



# National Capital Area SKEPTICAL EYE

1994

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## In Memorium: Elena Watson



Elena Watson passed away in March. When she was diagnosed with a progressive incurable disease, her future was defined with a clarity that we are afforded only in the most cruel and unforgiving circumstances. But Elena must have been an optimist. A pessimist would have found it very easy to give up on everything, but Elena accepted the new challenge and actively pursued her beliefs that her part of the world could be made better, and that she could help do it. When she chose as her target the same kinds of irrationality that concern NCAS, our paths were bound to meet. The local newspaper editors, for example, came to know her wit and reason with uncomfortable thoroughness, but she didn't stop there. I like to think that she turned up the lamp of learning a notch or two so the editors, as well as their readers, would all have a permanently brighter light in which to examine extraordinary claims. To our great fortune, she shared her views and experiences with us through the "Remote Viewing" column that she started in this newsletter. Her column showed us all that, when done well, reason and facts can challenge weird claims with clarity and humor without being pedantic or antagonistic. Elena did it well, indeed. As a testament to her skills we reprint on page 23 in this newsletter a eulogy from Bill Ruehlman of the *Virginian-Pilot Ledger-Star*.

We, too, will benefit from the lamps Elena lit.

—J.H.

## Must Animal Rights Be 'Anti-Science'?

By Randall Lockwood, Ph.D.

The question implied by the title is "can one be an advocate of animal protection *and* a proponent of skeptical, scientific inquiry?" As someone who has been active in both arenas for many years, I feel that the answer is clearly "yes" and I find the characterization of animal activists as a collection of creationist flat-earthers both personally offensive and frequently, but certainly not always, wrong.

Yet critics of animal research are often portrayed as anti-science, anti-intellectual, and anti-human. Those exact terms are suggested in the American Medical Association's "Action Plan" for dealing with animal activists, which was not intended for public circulation, but which surfaced in the summer of 1989.

Let me explore the basic question, "is the animal rights/animal protection movement anti-science," whatever that may mean. Are those involved in it simply ignorant of science, like the majority of Americans, or are they specifically against scientific methodology and progress? Is the underlying philosophy contrary to the aims or methods of science? What can be done to reconcile any conflicts that might exist between the aims of science and society's obvious concern for other creatures?

First, we have to clarify what we mean by animal rights. We must recognize that our culture harbors a wide spectrum of attitudes dealing with our duties and obligations to animals, ranging from those who feel justified or even religiously compelled to make whatever use of animals they see fit, who honestly believe that animals were put here by God for whatever use we chose to make

*continued on page 4*



encourages critical and scientific thinking

serves as an information resource on extraordinary claims

provides extraordinary evidence that skeptics are cool



## Letters

I have recently moved into the area and have truly enjoyed your publication. It's refreshing to see [that] not everybody is gullible enough to take as doctrine whatever they happen to see or read in print. This

letter however is in response to your review of Aidan Kelly's book *Crafting: The Art of Magic*.

Three of the main points in the article were more or less correct. Wiccan's do indeed acknowledge the female side of deity (as do many many other religions such as the Virgin Mary in Christianity and the goddess Isis in Egyptian mythology to name only a few). We do not however dwell on this to the point of exclusion of the male aspect of our god. Also Wiccans are very interested in our environment, though this is certainly not a trait unique to Wicca. It is only logical that when your beliefs incorporate a reverence for nature and all life is considered sacred, the wellbeing of the environment is of paramount importance. When the article comes to the point of Wicca's history though, there are a few facts that Mr. Dengrove overlooked (or perhaps, Kelly didn't incorporate these historical facts into his book).

A direct lineage of Wiccan history can only be traced back to Gerald Gardner in the late 1930s for a very simple reason. The law. In fact it wasn't until the mid 1950s that Wicca was finally protected, and recognized as a legitimate religion, even by the military (sort of a "don't craft, don't spell" policy). Before this, a witch who dared to come out of the broom closet, so to speak, could look forward to an array of terrible treatment including imprisonment and death, even in our own century. Before this, Wiccans were forced into hiding and continued to operate underground, not to keep their practices secret, but for their own protection. All literature was handwritten and passed from generation to generation. An oral history of their religion was preferred over a written one.

However, being a skeptic at heart, I too have searched for tangible proof of the existence and practice of Wicca prior to the Garnarian age. This is what I have found. In 1496 two German monks, Heinrich Kramer and Jakob Sprenger under order from Pope Innocent VIII produced the *Malleus Maleficarum*. In this publication guidelines for indentifying a witch, instructions on how they were to be tried, and procedures for their execution were given. Furthermore, in 1604 King James I passed his Witchcraft Act, based upon the writings of Kramer and Sprenger. This act was repealed in 1736 in favor of a more subtle way of "ferreting out" those who still practiced the craft. Finally I was a little surprised to learn the origin and meaning of the word 'pagan' (as in the term Wiccan-pagan custom). It was (and is) predominately used to describe the practice of any religion that pre-dates Christianity. The actual definition simply means 'non-Christian' and comes from the latin word *paganus*, which simply means 'one who lives in the country.' This term was used often in the 15th through 16th centuries. To my knowledge the common use of latin died out

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recycled paper

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## Prez Sez

### In Memorium

By Joe Himes

Elena Watson worked with a spirit and energy that exemplify our purpose as an organization. To help those qualities propagate and flourish in Elena's memory, NCAS will donate material to her local library in Norfolk and will establish a new feature in the Skeptical Eye that will look over the shoulder of reporters anywhere. Both projects promise to be fun as well as rewarding, and both could become models to be followed elsewhere. Best of all, everyone can have a hand in helping them along.

#### Skeptic's Bookshelf

NCAS will start to fill the shelf with a few books and copies of both this newsletter and the Skeptical Inquirer. The collection will emphasize the positive side of what we're all about. We will acknowledge contributions received in Elena's memory and use the money to purchase books or periodicals that are not already available in the library. Remember that Norfolk is Edgar Cayce country! (Of course, all material must be acceptable to the library.) We want to attract the attention of browsers, but

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#### Letters

long before Gerald Gardner's birth, so wouldn't apply to any modern "invented" religion.

One last point, the correlation of Wicca and Satanism is a common mistake. It is bred of ignorance, although in order to properly explain this would require an in depth discussion of Wiccan beliefs and morality. For now though it is sufficient to keep in mind Wicca's highest law—Do what will bring happiness and fulfillment as long as by doing so, *you bring harm to no one*. A philosophy that doesn't sound too satanic now, does it?

Jason Rodgers

*Editor's note: Maleus Maleficarum (literally "Witches' Hammer") was a how-to guide for would-be witch bashers. Its first part explicitly identifies "witches" as devil worshippers, a label applied broadly to heretics, homosexuals, Jews, and others outside the mainstream of the day. One of the fundamental principals of organized Satanism outlined in Anton La Vey's The Satanic Bible (1969) is do whatever you feel like doing as long as you do not harm anyone.*

we also intend for the browsers to remember our material as a resource when they hear about the next bit of wierd "science" or when they need an interesting topic for a school project.

Although we will not fill a whole shelf right away, Elena was optimistic and so are we. In fact, I invite you to offer ideas and a good name for our collection. Could it grow into a "Skeptics' Corner," or will it be more of a "Thinkers' Toolbox" that could be used by almost anyone to fix a broken idea? What would work for you?

#### Feature on Reporting

This feature may start humbly, like the bookshelf, but it has great growth potential. The objective is to improve the quality of reporting about extraordinary claims. "Quality," of course, doesn't mean only NCAS-approved articles, but it certainly implies a lot of care and context that are too often missing. Sensationalism may be good for sales, but it's bad for science and for those who are trying to understand science. This media watch column will feature examples of both good and bad reporting submitted by our readers. It is common to find both examples in different reports of the same event. Remember the weeping statues of St. Mary; group meditation to reduce crime in Washington; qi gong at the NIH; and recovered memories all over the place? There are fair and reasonable standards that print and broadcast reporters should be required to meet. Elena was able to increase awareness of those standards in her part of the world and we should do no less here. NCAS will, of course, offer a pat on the back for good work and aim a little lower for the rest. We could offer "report cards" (a technique that has worked well for the Georgia Skeptics) or even annual "best" and "worst" awards if they help to make our point. I promise that we will hold to our own standards and those set by Elena.

Help start us off. If you have an example of what you consider good or bad reporting about extraordinary claims, send us a copy and tell us why you like it or don't.

*Elena Watson Requiescat In Pace*

#### Editors / Writers

Now more than ever NCAS needs your help.

We are proud of our *Skeptical Eye*, and we want it to continue to arch it's brow with the highest possible standards. If you can contribute your talents toward editing, writing, and behind the scenes production, please let us know. Contact Chip Denman at 301-585-4093 (evenings), 301-405-3084 (office), or email: denman@umdd.umd.edu.

## ***Animal Rights, from page 1***

of them, to those who feel animals can be used, but with great concern that they be used wisely and humanely, to those who would grant animals equal rights with humans, to those who would injure people who they feel exploit animals. As with any such distribution, the extremes stand out, but they are minority positions. The caricature of the typical animal activist as a lab-trashing anarchist is a straw-man based on a small, but highly media-worthy element. In fact, the FBI's own documents estimate U.S. membership in the Animal Liberation Front at less than 100.

The growing strength of animal movements is a reflection of the fact that they deal with issues of concern to a large number of people. My own organization, The Humane Society of the United States, has a constituency of over one million eight hundred thousand. Most Americans are willing to make use of animals, for food, for medical advances and so on, but most are also concerned that such uses be justifiable and humane. The characterization of animal protection as anti-science would imply that it is a movement that should not, and in fact, *must* not, attract scientists, which is clearly not true.

Scientists have been involved in the debate over the use of animals in science since before the Victorian era. In 1824, as the British anti-vivisection movement was gaining strength, 67 doctors signed protests against animal experimentation in England. Even Charles Darwin, while reluctant to criticize the physiological investigations of his medical colleagues, was a vocal critic of the leg-hold trap and other abusive practices. Today we have a wide assortment of professional organizations concerned about animal protection, including the Physicians Committee for Responsible Medicine, the Association of Veterinarians for Animal Rights, Scientists Center for Animal Welfare, Psychologists for the Ethical Treatment of Animals, and hundreds of individual scientists who have contributed their expertise to efforts on behalf of animals.

Ultimately, our treatment of animals is a question of personal and societal values. The idea that science is value free is one that should have been vaporized with the first flash at Trinity Site, Alamogordo. Science is *not*

value free, and as philosopher Bernard Rollin points out, this assertion that it is, is itself a monumental value judgement; a proclamation that "I can do whatever I want in pursuit of truth and the mysteries of the universe!"

As long as science is done by human beings it will be value laden. "Objective" scientific data cannot lead us to a single, irrefutable ethical position on moral or value judgements. That is why we will always find good scientists on both sides of virtually every moral, social, or environmental issue, including abortion, global warming, acid rain, nuclear weaponry, animal rights, and many others.

Data alone cannot lead us to a single "scientific" position on our duties and responsibilities to animals and the natural world. All sides can use the same data on physiological similarities, sentience, capacity to suffer, and likelihood of human benefit to attempt to justify what are ultimately subjective judgments. These judgements, whether they lead to exploitation, utilitarianism, or reverence for life, are *emotional*, no matter who makes them and how objective they profess to be. It is no wonder that the debate over animals is so emotional, since ideas without emotion behind them are not translated into action.

The animal movement has been characterized as emotional, and thus unscientific, for its reliance on emotional messages and imagery, yet this same approach has been embraced by the AMA, the Society for Neuroscience, and other advocates of animal research in their public relations efforts depicting doe-eyed little children who, we are told, will surely die if the research community is inconvenienced in obtaining an unlimited supply of animals for the mills of science. Ironically, I have attended many hearings where animal advocates appear with printouts and spreadsheets to support their position, while the research community wheels in sick children, in what the press is fond of labelling "the parade of cripples," to plea for easier access to animals.

Another anti-science charge is that proponents of animal rights don't get the facts right. Often that charge is true...on both sides. I feel that the facts can speak for themselves and many scientifically trained animal advocates have been critical of poor scholarship on the part of much of the animal rights movement, which is again symptomatic of a broad-based grass-roots movement of a mainstream America which also happens to be scientifically naive. But again, emotion clouds scholarship and the blame falls heavily on both sides of the debate. Perhaps the most egregious error in scholarship has been the research community's assertion that the Nazis, like today's animal rights advocates, were vigorous opponents of vivisection. This claim was made by NIH's Dr. Fred Goodwin on a "MacNeil/Lehrer" broadcast and was repeated by the AMA's Dr. Daniel Johnson on "Nightline" when he said "The only people in modern society that have



not used animals in research were the Nazis.” This is a claim that is clearly emotional, incendiary, and simply wrong. Many historians of animal research have documented in detail how virtually all of the Nazi human experimentation was a continuation or supplementation of experiments begun on animals, including high altitude decompression, disease transmission, and the effects of mustard gas. Even if the allegations *were* true, what’s the point? Clearly the intended implication is to construct the logical argument: A. Nazi’s were for animal rights, B. Nazi’s were terrible people... therefore C. Animal rights people are terrible like Nazis! If this is the level of scientific reasoning common to the scientific community, we do indeed have enormous problems of scientific literacy!

Another criterion used to label the animal movement as unscientific is its reliance on untrained, non-scientific celebrity spokespeople. Most social and environmental movements make extensive use of articulate, popular spokespeople because they can communicate with the general public, something which, as has been lamented throughout these meetings, most scientists cannot. Once again the research establishment has mimicked its perceived foes and is doing the same thing. We have for example, the pamphlet “Charlton Heston on Animal Research,” brought to you by...The Incurably Ill for Animal Research! Mr. Heston, you are probably aware, has also been a spokesperson for Star Wars technology defense contractors, and can be seen regularly on TV promoting the National Rifle Association, which is hardly a strong ally of public health interests.

Another charge that is used to question the scientific credibility of animal advocates is that their motives are impure or greedy, using emotional appeals to fatten their purses. The assumption is that only the poor are pure of heart. On the flip side, we must not overlook the fact that most utilization of animals, be it for food, research, or sport... is somebody’s *business*. I do not doubt that many researchers pursue their interests for noble, altruistic reasons, but we can’t ignore the fact that animal research, like most of science, is big business. Last year NIH awarded \$275 million in biomedical research contracts to institutions within a 20 mile radius of this room. When the primary measure of ethics in research has been reduced to simply the absence of fraud, when researchers seriously measure their work in terms such as “least publishable units,” we have to be skeptical of the direction science is taking. As Einstein once remarked “if an Angel were sent by God to drive out of the temple of science all those people in it for reasons other than their love of truth, it would become embarrassingly empty.”

But let’s get beyond the rhetoric and name calling to see why the debate has become acrimonious, and what can be done. Concerns about animals and the implied mistrust of many of those involved in animal research is part of a much larger skepticism about the scientific establishment

that closely parallels events during the Victorian era when science and technology were producing rapid and often disruptive social and environmental change, a time very much like today which gave birth to the animal welfare and anti-vivisection movements.

The American public have become skeptical, even cynical consumers of scientific claims and promises and are increasingly unwilling to entrust scientists or technocrats with making the moral and ethical decisions about how these advances are to be obtained or applied. An NSF survey showed that 41% of Americans believe that science and technology will have a negative effect on people’s moral values. An Office of Technology Assessment survey reported that 42% believe that science must be restrained to protect the safety of society...and with good reason.

In the 1930’s and 40’s we began to be promised “better living through chemistry.” Dow may claim to help us do great things, but the Dow “thing” most of us of my generation remember best is napalm. That dream of better living brought us two decades of Silent Springs and then washed up dying on the shores of Love Canal and Times Beach and gasped its last at Bhopal. In the 50’s we were promised that we would soon ride to work in atomic cars on a penny’s worth of fuel, we saw that dream melt down at Three Mile Island and Chernobyl.

In the 1960’s our political and scientific leaders promised us that with enough guts and money we would win two wars, against Vietnam and against cancer. We lost in Vietnam, another fact which, like many in science, is unknown to many American high school students. As for the war against disease, the battle is in overtime. As medical ethicist Daniel Callahan points out in *The Limits of Medical Progress*, the basic assumptions of American medicine have never been under stronger attack than when we have lived in a country that features both the best and the worst health care delivery in the developed world. In this city we have a black infant mortality rate above that of many Third World countries.

In addition, as Andrew Rowan has noted, today’s citizens, like their Victorian counterparts “are by no means comfortable with the fact that their health is depen-



dent on a practice that can cause the death and possible suffering of helpless and innocent animals.”

Not surprisingly, the mood at a National Academy of Science meeting I attended on regulating genetic engineering and the release of engineered organisms was noticeably guarded. Many scientists spoke for cautious, well-regulated advance, since the public has been repeatedly burned before and this was, in one participant's words, “the last chance for scientists to get it right.” The European Economic Community has already voiced its opinion, by rejecting the concept of patenting animal life forms.

It may soon be too late to get it right as far as winning back the confidence of Americans in science. These slides are from a recent survey conducted by the National Science Teacher's Association in which children were simply asked to draw their impression of a scientist in action, and they are decidedly unflattering. They clearly show that many elementary school children view scientists as greedy vivisectionists. Yet it is a situation that the scientific community has largely brought on itself. The stereotype of the scientist as an omniscient, omnipotent, unemotional, infallible, white male is one that has often been embraced and rarely been discouraged. It is no wonder when they actually act like real, petty, and sometimes inept human beings that the public feels cheated and suspicious.

Roy Rustum, editor of the *Bulletin of Science, Technology, and Society*, has said it well, “Science must change or self destruct.” He observes, pessimistically, “Science will die as a vital culture-shaping force for the same reason that theology (not religion) died as a culture from a few centuries ago—it became too precious, the province of an elite priesthood.” The response of much of organized science to issues of animal protection are symptomatic of this. Conflict with the animal community is used as a litmus test of scientific integrity, of adherence to the faith, to the point where I get complaints from scientists who are being pressured by superiors to endorse practices like the Draize test or LD50 which *they oppose on purely scientific grounds*, because agreement with any of the positions of the animal rights community is seen as a sign of intellectual weakness. This has the effect of turning scientists against each other, as well as a large segment of the population that pays for their work.

Is there a way back? We have discussed the need for better education in science, and for better communication between scientists and the public they serve. But a basic change is needed, I feel, in scientists themselves. The best way to honor the spirit of Newton, Descartes, and Bacon is not to slavishly cling to a dispassionate view of nature as something to be conquered and disassembled to make it give up its secrets,

but to critique and modify their approach in the same way the first scientists critiqued their theological roots.

Physicians and veterinarians have recognized that they have been educationally ill-equipped to deal with ethical debates, and major changes are being made in the curriculum to give these topics serious attention. The same should be done in every branch of science and science education. That requires listening to other voices, other cultures, to the public, the philosophers, the ethicists, politicians, and the even animal rights community. I think in this light we can see that to most people, raising issues of our uses of animals is not like throwing a wall in the path of the vehicle of science, but rather applying pressure to brakes that might keep it from running completely off the road, taking us and the planet with it.

It is hard to do this, there is so much *data* to be absorbed in science education that it is difficult to make room for ideas. Few physics students today are exposed to the extraordinary range of Einstein's philosophical and political writings and activities, and very few molecular biologists have taken the time to experience the joy of reading Darwin's *Expression of the Emotions in Animals and Man* or his own personal favorite work on earthworms, *The Formation of Vegetable Mould*. Yet in doing so, and in seeing ourselves as a *part* of nature and not *apart from* it, the beauty of science done well can survive.



Based on an Address to CSICOP Conference on Critical Thinking and Scientific Literacy, Washington, DC, March 31, 1990.

Randy Lockwood is a vice-president at the Humane Society of the United States and a former vice-president of the National Capital Area Skeptics.



**Check the date printed on the mailing label on this issue. If you are looking into a past-life, then it must be time to renew your membership in NCAS.**

# By The Numbers

## Lies, Damned Lies, and Statistics

By Chip Denman

“When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind.”

William Thomson, Lord Kelvin  
1824-1907

Measurement is not enough. Scientific understanding lies in comparing measurements and understanding their uncertainty. Statistics is the discipline which not only tolerates uncertainty, but embraces it. Virtually every field of scientific inquiry has contributed to the language, variations, and styles of presentation which make up the body of statistics.

“Statistics”...a word which has struck fear into many a student.

Graduate students from agronomy to zoology have been left clueless by introductory statistics and research methods courses everywhere. Undergrads have despaired over chi-square formulae and F-tests. Those who never had such a course may feel even less comfortable with the “correlations,” “margins of error,” and other terms slung around in the morning paper. Sometimes, I suspect, being more self-consciously ignorant may be better than being blissfully half-smart...statistics being merely the example that I know best.

The language of probability and statistics is everywhere. All of these are from the newspaper the same day:

- *At least in the near future, state and local government is probably not going to generate a lot of jobs...*
- *Witch Doctor in the 8th race...odds: 9-2.*
- *The likelihood of developing severe symptoms was 20 percent in patients receiving the highest dose of AZT...*
- *Cancer: ...You'll have luck in matters of finance, romance.*
- *Gemini: Because Mercury, your ruler, now joins the sun and Mars in that area of your solar chart which governs work and career matters, you should be quietly confident about the future.*

Most of these examples convey a straightforward, everyday meaning. (Well, maybe if you are a Gemini.) Sometimes this everyday meaning is not the same as the precise mathematical meaning that underlies the original intention.

The very term “statistics” has many connotations. I once spent an hour on the phone with an attorney who called to find out if a certain product was safe. “Give me the data,” I suggested, “and I can develop the risk estimates.” “Data?...you are a statistician; you are supposed

to know these things!” A good librarian might have helped; I could not.

Let me be clear: My role as a statistician is that of a professional skeptic. My training is in mathematical tools for looking at data and evaluating hypotheses. My obligation is to ask tough questions about the data and its source.

The classic statistical paradigm (brushing aside the differences between the philosophies of Fisher, Neyman-Pearson, and Bayesian statistics) is a mirror of the mythic scientific method as promulgated in textbooks:

1. Formulate hypotheses (in terms which relate to probabilities);
  2. Use data to derive a quantitative summary which relates directly to the probability statement above;
  3. Reject (or not) hypotheses based on an evaluation of probabilities;
- ...and repeat as necessary.

Of course, real-life data analysis rarely follows such a recipe exactly. But, hey, if you've seen me in the kitchen, you know that I rarely cook exactly by the book either. In the last 20 years graphical methods, especially those suited to exploratory data analysis, have expanded the statistical menu. Computer-intensive methods based in part on (pseudo)random numbers and repetitive enumeration were unthinkable even a few years ago.

All of these statistical methods have one fundamental theme: human intuition is very fallible at evaluating likelihoods and coincidence. Even the very meaning of “random” is far from obvious. We can give a precise definition of probability in terms of abstract mathematical properties (e.g. measure theory), but the mathematics per se do not define everyday experience. What is this probability thing anyway?

The so-called classical approach to probability provides a convenient way to calculate, at least for simple, finite situations. According to this approach, derived from gambling problems and formalized philosophically by Pierre Simon de LaPlace (1749-1827), probability represents the ratio:

$$\frac{\text{number of (equally likely) ways something particular can happen}}{\text{total number of (equally likely) possible outcomes}}$$

This works fine for things like lotteries and other gambling games, but it's a bit of a reach to apply it to complex events.

To call this THE classical approach is misleading. Other ways of thinking about probability have been with us for just as long. The relative frequency interpretation is common among modern statisticians, but this same kind of thinking can be found in the mortality tables published in 1662 by John Graunt of London. In slightly more modern terms (proposed by John Venn in 1886 and developed mathematically in the 1920s by Richard von Mises), imagine an experiment in which we observe whether event

E happens or not. If we repeat the experiment many, many, many times, the ratio

$$\frac{\text{number of times E happens}}{\text{total number of repeats}}$$

will get closer and closer to some fixed number from 0 and 1. If we could imagine repeating the experiment forever, the limiting value of the relative frequency would be the "probability of E".

This makes sense in a large number of practical problems. We can easily imagine people playing the lottery time and time again. We can imagine, at least in principle, running a horse in race after race. We can even imagine interviewing a large number of "Cancers" and asking them about their love life. With a little more imagination we can make this work for, say, weather predictions. "A 30% chance of showers" could mean that if we could somehow observe a really large number of days with conditions just like today, 30% of the time our picnics would be canceled.

A third (and by no means, final) way to interpret probabilities is as a degree of belief, also known as the subjective interpretation. Only a mental contortionist could devise a frequency interpretation of the statement "Lee Harvey Oswald probably acted alone." In this way of thinking, probability represents a measure of your strength of belief. Variations on this idea are useful in trying to represent the degree to which evidence may confirm or disconfirm, say, "the single bullet theory." It is also a natural way of talking about the "prior distributions" in Bayesian analysis. The mathematical niceties of this idea are recent (F. P. Ramsey in 1926 and L. J. Savage in 1954 ). However, the concepts can be traced to 16th and 17th century jurisprudence in which "probability" was apportioned to evidence according to its certainty.

In practice, it rarely matters which interpretation is chosen. The numbers remain the same.

Even simple problems can knock intuition sideways. I just tossed a penny in the air. What's the probability that heads is showing? One-half, of course. One equally likely chance out of two. But now I have tossed a penny and a nickel together, and I tell you that one of them—and maybe both—is heads. What's the probability that *both* are heads? Surely one coin has no effect upon the other, so is it one-half again?

The correct answer is one-third. Huh?

The picture shows why. There are four equally likely scenarios when we toss both coins. Although the nickel and the penny are certainly independent (whatever that means), we know that they are not both tail up, leaving three possibilities. Double heads is one out of three. The key here is that I did not tell you which of the two coins I was talking about when I said that one of them was heads. If I had let on that it was the nickel, then we'd be left with only two scenarios which *does* yield the answer of one-half. Something as seemingly trivial as naming or not naming a coin makes all the difference.

If this still seems a bit weird, try the experiment. Toss two coins on the rug. If both are tails, forget it...pick them up and toss again. But if at least one head is showing, record the result. Repeat the process until you have a good number of recorded data. What percentage of the record shows double heads?

(This same problem is sometimes given in terms of a person with two children, at least one of whom is a boy. For some reason this seems to confuse intuition even more effectively than coins. Try it on someone.)

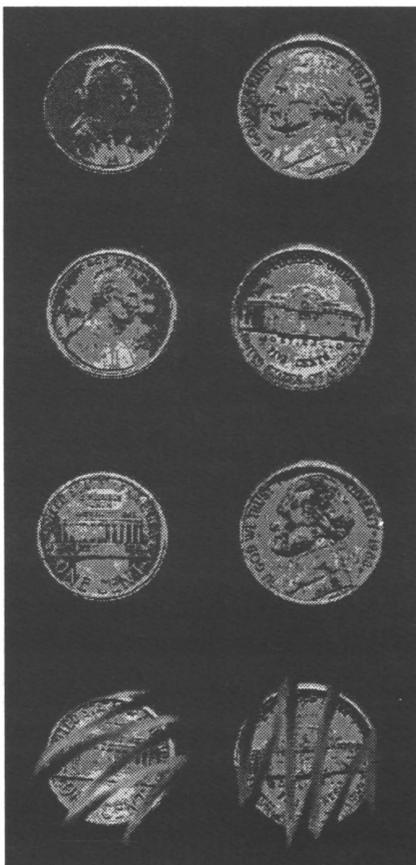
Another simple problem makes a great classroom demonstration. It is rather unlikely that you and I share the same birthday (day and month, ignore the year). Obviously the more people that we pull into the party, the more likely it is that at least 2 people will match. How many people do we need in order that a match is more likely than not?

Wishing away the pesky matter of leap years, it's pretty clear that if we invite 366 people, at least two of them *must* share a birthday. So how many before the chances are 50-50? (When I've posed this problem in large gatherings, I sometimes get answers like "1000". Go figure.)

If you've never heard the answer before, it just doesn't feel right: twenty-three. The box shows the calculation.

The key again is that we did not specify which birthday had to match. We did not specify June 25, nor did we require that James and Shirley had to match. We are merely looking for some coincidence, somewhere, anywhere.

Simple puzzles like these do more than point out the weakness of intuition. They also can give us a start toward quantifying more real-life coincidences. Persi Diaconis and Frederick Mosteller have presented



extensions to the birthday puzzle which show how easy it is to get near-misses like birthdays one or two days apart. But what about the “psychic” puzzlers like we’ve all encountered, at least secondhand? Is Aunt Martha’s dream which came true beyond the reach of probability and statistics?

Here’s a way of thinking about such events that I first saw sketched out in *Innumeracy* by John Allen Paulos. If there are absolutely no psychic powers whatsoever, it’s pretty unlikely that a dream of yours will predict the future. How unlikely? I don’t know...let’s start with the guess of 1 chance out of 10,000. What constitutes a hit? It doesn’t really matter; be your own judge. Since this is just an approximation, let’s also pretend that you remember one dream a night and that each dream is independent of the rest. Just like in the birthday calculation, start by looking at the probability that a dream *doesn’t* match with the future:

Probability of one non-matching dream:

$$9,999/10,000 = .9999$$

Probability of non-matching dreams for two nights in a row:

$$.9999 \times .9999 \approx .9998$$

Probability of a whole year of non-matching dreams:

$$(.9999)^{365} \approx .9642$$

In terms of the relative frequency interpretation of probability, we should expect that about 96.4 percent of us will not have any matching dreams over the course of a year of dreaming, waking, and remembering.

But this means that we should also expect those other 3.6 percent to have *at least* one dream each which seems to predict the future. And remember, we are talking about what would happen *without* psychic powers, just relying on pure blind luck. The United States is about 250 million, so we should expect about 9 million people in the U.S. alone to have “precognitive” dreams just by chance!

An individual who dreams for 19 years will have almost exactly an even chance of having at least one such spooky dream ( $1 - .9999^{365 \times 19} \approx .5002$ ). It’s no surprise to me many of my students at the university tell me that it’s happened to them.

Even if you think that our original guess of 1/10,000 was too high, this kind of analysis is still revealing. What if we try one chance out of 100,000? We still should

### Birthday Problem Solved!

Probability of no match with 2 people:

1st birthday can be any day out of the year: 365/365

2nd birthday can be any of the other days: 364/365

So chances of no match =  $(365/365)(364/365) = .9973$

Probability of a match =  $1 - .9973 = .0027$

For 3 people the chance of no matching birthdays is

$$(365/365)(364/365)(363/365) = .9918$$

For 23 people the probability of no matching birthdays is

$$(365/365)(364/365)\dots(343/365) = .4927$$

So the probability of getting at least one match with 23 people is

$$1 - .4927 = .5073$$

...which is just a little better than 50%.

expect 900,000 people to have the illusion of a psychic flash. Even if we try a ridiculously low chance of only 1 out of a billion, we should expect enough “precognitive” dreams for *Unsolved Mysteries* to re-enact one a week and have plenty left over as fodder for *The X Files*.

These kinds of tentative analyses are not proof. The numbers are guesses—your mileage may vary. But they are educated guesses. They show how even elementary arithmetic can go a long way toward slowing the jump to hasty conclusions.

Astute readers have noticed that I said that I would talk about statistics, but in fact I have talked mostly about probability. I lied.

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# Rants from the Underground



## What We Say . . . and What They Hear

By Steve Shore

Last week, I received a triple whammy of body-blows that serve to remind any academic about the truth of Gibbon's bon mot, quoted in Feynman's lectures on physics: "teaching is of little efficacy except in the happy circumstance in which it is superfluous." One of the students I had had last semester in the stellar astronomy course for non-science majors—call him D.—showed up late in the afternoon wanting to talk.

D. was one of the best students in the class, at least in his performance on exams. He faithfully attended class, expressed opinions, and asked questions. In short, D. was an ideal student. In addition, he is one of the "nontraditional" cohort, an older student who returned to university after some time away from the classroom. Since these students tend to be highly motivated, D. fit the pattern that way as well.

He said he'd been reading about propulsion systems and was wondering if I'd look at some ideas. Knowing that D. is a science fiction fan, I wasn't surprised at this request. After all, in class I had mentioned my involvement with NASA and the space biz. But that was when, as Alice found out, the road took a shake. D. wanted my opinion on some ideas specifically related to anti-gravity propulsion systems. And flying saucers. And the successful prototype of such a system that had been built by an Australian engineer (he read about it in *Nexus* magazine). And how you can use the polarity of a magnetic field to change the structure of the gravitational field, and how similar the two are. And how the government is covering this up.

It didn't stop there! D. went on to question the loss of the Mars Observer satellite. He argued that it was deliberately destroyed by NASA because it would reveal the truth about the "Face on Mars." When he finally reached the part about alien visitations over the centuries, and returned to claims of government cover-ups, I realized the full scope of the problem.

We talked for more than an hour, and we'll likely do so again because D. wants a friend to join in next time. In our discussion, nothing I could say could lead him to see

that his arguments, contradicted some of the most elementary ideas of physics. No paradox was too deep, no contradiction with mundane reality was too severe. D. just accepted them and returned to his original point.

This was a skeptic's worst nightmare come to life. For an entire semester, I had pointed out the physical basis of the material we were covering. I was very careful to try to bring in the sort of material that is always considered most helpful in broadening students' perspectives within science. I covered the historical and interdisciplinary aspects of the subject. I spent no time on debunking (Jim Alcock's analysis of belief systems has been a constant guide in this). Yet clearly D. had understood nothing of what I had said. And the structure of the short-answer and essay questions on exams had not revealed his dual world view. Because D. received an A for the course, he now thinks that he knows the subject material. And in fact he does—at the level that I examined it.

D. plans to become a teacher. Anyone looking at his transcript will think him qualified to teach elementary astronomy. Yet he lacks any understanding of what science is. I felt more like Colin Clive than Richard Feynman!

Later, I discussed this problem with another member of the department, an adjunct professor who teaches physics at a local high school. He thought I was overreacting. After all, it could happen that antigravity exists (if we had described the electron 100 years ago people would have said that it was also impossible). Besides, if D. understood how to solve problems then he understood the material.

This adjunct professor is an excellent teacher, and he has a good intuitive grasp of classical physics. But he wasn't in the least concerned about the fact that D., like so many other people, successfully carries around unreconciled views of the world. All that mattered to him was whether students could pass the quizzes, not whether they "believed" the material. Is it any wonder that engineers should turn up in the Institute for Creation Research or that a computer scientist should be a geocentrist?

The final punch came the next day, when a friend at Kennesaw State College in Georgia called to say that he had taken his class to the Fernbank Planetarium in Atlanta. He hoped the field trip would be a pleasant break

and would reinforce some of the material he'd been covering in class. The planetarium show was on African astronomy. In the middle of the program, the narration described how the Dogon people had discovered the moons of Jupiter hundreds of years before Galileo and how they had known for centuries that Sirius, the visually brightest star in the sky, has a compact companion whose density is greater than iron.

Fernbank is nationally known as an excellent public education facility. Yet here were Robert Temple's discredited claims all over again, assertions that had been trashed in the literature nearly 15 years ago!

When my friend spoke with the director, the response he received was a mixture of surprise that the show was being criticized and ignorance of the debunking of the "Sirius Mystery." This must be one of the longest periods of submersion for one of Randi's "rubber ducks" on record. Even after this discussion, the director saw nothing wrong with keeping the material in the show! Thousands of people, mainly children, will see this material and it will take on the ring of truth precisely because it is a slick show in a public facility that is presumably devoted to science education.

When you stand in front of a class and see students bob their heads in apparent comprehension, it's easy to feel that you are getting through to them. When you conduct tests and see that they are able to answer the questions correctly, you feel sure that they have absorbed your lectures and the material in the text. When you see from evaluations that the students think you know what you're talking about and feel that you've taught a stimulating course, you get that warm glow of accomplishment.

But I think we need to ask one more set of questions: Are we making any difference in how students see the world? Why are we teaching? Is it to pass along the facts? If so, then these marks of success are sufficient. But if we are trying to get students, especially non-science majors, to see how science works and to understand how scientists think about problems, then we may be falling well short of the mark.



*Steve Shore is chair of the Physics and Astronomy Department at Indiana University South Bend.*

## Barney Satanic Panic a Hoax

In early February of this year, one Luscious M. Bromley took to the airwaves in Tampa, FL, spreading the word that Barney, the goofy purple dinosaur, so beloved by preschoolers, was in fact, an instrument of the devil. And the word did spread. To the Associated Press, and to nearly 20 television stations, including CNN, who also picked up on it. But by the end of the month the jig was up. "Bromley" turned out to be 29 year old psychology graduate student John Bunch Jr., who had instigated the hoax to see how gullible the media could be, as well as to gain some publicity for his comedy duo, Human Kennel.

Bunch had claimed to be 33 year old housepainter and devout Christian, Luscious M. Bromley, the president of Citizens Concerned About Barney, a 20 member group based in Tampa. Far from the first Barney-basher, the fictitious Bromley took the craze to new heights by claiming that the purple dino was not merely insipid, but was instead spreading a message of Satanism, occultism and witchcraft. This would later lead children into drugs, gangs, homosexuality and premarital sex. Strangely enough, there is a man in Charlotte, N.C., Rev. Joseph Chambers, author of "The Purple Messiah," who preaches a similar warning. And yet, even he expressed some skepticism towards the unexposed Bromley, telling the *St. Petersburg Times* (Feb. 8, 1994) he didn't agree that Barney is a prelude to pornography, "I think that's a little heavy."

Bunch managed to lay it on even heavier, however, as his alter ego Bromley blamed his own past hedonism on youthful exposure to a TV show featuring dinosaurs, "Land of the Lost." "The program specifically said this prehistoric period existed. That right there is a contradiction of the Bible," Bromley/Bunch, insisted to the *St. Petersburg Times* (Feb. 8, 1994).

Bromley's own downfall came quickly enough, however, when he and his comedy partner, and fellow graduate student, David J. Bennett, were spotted on television by someone they knew (*St. Petersburg Times*, Feb. 15, 1994).

## Book Reviews



*Higher Superstition: The Academic Left and its Quarrels with Science* by Paul R. Gross and Norman Levitt. Johns Hopkins University Press, 1994. 314 pages.

A few years ago there was a fight at Stanford University over the humanities curriculum. The core of the disagreement was (putting it politely) whether the longstanding 'western civilization' curriculum represented an overly narrow view of philosophy, literature, and art. The Stanford debate became a reference point for people on all sides of the argument about political correctness and was thereby blown out of proportion. Underlying the fracas, though, was an intellectual phenomenon worth investigating.

Over the last twenty years or so, a body of thought has developed and spread widely through the humanities departments at many universities. Reduced and simplified dramatically, the essence of the thinking is that culture is a relative thing: what works for me might not work for you; what is a classic in my culture might be unknown or meaningless in yours. Once this viewpoint began to dominate the discourse at universities, it was bound to influence the curriculum, as the students and faculty at Stanford learned. The influence could be good or bad, depending on your perspective: on the one hand, greater inclusiveness looks like a good thing; on the other hand, few intellectuals are prepared to abandon all notions of merit. By any standard, precious few people have written as well as Shakespeare.

What does all this have to do with science? The answer should be, nothing. The purpose of science is to analyze and understand the objective structure underlying reality. It has succeeded: the modern world is full of the fruits of scientific progress and the physical laws as we now know them are literally universal. Shakespeare was a genius, no doubt about it, but his 'truths' are arguably part of our culture and may not apply in foreign cultures, let alone a distant galaxy. Science's laws do, though. They are just not up for debate.

At least, we would hope they're not. These relativist theories' proponents—called the 'Academic Left' by Gross and Levitt—fortified by their successes throughout the humanities, have begun to take on science. Consider the cultural constructivists, a tribe of academics who examine all thinking from the context of the culture in which it

derives. They argue that western civilization begat science, so science and its results must be branded by some of western civilization's viewpoints. This view may contain a nugget of truth: Linnaeus, for example, classified plants in his famous hierarchy using the male sex organs to define class, female sex organs to define order, and so on down. Male mattered more to Linnaeus than female, and it shows. Today, though, Linnaeus's hierarchy is long gone except as a label we apply to the modern taxonomy; science's inherent self-correction erased Linnaeus's mistake and moved toward the fundamental truths about the organization of life. This is not to say that scientists all agree about every interpretation or theory; nonetheless, they accept that there is an underlying reality to be discerned. The cultural constructivists, however, know too little about science to understand its processes; they have no interest in science qua science, only in its cultural origins. But science without its results is nothing at all. In their attacks upon science, the cultural constructivists ignore the understanding of objective reality it has given us, so they not only miss the opportunity to find the few interesting examples, they make fools of themselves.

Stanley Aronowitz is a leading sociological theorist who has written, for example, about quantum mechanics, a subject he apparently doesn't understand at all. Consider Aronowitz's version of the history of science after the First World War: Europe was in a deep spiritual malaise after the travails of the war and its citizens sought a way out of determinism and causality. The hero Heisenberg, recognizing the need, came up with the uncertainty principle and the public demand was met. Of course, this is egregiously, hilariously, spectacularly wrong. But that doesn't stop Aronowitz from pressing on, citing names and physics jargon in a mad rush to show how the uncertainty principle demonstrates that quantum mechanics, being fuzzy, is invalid. He ignores the fact that quantum mechanics, fuzzy or not (it's not), has given us just about everything modern in the modern world: radios, televisions, computers, CDs; the list goes on. Despite its name, the uncertainty principle is a fanatically precise idea with hard predictive power. It states categorically what can and cannot be done, and it is utterly right, an objective truth. It has nothing whatever to do with culture and, despite Aronowitz, it stands as a testament to the predictive power of science. Aronowitz just doesn't get it.

Neither, it seems, do most of the other members of the Academic Left. This laughable example is just one of hundreds in *Higher Superstition*, almost all perpetrated by leaders of the new wave in the humanities. The fundamental point they miss is that their techniques for analyzing cultural phenomena may be relevant to scientists but not to science. Einstein may be dead, white, and male, but his science is right. His culture has nothing to do with the physical laws he discovered.

If *Higher Superstition* were not so well annotated the story it tells would be literally unbelievable. The deconstructionists dissect the scientific texts to extract their true meanings from the text rather than the science being reported. To the postmodernists, science becomes a 'narrative' to be studied as an equal with any other 'narrative'; it has no more intrinsic merit than astrology or phrenology. The feminists quarrel with science because, being a patriarchy, its actions are the male ones of attacking, plundering, and raping the feminine Nature - Mother Nature, one assumes. The Africanists argue that ..., oh, never mind.

Gross and Levitt gleefully go about their business of presenting and explaining (if that is the word) what these people are trying to do. Did you know that logic is a product of western society? There is a tribe in Africa with a bizarre form of numeracy and logic that, because it is alternate, is as valid as 'our' logic. Of course, one mustn't point out to the purveyors of this analysis that their own reasoning is based on the logic they're attacking. Such inconsistencies abound in the thinking of the Left; consider deconstructionism, which reduces all text to meaninglessness—all text, that is, except the deconstructionists' own writings.

One of the techniques Gross and Levitt expose is the absorption of jargon without understanding what it means. Aronowitz's lesson about the uncertainty principle illustrates this, but not as well as Derrida's statement that "The discourses of philosophy, linguistics, and sociology must be supplemented by a truly psychoanalytic account of AIDS by concepts drawn from the discourse of mathematics, principally post-Euclidean geometry, which provides for topological mappings based on a non-Euclidean concept of space." Gross and Levitt explain that Derrida is laboring under an etymological mistake: he believes that topology, the mathematical study of form, is related to topos, a literary term that describes a rhetorical or narrative theme. In other words, Derrida thinks topology is the study of rhetorical devices. As for non-Euclidean, to a scientist that is a long-winded way of saying non-linear, and in trendy culture and idiomatic speech these days, linear thinking is bad, lateral thinking good. Derrida is mixing metaphors and math and making a muddle.

How can anyone be taken in by such poppycock? And does it matter? Near the end of the book, Gross and Levitt address these points and reflect the analysis back on the culture of the Left. Briefly, since science is the foundation of western society, what better place to start the attack if your goal is society's overthrow? Gross and Levitt place this position in the context of the development of 20th century critical thinking, right up to the recent fad of political correctness. The PC debate is not the subject of the book, however: the authors are, rightly, more concerned about the attitudes of the leading thinkers in the universities than in student fads. If the current

generation is being taught by people with so little understanding of or even respect for science, how can we guarantee science will not be affected? There are already courses being taught in 'feminist science' and the trend is sure to continue.

Gross and Levitt admit they have no solutions to offer, but their book is educational, funny, and delightful reading, at least after the slow, overwritten introduction. It does offer some arguments to toss back at the muddleheadedness around us. For example, I've never known the right response to make when confronted by someone espousing Chinese medicine as a replacement for my own doctor. "Western medicine doesn't know everything." Well, neither does Chinese, but that's not the point, as the authors make clear: what is important is that the alternative is presented not because of what it is, but because of what it is not.

The next time someone complains to me about science and modern society, I will ask the complainer to turn off his word processor, throw away all his pens and pencils, and burn all his printed textbooks and xeroxed articles. Then, in solidarity with the long-dead white male Francis Bacon, I will ask him to take off his eyeglasses when he attacks my culture and its incontrovertible achievements.

—Rob Pike

## Local Bookstore Establishes "Skeptical Literature" Book Section

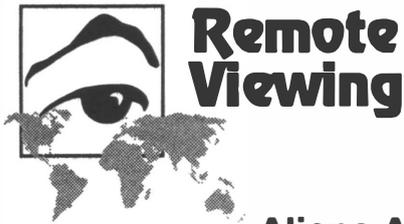
Reiter's Scientific & Professional Books, one of the leading technical and scientific bookstores in the Washington, D.C. area, has recently established a special interest section for books which may be of particular interest to skeptics.

According to a statement from Reiter's, the "Skeptical Literature" section has been created with the goal of providing a resource center for people interested in books which offer serious scientific debate on some of the more outlandish fads and fallacies which have beset our culture.

The heart of the new section will be a selection of books published by Prometheus Books. The bookstore also carries the periodicals *Skeptical Inquirer* and *Skeptic* magazine.

Reiter's encourages suggestions for titles to include in this new section. The store is located at 2021 K Street NW, Washington, DC, and can be contacted at 202-223-3327.

*The above is provided for information only and does not imply an endorsement by NCAS.*



## Aliens Among Us

By Lys Ann Shore

Bypassing the crowd at the buffet table, we got to the real reason why we'd ventured downtown on a cold night: to enjoy the opening of an exhibition of representational sculpture by a sculptor of our acquaintance. Breathtaking works of art, evidence of both inspiration and painstaking craftsmanship—and also blessedly recognizable. Here an exquisite head of an African woman, there a Degas-like dancer in bronze, on one wall a relief portrait of the pope. In a corner, fragments of alien armor.

Wait a minute—alien armor? I walked over to take a closer look. Yes, one piece was clearly a helmet, while another appeared to be a combination helmet and breastplate. There was more: a gaunt arm, mounted horizontally, outstretched like the arm of God reaching out to Adam on the ceiling of the Sistine Chapel.

What was going on here? A typewritten script mounted on the wall set the works in context: the artist envisioned them as fragments recovered from a “crash site” in—where else?—Roswell, New Mexico. He told me later that he had conceived the series for an outdoor setting, in a park, where the individual works would be installed around the central “crash site.”

“The occupants of the vehicle,” he explains, “appear to have been humanoid, with numerous differences, and about five-eighths human size...It is unclear whether the objects are actually armor, or a sort of self-grown protective covering, rather like a turtle shell. Perhaps these organisms grew such coverings, but instead of calcium for bone material, their metabolism used metal.” Well, it's hardly a coincidence that the sculptor is also a science-fiction writer in his spare time.

What intrigued me, though, and what kept drawing me back to these objects all evening, was the question of why they were so easy to recognize. What do you call a representational work of art that represents something that doesn't exist? What allows us to recognize the art work as a representation of that nonexistent thing, which ipso facto we've never laid eyes on?

Yet representations of the nonexistent are all around us; E.T. is only the most influential example of many imaginary “aliens.” Over decades of reading and viewing science-fiction tales, we've clearly built up a cultural consensus of approximately what an “alien” looks like.

Therefore, we immediately recognize one when presented to us. Ah, yes, it looks a little like a human being—but not too much so—and it's not an ape or a monkey or a human ancestor. It must be an alien. Especially if it's a bit smaller than we are, is skinny, and has big eyes.

Artists, like the rest of us, live and breathe the culture that surrounds us all. But it is their peculiar ability to draw on its various elements and transmute them into something new and beautiful, yet recognizable. Even the intangibles. Artists give material form to emotion, to thought, and to fantasy. In this respect, art can serve as a sort of iconographic probe of a society.

Art could also be said to constitute the “redeeming social value” of otherwise nonsensical or even pernicious pseudoscience. Whatever draws an artist to a particular notion, it's usually something other than its intellectual respectability (or lack thereof). Imaginary aliens aren't worth much scientific thought, but they make great material for an artist.



*Lys Ann Shore lives and works in South Bend, Indiana.*

## Return to Sender, Address: The Unknown

In late December a slightly smudged letter arrived at J.B. Rhine's office in Durham, N.C. The letter, sent by Rhine himself, had never been delivered and was returned unopened. All of which is not very newsworthy, unless you recall that J.B. Rhine, the “Father of Parapsychology,” has been dead for 13 years. The letter, addressed to a friend in Germany, had been mailed back in 1967. It returned with no explanation, only a postmark from Zurich, Switzerland.

Although the folks at Rhine's office, maintained as a virtual shrine by the 30 year old Foundation for Research on the Nature of Man, immediately suspected a foul-up by the postal system, they had to admit the incident was weird. And apparently spooky enough to rate a story in the local paper, the *RaleighNews & Observer* (December 21, 1993).

Ironically, in the actual letter Rhine complains that the world has changed, and that parapsychology is being taken more seriously in the USSR than in the U.S. A lament with a familiar ring.

# Roving Eye

*The next few pages present a collection of news releases from other locii of skepticism and grassroots scientific activity around the country.*

## **Professional Scientists, Move Over. Here Come the Amateurs**

*Press release from the Society for Amateur Scientists,  
April 4, 1994*

Nestled between the San Diego Zoo and the Museums of Balboa Park a new nonprofit group has appeared that is challenging the Ivory Tower monopoly on scientific research. The Society for Amateur Scientists (SAS) is an unprecedented collaboration between professional and amateur scientists, and if they get their way they will forever change how science gets done.

SAS is founded on the premise that it doesn't take a Ph.D. to do research. With the right support, they claim, even everyday people can make important scientific discoveries.

The fact that this idea makes some scientists bristle doesn't bother Shawn Carlson, the 33 year old physicist who founded SAS. Carlson is a professional scientist with a mission. "Scientific talent is not limited to the Ivory Towers" he says. "There are thousands of people out there who could do good science if only they were supported, networked and informed. Our mission is to empower everyday people to make real contributions to science." Carlson claims that SAS can help almost anyone make discoveries. "If you have the interest, we can put you right on the scientific frontier," he says.

When pressed to support his belief in the scientific ingenuity of the common citizen, Carlson fires off an impressive list of discoveries. Animal tracks in New Mexico from before the age of dinosaurs, supernovae in distant galaxies, prime numbers with more than 10,000 digits, and a calibration error in an important NASA satellite are only a few of the discoveries he says were made recently by amateurs. "Two amateurs recently developed a treatment for a fatal disease. When Augusto and Kayla Odone's young son was diagnosed with ALD, their doctors gave them no hope. So, with no support whatsoever, they set out on their own to find a treatment. Through brilliant scientific detective work they developed a drug which as already saved hundreds of children's lives. Now that's high-caliber scientific talent!" Carlson says.

Carlson concedes that important amateur discoveries are rare, but he insists that's because amateurs have no support. "The fact that they happen at all proves that amateurs can make discoveries. Think of what may be possible if all this talent was supported, sharpened and directed at important problems" he says. In fact, Carlson

maintains that amateurs have only scratched the surface of their potential. "Technology has brought extremely powerful investigative tools within everyone's reach. Today's amateurs can do things that only professionals could do just five years ago. We're putting these tools in the people's hands and turning them loose on the world."

The Society for Amateur Scientists is launching a number of national research programs specially designed for amateur participation., "We're developing programs in biology, astronomy, botany, geology, seismology, atmospheric, mathematics, computer science, even genetics," says Carlson. And they plan an expedition to Baja California to observe the solar eclipse on May 10. "We'll be part of a national collaboration monitoring ozone levels in the stratosphere as the ozone-producing sunlight is blocked out. This is very important work," he says.

SAS volunteers include housewives, engineers, teachers, journalists, entrepreneurs, and university professors including two Nobel Prize winners. Their strategy is to bring professionals and amateurs together for the benefit of both. The professionals design research programs that amateurs can carry out and then help the amateurs gain the skills needed to develop projects of their own. "We are preparing to support amateur projects with grants, awards, equipment and expert advice. Our philosophy is to focus on people and let the science largely take care of itself," Carlson says.

John Lighton is an assistant professor of biology at the University of Utah and a SAS volunteer. "SAS is absolutely heretical," he says. "I love it!" Lighton agrees that science has a lot to gain from amateur participation. "The more science that gets done by amateurs, the more professionals are free to do those experiments that only professionals can do," he says. Lighton is writing a column for SAS's quarterly journal and is looking forward to mentoring amateurs in biology. "There is nothing more exciting than helping to unlock someone's potential for discovery," he says.

Forrest Mims III is an amateur scientist in Texas. Even though he has no formal scientific training Mims has become one of the world's leading ozone scientists. His \$500 homemade instrument lets him measure stratospheric ozone from his backyard with precision which rivals NASA satellites. "It's a lot of work, but the rewards are incredible," he says. Mims is a contributing editor to SAS's journal and a strong supporter. "I think SAS is doing a fantastic job. It's great that some professionals are finally seeing the amateur community as a vital resource."

*continued on next page*

## SAS, continued

When asked what amateurs can contribute Mims is emphatic. "A lot! For one thing having no budget forces amateurs to be clever. We know how to get things done on a shoestring." Mims says that NASA once flew him to Washington to share his expertise on high-quality low-budget science. "The Society for Amateur Scientists give the entire amateur community support that it has never had before. I know firsthand how much talent is out there. By freeing people to contribute according to their talents SAS is helping to make discoveries that otherwise might be long in coming. It's very exciting," he says.

But not everyone is enthusiastic. According to Carlson, some scientists think helping amateurs is a waste of time. "It takes most scientists a decade to earn their Ph.D.s. Some people don't easily warm to the idea that a guy with no formal training can do a job almost as well as they can." But Carlson is undaunted. "Sure, there are some things that amateurs just can't do. A formal education means a lot. But there are many places where amateurs can make contributions. The Society for Amateur Scientists is totally dedicated to helping them get there."

When asked who should join, Carlson smiles. "It doesn't matter how little experience you have. If you dream of making discoveries, this is the place you should be." The toll-free number is 1-800-873-8767.

Annual membership is \$35. Write to SAS, 1549 El Prado, Balboa Park, San Diego, CA 92101. SAS publishes a bimonthly newsletter and plans to publish the *Amateur Scientist's Journal*.

## Skeptical Inquirer

If you don't know about *Skeptical Inquirer*, then you must be dowsing in the wrong location. For 18 years, *SI* has been a resource for skeptics worldwide. Featuring both scholarly articles and current events, *SI* is the official journal of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP). *Skeptical Inquirer* has recently announced that beginning in 1995, it will increase its publication schedule from four to six times a year.

Subscriptions are \$25 for one year, \$43 for two years, and \$59 for three years. Write to Skeptical Inquirer, P.O. Box 703, Buffalo, NY 14226-0703, or call 1-800-634-1610.

## Skeptic Magazine / Society

Two years ago *Skeptic* magazine hit the stands. The official magazine of the southern California based Skeptics Society has quickly become a worthy addition to the skeptical publishing scene. It earned honors from the *Library Journal* as "one of the 10 best new magazines of 1993" and plans to extend its publication schedule from quarterly to bimonthly. In its short history it has featured articles from James Randi, Stephen Jay Gould, Steve Allen, and others well known as outspoken skeptics. Each issue features book reviews, short news, and a section of articles focused around a special theme such as "Fad Psychology," "Science, Religion, and Cults," and "Holocaust Deniers."

The Skeptics Society also sponsors a lecture series at Caltech and other educational and social events. Founded by Dr. Michael Shermer, a historian of science, the Society hopes to attract members from around the world to support public outreach and education regarding the history and philosophy of science, magic, superstition, and skepticism.

Membership in the Skeptic Society includes a subscription to *Skeptic* magazine. The magazine is also available locally at some newsstands and bookstores such as Reiter's Books.

Annual membership/subscription is \$35. Write to Skeptics Society, 2761 N. Marengo Avenue, Altadena, CA 91001, or call 818-794-3119.

### Addendum:

"From the Archives" (*SEye*, vol 7, no. 4) reported on the Rocky Mountain Skeptics challenge of the use of therapeutic touch. Bela Scheiber, Linda Rojas, and Mary Folsom all contributed to those articles.

**1994 CSICOP Conference**  
**"The Psychology of Belief"**  
**Seattle, Washington**  
**June 23-26**

*Thursday, June 23*

**Alien Abductions**

Moderator: Paul Kurtz, CSICOP Chairman

Robert Baker, professor emeritus of psychology, University of Kentucky

Thomas Bullard, folklorist, Indiana University, Bloomington

John Mack, professor of psychiatry, Harvard University

Nicholas P. Spanos, professor and director of the Laboratory of Experimental Hypnosis, Carleton University, Ottawa

*Friday, June 24*

**The Belief Engine: How World Views Are Formed**

Moderator and panelist: James Alcock, professor of psychology, Glendon College, York University, Toronto

Ray Hyman, professor of psychology, University of Oregon, Eugene

Andrew Neher, professor of psychology, Cabrillo College, Aptos, California

Anthony Pratkanis, professor of psychology, University of California, Santa Cruz

**Luncheon**

An Illustrated History of UFOs

James McGaha, Major, USAF (Retired)

**How We Fool Ourselves: Anomalies of Perception and Interpretation**

Moderator and Panelist: Barry Beyerstein, professor of psychology, Simon Fraser University, Vancouver, B.C.

Irving Biederman, professor of psychology, University of Southern California

Elizabeth Loftus, professor of psychology, University of Washington, Seattle

**Keynote Address**

Carl Sagan, David Duncan Professor of Astronomy and Space Science, Cornell University

*Saturday, June 25*

**Memory: How Reliable Is It?**

Moderator: Carol Travis, psychologist, author, Los Angeles

Stephen Ceci, professor of psychology, Cornell University

Richard Ofshe, professor of sociology, University of California, Berkeley

Loren Pankratz, clinical psychologist, Portland, Oregon, Veterans Administration

**Luncheon**

CSICOP and the Law

Brenton VerPloeg, attorney, Schults & Bowen

**Influencing Beliefs In The Courtroom: Rules of Law, Expert Testimony, and Science**

Moderator and Panelist: Gerald M. Rosen, clinical associate professor, Departments of Psychiatry and Psychology, University of Washington, Seattle: "Confirmatory Bias in Forensic Settings"

Barry Beyerstein, Brain Behavior Laboratory, Psychology Department, Simon Fraser University, Vancouver, B.C.: "Graphology: Pseudoscience in the Courtroom"

Peter Huber, author of *Galileo's Revenge: Junk Science in the Courtroom*

Timothy Moore, associate professor of psychology, Glendon College, York University, Toronto: "Scientific Consensus and Expert Testimony: Lessons from the Judas Priest Trial"

**Awards Banquet**

*Sunday, June 26*

**Conspiracy Theories**

Moderator: Lee Nisbet, professor of psychology, Medaille College, Buffalo, NY

Don Kates, attorney and criminologist, San Francisco

Phil Klass, former senior editor, *Aviation Week and Space Technology* magazine

Valerie Klein, JFK assassination researcher

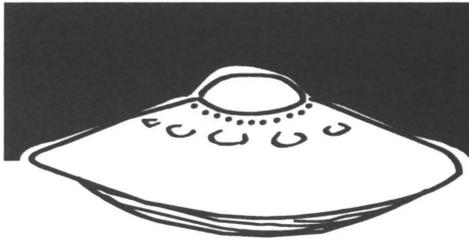
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Registration is \$135 for the conference and the Keynote Address.

Luncheons are \$20 each, and the Awards Banquet is \$30.

Write to 1994 CSICOP Conference, P.O. Box 703, Buffalo, NY 14226, or call Mary Rose Hayes at 716-636-1425.

For hotel accommodations call Doubletree Suites Hotel at 206-575-8220. Cut-off date for the conference rate is June 8.



## **Investigation of “Roswell Crashed Saucer” Claims Launched by Respected Congressional Agency**

*By Philip J. Klass*

Reprinted by permission from *Skeptics UFO Newsletter*, January 1994. Copyright © Philip J. Klass.

An official investigation into claims that the U.S. Government recovered a crashed flying saucer, several ET bodies and possibly a live ET in New Mexico in mid-1947 has been launched by the General Accounting Office (GAO)—Congress’s respected investigative agency. Another GAO investigation recently made headlines with the revelation that the Atomic Energy Commission had secretly conducted a dozen experiments between 1948 and 1952 which intentionally exposed a number of unsuspecting U.S. citizens to radiation to assess effects of radiological weapons. For example, an estimated 250,000 people living near the Hanford, Washington AEC facility were exposed to very high dosage. A very embarrassing disclosure that will undoubtedly cost the Government dearly in damages—but this did not deter the GAO from reporting the facts revealed by its investigation.

The GAO investigation was requested by Republican Congressman Steven H. Schiff of Albuquerque, a member of the influential Government Operations Committee, in response to claims by his constituents that they have been harassed by Government agents to suppress the facts. GAO has assigned one of its top investigators who specializes in “Black programs” and who holds top-level security clearances. [*SUN* will refer to the investigator by his initials—DH—to spare him numerous telephone inquiries by curious UFOlogists.

Last March 11, [1993] Schiff wrote to Defense Secretary Les Aspin in regard to the (alleged) crashed saucer incident, asking SecDef Aspin to investigate and provide Schiff with a personal briefing. The Pentagon’s Legislative Affairs Office replied on March 31 [1993] suggesting that Schiff direct his query to the National Archives which had acquired the USAF’s Project Blue Book UFO case files in 1976. Schiff found this response unacceptable and wrote to Aspin again on May 10, noting that he had requested a briefing on the Pentagon’s current position on UFOs as well as clarification of the 1947

incident. This brought a similar response from one of Aspin’s top aides. As a result, during an October meeting with the GAO’s director, Schiff requested that his agency launch an investigation.

A senior member of Schiff’s staff told *SUN* “The Congressman did not ask the GAO to look into ‘crashed saucers.’ The Congressman asked the GAO specifically, and the Department of Defense, to provide him with an explanation of what actually happened in 1947 in New Mexico... The Congressman wants the Government to explain what came down...If nothing came down...why it was necessary for the Government [allegedly] to take these extraordinary measures to ‘cover-up’—if you want to use that term...He wants a full explanation.” [*SUN* Note: After the debris recover on the Brazel ranch was flown to Eighth Air Force headquarters in Ft. Worth and examined by a meteorologist, Brig. Gen. Roger Ramey promptly announced on the evening of July 8, 1947 that the crashed object was a meteorological balloon-borne radar corner reflector.]

When *SUN* asked if Rep. Schiff was questioning whether Ramey had told the truth, the senior staff member replied: “Well, I suppose you could construe that to be the key question. I think the GAO will eventually come to that...I suppose you could start with that as a premise...[But] we did not ask for a review of Gen. Ramey’s particular announcement. We asked that they [GAO] provide us with an explanation of what happened.”

*SUN* wonders if the Congressman is aware that one prominent “firsthand witness” (not one of his constituents) who claimed to have seen the “crashed saucer” as well as ET bodies in 1947 has been exposed as a spinner of “tall tales.” *SUN*’s own investigations indicate there are others. *SUN* predicts that Congressman Schiff will come to rue the day he ever became involved in claims of “UFO cover-up” and “crashed saucers.”

*Skeptics UFO Newsletter (SUN) is published bimonthly. Subscription rate (six issues) is \$15 for U.S./Canada. Overseas rate (airmail) is \$20/year. Please make check/money order payable to Philip J. Klass, 404 “N” St. SW, Washington, DC 20024.*

## Followup from SUN #26 and #27

Klass has since quoted GAO's specific objective from a letter sent to Rep. Schiff by the GAO:

"This letter confirms our meeting with you on January 26, 1994, where we discussed the issue of government accountability with regard to the handling, retention, and subsequent disposition of official government records. In this regard, you asked the GAO to review the policies and procedures of the Department of Defense, the National Archives, and others governing records involving crash incidents similar to that reported to have occurred at Roswell, N.M. in July 1947. As part of our review, we plan to examine whether government agencies adhered to established policies in carrying out their record stewardship activities."

Klass further reported that Schiff, in a radio interview, emphatically denied asking the GAO to resolve the Roswell matter once and for all and clarified his request for whatever "files would have existed on the subject, or an accounting of what happened to them." Klass adds that not all UFOlogists are happy with that limitation. Some are taking credit for prompting an investigation that they compare with Iran-Contra, Watergate, and the Kennedy assassination. Others are rankled because the GAO apparently will not be taking a position on whether or not an alien craft crashed that night. The GAO is in the middle, as Klass points out: If the investigators don't find a hidden "Roswell file," they'll be accused of being part of the cover-up and the claims will go on. As much as we at

NCAS prefer analysis to prescience, that seems like a safe prediction to us.

Phil Klass' interesting newsletter contains many other tidbits and questions about the Roswell incident, whatever it was:

- The location of the "crash" is still in dispute by some tens of miles because "eyewitnesses" quoted by the various storytellers do not agree. Even different dates are cited.
- One person claims to have some of the debris, but refuses to make it available for analysis even to the authors who have featured him in a new book. (Meanwhile, the government is accused of a cover-up.)
- If the government recovered new metals or other materials from the crash site, why haven't those materials shown up in our own craft 47 years later? If the material is that difficult to understand and replicate, why are there no reports by the large number of specialists and institutions that would surely have been asked to analyze and exploit the materials by now?

Klass now sends his newsletter to GAO.

NCAS has independently discussed the ongoing investigation with the GAO and will act as a resource for the investigators, if requested. We hope to schedule GAO for one of our monthly programs when their time permits. To date, Rep. Schiff has set no deadline.

—J. H.



## Our Lady of Akita

Crying statues of the Virgin Mary aren't restricted to the United States by any means. Consider the following mind-bending case from Japan, in which the National Canonical Commission of Inquiry declared the apparitions of Our Lady of Akita to be "paranormal" as opposed to being "supernatural," and therefore, no longer significant to the Church.

It seems a Japanese nun, Sr. Agnes Sasagawa Katsuko reported seeing a statue of the Blessed Virgin shed tears approximately 100 times between 1973 and 1981. She likewise heard Mary warn her of a "heavy chastisement" to come from God. Bishop John Shojiro Ito authorized these events as authentic in 1984. (*The Wanderer* January 6, 1994).

However, Bishop Ito later, under the advice of the apostolic nuncio, asked the Bishop of Tokyo to form a commission to do a canonical inquiry. After two years of investigation, the commission said they could not endorse the supernatural character of the occurrences. Instead, they said the events did actually take place, but were due to the "ectoplasmic influence of Sr. Agnes" who "had the subconscious capacity to make her own tears and her own blood appear on the statue." (*Fatima Family Messenger*, 1993). Oh, so that's how you fake a miracle, just use ectoplasm.

(Thanks to Mike Epstein for finding this item.—ed.)

# Watchful Eye

Jodi Garbe sent NCAS an advertising flyer for the "Health Cup" picked up on a trip to Singapore. It looks like an ornate ivory colored plastic cup which perhaps contains a magnet of some sort. It sells for \$54, Singapore (about \$35, U.S.) Here at NCAS central our Chinese is a bit shaky so we're not completely sure what health claims are being made. But the reverse side, written in plain English, caused us to raise a skeptical brow:

It appears to be a page from a scientific report, duly signed by two officials, attesting that water stored in "magnetic therapeutic cup" after 48 hours "complies with the requirements of the World Health Organisation" in terms of toxic metals. Surely this should mollify skeptics!

But read those numbers closely. In every single test, from copper to arsenic, the water from the "magnetic therapeutic cup" is certified to be every bit as pure as the "Control". In other words, as long as the water which goes into the cup meets WHO standards, the cup appears to neither add nor remove anything.

The big print in Chinese may as well say "Cholesterol Free!"

Q-14369-5101-C8Y

Page 4 of 4

Tests	Water stored in "magnetic therapeutic cup" after 48 hours	Control	REQUIREMENTS
			WHO Guidelines for Drinking Water Quality Vol I (1984)
Cu (mg/l)	less than 0.01	less than 0.01	1.0 max
Pb (mg/l)	less than 0.05	less than 0.05	0.05 max
Cd (mg/l)	less than 0.001	less than 0.001	0.005 max
Mn (mg/l)	less than 0.01	less than 0.01	0.1 max
Zn (mg/l)	less than 0.01	less than 0.01	5.0 max
Fe (mg/l)	less than 0.01	less than 0.01	0.3 max
Pb (mg/l)	less than 0.01	less than 0.01	0.05 max
Cr (mg/l)	less than 0.001	less than 0.001	0.001 max
Hg (mg/l)	less than 0.05	less than 0.05	0.05 max
As (mg/l)			

**Remarks:**  
 The pH of the water sample stored under various experimental conditions satisfied the Public Utilities Board requirement. PUB stated that for drinking water, the pH must lie between 6.5 - 8.5.  
 The results on toxic metal analysis shows that the levels of the various toxic metal analysed comply with the requirements of the world Health Organisation (WHO).

CHOO BEOW YAH (MISS)  
TESTING OFFICER

CHONG KOK YONG  
EXECUTIVE SCIENTIFIC OFFICER  
FOR ASSISTANT MANAGER  
FOOD TECHNOLOGY CENTRE  
SISIR

## Sharper Image Asks: "Can copper help your arthritis?"

(ad for copper bracelets  
March 1994 catalog; page 19)

No.

健壽牌象牙色龍鳳磁療杯

Find any advertising or other weird science which rings your skeptic's alarm? Share it with the Eye, and we'll feature it here.



## Past Life Reporting

### Almost (NCAS) Heaven, West Virginia

By Curtis Haymore

My son, John, had asked my wife and I why were we going to attend the annual NCAS workshop in Harpers Ferry, held this past February on Communicating Skepticism. He has been (less than willingly, I might add) to several of the monthly NCAS meetings and now considers himself an expert on skepticism. "You just get together to tell each other you're right." (I suppose this is not, too far, from the truth.) I explained that we also wanted to be able to convince others how right we are. He groaned.

Although, I have little desire, personally, to become a media representative, or even a regular on the lecture circuit, I was hoping for some tips on how to be more influential with my New Age-infatuated siblings, while keeping my family ties intact. With this goal, my wife Robbyne and I attended our first NCAS workshop. If you didn't go, our observations won't really make you feel as if you had been there, but I hope they will convince you to attend next year.

Many of the skeptically loyal met in the Cliffside Inn bar on Friday evening, for libation and conversation. Participants from the previous year told of the blizzard driving conditions (one person took 6 hours to arrive last year!), and excitedly looked to see if a card magician Jamy Ian Swiss had stuck to the ceiling last year, might still be there (it wasn't). Chip and Jamy held forth with tales of the early exciting and painful days of NCAS, and stories were told of last year's "ghost walk." It was a time for cold beer, loud talk over the juke box and anticipation of the weekend to come.

The workshops started on Saturday, with Randy Lockwood, of the Humane Society, sharing his advice on how to work with the press and electronic media. He gave many hints on writing press releases and dealing with reporters. In particular, I was reminded that reporters work under DEADLINES and want NEWS.

Conjurer Jamy Ian Swiss gave an entertaining review of spiritualism with readings and stories. Depressingly, today's newest incarnations of this social phenomenon do not represent the first time around on any of this stuff, there just seem to be new spirits. Each generation may have to confront and debunk its own spiritualists and channelers, having to relearn lessons from earlier days.

Elena Watson, editor of the *Skeptical Eye*, talked about letter writing and being effective with the local media. She related several stories and presented examples of successful responses to the local media in their coverage of fire walking, UFOs, and homeopathy. Others also described their efforts, successful and not, of trying to counterbalance coverage in newspapers. My favorite was the small notice of a bright Venus in the night sky next to a longer report of a claimed UFO sighting in the same direction, at the same time. Apparently claims are still news, even when the newspapers don't believe the claims.

Therapist Seán O'Neil's session described ways of talking with friends and colleagues about skepticism without alienating them. I especially liked his approach to categorizing people according to the basis of their paranormal attitudes: the genuinely ignorant; the emotionally damaged; the intellectually challenged; and the cosmologically rigid. He also described how to maintain your perspective and approach rather than letting others' attitudes dictate it for you.

On Saturday evening, most of the attenders ate dinner together at the Anvil, a restaurant in Harpers Ferry, that provided us with a private dining room for the evening. The food was wonderful; the company was diverse and entertaining. After dinner, Jamy Ian Swiss gave a magic show primarily of close-up card tricks and some mentalism. My wife Robbyne and Elena Watson's husband, John Pickel, were Jamy's helpful assistants-from-the-audience (some might say "stooges") for the show. We watched it all, knew incredible things were happening, but had no idea how any of the tricks were done. Jamy gave an entertaining and truly magical performance.

The next morning, we met again to practice some of Seán O'Neil's suggested ways of responding to people's beliefs, by breaking into groups and role-playing several situations, some preconceived and others from attender's real life experiences. I got several useful ideas I'm eager to try with my family the next time they pull out their homeopathic "magic" pills.

The meeting concluded with an open discussion of how to broaden NCAS's sphere of influence. Suggestions on influencing reporters included providing them information (for example, responding quickly to their requests, sending background materials, developing short courses on investigating amazing claims) and even working on a more fundamental level by developing appropriate curricula for journalism schools. Becky Long, of the Georgia Skeptics, told of their success in preparing press releases that gave a "report card" to the media in response to each

story run or aired. Others suggested presenting annual awards for both good and poor local media coverage.

NCAS maintained its reputation for polish and professionalism in this well-run and organized workshop. Chip Denman and the others who put it together should be proud of their efforts; those of us who attended are appreciative of the results and are already looking forward to the 1995 edition.

Next year's workshop will focus on education. We can start to plot now how to tell students (especially my 14 year old son, John) how right we really are. I hope to see you there!



## Randi Legal Fund

Contributions to the James Randi Fund may be sent to:

The James Randi Fund  
142 West 49th Street, Suite 12H  
New York City, NY 10019

The fund is still needed to assist in covering legal costs incurred by Randi in fighting the suits brought by Uri Geller and others.

## The Electric Skeptic

*occasional articles about skepticism  
on the electronic frontier*

The Skeptic Tank BBS is now on-line and ready for logins!

The purpose of this BBS is to provide an electronic forum for NCAS members—as well as the general public—who don't have access to the other internet based skeptic maillists and ftp sites (don't let that stop the rest of you net surfers—we need you, too!).

The board will host discussions on a myriad of topics, electronic bulletins and newsletters of interest to skeptics (as well as back issues), and listings of upcoming lectures, meetings, get togethers, and any other tasty tidbits we can get our hands on.

All it costs is a phone call to 703-471-8562. Set your modem to 2400-N-8-1-Full and let it go! If you have any questions, please feel free to call Chris or Maggie at 703-904-1788.

—Chris Ragaisis

## Electronic Directory

Joe Himes, president  
Mike Epstein, v.p./print archives  
Gary Stone, secretary/AV archives  
Grace Denman, treasurer

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### *other board members*

Chip Denman  
Curtis Haymore  
Patti Maslinoff  
Pam O'Neill  
Seán O'Neill  
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mvz@cs.umd.edu

Would you like to be included in a future NCAS electronic directory? Send e-mail to Gary Stone.

**Recently Penn & Teller tickets were announced to members via e-mail and the Skeptic Tank BBS. Don't miss out on other special announcements.**

## Eulogy for Elena Watson

By Bill Ruehlmann

Book Columnist, *Virginian-Pilot Ledger-Star*

She was so funny. When the subject of Bigfoot came up, Elena M. Watson of Norfolk said: "They must be extremely clean animals, because nobody has ever found any droppings."

The skeptical writer was equally wry on Unidentified Flying Objects: "The size of the universe is so huge, and the time span and the distances so vast, that it's ridiculous to think if there were life somewhere that they would waste all this time just to buzz the Earth and pick up a couple of hicks in Mississippi."

And she was just as unblinking about her own battle with progressive disability.

"The muscular dystrophy is a major inconvenience in my life," Elena said, "but it's pointless to whine about it. You live with it. Not long ago somebody asked me if the prognosis means I'm going to become a vegetable.

"I said yes — broccoli."

She had this thing about mermaids. Elena kept a small one above her computer keyboard, and I think it was a clue. MD put her out of her element in the physical world; but in the cosmos of ideas, and in communion with her associates, she swam free.

Sometimes, upstream. A professional conjurer pal of hers once noted with precision that she was "fiercely rational." In that, she was tough; she stood up fearlessly to fraud and pretense, in person and in print. Toward the end Elena went about the world in a motorized wheelchair, defiantly unconfined at the keyboard to Internet and editor of the *National Capital Area Skeptical Eye*, a newsletter serving 300 critical thinkers banded together for the sole purpose of poking holes in hooey. She felt that a substantial number of the more academic membership were "humor-impaired" and set about doing something about it. The consequence was a lively and literate publication that

*continued on next page*

## In Search of:

NCAS would like to find possible facilities for future events. Can you suggest locations? Rooms of different sizes are sought which could accommodate 75-500. Metro accessibility, parking, audiovisual equipment, and weekend availability are all factors which need to be considered. Please phone Joe Himes at 703-280-2503.

## Keep Your Eye Open

Send your articles, letters, and original artwork for future publication in the *Skeptical Eye*. Contributions should be typed, not handwritten. If you use a computer, please send hard copy along with your floppy disk (5.25" or 3.5", WordPerfect or ASCII). Please be sure to include your name, address, and telephone number. Send all contributions to *Skeptical Eye*, 8006 Valley Street, Silver Spring, MD 20910.

## Time to Renew? Time to Join?

Yes, I want to \_\_\_\_\_ join NCAS. \_\_\_\_\_ renew my membership.

Single: \_\_\_\_\_ @ \$20 Double (2 members at same mailing address) \_\_\_\_\_ @ \$30 Full-time student\* \_\_\_\_\_ @ \$10

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Make checks payable to  
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Silver Spring, MD 20910

## Eulogy

drew from a wide range of offbeat sources on unscientific misapprehensions, from scholarly journals to supermarket tabloids.

She loved to ponder the implications of such compelling *Weekly World News* headlines as "EARTH'S WATER SUPPLY CAME FROM DINOSAUR WEEWEE."

Elena, who held a degree in psychology from Christopher Newport College, wrote a good book titled *Television Horror Movie Hosts: 68 Vampires, Mad Scientists and Other Denizens of the Late-Night Airwaves Examined and Interviewed* (McFarland, 242 pp., \$29.95). She documented the low-budget likes of Ghoulardi, Sir Graves Ghastly and Dr. Maximilian Madblood. Why?

"The shows," she said, "offered a certain energy, originality and creativity the slicker network stuff lacked. They were not mass-produced. There was an underlying level of subversion to them."

As indeed there was to her. Elena was an inveterate enemy to unexamined opinion, superstition and smugness. For her, the daughter of a minister, truth was a sword that protected people from every sort of snake oil, be it totalitarian government or sneak-thief 900 numbers.

"There are telephone hot lines that advertise themselves as providing a psychic friend who really cares about you," she said.

"They care about you for \$4 a minute, which adds up fast. Meanwhile, there are a lot of people out there who don't have friends, who are lonely, who are ill.

"I think they're being victimized by things like psychic hot lines."

Instinctively, she identified with the underdog. In some ways, she had been one. As a child her schoolyard peers had not been kind to the short girl who walked differently. "I've always had sort of an outsider status," Elena said. "It made me a little bit cynical about people. I just had a sense that you can't always believe everything you hear."

That sense extended to critical judgments. Performers and films long since consigned to "B" status and below were often tops with her. It was never production values that impressed Elena in a movie; it was flair.

Among her favorite actors was Peter Lorre, whose ability often transcended his material; on the wall beside her computer, Elena kept a photograph of him as Mr. Moto, the bantam superspy of late 1930s films.

"Moto was cool," she said. "He juggled, did magic and performed martial arts. He played the fool for people, but he was a very logical guy who knew everything that was going on."

Like Elena. She loved magicians, too. They fooled the public but made no bones about the hustle.

She loved only one thing more, and that was her husband, John S. Pickel, a project engineer at the Norfolk Naval Shipyard.

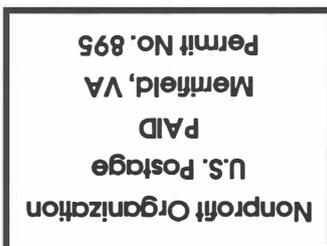
Last week Elena fell and did not get up again. She was 36 years old. She left behind an extraordinary example of enduring wit and stubborn dignity that provided powerful testimony for the human spirit.



*Bill Ruehlmann is a mass communication professor at Virginia Wesleyan College.*

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**Check the mailing label for your membership date ...  
a renewal form is on page 23**



**National Capital Area Skeptics  
8006 Valley Street  
Silver Spring, MD 20910**

