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Motto of the month:

It is definitely bad luck to be superstitious.

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A Geologist Experiences Dowsing

A report on the November 1996 meeting

Professor Wayne Pryor of the University of Cincinnati has studied groundwater geology for three decades and has many years experience with water problems and in prospecting for oil. In this work he has encountered many dowsers also known as water witchers or doodle buggers. These persons search for water and much else by psychic, magic, or spiritual means.

The practice of dowsing is very old, and may go back five thousand years to Babylonian civilization. In the Bible, Moses striking a rock to bring forth water has been interpreted as describing dowsing. The first published examination of these practices was made by Georg Agricola<sup>1</sup> in his famous book on mining and minerals in the early Renaissance. Professor Pryor thought Kenneth Roberts<sup>2</sup> naive praise of dowser Henry Gross in the fifties may have revived the ideas and the practice. A definitive scientific source is The Dowsing Rod<sup>3</sup>, a water supply paper of the Geological Survey. More recently, the Rand Corporation has made a controlled study of dowsing with negative results. The recent article on dowsing in the Smithsonian<sup>4</sup> magazine can only be characterized as shallow.

The major oil companies have, of course, looked into all possibilities for finding underground minerals. Most of their studies are proprietary. Results are thought to have been uniformly negative, at least no positive results have been announced or published.

The tools used by dowsers are in the first place a forked stick cut preferably from willow or witch hazel. The first, *Salix saliforma*, has an affinity for growing near water, so its use is a form of sympathetic magic. Witch hazel, *Hamamelis virginiana*, actually has a tendency of growing in metalliferous ground. Other tools may be balanced pieces of wood, L-shaped rods in which the short leg is held and the sought after material affixed to the long end. Various pendulums are used, often weighted by a vial of the material searched for. Hanging this from a gold chain, and wrapping it around the wrist near the pulse is said to improve the power of the instrument. Some "sensitives" use no tools at all, just their psychic or shamanic powers of divination to find things and answer questions.

Finally, some doodle buggers use a black box which contains a variety of highly secret materials selected by and only known to the practitioner. Professor Pryor mentioned one who used a "devonian period fossil octopus tentacle" to find devonian age oil! These black boxes may in turn be hooked up to electric power or batteries, to an antenna, to a probe or wand, and may display dials for the operator to use. Black box users are more likely to claim ability to find valuable minerals, such as silver, oil, copper, or even gold. Such operators are also more likely to lay claim to a certain technical expertise, calling their dowsing rhabdomancy or radiesthesia. In fact, their talk and promises may include scientific or technical terms, or even achieve a "high plane of techno-babble."

Among things sought after by dowsers is first of all water. Success rests on the fact that groundwater is virtually ubiquitous at some depth. It is distributed in the pore spaces and fractures in the rock, not in veins of any kind. The flow of a well depends on how readily and quickly the water will trickle from the rock into the casing. In Professor Pryor's experience there will be few dowsers in areas where water is difficult to find, but many where water is plentiful. In such areas well drilling contractors are likely to maintain their own dowsers in order to prevent interlopers from insisting they drill in an inconvenient location, far from electric connections or from the house or barn where the water is wanted. Nor do contractors enjoy being accused of having "crushed the vein" with their heavy equipment, when little water is found where the forked stick indicated. Most water witchers are honest believers and themselves convinced of their power. Consequently their charges are likely to be modest, with a money back policy, if no water is found. Nobody, neither dowsers, nor well drillers, nor geologists are a hundred percent successful, since the success of a well is difficult to predict. And, none of them is likely to advertise their failures.

Oil is probably the second most sought after material. This is more the domain of the black box men, some of whom are charlatans. Prospecting for valuable metals also attracts dowsers. Beyond these, almost anything may be sought by psychic methods. All manner of lost objects are dowsed for. Among these water dowsers have some success with finding old drain tiles in the swampy glacial lake plains south of the Great Lakes. These were laid in the last century, and sometimes surface indications of their presence are noticeable. Dowsing methods have been used to find dead bodies or lost persons, as well as to detect crimes, both with rather indifferent success. Where dowsing rod and pendulum are used to determine the sex of unborn children, diagnose illness, or generally predict the future, it shades off into the vast plethora of weird, supernatural methods.

Various theories are put forward to explain why these non-scientific methods should work. Sympathetic attraction to wands or pendulums weighted with the thing sought is an ancient concept. The thought that individuals possess special psychic powers was already held by shamans and doctors of primitive peoples. Related is the idea that the dowsing instrument or the vein of mineral may be guarded by spirits, which in turn may be thought to represent either good or evil. To the skeptic the practice represent merely another belief in magic. In the case of water witching and tile finding the lay of the land, the hillsides and swales, or the presence of green plants may give a dowser useful indications where water is available near the surface. This is particularly the true if the dowser knows the local region and is familiar with its plant life.

-- reported by Wolf Roder

Agricola, Georg (1494-1555), *De Re Metallica* [about metals] first published 1556, translated by Herbert Hoover, 1912, (reprinted NY: Dover Pub. 1950)

Roberts, Kenneth Lewis (1885-1957), *Henry Gross and his dowsing rod* (Garden City, NY: Doubleday, 1951) 310 pp. ill. maps, ports.

Arthur J. Ellis *The Dowsing Rod: A History of Water Witching* (Wash: U.S. Geological Survey, Water-Supply Paper #416, 1917).

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Is There a Santa Claus?

As a result of an overwhelming lack of requests, and with research help from that renowned scientific journal *Spy* magazine (January, 1990) - I am pleased to present the annual scientific inquiry into Santa Claus.

No known species of reindeer can fly. But there are 300,000 species of living organisms yet to be classified, and while most of these are insects and germs, this does not completely rule out flying reindeer which only Santa has ever seen.

There are two billion children in the world. But since Santa doesn't appear to handle the Muslim, Hindu, Jewish and Buddhist children, that reduces the workload to 15 percent of the total, or 378 million according to the Population Reference Bureau. At an average rate of 3.5 children per household, that's 91.8 million homes. One presumes there's at least one good child in each.

Santa has 31 hours of Christmas to work with, thanks to the different time zones and the rotation of the earth, assuming he travels east to west, which seems only logical. This works out to 822.6 visits per second. That is to say, for each Christian household with good children, Santa has one thousandth of a second to park, hop out of the sleigh, jump down the chimney, fill the stockings, distribute the remaining presents under the tree, eat whatever snacks have been left, get back up the chimney, get back into the sleigh and move on to the next house. Assuming that each of these 91.8 million stops are evenly distributed around the earth, which of course we know to be false, but for the purposes of our calculations will accept, we are now talking travel of about .78 miles per household, a total trip of 75.5 million miles, not counting stops to do what most of us must do at least once every 31 hours, plus eating and feeding the reindeer, and etc.

This means that Santa's sleigh is moving at 650 miles per second, three thousand times the speed of sound. For purposes of comparison, the fastest human made vehicle on earth, the Ulysses space probe, moves at a poky 27.4 miles per second. A normal reindeer can run, tops, 15 miles per hour.

The payload on the sleigh adds another interesting element. Assuming that each child gets nothing more than a medium-sized Lego set, about two pounds, the sleigh is carrying 321,300 tons, not counting Santa, who is invariably described as overweight. On land, conventional reindeer can pull no more than 300 pounds. Even granting that "flying reindeer" (see point #1) could pull ten times the normal amount, we cannot do the job with eight, or even nine, we need 214,200 reindeer. This increases the payload - not counting the weight of the sleigh itself - to 353,430 tons. Again, for comparison - this is four times the weight of the Queen Elizabeth. The ocean liner, not the lady.

353,000 tons traveling at 650 miles per second create enormous air resistance - which will heat the reindeer in the same way a spacecraft reentering the earth's atmosphere is heated. The lead pair of reindeer will absorb 14.3 quintillion joules of energy per second each. In short, they will burst into flames almost instantaneously, exposing the reindeer behind them, and create deafening sonic booms in their wake. The entire reindeer team will be vaporized within 4.26 thousandths of a second. Santa, meanwhile, will be subjected to centrifugal forces 17,500.06 times greater than gravity. A 250 pound Santa, which seems ludicrously slim, would be pinned to the back of his sleigh by 4,315,015 pounds of force.

In conclusion - If Santa ever did deliver presents on Christmas Eve, he's dead now.

So now you know why he can't do it all by himself. And that is why Santa needs all the help and helpers he can get.

-- selected by Brad Bonham

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President's Corner

A Little Skeptical Pay Back?

[Wizard holding up a candle]

When is the proper time for the news media to take a skeptical look at the stories they carry? This question pops into my mind each year right after Halloween. It happened just last week when I read a long and very credulous story in the Northern Kentucky edition of one of our local newspapers. The story documented the latest in a series of "haunted bars" to get free publicity. A club in Wilder, Kentucky, can be counted on for an annual story about their latest apparition. Its

cast of spirits has made the circuit of spooky tabloid TV shows and has a local access feature that haunts the local cable channels. The reporters sent out to gather "Halloween Features" can't be expected to ask embarrassing questions about evidence or corroboration, I suppose, because they do need something to print. Besides the talk shows are now the competition and we all know how well researched those shows are.

So I was thinking that there should be an appropriate time of year for skeptics to expect a little attention. A day for the media to reflect on the fine job of balanced reporting they do on the continuum from skeptic to believer. Could there be a more appropriate day than April First? But I need the cooperation of all skeptics out there who put up with stories about UFO's over Butler County, about the virtues of Homeopathic remedies, and the latest on crop circles in the local press. Cut the story out or jot down the broadcast station, the time and the details. You can give the stories to me at our meetings, or send them by E-mail or snail mail, or even over the phone. I will put all of your entries into an empty mayonnaise jar and next March I will present your best pick an award for the most gullible reporting.

-- president

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From the Un-easy Chair

Identifying a taste and choosing a Doctor

We generally think we ourselves are the best judges of our choices in drink, food, and medical practitioners. Yet, there is a sizeable amount of evidence we couldn't tell a mouse from an elephant.

Consumers Reports once tested a large sample of coffee drinkers to identify the better quality coffees. It turned out, about a third of the sampled persons could not tell instant from brewed coffee, and another third could not identify them with certainty. Research on the taste differences in wines resulted in similar findings. My own very informal tests have shown most persons can't tell one whiskey from another, no matter what the price. I also doubt many can tell the difference between brands of vodka by taste or smell, and probably would not be able to tell vodka from gin.

A recent survey of British taste buds by the Tropicana Food company revealed that 70 percent of Britons can't identify the flavor of mashed carrot, 40 percent couldn't distinguish cooked apples, 32 percent couldn't tell cooked pears, and 20 percent can't even identify a mashed potato. "The blindfold tests show that consumers have real difficulty in defining taste and become confused in identifying food types when they cannot see what they are eating or drinking," a Tropicana spokeswoman concluded. (Reuter)

Hilary Clinton's proposals for national health care were heavily criticized because they "would have put limits on people's choice of doctors"; or at least 69 percent of respondents to a survey thought so. (Newsweek, 27-28 October 1994). The proposals in fact did not have such limits. Freedom to choose your own medical practitioner, whether conventional or quack, remains one of the big obstacles to achieving national health insurance. Yet, with the best will in the world, do you have the information to make a choice?

The most recent issue of Consumers Reports (Nov. 1996, pp. 62-63) reviews what knowledge you can acquire about your prospective practitioner. You can find out his credentials, degrees, specialties, and board certification. With some effort and cost you may also find out if he has been disciplined by the state AMA, but not whether charges have been filed. It extremely difficult to determine if a doctor has been sued for malpractice, or how that turned out, and whether it was frivolous. But, most of all there is no way to know if a doctor is trustworthy, skillful, capable or up to date on his learning. Fundamentally then, the free market place in medicine leaves us blind choice.

Astronomy and the Bible

Isidor I. Rabi's is an American tale in the tradition of unlikelihood mixed with seeming inevitability. Brought as an infant from Galicia, Rabi grew up on the lower East Side of New York City, and, later, in Brooklyn, on one side hemmed in by poverty, but expanding on the other into the culture and religion of Orthodox Judaism. His special gift of clear and captivating speech was evident early. Though always small of stature, he made it on the tough slum streets by fascinating the bully-boys with Bible stories.

The local public library was his refuge, a place for his self-education but eventually the cause of a familiar crisis. A little book on astronomy opened his eyes to the Copernican solar system with its clockwork regularity of planetary motion. The simplicity and beauty were overwhelming, scuttling his biblically-based belief that the sun's risings and settings are caused by God's constant operations. Young Rabi announced to his pious, long-suffering parents: "It's all very simple: who needs God?" He was evidently one of those fiercely independent kids: when time came for his bar mitzvah, it was held, at his insistence, in his home instead of the synagogue, and he delivered a speech on "How the Electric Light Works." Yet all his life he remained God-struck, rather like Einstein, who called himself an irreligious believer.

from: Gerald Holton, *Einstein, History, and other Passions*, p. 229 Isidor Isaac Rabi [1898-1988] physicist, received the Nobel Prize in 1944.

"Folks don't mind if you tell them a few lies, as long as you are real sincere about it." --bio-astrologer Esmeralda von Lowenzahn-Dentdelion

Skeptics have questioned Esmeralda's assertion that psychics could possibly be so ethical as never to enrich themselves from predictions on the stock market and on games of chance. But Esmeralda points out that few psychics are rich, which surely and clearly shows they do not enrich themselves from their predictions. They would be dishonest charlatans if they did so.

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## Book Reviews The Darwin Legend

The Darwin Legend  
by James Moore  
(Grand Rapids, MI: Baker Books, 1994)

The legend pursued by Moore is the claim Darwin turned to God on his deathbed and renounced evolution as an error of his youth. This story has been told and retold over the years in a variety of versions especially in fundamentalist circles. Moore's appendices document and reprint such tales from 1882, the year Darwin died, to the year before publication of this book. He also reprints and documents denials of the canard by family and friends of the great man. Moore is extremely well placed to write on this topic. He is co-author of a highly regarded biography of Darwin, of other works on Darwin, and of works on science and religion. So what is the source and the truth of the matter?

I learned three things. One, Darwin was an unbeliever who had lost his faith in the traditional Christian God early in his scientific career. He called himself an agnostic in his personal diaries, and would say so in the circle of intimate friends. There is no evidence he ever wavered in this conviction. And, it would have been quite uncharacteristic of this calm and meticulous thinker to do so on his death bed.

On the other hand Darwin never proclaimed his loss of faith publicly. Moore never calls him a hypocrite, but Darwin supported the local village church, its charities, and if called upon local evangelical preachers who came to save the hop harvest workers from sin and drink. Darwin was in every way a Victorian gentleman, a member of the establishment. And a gentleman was not a radical, he did not speak against the crown or its church. Darwin deferred in such matters to his wife and daughters who tended to continue strong in their belief in God, and feared he would go to hell. They also made sure his private diary was published only in an edited version. Darwin's public adherence to the church made possible his interment in Westminster Abbey.

This ambiguity about Darwin's faith made the legend possible. The actual perpetrator was a woman evangelist, Lady Elizabeth Hope, who worked the tent circuit in Down village in the year before Darwin's death. Her descriptions of the view from the house and from Darwin's study are too accurate to be second hand. Thus, although there is no direct evidence of her visit, Moore credits her with calling on Darwin in the Fall of 1881. Darwin, always a gentleman, surely would not have refused to receive a titled preacher.

Moore's pursuit of the facts makes a fascinating story. If you like historical detective work, this is a good one. Oh, yes, and what was Darwin's actual final utterance on his deathbed? "I am not the least afraid to die," he assured his wife and several members of his family before he expired.

-- Wolf Roder  
Journey into the Light

Journey into the Light:  
Exploring Near Death Experiences  
by Richard Abanes  
(Grand Rapids, MI: Baker Books, 1996)

This book is written from an evangelical Christian view point by a "cult awareness" activist. The foreword is by Norman Geisler, a "creation science" apologist, and the cover endorsement by another, D. James Kennedy. For some skeptics this is enough to discredit it. But, there is much of use to skeptics in this book. Near Death (NDE) and Out of Body Experiences (OBE) occur only in the brain, not outside the body is the author's contention. Let me provide a chapter by chapter description.

"A timeless phenomenon" covers the historical background from ancient to modern times. Nearly all cultures have stories of spiritual beings and of visions.

"And then I died" provides definitions of NDEs. They may be divided into autoscopic or rising out of the body events, transcendental travel NDEs, and various combinations of these.

"NDE basics" lists some common characteristics, i.e. body separation, tunnel of light, meeting other beings, life review, and return.

"Altered states" describes experiences similar to NDEs which help explain these: deprivation tanks, sudden fast motion, hypnogogic-hypnopompic dreams, etc.

"When death approaches" compares Fear of Death experiences with NDEs, including life reviews and feelings of peace which are too similar for coincidence.

"Brain reactions" examines chemical changes associated with NDEs.

"Consistent inconsistencies" examines the contention of NDE advocates that similarity of these experiences proves they represent reality.

"PSIence fiction" explores the connection between NDE and ESP research.

"Transformation" says that just because people's lives were changed for the better does not prove the NDE occurred outside the body.

"New Age ties/old age lies" comments on the connection between NDE advocacy and the New Age movement, and inveighs against the pantheistic theology and the oneness of all world view.

"Netherworld explorers" describes at length the institutions and individuals who have engaged in NDE research.

"The final frontier" explores a Biblical view of death and heaven.

Appendices examine NDEs which describe descents into hell or were otherwise unpleasant; and critically treat the claims of Betty Edie, and Mormon theology.

This book was thoroughly researched, has a glossary, extensive footnotes, and a long bibliography. Unfortunately no index is included, which I consider a major omission. On the whole, the book examines NDEs in a way acceptable to skeptics.

William S. Bainbridge in an insightful article "Superstitions: Old and New" in the SI (Summer 1980) pointed out that evangelicals accept many of the same ideas as skeptics. He surmised that an end to religion may not mean the beginning of an "age of reason", instead, it may mean the coming of an age of new superstitions.

-- Andrew O. Lutes  
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This & That  
Gopher It

The gopher museum in Torrington, Alberta, has been opened despite a long campaign by animal rights activists to prevent it. Stuffed gophers, caught in local farm fields where they are a pest, are dressed in clothing and with tiny props show many scenes of life in Torrington: they play hockey, get their hair done, shoot pool, fish, and rob a bank. There is even a gopher preacher in his church. The locals didn't appreciate the outsiders' objections. The Mayor told them to "go stuff themselves." But the head of Torrington's tourism committee, liked the controversy. "They've given us thousands of dollars of free publicity," she said. (AP) Is this stupidity or lack of education?

Straight Talk

An absolutely choice example of non-thinking, brought to you by Cincinnati's skeptics. Steve Allen has a humorous story he tells, as an example of Dumbth, his word for stupid things people do and think. He has a book filled with such actions by the same title. Someone did a "man-on-the-street" interview in which he asked the following question: "Would you vote for a heterosexual presidential candidate?" Reputedly over half those questioned said that if they were honest, they just didn't think they could vote for a such a person for president. The dumbing down of America continues!

Save for your life and more

A company based in Liechtenstein is offering a new investment which it claims will be the best for your life and in your afterlife. Prometh's "reincarnation account" provides "seed capital for your next life." The \$130,000 minimum accounts are invested in conservative growth portfolios. "You shouldn't be speculating while your soul wanders," the Company insist, and it must be redeemed within 23 years after the owner's death. To collect, the reincarnated soul must correctly answer questions that only their selves in a previous life would have known. (Newsweek)

Talking Dog?

Robert M. of Tampa was charged with theft and forgery after he allegedly married his comatose girlfriend hours before she died, then charged \$20,000 to her credit cards. But, he claims, it wasn't his idea. "He said he was sitting on the couch when Ms. Sewell's dog told him she would want him to go on living, have a better life, and it would be OK to use her credit cards," a police person reported. However, an investigator who searched the apartment couldn't find any corroborating evidence. "The dog was tied up in the garage and didn't say a thing," he commented. (AP)

Give Him a Hand

Thomas W. Passmore, 32, was working on a construction project in Norfolk, Va, when he noticed a mark on his hand. It looked like "666" to him. Remembering his Bible: "If thy right hand offend thee, cut it off," Passmore picked up his circular saw and complied. Quickly taken to a hospital, he refused to give consent to surgery, saying he would go to hell if they re-attached his hand. Hospital officials, unsure what to do, consulted a judge, who told the hospital to follow their patient's wishes. Now, Passmore is suing the hospital for \$3.35 million, claiming they should have overruled his orders and made him have the surgery. He said the hospital is liable because they knew he had a history of mental problems. (AP) Had they re-attached his hand would he now be suing them for ignoring his religious beliefs?

Taking a good look

San Jose State University is looking for Josephine Canicatti, 83, to help their football team beat their rival, the University of California Bears. Canicatti is reputed to have the malocchio, Italian for "evil eye", so she can put curses on others -- which she is said to have done for other teams. She put her stare on Casey Stengel before the Yankees lost the World Series in 1955. Marketing consultant Peter Ciccarella came up with the idea, even though he lost track of her in 1986. Is this some sort of publicity stunt? "Absolutely," Ciccarella says, adding he doesn't really think the curse will work. "But when you're involved in a losing program and you want to turn the corner, you'll take anything." The Bears' coach isn't too worried. "This is Berkeley," Steve Mariucci says. "We get things like that all the time around here." SJSU's football coach John Ralston wasn't consulted on the plan, but liked it. "Let's try it. We need all the help we can get." (San Francisco Chronicle) May I recommend an absolutely first rate African witch doctor?

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From the Amazing Randi

RE: Gotcha!

Another Act in the Quadro Drama....

Some months back, I discussed the silly device known as the "Quadro" rod, a stick that claimed to be means of detecting golf balls, guns, and drugs at a distance by super-technology invented and offered for sale by the Quadro Corporation of Harleyville, S.C.

AP has just announced that the FBI have indicted:

Wade L. Quattlebaum  
Raymond L. Fisk  
Malcolm S. Rowe  
William J. Long

-- the officers of the corporation -- on mail fraud charges. And I have a couple of comments on that, which their attorney just might like to know about.

I think those charges are unjustified. Despite the fact that I long ago notified the first three of these gentlemen about the true nature of their "invention," and that their grasp of science was non-existent, I really believe that they all were then and still are now convinced that it works. They're simply ignorant of how the real world works, and about how they should have gone about testing the thing. And if that's true, they cannot be properly charged with fraud, but only with being not very bright -- a charge that could be brought against many of us.

I'd be willing to appear in court on behalf of these defendants and testify that, incredible as it may seem, they probably thought that a "chip" made of a scrap of paper could be as effective as an actual computer chip produced by modern technology, that they believed their own constant rationalizations for the 100% failures of the Quadro when tested double-blind, and that their abysmal ignorance of electronics is genuine.

But, I must admit that it's hard to explain why they refused my offer of (at that time) \$475,000 for ONE simple demo of the thing. And I recall that Quattlebaum, the "inventor" of the Quadro, wrote me that: "[the officers of Quadro Corp.] may call upon your magical powers to get us out of jail, if the device is not what we claim it is."

If convicted, the Quadro four face up to five years in prison and \$250,000 fine on each count of the indictment. And I won't be available....

-- James Randi  
Coffee mug mottos

Randi asked for a motto for a coffee mug to be made for his center and foundation. Some really good and usable suggestions:

I'm just a psi doubter.  
Contents: coffee. Unless better evidence is presented. (from Mike Tuomola)  
I'm so skeptical I can hardly believe it! (originator: Chip Denman)  
In a previous life, this mug was a precious Ming dynasty vase. (Brian Siano)  
This side of the mug was intentionally left blank. (Bob Steiner)  
My buddy was abducted by an UFO, taken to Venus, and medically examined in weird ways. And all I got was this lousy mug. (Mitch Grunat)

I think the UFO one might win. Sincere thanks to all of you who troubled to send in suggestions. We had a great time going through them, and lots of laughs.

-- James Randi  
A Small Update

(27 October 1996)

I've been rather inattentive to the folks on the mailing list. My apologies. The 12-to-15-hour days I've been putting in at the Foundation have taken my time and attention. Getting the whole shebang off and running is quite a task. But I love it. Things are falling into place nicely.

To share with you a few things that have been happening.... First, I got a message from a would-be "psychic" that read -- and I quote exactly --

What no response to my offer to except your Psychic Challenge. Scared you will lose or what?

I got no "offer to except" or even to "accept" the offer, but that won't stop him/her from crowing that I'm scared of this dire threat to the Pigasus Prize. I recall that this "psychic" claims to be fabulously wealthy, and says he/she doesn't need or want the prize, so why all this carrying on? Make up your mind!

In fact, on 8 November, I'm due to test the weird claim of "Therapeutic Touch" (TT) which -- we won't be surprised to learn -- involves no touching whatsoever. In co-operation with Bob Glickman of PHact (the Philadelphia area skeptics group) I've devised a simple, cheap, easy, direct, definitive test of TT, and though the Pigasus Prize is rapidly approaching one million dollars, and will certainly be there by year's end, we as yet have no acceptances from the vast number of nurses who say they can do this wonder of healing, as they do every day of their lives. If there are no claimants by November First, which is one week before the scheduled test, no test will take place.

A splendid exchange took place between a couple of unhappy "psychics" and myself, in which the psychics complained that the at that time US\$742,000 Pigasus Prize was only in the form of pledges, and would be difficult or impossible to collect. They had a point there, since there are just under 300 pledgers in 15 countries who have agreed to pay the successful claimants who just might materialize. I responded by agreeing to an additional clause in the official offer: my personal ten thousand dollars would be paid immediately to any winner, and the additional prize money would be paid within seven days since the Foundation would need that period to convert stock into cash.

Well, that didn't make them any happier. They next bleated that they didn't believe that the Foundation had that amount of money available. In my inventive fashion, I came up with this: If you don't believe we have the money, put your money where your mouth is, just as I've done all my life. Bet me a thousand dollars that we don't have the money. Send your check payable to the Foundation to any reputable lawyer you choose to name. I'll do the same, sending a thousand dollar check payable to you, to that same lawyer. As soon as I'm informed by the lawyer that both checks have been received, I'll send the lawyer a financial statement, notarized by our bank, which establishes that the prize can be covered. At that point, both checks will be sent to the Foundation. Of course, if I can't, don't, or won't, supply that statement, the lawyer will send both checks to you. Any takers? No, not a one. Just silence, as we might expect.

A UFO nut in Florida sent me (via Dr. Gary Posner of the Tampa Bay Skeptics) a bunch of forks and letter-openers bent into various curliqueues, and claimed that a woman he knows did the job using her bare hands, right in front of him. Wow! As we know, this is impossible without magical powers, right? In response, I went out and bought identical letter-openers, and asked Jenny Blair -- one of my employees -- to bend them on videotape in very similar, and even better, shapes. Easily done, within seconds. The UFO cuckoo now has that tape and the bent metal. It will be interesting to learn what alibis will be offered next.

We're taking bids on the contract to build our auditorium at the Foundation. A full stage with state of the art audio and video equipment will be installed.

The membership drive for the James Randi Educational Foundation has had some encouraging success, but we're looking for many more members to come forward.

We're toying with the idea of offering a free hundred thousand dollar insurance policy against alien abduction, to all members. This was suggested by an actual, similar offer made by a regular insurance company, and the news that another company based in Liechtenstein has offering a "reincarnation account" which is designed to provide "seed

capital" for the next life of the insured. The \$130,000 accounts would be invested in conservative growth portfolios and would have to be redeemed within 23 years after the insured person's death. The "reincarnated" claimant would be required to answer questions that only they, in their previous lives, would have known the answers for. But what if one of those powerful psychics were to come along, divine the right answers, and "pass" as the real reincarnated policy holder? Seems risky, doesn't it?

Take a look in at the Web page, won't you? It gets better all the time, thanks to the dedicated work of Maggie Ragaisis and Jutta Degener. We'd like your comments.

I'm in Vancouver, Canada, filming the final shots for the A&E Scams, Scoundrels, and Swindles TV Special, which will air in January.

Randi  
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Some critical comments on the Dillon-Brown debate

by Thomas J. Wheeler <tjwheeler@louisville.edu>

This is a follow up to Rob Dillon's summary of his recent debate with Walter Brown.

Brown's initial 40-min presentation showed why many people are reluctant to engage in such debates. He covered a wide range of scientific fields, such as genetics, paleontology, the complexity of life, geological formations, radiometric dating, astronomy, etc. Including various charts he displayed (e.g., geological anomalies which supposedly support a worldwide flood), he probably made about a hundred claims. These were, for the most part, misunderstandings or misrepresentations of science; invalid claims or arguments; and statements which may have been true (e.g., complex features of living things) but which in no way cast doubt on the validity of evolution. Most, if not all of these, have been answered previously in the numerous books and articles written by scientists to counter the creationist attacks on science. The problem facing an evolutionist debater is that it is much easier to make numerous invalid claims than it is to explain what is wrong with them, especially to a lay audience. Given the time limitations in a debate, the best an evolutionist would be able to do is to refute selected arguments, and point out that the others can also be dealt with. Even so, I am afraid that an audience would be left with the impression that both sides could present persuasive-sounding cases, and therefore it is only right that both sides be taught in public school science classes.

Dillon showed how the different layers were dated by both K-Ar and Rb-Sr methods, with samples sent to numerous laboratories for independent analyses, and with results in excellent agreement. He did get in one attack on creationists claims at this point (asking if the audience thought that all of the dating laboratories had engaged in a conspiracy to trick people). However, I wished he had used the opportunity to refute one of Brown's more outrageous claims, that fossils are (using circular reasoning) dated based on their assumed evolutionary age. Here were numerous objectively-dated samples of volcanic ash, which conclusively established the age of each layer independent of any assumptions concerning evolution.

To go into such detail involves a trade-off, however, and Dillon did not spend any time covering some of the major classes of evidence for evolution, such as the hierarchical pattern of shared similarities (anatomical, physiological, biochemical), which to me is the strongest area of evidence; the fossil record, except for hominids; embryology; vestigial features; and biogeography.

Rather than a typical series of timed rebuttal speeches, the second half of the debate had an unusual format, referred to as a "dialogue." Each speaker was allotted a total of 30 min, but in a back and forth style in which his clock was running when he talked (sort of like a chess match). By repeatedly provoking Dillon to answer questions, thus using up his time, Brown was left with six minutes at the end to speak unopposed, summarizing his major points and repeating his appeal for equal time for creationism in the classroom.

Dillon made a good point in stating that evolution was an observation, and that we don't need to explain everything

about how it works in order that there be a convincing case that evolution has happened. He used gravity as an example of a demonstrable phenomena which cannot be explained. However, I think he should have then discussed some of the progress which is being made at the theoretical level, and the fact that our knowledge advances all the time; he left the impression that scientists have no idea of how complex features arose. When he pointed out that the question of how complex features arise was "not relevant" to the truth of evolution, there was laughter among the audience members. They see it as very relevant, an insurmountable obstacle to evolution, and they need to know that progress is being made in constructing evolutionary scenarios for the origin of complex structures.

In dealing with Brown's questions on fossilization, I think Dillon showed that he was far more knowledgeable, and that Brown's ideas were simplistic or incorrect. However, in moving away from his area of expertise (which is necessary in an all-encompassing debate such as this) he had mixed results. While I wished he had hit Brown much harder on the latter's age of the earth claims (Dillon's write up indicates that he was waiting for Brown to repeat these points in the dialogue section before responding to them), he made an effective case for regarding physical constants as constant until shown otherwise. When Brown stated that there are measurements showing the speed of light has decreased, Dillon countered with what I considered his best line of the evening: "I've never seen someone so enamored with ancient data." But when he moved to categories of evidence for the Big Bang, Dillon confused some of the concepts, an error which Brown was able to pounce on.

Overall, Rob's report gives the impression that he "won" the debate. While it was a fairly good effort for a first-time debater, I doubt that most of the audience would agree that he got the better of Brown, or that Brown seemed to "cave in." Dillon probably showed them that an evolutionist can be a nice guy, and maybe even a good Christian. He also showed that evolutionists can come up with a lot of data which can be interpreted as supportive of evolution. However, I think too many of Brown's claims went unanswered, leaving the audience with the impression that evolution faces insurmountable difficulties.

Finally, Rob gave some recommendations for future debates. He suggested a "3-member response team" to deal with the problem of the range of topics covered. I'm not sure this would work, because it would give the creationist the appearance of being an underdog (one against three), enhancing his stature with the audience. It also wouldn't overcome the fact that far too many claims, in too many subject areas, can be brought up to be dealt with in any depth. I think it would be preferable to have a debate focused on a single topic, e.g., the age of the earth, where the evolutionist could cover the scientific evidence and also refute selected creationist arguments in depth.  
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## How to Debate a Creationist

An overly long account of my debate with Creationist Walter Brown at Southeast Christian Church, Louisville, Ky, 27 October 1996, by Robert T. Dillon, Jr. Department of Biology, College of Charleston, (dillonr@cofc.edu).  
Walter Brown

Walt's conversion to creationism began in 1970, when, as a new professor at the Air Force Academy, he heard "some surprising, almost shocking, claims that Noah's Ark rested near the 14,000 foot level of Mount Ararat in eastern Turkey. Almost daily I gazed up at 14,000 foot Rocky Mountain peaks and tried to imagine, at one of their summits, an object large enough to fit snugly inside a football stadium. By 1972, I had become a creationist." He has been touring the country with his In the Beginning seminars since 1980.

I'd been watching Brown perform since Friday afternoon, and he really does have considerable skill as a public speaker. He is forceful and declarative, and presents as a classical "authority figure", although brusque. He is of the military sort, not the "distinguished gentleman" sort. He is of Midwestern extraction, with some Yankee flavor. A southerner will have an advantage in front of many audiences.

He normally uses a lot of humor, mostly at the expense of evolutionists, but sometimes at his own expense, which of course can be especially disarming. His best jokes Friday and Saturday were all based on the theme, "aren't scientists of all sorts stupid?" He found a nine year old girl in the front row and led her along his line of reasoning, to show that even she might marshal more insight than the entire scientific establishment. He moved around easily, used the stage well,

and smiled often.

But the man seemed to cave in Sunday evening. He can't take much pressure. I joined the Director of Adult Education, who organized this thing, the timer, the moderator, and assorted wives, for sandwiches while Brown hid in the choir room.

Brown's Forty Minutes

At the introduction, I received polite applause, Brown received enthusiastic applause, plus a fair number of cheers. Brown had won the toss at lunch earlier in the day, and elected to go first. He stood rooted behind the pulpit and read a dry, prepared statement verbatim. An assistant, seated by the overhead projector, followed the script and flipped transparencies. It was a 41 minute outline of his book and rather light on the worldwide flood. About halfway through he had pencilled in "How can you, Dr. Dillon, explain..." where his script read "How do evolutionists explain..." At which point I spontaneously, and rather heartlessly I fear, gave a tiny jerk in my seat, as though roused from slumber. Got a titter from the side of the congregation that saw it.

My Forty Minutes

After the five minute stretch break came my turn. When I asked if everybody would join me in prayer, one person in the audience audibly scoffed. I used that old preacher's standby, Psalms 19:14 "May the words of my mouth,...be acceptable in thy sight, O Lord." Here are the brief opening remarks I prepared.

"Ladies & Gentlemen, the creationist message boils down to three logical fallacies, two misunderstandings, and one crying shame. The crying shame is that this issue is divisive. It tragically divides the scientific and religious communities, and even Christian against Christian. It's a family spat. But it does no good to bottle this sort of thing up. It's a blessing that the Lord has brought us together today to discuss these issues and if not agree, then at least increase our level of understanding. So I have chosen to emphasize for my talk this evening the two misunderstandings that creationists seem to harbor. I have not come to argue, I have come to explain."

I then went to my slides. The first slide was an outline of my talk:

Evolution and Creation in Louisville, a dialogue:

Definitions

What is evolution?

Examples

Macro and microevolution

Primate evolution at Olduvai Gorge

Stratigraphy and dating

Fossils

A hypothesis

As "misunderstanding #1" I showed Brown's definition of evolution, and how this differs so greatly from the correct one. No, evolution is not always "natural." No, change is not always "beneficial." No, evolution has nothing to do with "complexity." I really spent a fair amount of time on that term, complexity. It underlies both misunderstandings. We cannot define the term; it can't be measured. I argued that bacteria may be the most complex organisms, then seeming to change my mind, made an argument that vascular plants are the most complex organisms. I held a big yellow potted chrysanthemum in my hands for an illustration.

Then I ran through 10-12 slides on what evolution is, namely "heritable change." Six sub-points, each with solid, real-life examples: (1) may occur naturally, artificially, experimentally, (2) occurs constantly, over days, years, or eons, (3) has many causes, (4) occurs within populations, (5) may result in speciation, (6) may result in extinction. I asked if anyone had seen any dinosaurs rumbling down the street? Then, I concluded "Evolution is not a theory, it is an observation."

Then we came to our second misunderstanding, the difference between microevolution and macroevolution. I again

showed Brown's definitions. We all agree on what he calls microevolution, -- good! But macroevolution, which he defines as an increase in complexity is misunderstood. No, I reiterated, evolutionists do not, cannot study complexity. I showed the correct micro and macro definitions. Simply an artificial division of time scales, done for convenience. Both are equally observable. Do you see any dinosaurs?

I know this sounds kind of dry. It certainly could have been. But all the while, I was on my feet, mostly right in front of the audience, sometimes moving back to gesture at slides, keeping the mood as light as I could. Folks told me later that it was clear that I was having fun. Which, oddly, I was.

The second half of my talk was a mixture of pretty slides of Olduvai Gorge from old National Geographics and rather technical, detailed accounts of stratigraphic mapping, K/Ar dating, fission track dating, and paleoanthropology. I'm sure some folks weren't following, but heck, they asked for science and they got it. Besides, I was sick of being condescended to for three days. I was having a blast. I get excited about this sort of thing. The summary slide was a check chart showing:

Olduvai Bed I: 1.8 mya - H habilis yes, A boisei yes, H erectus no, H sapiens no.

Olduvai Bed III: 1.0 mya - H habilis no, A boisei no, H erectus yes, H sapiens no. Present: H habilis no, A boisei no, H erectus no, H sapiens yes.

Evolution as heritable change has occurred.

Now I clearly and explicitly pointed out that I had not, to this very point, offered a single evolutionary theory. My talk had been entirely definitional or observational. Here, I said, I will offer you my first theory. I then showed the first page of a 1960 National Geographic article, where Leakey announces finding "The World's Oldest Man, Zinjanthropus boisei." Although Leakey was among the best anthropologists of his day, we have subsequently discovered far more human looking fossils that are much older. I showed the nice overview of human evolution in the most recent American Scientist (Nov/Dec 1996), with all the transitional forms anyone could want.

So finally I showed a big pile of old science textbooks that a colleague had left stacked in the hall for garbage. Science texts are updated every three years. Six years and they're useless, clogging the dumpsters. I reached for and held up my Bible. "This book, on the other hand," I said, "is thousands of years old, and still every bit as fresh, every bit as vital, as the day it was written. I don't want this to become my science textbook. I love it too much." Speaking time was 39 min 11 seconds. Whew!

I got a really hearty round of applause, and a nice chorus of cheers. I think my ovation easily rivaled Brown's. The Debate

After a fifteen minute break came the dialogue. Does the scientific evidence favor creation or evolution? I opened, since I was the second presenter. I picked up my big, potted chrysanthemum and asked if anybody had ever seen one growing wild. Nope? Wild mums look like weeds. This specimen is a demonstration of evolution, artificial manipulation of chromosome number. I had pinned a sign on the pot: "God's hand, by man, through evolution." I then made a gift of this plant to Dr. Brown, so that he could have some evolution to remember me by. I'm not sure whether I looked sweet, or obnoxious as hell. Brown did not smile.

Brown was miserable. The poor man was a shadow of himself. He sat stiffly behind his table with a note pad, shuffling 3x5 cards with little factoids and quotes. He had a file box stuffed full of alphabetized arcana. And I knew what every card and note said. I'd read his book, listened to hours of tapes, and attended all his sessions. He had absolutely nothing new. And he could not offer a cogent response to anything I challenged him with.

I spent most of the debate on my feet, alternately at the edge of the stage speaking to the people, or upstage directly addressing Brown, or occasionally seated and listening.

During the debate I hit him with the three logical fallacies I'd promised at the outset. Logical fallacy #1 took away most of his material. He repeatedly asked questions like: "How can life spontaneously assemble?" or "How could an eyeball evolve?" If I cannot explain to the satisfaction of Walt Brown, right now, how an eyeball evolved, then evolution did not

occur. But this is nonsense, confusing an observation with its causation.

The first time he did it, I said to the folks, suppose I were to tell you that I saw the baseball game on TV last night. Then you ask me to explain how that picture got through the air all the way from New York. I don't know. But that doesn't change the fact that I saw the game. Second time Brown did it, I picked up a roll of duct tape and dropped it. I said that of the four forces of nature, gravity is the least understood. Physicists can't explain why that roll of duct tape dropped. Yet it did fall. The third time he demanded some sort of explanation from me regarding an evolutionary observation, I simply told him I would explain that particular observation if he would explain why TWA flight 800 crashed. The debate here is whether evolution has occurred, not how it occurred.

The second logical fallacy came when he questioned my radiometric dates. He calls the assumption of constant nuclear decay "bold, critical, and untested." I characterized this as "gratuitously questioning assumptions." I told about the philosophy instructor who entered the classroom every day and asked: "Will the Sun rise tomorrow?" The answer is yes, unless there is evidence to the contrary. We have 4.5 billion years of observations of yes. If my philosophy instructor would like to suggest "no", the burden of proof is on him.

I identified the third logical fallacy when Brown brought out his "evidence" that the speed of light is decreasing. This involves a series of observations beginning back in the nineteenth century. Never in my life, I said, have I seen anybody with such a strange fondness for old science. The technology a hundred years ago was not as good as today's, hence old observations cannot be equally weighted with new.

As it became clear that he was going to be relatively harmless, I felt bold enough to offer a number of important theories to the congregation, outlining the three lines of evidence for the Big Bang, and the importance of bipedalism. I attacked Brown mostly on definitions, challenging him to define complexity, or even creationism.

I ran out of time five minutes before Brown. He could have used this to his great advantage, but instead, the congregation was treated to a boring reiteration of his little factoids, read from notes. We received applause together at the end.

Robert T. Dillon, Jr.

Thomas Wheeler made some comments on Dr. Dillon's account.  
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Once Around, Lightly

by Wolf Roder

"Gore harizi rakaze rimwe" (as they say in the Shona language, "the same year can never return again").

"And I've run into something that complicates business on Earth to an incredible extent. I knew about it, but hadn't realized its full implications. It's the problem of Time Zones. There are some advantages in belonging to an off world culture. We're not slaves of the sun, and can set all our clocks to the same time, all over Titan. But on Earth!

There are four time zones -- America, Africa, Asia, Oceania -- six hours apart. So when you want to speak to anyone, or make an appointment, you have to know what zone he's in. And when you move from one zone to another, you have to put your watch ahead -- or back -- six hours.

It's very awkward and confusing, but it was even worse a couple of centuries ago; then there were twenty-four zones, one for every hour of the day!"

Arthur C. Clarke, *Imperial Earth* (a novel), (NY: Ballantine, 1976) p. 133

I'm a friendly sort of guy, at least I think I am, and an internationalist to boot, and so are you, aren't you? So I thought

we would drink a toast to and with all the people in the world to celebrate the coming of the New Year, precisely at midnight when the old year ends and the new begins. Now, everybody knows your brother out on the west coast in California is three hours behind and not just because he's always been a little slow either. So his New Year doesn't start until it's three o'clock in the morning here. But what about the rest of the world, when does the New Year actually tippy toe onto the global earth and the first celebrants get tipsy?

Since we live on a spherical earth which is turning all the time, it is always midnight somewhere and noon on the antipodes. And just as we switch time zones, we need a place to change days. The new day can be thought as issuing out of the International Date line at midnight, or zero hours as the metric folks would have it. The International Date line is close to but not identical with the meridian of 180 degrees. That's 180° East, or West, it does not matter, it's the same. The International Date line bends around the Chukchi Peninsula, which is the easternmost extension of Russia in Asia, but is really in the Western Hemisphere. There they are eleven hours ahead of Moscow and thirteen of Greenwich, but they keep the same day. So that is where the New Year begins, eighteen hours ahead of Cincinnati and Eastern Standard Time, which is 6 AM on New Years Eve. A little early to start drinking, don't you think. Well, maybe you don't.

You wouldn't want to visit the Chukchi Peninsula. That is eastern Siberia, close to the Arctic Circle, and very cold in winter. For a warmer place try the islands of Tonga in the South Seas near the Tropic of Capricorn, which literally keep time with eastern Siberia. Besides it's summer there. Tonga is an independent Kingdom under Taufa'ahau Tupou IV. The people have a reputation of being well educated and friendly to tourists.

That at least was how it was until last year. This year, however, President Teburoro Tito of Kiribati moved the International Dateline. He did, for it was a campaign pledge, and he at least is one politician who keeps a promise. Kiribati is an archipelago, which sprawls across 2,200 miles of the Pacific Ocean, across the Equator, and across the International Dateline from the eastern to the western hemisphere. Or used to, it still sprawls, but now all of the Republic and every one of its islands is on the eastern side of the International Dateline. The easternmost inhabited island, Kiritimati, pronounced Christmas, is east of Honolulu, and 72 solar minutes ahead of Tonga and the Chukchi Peninsula. There, for the first time the year will start at 5 AM Cincinnati time, 19 hours ahead of the United States. You didn't know we were that far behind, did you?

From there it's a regular beat. Every hour the New Year reaches another time zone. In Eastern Standard Time, at 7 AM, New Zealand, at 8 New Caledonia and the Solomons, at 9 Sydney and the whole of eastern Australia, at 10 Japan and Korea, at 11 western Australia, Peking, and the Philippines, at 12, that is noon in Cincinnati, midnight descends on Vietnam, Indonesia, and Mongolia.

One drink every hour. You think that is not so much, you can handle that, but hold it, that's not all. Many countries which straddle a time zone boundary, offset their clocks not by a full hour but by a half or a quarter. So at 6:15 PM on New Years Eve you need to drink a toast to the Chatham Islanders, at 7:30 to the people of Nauru and Norfolk Islands, and at 9:30 comes Adelaide and South Australia. Malaysia at 11:30, at 12:30 PM in Cincinnati comes Myanmar, at 1:30 the whole of India, at 2:30 Afghanistan, and at 3:30 Iran. In Nepal the New Year comes when it's 12:20 PM in Cincinnati, and you can drink to that.

Not to forget the regular, full hour time zones. When it is 1 PM here, the New Year hits western China and eastern Kazakhstan in the former USSR. At 2 it's Kirghizia and Tadzhikistan (or Tajikistan), which are difficult to spell or to pronounce even if you're still sober. Then, by 3 it's Iraq and Mauritius. After that Midnight falls in Saudi Arabia where they have no official time at all, but continue to use Allah's own solar time. You may drink at will as the New Year crosses the Arabian Peninsula, and every oasis and bedouin encampment reaches its own midnight. Drink here but not there, for the Kingdom is dry as the holy Quran commands.

At 4 PM the regular beat goes on as midnight comes to Turkey and Ethiopia with its neighbors. At five in the afternoon we can celebrate the New Year with much of Africa, the Balkan peninsula and Finland. By 6 PM midnight falls on most of Europe, and by 7 our time, it is New Year in Great Britain, Iceland, Portugal and westernmost Africa. This makes 1996 official for Britain is Universal Time, used by all who span the time zones like long distance pilots and short wave ham operators. It used to be Greenwich Time after the Royal Astronomical Observatory in that part of London. They moved the Observatory out of the London smog, but they had to leave the zero meridian where it was. We can now

relax a little as the New Year crosses the Atlantic Ocean.

At 8 it hits the Azores and Guinea-Bissau, and at 9 the Cape Verde Islands. And if you don't remember where the Cape Verdes are, by now you don't really care. Liberia is always different, so midnight there comes at 8:15 our time. By 10 PM the New Year makes its first land fall in easternmost America, yes, that's eastern Brazil. If you're still on your feet you can now drink to another bunch of mavericks. At 10:30 it's Newfoundland which is a Province of Canada, at 10:40 Surinam, at 10:45 Guyana, and at 10:50 French Guiana, then at eleven the New Year comes to Atlantic Standard Time and we celebrate with such friends as Nova Scotia, New Brunswick, Venezuela, Chile and Bolivia.

In another hour it is finally midnight in Cincinnati, as well as in Panama, Colombia, Ecuador and Peru. Then the New Year winds down across the rest of the USA. At 1 AM on the first day of 1996 New Year comes to Texas and most of Mexico, at 2 to the mountain states and Alberta, and at 3 to the West Coast and the Yukon territory.

That is not the end yet. Only Pitcairn Island and the town of Yakutat in Alaska celebrate the New Year at 4 in the morning our time. Pitcairn has less than one hundred inhabitants, and Yakutat does not have many more, so they need all the help and support they can get. At 5 AM the New Year comes to most of Alaska, Hawaii, and the Tuamotu Archipelago with Tahiti in French Polynesia, and at 5:30 it's midnight in the Cook Islands. Finally, at 6 AM our time, twenty-five hours after we started, the New Year comes for the last time to the westernmost ends of America, the Aleutian Islands, to Midway, and American Samoa.

If you're still on your feet at this time, you deserve everything you got. Try to count the time zones, and thus the number of drinks we have taken. Be glad the New Year comes in winter, else we would have to consider all the folks who use Daylight Savings Time. And at that, we ignore all that summer time switching in the southern hemisphere, who knows what those folks do? We've gone all around the globe, as the King asked the wise man: "How long will it take me to ride around the Earth?" "If you saddle up at Sun rise," the expert answered, "and ride with the Sun, it will take but a day." And if you liked our trip, next year we shall drink to every nation in their own particular tipple when the right time comes. With vodka to the Russians, rum to the Caribbean, Scotch to the Scots, and wine from every clime to the people of the region. Skoal, Prosit Neujahr and Auld Lang Syne.  
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#### Letters to the Editor

ART members may recall that I joined you for your program on Therapeutic Touch earlier this year. At that time I talked with your officers about our hopes of starting a Central Ohio Group. Every one was enormously helpful in giving me sample documents, copies of your newsletter, and other tips.

This is to report we are off and running. About a hundred people in the Columbus-Dayton area have shown an interest in the new group. We held our organizational meeting on October 12 in Hilliard, drawing an attendance of thirty. At a second meeting on November 9 we shall adopt by-laws and elect officers.

I want to thank all of you for the warm encouragement you have given me in starting this group.

Ann B. Pratt, Temporary Secretary  
Central Ohioans for Rational Inquiry

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#### Book Reviews The Darwin Legend

The Darwin Legend  
by James Moore  
(Grand Rapids, MI: Baker Books, 1994)

The legend pursued by Moore is the claim Darwin turned to God on his deathbed and renounced evolution as an error of his youth. This story has been told and retold over the years in a variety of versions especially in fundamentalist circles. Moore's appendices document and reprint such tales from 1882, the year Darwin died, to the year before publication of this book. He also reprints and documents denials of the canard by family and friends of the great man. Moore is extremely well placed to write on this topic. He is co-author of a highly regarded biography of Darwin, of other works on Darwin, and of works on science and religion. So what is the source and the truth of the matter?

I learned three things. One, Darwin was an unbeliever who had lost his faith in the traditional Christian God early in his scientific career. He called himself an agnostic in his personal diaries, and would say so in the circle of intimate friends. There is no evidence he ever wavered in this conviction. And, it would have been quite uncharacteristic of this calm and meticulous thinker to do so on his death bed.

On the other hand Darwin never proclaimed his loss of faith publicly. Moore never calls him a hypocrite, but Darwin supported the local village church, its charities, and if called upon local evangelical preachers who came to save the hop harvest workers from sin and drink. Darwin was in every way a Victorian gentleman, a member of the establishment. And a gentleman was not a radical, he did not speak against the crown or its church. Darwin deferred in such matters to his wife and daughters who tended to continue strong in their belief in God, and feared he would go to hell. They also made sure his private diary was published only in an edited version. Darwin's public adherence to the church made possible his interment in Westminster Abbey.

This ambiguity about Darwin's faith made the legend possible. The actual perpetrator was a woman evangelist, Lady Elizabeth Hope, who worked the tent circuit in Down village in the year before Darwin's death. Her descriptions of the view from the house and from Darwin's study are too accurate to be second hand. Thus, although there is no direct evidence of her visit, Moore credits her with calling on Darwin in the Fall of 1881. Darwin, always a gentleman, surely would not have refused to receive a titled preacher.

Moore's pursuit of the facts makes a fascinating story. If you like historical detective work, this is a good one. Oh, yes, and what was Darwin's actual final utterance on his deathbed? "I am not the least afraid to die," he assured his wife and several members of his family before he expired.

-- Wolf Roder  
Journey into the Light

Journey into the Light:  
Exploring Near Death Experiences  
by Richard Abanes  
(Grand Rapids, MI: Baker Books, 1996)

This book is written from an evangelical Christian view point by a "cult awareness" activist. The foreword is by Norman Geisler, a "creation science" apologist, and the cover endorsement by another, D. James Kennedy. For some skeptics this is enough to discredit it. But, there is much of use to skeptics in this book. Near Death (NDE) and Out of Body Experiences (OBE) occur only in the brain, not outside the body is the author's contention. Let me provide a chapter by chapter description.

"A timeless phenomenon" covers the historical background from ancient to modern times. Nearly all cultures have stories of spiritual beings and of visions.

"And then I died" provides definitions of NDEs. They may be divided into autoscopic or rising out of the body events, transcendental travel NDEs, and various combinations of these.

"NDE basics" lists some common characteristics, i.e. body separation, tunnel of light, meeting other beings, life review, and return.

"Altered states" describes experiences similar to NDEs which help explain these: deprivation tanks, sudden fast motion, hypnogogic-hypnopompic dreams, etc.

"When death approaches" compares Fear of Death experiences with NDEs, including life reviews and feelings of peace which are too similar for coincidence.

"Brain reactions" examines chemical changes associated with NDEs.

"Consistent inconsistencies" examines the contention of NDE advocates that similarity of these experiences proves they represent reality.

"PSIence fiction" explores the connection between NDE and ESP research.

"Transformation" says that just because people's lives were changed for the better does not prove the NDE occurred outside the body.

"New Age ties/old age lies" comments on the connection between NDE advocacy and the New Age movement, and inveighs against the pantheistic theology and the oneness of all world view.

"Netherworld explorers" describes at length the institutions and individuals who have engaged in NDE research.

"The final frontier" explores a Biblical view of death and heaven.

Appendices examine NDEs which describe descents into hell or were otherwise unpleasant; and critically treat the claims of Betty Edie, and Mormon theology.

This book was thoroughly researched, has a glossary, extensive footnotes, and a long bibliography. Unfortunately no index is included, which I consider a major omission. On the whole, the book examines NDEs in a way acceptable to skeptics.

William S. Bainbridge in an insightful article "Superstitions: Old and New" in the SI (Summer 1980) pointed out that evangelicals accept many of the same ideas as skeptics. He surmised that an end to religion may not mean the beginning of an "age of reason", instead, it may mean the coming of an age of new superstitions.

-- Andrew O. Lutes

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## Book Reviews

### The Darwin Legend

#### The Darwin Legend

by James Moore

(Grand Rapids, MI: Baker Books, 1994)

The legend pursued by Moore is the claim Darwin turned to God on his deathbed and renounced evolution as an error of his youth. This story has been told and retold over the years in a variety of versions especially in fundamentalist circles. Moore's appendices document and reprint such tales from 1882, the year Darwin died, to the year before publication of this book. He also reprints and documents denials of the canard by family and friends of the great man. Moore is extremely well placed to write on this topic. He is co-author of a highly regarded biography of Darwin, of other works on Darwin, and of works on science and religion. So what is the source and the truth of the matter?

I learned three things. One, Darwin was an unbeliever who had lost his faith in the traditional Christian God early in his scientific career. He called himself an agnostic in his personal diaries, and would say so in the circle of intimate friends. There is no evidence he ever wavered in this conviction. And, it would have been quite uncharacteristic of this calm and meticulous thinker to do so on his death bed.

On the other hand Darwin never proclaimed his loss of faith publicly. Moore never calls him a hypocrite, but Darwin supported the local village church, its charities, and if called upon local evangelical preachers who came to save the hop harvest workers from sin and drink. Darwin was in every way a Victorian gentleman, a member of the establishment. And a gentleman was not a radical, he did not speak against the crown or its church. Darwin deferred in such matters to his wife and daughters who tended to continue strong in their belief in God, and feared he would go to hell. They also made sure his private diary was published only in an edited version. Darwin's public adherence to the church made possible his interment in Westminster Abbey.

This ambiguity about Darwin's faith made the legend possible. The actual perpetrator was a woman evangelist, Lady Elizabeth Hope, who worked the tent circuit in Down village in the year before Darwin's death. Her descriptions of the view from the house and from Darwin's study are too accurate to be second hand. Thus, although there is no direct

evidence of her visit, Moore credits her with calling on Darwin in the Fall of 1881. Darwin, always a gentleman, surely would not have refused to receive a titled preacher.

Moore's pursuit of the facts makes a fascinating story. If you like historical detective work, this is a good one. Oh, yes, and what was Darwin's actual final utterance on his deathbed? "I am not the least afraid to die," he assured his wife and several members of his family before he expired.

-- Wolf Roder  
Journey into the Light

Journey into the Light:  
Exploring Near Death Experiences  
by Richard Abanes  
(Grand Rapids, MI: Baker Books, 1996)

This book is written from an evangelical Christian view point by a "cult awareness" activist. The foreword is by Norman Geisler, a "creation science" apologist, and the cover endorsement by another, D. James Kennedy. For some skeptics this is enough to discredit it. But, there is much of use to skeptics in this book. Near Death (NDE) and Out of Body Experiences (OBE) occur only in the brain, not outside the body is the author's contention. Let me provide a chapter by chapter description.

"A timeless phenomenon" covers the historical background from ancient to modern times. Nearly all cultures have stories of spiritual beings and of visions.

"And then I died" provides definitions of NDEs. They may be divided into autoscopic or rising out of the body events, transcendental travel NDEs, and various combinations of these.

"NDE basics" lists some common characteristics, i.e. body separation, tunnel of light, meeting other beings, life review, and return.

"Altered states" describes experiences similar to NDEs which help explain these: deprivation tanks, sudden fast motion, hypnagogic-hypnopompic dreams, etc.

"When death approaches" compares Fear of Death experiences with NDEs, including life reviews and feelings of peace which are too similar for coincidence.

"Brain reactions" examines chemical changes associated with NDEs.

"Consistent inconsistencies" examines the contention of NDE advocates that similarity of these experiences proves they represent reality.

"Psience fiction" explores the connection between NDE and ESP research.

"Transformation" says that just because people's lives were changed for the better does not prove the NDE occurred outside the body.

"New Age ties/old age lies" comments on the connection between NDE advocacy and the New Age movement, and inveighs against the pantheistic theology and the oneness of all world view.

"Netherworld explorers" describes at length the institutions and individuals who have engaged in NDE research.

"The final frontier" explores a Biblical view of death and heaven.

Appendices examine NDEs which describe descents into hell or were otherwise unpleasant; and critically treat the claims of Betty Edie, and Mormon theology.

This book was thoroughly researched, has a glossary, extensive footnotes, and a long bibliography. Unfortunately no index is included, which I consider a major omission. On the whole, the book examines NDEs in a way acceptable to skeptics.

William S. Bainbridge in an insightful article "Superstitions: Old and New" in the SI (Summer 1980) pointed out that evangelicals accept many of the same ideas as skeptics. He surmised that an end to religion may not mean the beginning of an "age of reason", instead, it may mean the coming of an age of new superstitions.

-- Andrew O. Lutes  
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