

Phactum

The Newsletter of the Philadelphia Association for Critical Thinking

www.phact.org

October 2006

Listen UP!!!

There is a change of plan

The October Meeting of PhACT will **NOT** be on the third Saturday of October as normally scheduled because of a special circumstance. Best selling science author **Michael Shermer** ("Science Friction", "The Science of Good and Evil", "How We Believe", "Why People Believe Weird Things", "Denying History", "Science Skepticism and the Media", "The Borderlands of Science") is the founder of Skeptic magazine and of the International Skeptics Society). He will address PhACT promptly at **7pm, Oct 13th** at the **ETHICAL SOCIETY** at **1906 S. Rittenhouse Square** in Center City, Philadelphia. Following, the Freethought Society will hold their "Friday the 13th Party" at 8 p.m. upstairs while Mr. Shermer remains downstairs to sign books.

Stephen Jay Gould called Shermer "a powerful activist and essayist in the service of reason . . . an important figure in American life." But, in addition to his skeptical contributions to the world, Michael is also a really cool guy: He's down to earth, he used to be on "the other side", he has bicycle raced across the continent, he started the Southern California Skeptics, is a columnist for Scientific American, and he's a family man. PhACT highly recommends people to bring friends for this rare chance to meet this amazing "Uber Skeptic" in Philadelphia while he promotes his new book. Please consider buying some of his books, (they make great gifts) and getting them signed by him.

(Continued on page 3)



The PhACT Council

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Phactum is, in theory, printed 6 times a year and is the main propaganda organ for the Philadelphia Association for Critical Thinking.

If you are not a subscriber we invite you to become one by sending a \$15 membership to PhACT, \$10 for students.

Send letters of rebuttal, ideas, short essays, opinion pieces, complaints, and lavish praise to Ray Haupt, Phactum editor, at phactpublicity@aol.com.

PHACT CALENDAR

Friday, October 13, 2006 - Michael Shermer at the Ethical Society. See page 1.

Saturday, November 18, 2006 - The Physics Department of Community College of Philadelphia will host a meeting of **PhACT** - at 2:00 PM, Community College of Philadelphia, 17th and Spring Garden Streets, West Building Room W2-48.

Don Simanek, Emeritus Prof. of Physics, Lock Haven University, will talk on **SCIENCE ASKEW**. Gems of science humor, satire and parody from his just-published book of the same title by Donald E. Simanek and John C. Holden. Previews: The age of the universe is a function of time, The illustrated dictionary of physics, The Ideal Scientific Equipment Company, The Hazards of Solar Power, A Religion for the Rest of Us. There may not be time for all these topics but a lot of information will be discussed.

This meeting is free and open to the public. Bring a friend. Executive meetings are held prior to each lecture at 1:00 PM. Any member may attend. Light refreshments will be served.

Friday Dec 22, 2006 - annual Winter Solstice party - email Eric: at erickrieg.verizon.net for details and directions. This event is free but is for members and their guests only.

Wednesday, October 11, 2006 7:30 to 9:30 PM - Lecture: Introduction to Homeopathy. Alan Schumaker, author of the new book, *Homeopathy*, will give a lecture on this form of alternative medicine. If you've been curious about natural medicine or skeptical of conventional pharmaceuticals, this lecture might be of interest. For more information call: 215-788-3479. At St.Lukes Memorial Church, 1946 Welsh Road, Philadelphia, PA. 19115.

Friday, October 13, 2006 - 8:00 PM - Freethought Society of Greater Philadelphia presents an **"Anti-Superstition Party"** where attendees will "poke fun at various superstitious beliefs through games, costumed hosts, exhibits of silly superstitions, and free educational literature." There will be musical entertainment, and you can BYOB. At the Ethical Society, 1906 South Rittenhouse Square Philadelphia, Pennsylvania 19103. The special guest for the event is Michael Shermer, Founding Publisher of *Skeptic* magazine and Director of the Skeptic Society. He will be signing his new book *Why Darwin Matters: The Case Against Intelligent Design*. This event is free and open to the public. Visit the FSGP website at www.fsgp.org _or call Margaret Downey at (610) 793-2737.

Thursday, November 2, 2006, noon - "The God Delusion" - Richard Dawkins will discuss his views of religion. At the Free Library of Philadelphia, 19th and the Parkway. Free. There will be a book signing at this event.

Ongoing: Freethought Society of Greater Philadelphia (FSGP) and the Humanist Association of Greater Philadelphia (HAGP) co-sponsor a monthly book

discussion club. The book club meets on the third Saturday of each month at 7:00 PM at Willow Grove Barnes & Noble, 102 Park Avenue, Willow Grove, Pennsylvania 19090. If you have any questions, please contact the book club moderator, Ian Thomas.

Email: ian.thomas101@gmail.com Phone: (610) 368-5915 Cell: (610) 565-4530.

Ongoing: Penn Science Café is a lecture series hosted by PhACT member Greg Lester. Scientists and engineers from University of Pennsylvania discuss their work at a level accessible to the layman. Events are on the last Monday of each month at 6:00 PM at the MarBar, 40th & Walnut Streets. Lectures are free and open to the public.

Ongoing: The Wagner Free Institute of Science offers an assortment of science lectures presented at the introductory college level by professors from various universities around Philadelphia. These courses are free and vary from a single night to an eight week course. See their website at <http://www.wagnerfreeinstitute.org/>.

The PhACT Calendar is open to members, and non-members too, who wish to announce meetings and events of other groups of which they are interested or affiliated. These events should be of some general interest to the Skeptical or Scientific community and should be within a reasonable radius of Philadelphia. Send submissions to the editor at phactpublicity@aol.com. Keep the announcements brief. Space is limited and insertions will be made on a first come-first served basis after the needs of PhACT are accomplished.

The Origins Of Man exhibit, comprised of pre-historic finds from around Africa's Great Rift Valley considered by many to be the cradle of humanity, is offensive as it promotes Charles Darwin's theory of evolution, they say. "When museums put it out there that man evolved from apes, theologically they are affecting many people who are Christians, who believe God created us," says Bishop Boniface Adoyo, who is leading a campaign against the exhibit.

"It's creating a big weapon against Christians that's killing our faith," he told AFP, calling evolution theory an "insult" and dangerous to youths. "When children go to museums they'll start believing we evolved from these apes.

"This is not the truth," said Adoyo, pastor of Nairobi's "Christ is the Answer Ministries" and chairman of the Evangelical Alliance of Kenya, which claims to represent churches of 35 denominations with nine million members. "I can't stand it, neither can other Christians," he said. The bishop's high-profile drive to force the government-funded museum to downgrade what is arguably its most important collection has put him squarely at odds with the scientific community and curators.

Many of the fossils were discovered by legendary paleontologists Louis and Mary Leakey in east Africa whose pre-historic finds around the Olduvai Gorge, Lake Victoria and Lake Turkana are seen by many as proof of Darwin's theory. Their son, Richard, himself a noted anthropologist and conservationist, is particularly disturbed by the furore and is speaking out against what he says is a misguided attempt to reject sound science. "The church is being ridiculous," he told AFP. "The church leaders are out of step. They should concentrate on their faith and leave scientists to concentrate on their historical work and defend it."

"Evolution theory is accepted across the world," he said. "This is scientific history and Kenya has the best of this evolutionary history. Globally, few can match that claim to fame."

Officials at the museum, which houses priceless items including remains of hominid species dating back 1,7 million to 1,2 million years, are loath to get involved in the fractious debate but defend the

exhibition.

"The fossils have confirmed Kenya's position as the cradle of mankind and have drawn large numbers of visitors," the museum said in a statement released shortly after Adoyo launched his campaign.

In an email response to questions posed by AFP, NMK director general Farah Iddle said the museum "strives to accommodate divergent views and ideas". "However, it also has the responsibility of ensuring that the integral research findings that have been developed over time are preserved," he said.

"This includes the fossil collection that's the scientific evidence that shows the relationship between apes' fossils dated millions of years back and the modern man."

Exact display plans for the exhibit when the 75-year-old museum re-opens in June 2007 are still being discussed but officials said they hope to keep it in a position of prominence among three new re-designed galleries.

What will not likely change, they say, is the placement of a huge bronze sculpture outside the museum's main gate, which depicts a series of figures from ape to humans gradually becoming more erect as they walk.

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Sexual Harassment in Philadelphia

Who stands to gain?

The Tuesday, August 29, 2006 edition of the Philadelphia Daily News has an article that claims that 270,000 Philadelphia adults were sexually abused as children. I am skeptical of that claim.

Philadelphia has a population of about 1.5 million, and of that group a good percentage are children and would not have been a part of this so-called "study". If 1.1 million Philadelphians are over 18 and considered adults for the purpose of this "study" then one would conclude that 25% of the population has been sexually abused.



I do not believe that number. The "study" as described seems very loosely controlled and the fact that it was conducted by a social services agency that would stand to gain if more funding were provided does not make the matter appear more convincing.

PhACT member Eric Hamil is likewise skeptical on this matter. He writes:

“Concerning the report on child sexual abuse in Philadelphia, it would be helpful to have more information on its methodology in order to assess the significance of its findings.

A flaw with many studies dealing with this kind

"unwanted," but that hardly implies the malevolence or willful imposition that the term "harassment" connotes. Yet that was the word used in the publicity about the study's findings.

While I see no reason to assume the reported child sexual abuse figures couldn't be true, it's easy to think of possible methodological flaws. It may be that the researchers asked people about any sexual contact experienced before the age of eighteen, and how old the other person involved was, then classified, say, all incidents where the other party was at least two years older as abuse, without consulting the respondents about whether that was the way they experienced it.

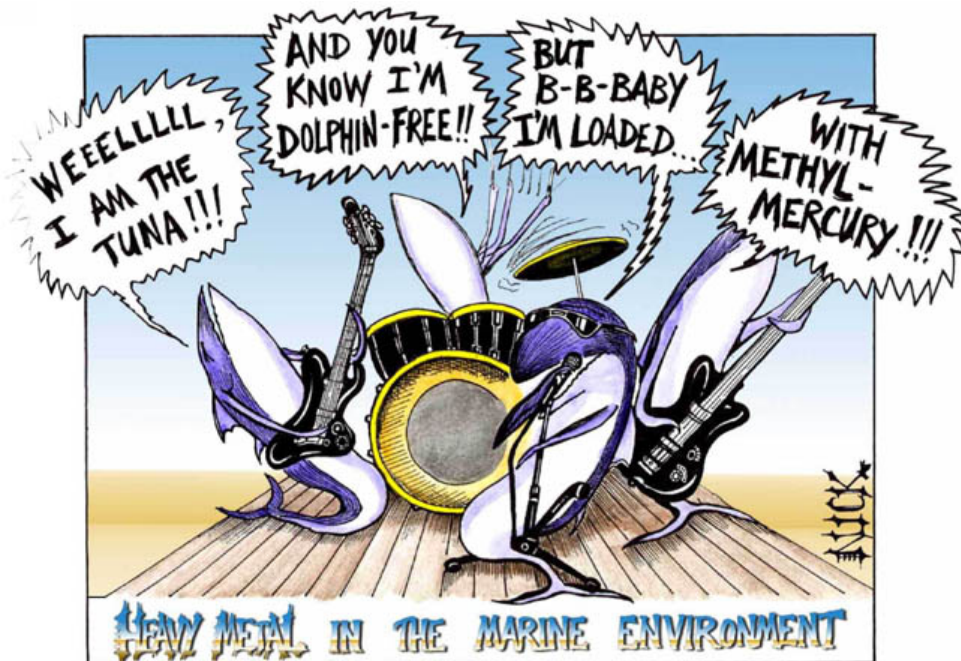
I'd be interested in knowing whether other studies have been conducted on this question by less interested parties, and if so what their findings were.”

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The Wagner Free Institute of Science, a Philadelphia Gem

The Institute began in 1855 as one of the earliest free adult science education programs in the United States. From the beginning it has combined public access to natural history and science materials with lively educational programs taught by acknowledged scholars. That agenda has altered little over time except to incorporate new fields of science and new theories of older disciplines. Today, adults may select from a broad range of college-level courses in the natural sciences taught by faculty from Philadelphia's outstanding colleges, universities, and research institutions. Special lecture series and symposia regularly bring nationally-known scientists to the Institute for academic programs which are open to the public. In addition, the Institute serves more than 10,000 children each year through an array of science lessons and its innovative GeoKids program – an interdisciplinary outreach in science and writing for neighborhood elementary students.

The Wagner Institute is located at 1700 West Montgomery Avenue Philadelphia, PA 19121.



of question is that conclusions are stated in terms of loaded words like "abuse," but the words actually used in the survey are different. For instance, a number of years ago studies were conducted at Yale and Penn on the incidence of racial and sexual harassment as reported by students. Though already an alum, I stopped at Houston Hall to pick up a copy of the questionnaire, which was still available, and see what the questions were.

It turned out that the words "sexual harassment" appeared nowhere in the survey. Respondents were asked about whether they'd experienced "unwanted" advances, remarks, jokes etc. of a sexual nature. They were never asked whether the authors of these actions knew they'd be unwanted, nor whether they persisted in them after being told they were. Obviously if you dislike someone (and sometimes even if you like them, but "not in that way"), their advances may be

Telephone: 215-763-6529.

Website: <http://www.wagnerfreeinstitute.org>

Dr. Paul Angiolillo, Associate Professor of Physics at St. Joseph's University is leading an 8 week course about the Physics of Energy, sponsored by the Wagner Institute. This course began on September 27 and will convene on Wednesday evenings at 6:30 PM until November 15. At the Wynnefield Branch of the Free Library of Philadelphia, at 54th and Overbrook Avenue, across the street from St. Joseph's University. Dr. Angiolillo invites PhACT folks to attend remaining sessions. The material is presented at the college level for non-physics majors. There are no homework assignments and weekly sessions are self contained. This course is free and pre-registration is not needed.

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February and March 2006 Meeting Reports By Becky Strickland

At our February meeting, Tom Napier, a PhACT founding member, discussed pyramids and the myths surrounding them. Tom showed slides he took on a trip to the Giza Plateau in the 70's.

Over the centuries, some have believed the pyramids couldn't have been designed and built by the Egyptians, (extraterrestrials and priests from Atlantis have been proposed as possible architects) and that 'Pi' is significant in the formula.

Neither is true. Starting from simple tombs, the Egyptians developed and built pyramids for more than 120 years, experimenting with different methods and sizes. They believed the Pharaohs were gods in training who must be preserved, protected and provided for after death so they could rule in the afterlife.

Critical thinking eventually prevailed: later Pharaohs realized they were not protected if entombed in a large conspicuous structure, and they stopped building them.

At our March meeting Phact President Eric Kreig discussed his ongoing expose of 'free energy' claims and Dennis Lee. He began with a video of a CNBC investigative report on Dennis Lee that featured

interviews with people who had purchased dealerships from Lee and had paid a high price for sleeping through science class.

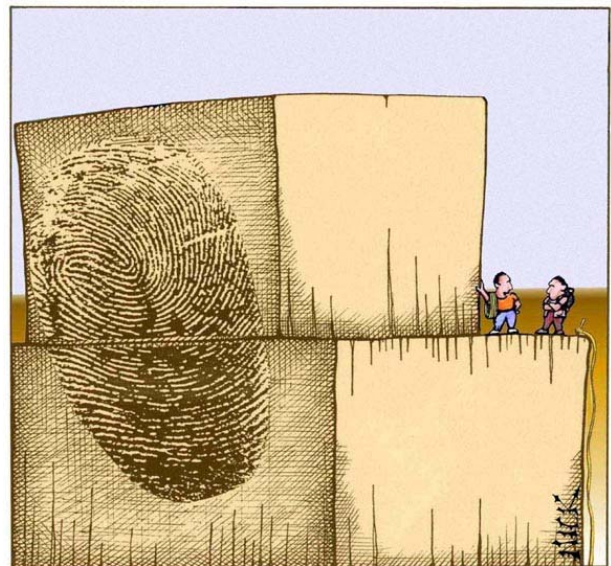
'Free energy' claims and pitches to invest in the same, are more successful in rural areas than in cities and Lee appears to focus on Christian fundamentalists, using a combination of Home Shopping Network and revival meeting techniques.

Eric showed pictures of various machines Lee has sold over the years along with pictures of Lee's home that clearly shows electrical service going into the house.

Eric noted that there is a 150-year history of 'free energy' failure. Skeptic groups and Better Business Bureaus around the country have tried to counter Lee's claims. Lee has unsuccessfully sued Eric because of Eric's web page exposing Lee, while ignoring Eric's offer of \$50,000 to produce a working 'free energy' machine.

The meeting ended with a discussion by 6 or 7 audience members who have attended a Dennis Lee meeting, described as a mixture of "Jesus talk, pseudo science, conspiracy theory, tricks and illogic." Eric and other PhACT members were thrown out of a Lee meeting a few years ago.

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"Of course, it's still a complete mystery as to how the ancients even managed to MOVE these massive stones..."



Soul of Science by Michael Shermer. (b106PFB \$5.) Here is Shermer's popular lecture & inspirational essay as a pocket-booklet. How can we find spiritual meaning in a scientific worldview? Religion may be the most common source of spirituality, but anything that generates a sense of awe may be a source of spirituality. Science does this in spades.



The Science of Good and Evil: Why People Cheat, Gossip, Care, Share and Follow the Golden Rule (b09PFB-paperback \$15.95) By Michael Shermer. Enriched in scope, deep in analysis, and controversial, is it human nature to be selfish or selfless, fierce or loving, moral or immoral? Examines the scientific evidence that shows that morality is deeply embedded in our being and behavior. Covers primate/animal behavior, neuroscience, game theory, free will, & more.



Baloney Detection Kit (b075PB \$5.00 paperback), by Michael Shermer & Pat Linse. A 16 page booklet summarizes thinking skills with paranormal examples. Widely used text for critical thinking classes. Sagan's 10 Tools; Shermer's 10 Questions For Baloney Detection; How Thinking Goes Wrong; 25 Thought Fallacies; 8 Sample Syllogism Manifestos.



How to Debate a Creationist (2nd Ed) Nov. By Michael Shermer. (b070PB \$5.00 paperback, 28 pages.) Evolution debates, Relationship of Science and Religion: Old & New Creationism; 25 Arguments and 25 Evolutionist Answers. The New New Creationism: Intelligent Design Theory, Creationist strategies; Ten Intelligent Design Arguments and Ten Answers.



Why People Believe Weird Things—New 2nd edition includes new chapter, "Why Smart People Believe Weird Things." (b062PB \$16, paperback) by Michael Shermer. Witty & eloquent. A no-holds-barred assault on mass delusion, prejudice, & gullibility. UFOs, ESP, Near Death Experiences, Alien Abductions, Reincarnation, Memories, Creationism, Holocaust Denial, Race, God, & Science vs. pseudoscience. (Save on 1st. edition b063 hardback \$10. b060 paperback \$5.)



BOOK ON TAPE: Why People Believe Weird Things by Michael Shermer (b061BT- abridged 1st. ed 2 tapes, \$6.95).



How We Believe (New 2nd ed. Includes new chapter, "God On the Brain.") (b063PB \$16.00 paperback) An empirical study of 10,000 Americans—why do people believe in God? science & religion controversies; proofs of God; did religion evolve? deeper millennial destruction-redemption meanings; finding meaning in life; how people assume that others believe for different reasons than they do. (Save on 1st. edition b064 hardback \$10. b068 paperback \$5.)



BOOK ON TAPE: How We Believe by Michael Shermer (b065BT-abridged) 1st. ed. 2 tapes, \$6.95).



Denying History: Who Says the Holocaust Never Happened & Why Do They Say It? (b067HB- hardback \$27.95) (b077PB-paperback \$16.95) By Michael Shermer & Alex Giberman. A splendid study of Holocaust denial. Shows how historical facts are proven. Deals with specific denial fabrications. "gripping... confronts outrageous claims with greedily, irrefutable facts... engrossing & important"—David Hammond

Books by MICHAEL SHERMER



To purchase go to www.skeptic.com

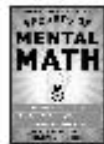
or phone us at 626/794-3119



Why Darwin Matters by Michael Shermer. (b111HB \$22.) An insider's guide to the evolution/creation debate—what evolution really is, how we know it happened, and how to test it. Why creationism and Intelligent Design theory are not science. Examines the reasons half of Americans reject evolution: fear of loss of meaning; psychological and political reasons, such as moral relativism and social Darwinism.



In Darwin's Shadow: The Life & Science of Alfred Russel Wallace by Michael Shermer (b081HB now only \$25.00 hardback) A landmark biography of the co-discoverer of natural selection & the greatest naturalist of his age. Shermer applies modern psychological theories to understand why Wallace also crossed disciplines to become involved in spiritualism, sciences, & UFO after death belief systems.



Secrets of Mental Math: The Mathemagician's Guide to Lightning Calculation and Amazing Math Tricks (formerly titled *Mathemagics*). (b112PB- \$12.95) By Arthur Benjamin and Michael Shermer. Renowned "mathemagician" Arthur Benjamin shares his secrets for lightning-quick calculations and amazing number tricks. This book will teach you to do math in your head faster than you ever thought possible, dramatically improve your memory for numbers, and—maybe for the first time—make mathematics fun.



Science Fiction: Where the Known Meets the Unknown by Michael Shermer. (b100HB \$25.) Shermer becomes a psychic for a day, investigates quack cancer & alternative medicine, evolutionary psychology and the making of the Bionly, chaos theory and history, intelligent design creationism, sports psychology and more. Lively and fun reading.



Borderlands of Science by Michael Shermer. (b069HB \$25, hardback) Where does valid science leave off and borderland science begin? Examines the theories, the people and the history involved in areas of controversy where sense is in danger of turning into nonsense.



The Skeptic's Encyclopedia of Pseudoscience by Michael Shermer, Editor Pat Linse, Contributing Ed. **TWO VOLUMES**, only \$129. (save over \$50. off the library price. Hardback. b0834B)

Includes: (1.) A-Z — acupuncture, alien abductions, astrology, facilitated communication, Fen Shui, hypnosis, magnetic therapy, polygraph & lie detection, prayer & healing, recovered memories, reincarnation, spiritualism, subliminal perception, Tar's curse, UFOs & dozens more. (2.) Case Studies: in-depth analyses: acupuncture, alternative medicine, Atlantis, chiropractic, homeopathy, immortality, police psychics, pyramids, Socratic Ritual Abuse, science and religion, witchcraft, & many more. (3.) Pro and Con™ debate section—evolutionary psychology, memes, Race and Sports, Race and I.Q. (4.) Historical Documents: Animal Magnetism by Ben Franklin, A. Lavoisier; Bryan's best evolution speech; Hume's "Of Miracles" Condor report on UFOs. Bibliography, illustrated.

Defrauding the Dying

By Dr. Raymond Richards

Mexican cancer clinics continue to do a roaring trade, despite their poor track record

When civil rights leader Martin Luther King was assassinated in 1968, the world lost a voice for decency and truth. The death of his widow earlier this year, however, was attended by greed and lies.

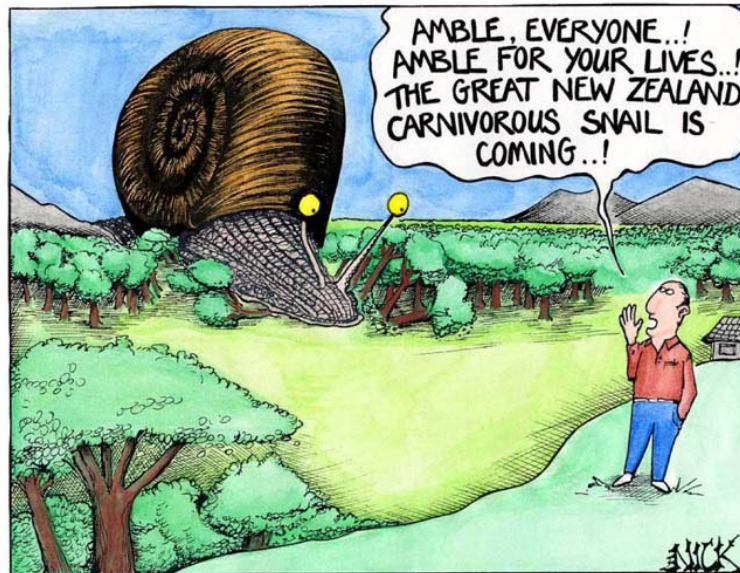
The family of Coretta Scott King rushed her to Hospital Santa Monica at Rosarito Beach, Mexico, on 26 January. She died five days later. The underlying cause of her death was ovarian cancer. King's death in one of alternative medicine's dodgiest facilities highlights a relationship between quacks and Mexicans that is evil.

Hospital Santa Monica is located near crashing surf, 25 kilometres south of San Diego. The climate there may be the best in the world, consistently pleasant. Cruise ships call at beach resorts along the coast, unloading passengers who like the sunshine and the cheap peso. The region also has about 20 alternative medical clinics for desperate patients, almost all from the United States. Coretta Scott King was barely alive when she arrived in Mexico, but like the tourists, she had money. She was one of perhaps 10,000 paying U.S. citizens who check into some Mexican clinic every year. Mexican locals and authorities welcome money from both the tourists and the sick.

Sadly, Hospital Santa Monica and the dozens of similar facilities sell patients only false hope. Kurt W. Donsbach founded the Rosarito Beach facility. "The major patient clientele is comprised of cancer patients who have been told that there is no more hope, all traditional therapies having failed," he boasts on his website. Donsbach claims to use "wholistic" techniques to treat the "whole" person; body, mind and spirit. He repeats the usual twaddle favoured by quacks: about how orthodox doctors treat only symptoms, not the disease; about detoxing the body and boosting the

immune system; about avoiding standard treatments because they make cancer worse. Hospital Santa Monica offers "a very eclectic approach," he says, including ultraviolet blood purification, mag-ray lamps, hydrogen peroxide solutions dripped into veins, ozone gas blown into the colon, a microwave hyperthermia machine (with a rectal probe), induced hypoglycemia by administering insulin, shark cartilage, a Rife frequency generator machine (remember Liam Williams-Holloway?), magnet therapy and other nonsense. Deluded groups such as the so-called Cancer Control Society, based in Pasadena, California, run trips to such Mexican clinics, taking thousands of cancer patients there for useless treatment.

Donsbach fails to reveal on his website that he has a criminal record but no medical degree. Born in 1933, he graduated in 1957 from a chiropractic college



in Oregon. By the late 1960s he was running a health-food store in California, selling supplements that he said treated cancer. Throughout the 1970s and 1980s, he was repeatedly in legal trouble for practising medicine without a licence, selling unapproved drugs and related wrongs. In 1979 he founded a correspondence school – the nonaccredited Donsbach University – that awarded bogus degrees in nutrition, and he sold his own supplements. Officials in New York said the products were useless and sued him. Under pressure in the United States, Donsbach started the Mexican clinic in 1983. In 1996 he pleaded guilty to charges of smuggling \$250,000 worth of unapproved, adulterated or misbranded medicines from Mexico into the United States. Sentenced to prison, he avoided serving time by plea bargaining. In other words, Kurt W. Donsbach's life has been devoted to a range of health-related scams.

The Mexican medical clinics are a blot on the page of human history, but they continue to exist because they attract money. Mexico is a very corrupt country, and bribes and fraud allow unconscionable activity to thrive there. Mexican officials claim they can investigate the facilities only if there are complaints,

which are rare because the clinics usually treat non-Mexicans and do not advertise in Mexico. Sometimes clinics get shut down, but they re-open. A week after Coretta Scott King died, the Mexican government closed Hospital Santa Monica, saying it lacked authority to carry out some of its treatments and that several of its unconventional practices put patients at high risk. Patients from the United States, Canada, Australia and Italy were at the facility when it was closed. Interviewed by the *Los Angeles Times*, Donsbach was shameless. He blamed the closure on the U.S. medical establishment and predicted that his clinic would reopen soon: "The moment they close down a clinic, they open it up very quickly, the same place, same people." Immoral quacks and their allies continue to fleece the dying.

Dr Raymond Richards is a Senior Lecturer in History and American Studies at the University of Waikato in Hamilton, New Zealand. He can be reached at ray@waikato.ac.nz.

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WHY I'M NOT A CERTIFIED PSYCHIC

By William A. Wisdom

You no doubt wonder why I was never certified as a professional psychic. Surely I'm as qualified as anyone is. It's time for me to tell the whole painful story.

Late one night in December of 1994 I was running around the television dial, and accidentally encountered an ad for a telephone-psychic service. What particularly caught my attention was the announcer's assurance that, although there were a lot of fakes and phonies in the business, every one of *their* psychics was certified. "What a concept!" I thought. "Certification as a psychic." I wondered whether this outfit did indeed certify its psychics, and, if so, how I might go about getting their endorsement. How hard could it be? I have always assumed that the telephone psychics have no special powers distinguishing themselves from ordinary folks like me. They proved that I was wrong. This is that story.

I determined, by reading the fine print in

subsequent ads, that they called themselves the American Association of Professional Psychics. Further research identified them with a post office box in Maryland. So I wrote to them asking about their certification process. *Mirabile dictu!*, as Julius Caesar used to say, they sent me a slick brochure entitled *Certification Program*. Half the brochure consisted of their "Statement of Purpose", and the other half explained "How to Apply for Certification".

To start the process, candidates are to submit a recent photograph (??), a professional resume, a brief essay on their psychic orientation and experience,



"Nobody uses crystal balls anymore!"

documentation of their special abilities, letters of reference from at least two satisfied customers, and \$35.

If they pass this first stage of scrutiny, candidates will undergo "peer review"--they will give psychic consultations to some already certified psychics, in order to "maintain...the highest standards of ethics and credibility in those who work with us in the field. We...are looking for recognizable qualities such as professionalism, the ability to tune in, and the talent to help a client feel recognized, validated, and uplifted by their contact with you."

I submitted my photograph, "professional resume", and brief essay--half barely factual and half wildly imaginative. In lieu of conventional documentation (which of course I didn't have), I enriched my application with letters of reference from not two but six friends who were even more imaginative and less scrupulous than I. I got "evidence" of my skills in such things as communicating with angels and hypnotic future-life progression (the opposite of past-life regression). Most of these skills I traced back to my

father's Creole nanny and my mother's early life on the reservation, where she learned such things as Native American dream-interpretation.

So far, so good. I figured I would easily qualify for the "official Certificate from the Association"--which was all I really wanted. I faced only one more hurdle--psychic readings for some certified psychics. By way of preparation, I invested a few dollars in some psychic consultations on the phone, to get the hang of the process. Nothing to it! In fact, I was told that I would have to give a reading to only one psychic, not the usual three.

After starting the tape recorder and getting my "client's" first name and birth date, I scattered on the desk before me the plastic pieces of a puzzle which I said were the bones of a golden eagle, given to my mother at her birth in 1905 by the great chief of the Crow Indian people by whom she was raised. I then mumbled some golden-eagle-bones incantations (actually the first few lines of Homer's *Iliad* in the original). With this ritual preparation, I was ready to go.

But I wasn't ready for what came next. She wanted a reading not for herself but for her sister, who was in the hospital. I had no idea how to proceed. In retrospect, I can now think of a number of useful approaches to my problem. But at the time I alternately stammered and improvised some sappy remarks, finally assuring my client that her sister would survive--though I had no idea whether her sister was at the point of death from cancer or was having an ingrown toenail fixed. After some three to five minutes on the phone, I mumbled something about the curtains of the dream world being drawn shut, so that I could see no more, and I bailed out.

[By the way, I still have the recording of this call, available to anyone who would like to come hear it. My wife thinks that it's far funnier than this written account suggests.]

About a week later I got this letter from headquarters: "Thank you for your interest in the American Association of Professional Psychics. At this time, however, the Certification panel has declined to issue a Certificate for you. Often, all that is needed is more practice and/or more training in the use of a particular method, such as Tarot, or Numerology, etc. We recommend you wait at least six months before you reapply. Please find your check enclosed." How about that?! "Please find your check enclosed." But that was cold comfort. The bottom line is this: for the first time

in my life, I FAILED A COURSE BECAUSE I FLUNKED THE FINAL EXAM!

Embittered by this failure, I first considered getting "more practice and/or more training", on the basis of which I was quite sure that I could get my Certificate. But then I realized that the whole point of this exercise was to get the Certificate *without* any training or experience. I may try again some day. But if I do, I won't prepare myself in any special way.

But I will keep in mind the lesson I learned, to which I alluded at the beginning of this account. It had not occurred to me that *telephone psychics do have special powers distinguishing themselves from ordinary folks like you and me*. They have cultivated the power to keep people talking and listening on the phone for a long, long time. Telephone psychics work by the hour. Chatting with someone for three to five minutes is certainly not going to pay the bills. So they were exactly right when they said that I didn't have what it takes.

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Bill Wisdom is a long time member of PhACT and in real life is a banjo picker and Professor Emeritus of Philosophy at Temple University.

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Wanted: Articles and opinion pieces on subjects of general interest to skeptics and critical thinkers. Book reviews by members are welcome. Material must be geared toward a general audience and not overly technical. PhACT members and speakers who may have written a book are invited to submit articles or advertising promoting their publication. Phactum accepts no paid advertising. Send to Ray Haupt at phactpublicity@aol.com.

Science Without Sense – The Case of Secondhand Smoke

By Albert Z. Conner

I am a member of PhACT, CSICOP, FSGP, and WASH. All of these organizations seek to promote science, encourage critical thinking and expose the fallacies of pseudo-science, junk-science, and religious myths and legends. Substantial efforts have been made in the debunking of phenomena such as UFOs, faith healing, cryptozoological beasts, ESP, energy machines, magic magnets, weeping statues, haunted houses, etc., etc. While these efforts are instructive, and often a lot of fun, they have little or no social impact. On the other hand, I have been very disappointed by the failure of these organizations to address, or even mention, the current massive pseudo-scientific attack on the perceptions and the lives of the general population. I am referring to the flood of false and misleading information being generated by incompetent epidemiologists, biased public health organizations, environmental extremists, and a scientifically illiterate media. We are continually subjected to reports of "studies" warning of the threats to public health of almost everything that we eat, drink, or breathe. The great majority of these "studies" are known as retrospective epidemiological studies in which two groups of people, alike as possible except for their behavior or exposure to some food or chemical, are compared with regard to the incidence of a specific health effect. After statistical analysis of the results, correlation factors and relative risk factors are calculated that supposedly determine the threat to public health.

Retrospective epidemiological studies are not science. They are statistical exercises applied to a body of data usually collected from questionnaires or interviews that rely on an individual's perceptions and memories. They often ignore or minimize a host of variables (confounding factors) that could affect the conclusions. Regardless of the results, the only real conclusion that can be reached by any such "study" is the possible existence of a correlation between behavior/exposure and the targeted health effect. It is a basic tenet in statistics that correlation does not prove cause. Cause and effect must be established by resorting to real science involving such disciplines as chemistry, physics, physiology, etc.

One of the most egregious statistical frauds ever

perpetrated on the general public has led to the condemnation of secondhand cigarette smoke (SHS) as a public health threat. In 1989, the EPA issued a public notice that SHS was a Group A human carcinogen and a "known cause of lung cancer". The basis for this statement was not initially published. In 1992, the EPA published its so-called risk assessment based on a seriously flawed and statistically manipulated meta-analysis of a group of hand-picked studies. This risk assessment was subsequently challenged in Federal court. After a thorough review, the Court determined that the EPA had knowingly and willfully disseminated false information based on hand-picked data and



"You can come out now, Miller. But never think about smoking again."

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manipulated statistics. Consequently, the Court ordered a summary judgment against the EPA and nullified the Agency's risk assessment.

Since that time, many retrospective epidemiological studies of the potential effects of SHS on human health have been reported. A relatively recent review of a large number of these studies conducted in several countries over the past 17 years concluded that 77 studies showed no significant risk, 16 studies showed a measurable positive risk, and 30 studies showed a negative risk. These studies included a WHO study covering 21 countries over 10 years and a massive recent study of more than 35,000 California individuals from 1960 to 1998. The health threat does not exist.

A basic tenet of toxicology is that "the dose

makes the poison". There is no valid scientific method to determine the amount of SHS that any individual is exposed to under normal living or working conditions. Trying to estimate exposure by relating it to living with a smoker who smokes some number of packs/day or working in an environment in which smoking is permitted (bar, casino, restaurant) is a ridiculous exercise. Contrary to the EPA's judgment that SHS has the same chemical composition as the smoke that smokers inhale, SHS is much different. Potentially harmful ingredients are chemically altered and greatly diluted. In addition, the amounts of these compounds are orders of magnitude below the levels that would pose any significant health threat. Consider the fact that OSHA has never established any Federal standards for indoor smoking in the workplace.

None of this factual information has had any effect on the position of the anti-smoking zealots and organizations such as the American Cancer Society, the American Heart Association, the American Lung Society and the World Health Organization. They remain focused on the original EPA classification of SHS as a human carcinogen and a known cause of lung cancer and other diseases despite the complete lack of scientific evidence. These organizations, the Media, and the general public have been brain-washed into accepting the anti-smoking propaganda. In addition, the huge influx of cash to the states from the tobacco company settlement and the major financial contributions from the large pharmaceutical companies who profit enormously from the sale of anti-smoking medications, have compounded the felony.

The social and economic repercussions of the above flood of lies and misinformation have been enormous. Smokers have been demonized and smoking bans have erupted across the country and internationally. The private rights of citizens have been violated and many businesses have suffered substantial economic losses. Secondhand smoke does not kill nor does it pose a significant health threat to the general public. Here we have a classic example of scientific ignorance and the lack of critical thinking having a major impact on the social structure. Why has this been ignored by organizations devoted to the principles of science, skepticism, and critical thought?

Albert Z. Conner is a retired analytical chemist with more than 20 years experience in the fields of epidemiology, toxicology, statistics, and government regulatory practices.

Editors note: On September 14, 2006 Mayor John Street signed into law a bill that bans smoking in most public places in Philadelphia. Sidewalk cafes, specialty tobacco establishments, private clubs and casinos are exempt. Some members of City Council wish to extend the ban to outdoor cafes.

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More Creationism at Sandia

Special Report by Dave Thomas

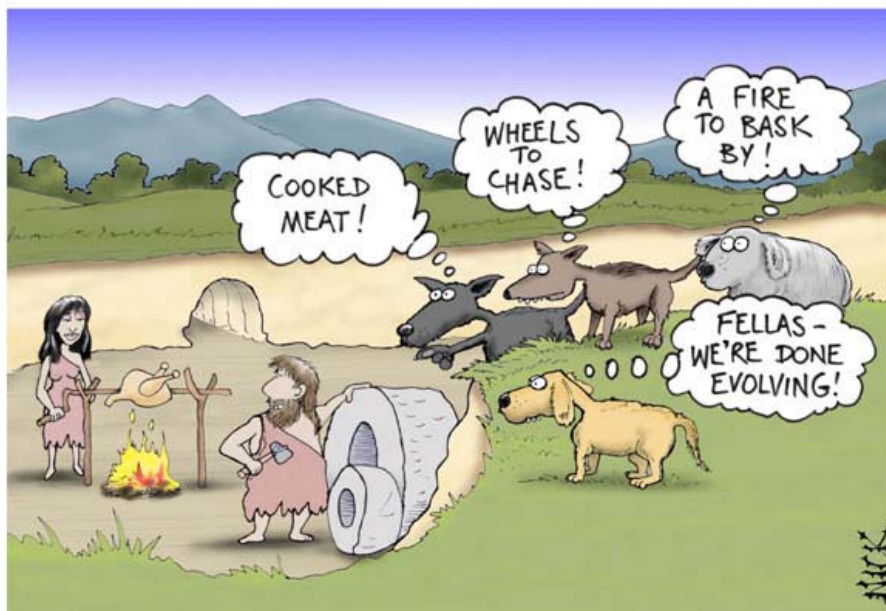
On Monday, March 13th, 2006, young-earth creationist John Baumgardner gave a talk at Sandia National Labs. Unlike Russ Humphreys' appearance at Sandia in February, Baumgardner did not sell creationist books and videos in the lobby. However, he did pitch them as available at creationist web sites during his talk. The main thrust of his talk was "continental sprint." Baumgardner pursued a doctorate in geophysics specifically to disprove evolution. He developed a code, Terra, used widely in continental drift calculations. When the best estimates of physical and historical conditions are specified, this code does a marvelous job of explaining plate motions over long time periods. Baumgardner assumes that physical constants like rock stiffness would have changed drastically during the time of Noah's flood, and claims that the flood itself broke up the mega-continent Pangaea, moving the continents to their present locations in a very short time. It's similar to how Humphreys assumes orders-of-magnitude difference between real conditions (in his case, minerals miles below the surface) and imagined conditions (minerals in a vacuum).

Baumgardner assumes orders-of-magnitude changes in physical parameters like temperature diffusion constants, and then is surprised when the age of the Earth under these assumptions comes in at a convenient 6,000 years. Baumgardner has provided a valuable public service in the past. He has demonstrated exactly why science can not be based on the supernatural, or upon various religious claims. The problem is that once somebody starts to invoke religious miracles as valid scientific explanations, anyone that disagrees with that person, even if it is only with the "scientific" aspects of their claim, is immediately criticized as attacking the *religion* behind the claim.

Creationists want it both ways - they promote their claims as "science," but treat scientific criticisms as heresies against God.

In 1997, there was a series of letters between Baumgardner and various scientists in the pages of the Los Alamos Monitor. Baumgardner claimed he could disprove evolution with a simple probability argument concerning formation of proteins. Writing of this letter exchange, he states "Let us merely focus on the task of obtaining a suitable sequence of amino acids that yields a 3D protein structure with some minimal degree of essential functionality. Various theoretical and experimental evidence indicates that in some average sense about half of the amino acid sites must be specified exactly. For a relatively short protein consisting of a chain of 200 amino acids, the number of

random trials needed for a reasonable likelihood of hitting a useful sequence is then on the order of 20100 (100 amino acid sites with 20 possible candidates at each site), or about 10130 trials. This is a hundred billion billion times the upper bound we computed for the total number of molecules ever to exist in the history of the cosmos!! No random process could ever hope to find even one such protein structure, much less the full set of roughly 1000 needed in the simplest forms of life. It is therefore sheer irrationality for a person to believe random chemical interactions could ever identify a viable set of functional proteins out of the truly staggering number of candidate possibilities. In the face of such stunningly unfavorable odds, how could any scientist with any sense of honesty appeal to chance interactions as the explanation for the complexity we observe in living systems? To do so, with conscious awareness of these numbers, in my opinion represents a serious breach of scientific integrity. This line of argument applies, of course, not only to the issue



Forget the experts; domestication of the dog only took about 8 seconds.

of biogenesis but also to the issue of how a new gene/protein might arise in any sort of macroevolution process. ... One retired Los Alamos National Laboratory Fellow, a chemist, wanted to quibble that this argument was flawed because I did not account for details of chemical reaction kinetics. My intention was deliberately to choose a reaction rate so gigantic (one million million reactions per atom per second on average) that all such considerations would become utterly irrelevant. How could a reasonable person trained in chemistry or physics imagine there could be a way to assemble polypeptides on the order of hundreds of amino acid units in length, to allow them to fold into their three-dimensional structures, and then to express their unique properties, all within a small fraction of one picosecond!?

Prior metaphysical commitments forced him to such irrationality. [He is referring to the late Dr. Ray Rogers.] Another scientist, a physicist at Sandia National Laboratories, [Dr. Marshall Berman] asserted that I had misapplied the rules of probability in my analysis. If my example were correct, he suggested, it 'would turn the scientific world upside down.' I responded that the science community has been confronted with this basic

argument in the past but has simply engaged in mass denial. Fred Hoyle, the eminent British cosmologist, published similar calculations two decades ago. Most scientists just put their hands over their ears and refused to listen. In reality this analysis is so simple and direct it does not require any special intelligence, ingenuity, or advanced science education to understand or even originate. ... Why could this physicist not grasp such trivial logic? **I strongly believe it was because of his tenacious commitment to atheism that he was willing to be dishonest in his science.** At the time of this editorial exchange, he was also leading a campaign

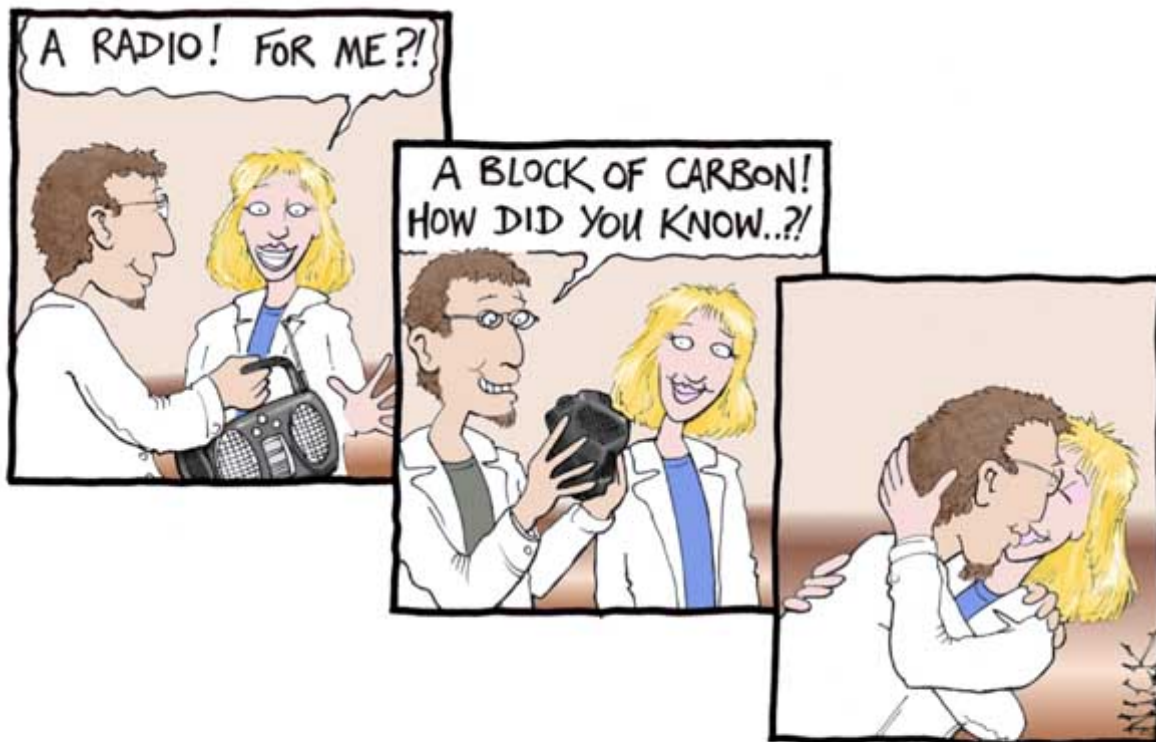
before the state legislature to attempt to force this fraud on every public school student in our state..."

Here's a sample of Marshall Berman's "tenaciously atheistic and dishonest" critique of Baumgardner's argument: "Mark Twain said: 'There are three kinds of lies: lies, damned lies and statistics.' Baumgardner purports to calculate the probability of life arising due to random interactions over the life of the universe. If true, Baumgardner would turn the scientific world upside down. But it is not true. Baumgardner uses statistics and probability theory improperly. He assumes randomness that doesn't exist. Indeed, by assuming randomness for non-random processes, one can show that almost any event is extremely improbable. Let's run a scientific experiment. Go outside and pick up a small rock. The probability of that rock being on that spot on the earth *by chance alone* is roughly the area of the stone divided by the surface area of the earth, or about one chance in 10 to

the 18th power (one followed by 18 zeros). If picking up the stone took one second, the probability of such an event occurring at this precise moment over the lifetime of the universe is now even smaller by another factor 10 to the 18th power! This simple event is so incredibly unlikely (essentially zero probability) that one wonders how it could be accomplished! How can such an 'unlikely' event occur? The problem is our initial false assumption of randomness. The rock and you arrived at that spot at that time by mechanistic processes. Probability theory fails when used improperly, as Baumgardner has done. Probability theory, like evolution theory, is valuable because it works under the appropriate conditions. ..."

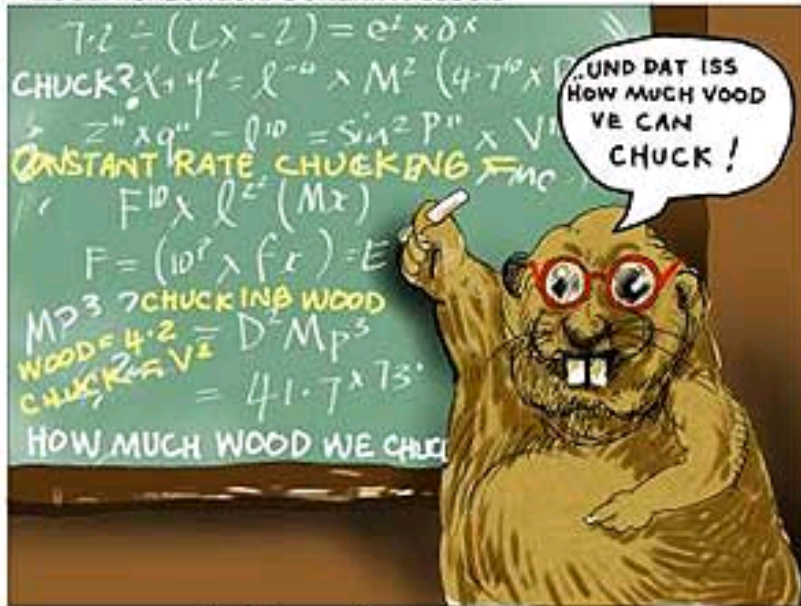
Dave Thomas is an avid skeptic and President of New Mexican's for Science and Reason. The NMSR website is regularly updated and can be found at <http://www.nmsr.org>.

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The radiocarbon dating technique.

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Ode to Carbon

By Kathryn Cresswell



Oh Carbon! Woman's best friend
Without you, love would not end.
You are the source of life on earth
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There would be no 'you' and no more 'me'.

Carbon is a woman's best friend-
The ring on her finger, that sparkles and shines
That costs man plenty (along with the wine and the dine)
Is made from diamond, a bright shining carbon
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And many a star!

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