Penrose rejects the fourth explanation, which keeps him within the domain of orthodox mathematics; however, he seems to be pushing the envelope a bit.

Penrose's theory of consciousness follows this general argument:

1. Mathematical insight depends on consciousness, and because of the non-computability of consciousness, it is doubtful that consciousness can be mechanized (i.e., built into a computer).

2. A physical system can be conscious only if it can't be simulated by a computer.

3. The interaction between quantum mechanics and the general theory of relativity is poorly understood. (That is, one of the important research directions for theoretical physicists is to understand the role that quantum theory plays in influencing gravity in the general theory of relativity.)

4. The transference of signals from one nerve cell to another may play an important

role in determining consciousness. The quantum effects of impulses moving from one cell to another should be observable and a single nerve cell in the brain can interact with thousands of adjacent cells.

Now that I have tried to explain Penrose's theory superficially, I need to get his two books which describe this theory in greater detail to see how wrong I may have been:

The Emperor's New Mind: Concerning Computers, Minds, and the Laws of Physics, Penguin Books, 1991.

Shadows of the Mind: A Search for the Missing Science of Consciousness, Oxford University Press, 1994.

For those hooked up to the World Wide World, there is a discussion of Penrose's theory with dissenting opinions and Penrose's rebuttal at:

<http://psyche.cs.monash.edu.au/volume2-1/psyche-96-2-23-shadows-10-penrose.html>

In summary, it was a fascinating lecture, but there was obviously no real conclusion. Consciousness is too complex a phenomenon for us to have any real idea of what it means or how to simulate or duplicate it. But it was interesting to hear his hypotheses anyway.



Marv Zelkowitz is NCAS secretary and a professor of computer science at the University of Maryland.

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skeptical i

They're Heeere!

editor's column
by Carol Krol

Dorothy Allison, psychicfriend to the cops of Newark, New Jersey, is at it again, this time consulting on a case that hasn't been solved in almost two decades. This well-known psychic, who lives in Nutley, New Jersey, has worked with police departments around the country, as well as the FBI and the Secret Service. Now she's been called on by the Newark Police Department to help locate the bodies of five boys who disappeared mysteriously one night eighteen years ago. Not one, but *two* articles, one a straight news piece and the other a thousand-word profile on Allison ran within nine days of each other in none other than *The New York Times*. The reporter's description of her — "Allison stands under 5 feet tall, wears seriously thick glasses and has her hair done in a brunette pouf at the beauty parlor" — in the Sunday, May 26, 1996 Metro Report conjures up images of Zelda Rubinstein's portrayal of the sweet, grandmotherly demon-chaser in the film, *Poltergeist*. That's fine for the movies, but I don't find this homespun tale of little old ladies seeing visions to help solve real-life murders quaint at all. As the little blond girl, Carol Ann, in *Poltergeist* says, "They're heeere." Yes, the nightmare isn't over. They're *still* here — from alien autopsies to celestine prophecies, Dionne Warwick to Deepak Chopra — and I'm convinced they're not going away any time soon. They're still making national news, getting rich off infomercials and getting air time on public television.

Every level of skepticism, from individuals to local organizations to national magazines and books, is important. Carl Sagan, in his new book, *The Demon-Haunted World* (Random House, 1996),

speaks out in defense of science and critical thinking and offers his "Baloney Detection Kit" to enable the reader to separate fact from fiction. I recently attended a one-day workshop hosted by NCAS in Bethesda and taught by Chip Denman for fifteen kids, ranging from age seven to thirteen, that encouraged them to question things that aren't quite what they seem and gave them a glimpse at the "counter" that often lies behind the intuitive. In his nationally-syndicated column, "The Straight Dope" (which appears in *The Washington City Paper*), Cecil Adams sets his readers and the record straight in his typical irreverent yet rational style regarding questions about the Roswell Incident and the alien autopsy television special. He surmises that the Fox program "...obviously depicts a bunch of actors in spacesuits with no idea of how a real autopsy is done, fumbling over a reject from a Steven Spielberg flick."

As long as there are "psychics" like Dorothy Allison out there claiming to have special powers and bad actors dissecting rubber aliens, we'll need skeptical individuals and organizations, speaking alone or as a community, to talk back. We're thankful for the voice of one guy in particular who's been talking back all along, who went up against Uri Geller and hung in there singlehandedly, one guy whose rationality and tenacity have never wavered. That voice has now been amplified a hundred-fold with the formation of a new foundation which bears his name, The James Randi Educational Foundation. You'll read more about the Randi and the Foundation in our Page One story in this issue. Every voice, new and old, that's added to the chorus of skeptics should be welcomed. "They" may still be here, but so are we.



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