

**“It is difficult to make our material condition better by the best law, but it is easy enough to ruin it by bad laws.”**  
**Theodore Roosevelt**  
**(1858 - 1919)**

# ***Phactum***

**The Newsletter of the  
Philadelphia Association for Critical Thinking  
September 2009**

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## **Phantom Armies in the Sky over the Delmarva Peninsula**

**By Don Nigroni**

**T**here have been reports of phantom armies over the centuries in various places. Some phantom armies may be omens or precognitions of the future while others might be replays or retrocognitions of the past. However, there are also accounts of phantom armies performing solemn tasks for the present, such as the reported sightings of them in the sky above what is now called the Delmarva Peninsula shortly after the death of President Garfield. Our second president to be assassinated was fatally wounded on July 2, 1881 and died on September 19, 1881. Soon afterwards phantom armies of angels and soldiers were reportedly seen in the clouds above Maryland and Delaware, some even claiming they saw the ghostly figure of the dead president himself.

In *New Lands* (1923), Charles Fort wrote: *Then a dispatch from Wilmington, Delaware--platoons of angels marching and countermarching in the sky, their white robes and helmets gleaming.* Similar accounts came from Laurel and Talbot. Several persons said they had seen, in the sky, the figure of President Garfield, who had died not long before. Our general acceptance is that all reports upon such phenomena are colored in terms of appearances and subjects uppermost in minds.

And in the *Fort Wayne Daily Gazette*, Fort Wayne, Indiana, for October 15, 1881 under the heading *Garfield's Heavenly Escort* and subtitled *Delaware Peninsular People see the Late President Surrounded by Soldiers in the Sky*, we read that in Royal Oak, Maryland some three weeks before a little girl “saw after nightfall, before the moon was fairly up above the horizon a whole platoon of

*(Continued on page 21)*

**James Abram Garfield (1831—1881)**



20th President of the United States was murdered by Charles J. Guiteau who was subsequently hanged, June 30, 1882. A portion of Guiteau's brain is on display at the Mutter Museum of the College of Physicians in Philadelphia. Garfield was succeeded by Chester A. Arthur.

**“Governing a great nation is like cooking a small fish - too much handling will spoil it.”**

**- Lao Tzu (circa 6th century BC)**

# PHACT CALENDAR

**Dr. David Cattell, Chairman of the Physics Department of Community College of Philadelphia** hosts meetings of **PhACT** - at 2:00 PM on the third Saturday of most months at Community College of Philadelphia, in **Lecture Room C2-28 in the Center for Business and Industry at the corner of 18th and Callowhill Streets**. Parking is easily available but is no longer free for PhACT attendees at CCP events. The Saturday parking rate is \$3.00. Enter the college parking lot on 17th Street which is one way south bound. This meeting site is handicap accessible. **PhACT Meetings are free and open to the public unless otherwise noted.**



**Saturday September 19, 2009** - Dr. Lewis Mifsud, Professor of Physics and Electrical Engineering will discuss **SCIENCE, PSEUDOSCIENCE AND THE LAW - Legal Authentication of Scientific Evidence**. Dr. Mifsud will discuss legal criteria toward evaluating evidence, and will discuss one case in which one litigant contests the scientific value of the evidence proffered by the opposing party. See Page 6.

**Saturday, October 17, 2009** - Dr. Paul Halpern, a physicist and author at the University of the Sciences in Philadelphia will discuss his book **Collider: The Search for the World's Smallest Particles**. It is about the Large Hadron Collider (and other colliders), what scientists hope to find, and the fear that colliders might produce black holes or other objects able to destroy the world. See Page 24 for a description of the book.

**Saturday, November 21, 2009** - **Dr. Robert L. Park**, professor of physics at the University of Maryland and author of **Superstition: Belief in the Age of Science**, will be our speaker. Dr. Park will discuss his book and anything else that may be on his mind. See page 24 for description of the book.

## Delaware Valley Mensa General Membership Meeting.

The General Membership Meeting is held at the Police Administration Building, 750 Race Street, Philadelphia, PA. This meeting is DVM's only activity specifically open to the public and is always on the second Friday of each month and discussions begin at 8 PM sharp. Feel free to invite your friends and relatives.

Free. <http://dvm.us.mensa.org/>.

## Upcoming Mensa meetings

♣ Friday, September 11 - TBA

**Sunday, September 13, 2009** . **The Delaware Valley Opera Company** will perform a concert of opera and operetta at the Leverington Presbyterian Church located at 6301 Ridge Avenue in the Roxborough section of Philadelphia. At 2:30 - 4:00 PM, fund raising silent auction. Concert begins at 4:00 PM. No reservations are needed. 215-725-4171. <http://www.dvopera.org> Admission is a free-will donation. In the words of Lorenzo diMedici "Be Magnificent".

**September 17, 2009.** At the Academy of Natural Sciences, 1900 Benjamin Franklin Pkwy, **Philadelphia Urban Sustainability Forum "No Vacancy": Reimagining Vacant Land In Philadelphia** Reception - 6:00 p.m., Panel Discussion - 6:30 - 8:30 p.m. - A panel discussion to look at vacant land as an environmental and economic sustainability issue. Experts, from Philadelphia and beyond, will examine ways to effectively "recycle" vacant and abandoned space in the city. Free but RSVP Required. . For more

information or to RSVP, contact [cep@ansp.org](mailto:cep@ansp.org).

**September 22, 2009** - At the Academy of Natural Sciences, 1900 Benjamin Franklin Pkwy, **Energy Use in Condominiums** - Part of the Center for Environmental Policy's ongoing support of the Green Condominium Initiative, tonight's event is open to the public and will look at the strategies for reducing the energy use of large residential buildings, especially condominiums and co-ops. Guests include representatives of the Clinton Climate Initiative. Free. For more information or to RSVP, contact [cep@ansp.org](mailto:cep@ansp.org).

**September 24, 2009** 6-8:30 pm at The Academy of Natural Sciences Auditorium. **An Evening with Explorer Richard Wiese**. Richard Wiese, author of *Born to Explore: How To Be a Backyard Adventurer*, is an Emmy-winning journalist, TV host, naturalist, outdoorsman, mountain climber, explorer and former president of the Explorer Club. Join us as he takes us on an adventure through his life and expands on his book.

Living an active nature-filled life in today's society can be challenging, but Richard Wiese will introduce qualities of the outdoors that most people—young and old alike—might miss. He'll also

The **PhACT Calendar** is open to members and non-members 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](mailto: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.

present outdoor skills ranging from navigating by the stars to making a fire without matches.

This event, made possible by the Center for Environmental Policy, is free and open to the public.

**Thursday, October 1, 2009 at 7:30 PM.** At the Free Library of Philadelphia, 20th and Benjamin Franklin Parkway. **Karen Armstrong** | *The Case for God*. A powerful voice for ecumenical understanding, Karen Armstrong is the author of many acclaimed books on religious affairs, including *A History of God* and *The Battle for God*. Recipient of the 2008 TED Prize, she has participated in the World Economic Forum, and is currently an ambassador for the U.N. Alliance of Civilizations. *The Case for God* examines the diminished impulse toward religion in modern society and the great lengths to which humankind has gone in order to experience a sacred reality. Ticket or subscription purchase required 215-567-4341

**Thursday, October 15, 2009 at 7:30 PM.** At the Free Library of Philadelphia, 20th and Benjamin Franklin Parkway. **Steve Poses** | *Things I've Learned: A Caterer's Guide to Cooking and Home Entertainment* FREE Steve Poses is the founding chef of Frög (named "Best Restaurant" of the past 25 years by Philadelphia magazine in 1998) and The Commissary. Born of the two, Poses's Frog Commissary Catering has catered more than 12,000 events in the Philadelphia area and *The Frog Commissary Cookbook* is a regional bestseller, with more than 100,000 copies in print. Inspired by his decades of experience in the catering industry, his new book is a guide to cooking and home entertainment. FREE. 215-567-4341

**Thursday, October 22, 2009 at 7:30 PM.** At the Free Library of Philadelphia, 20th and Benjamin Franklin Parkway. **Richard Dawkins** | *The Greatest Show on Earth: The Evidence for Evolution* Evolutionary biologist and unapologetic atheist Richard Dawkins taught for many years at Oxford University as the Charles S. Mononyi Professor of the Public Understanding of Science. The Economist called his international bestseller, *The God Delusion*, "a particularly comprehensive case against religion." His other works include *The Selfish Gene* and *The Blind Watchmaker*. A follow-up to *The God Delusion*, *The Greatest Show on Earth* uses scientific evidence to argue the case for evolution. Ticket or subscription purchase required. 215-567-4341

**Thursday, October 29, 2009 at 7:30 PM.** At the Free Library of Philadelphia, 20th and Benjamin Franklin Parkway. **Gordon S. Wood** | *Empire of Liberty: A History of the Early Republic, 1789-1815*. Ellis Wachs Endowed Lecture. The Alva O. Way Professor of History Emeritus at Brown University, Gordon S. Wood won the Pulitzer Prize for *The Radicalism of the American Revolution* and the Bancroft Prize for *The Creation of the American Republic, 1776-1787*. His other books include *The Americanization of Benjamin Franklin* and *The Purpose of the Past: Reflections on the Uses of History*. *Empire of Liberty* offers a comprehensive account of the pivotal era between 1789 and 1815 when the United States took its first shaky steps as a new and growing nation. Ticket or subscription purchase required. 215-567-4341

**Tuesday, November 24 at 7:30 PM.** At the Free Library of Philadelphia, 20th and Benjamin Franklin Parkway. **Adam Gop-**

**nik** | *Angels and Ages: A Short Book about Darwin, Lincoln, and Modern Life*. Horace W. Goldsmith Foundation Endowed Lecture Co-sponsored by the American Philosophical Society Museum. Adam Gopnik's *Angels and Ages* is a study of the cultural impact of Charles Darwin and Abraham Lincoln. Time magazine calls the book "a succinct, convincing, and moving account of how two men ripped mankind out of its past unreason and thrust it into a more enlightened age." Gopnik appears at the Free Library to speak of these celebrated thinkers--who were born on the same day in 1809--on the 150th anniversary (to the day!) of the publication of *On the Origin of Species*. A contributor to the *New Yorker* for more than two decades, Gopnik is a three-time recipient of the National Magazine Award. Ticket or subscription purchase required. 215-567-4341

## 2009-10 Penn Science Café Schedule



The Penn Science Café, the lecture series that hauls science out of the lab and treats it to a night on the town. Free and open to the public, it's an opportunity to pitch questions to leading scientific experts.

6 p.m. at the White Dog Café, 3420 Sansom Street, Philadelphia, PA 19104. Menu items available for purchase RSVP to Jordan Reese, jreese@upenn.edu or 215-573-6604. RSVP's are encouraged, but we aren't sticklers.

- **Sept. 16**, Mark Trodden, Department of Physics and Astronomy: **How the Vast and the Miniscule Conspire to Form Our Universe**
- **Oct 14**, Anthony Cashmore, Department of Biology: **Free Will and the Criminal Justice System**
- **Nov 18**, Lyle Ungar, Computer Science **The Singularity -When computers Will Think Like Humans**
- **Dec 16**, Adrian Morrison, Veterinary Medicine **An Odyssey With Animals: Reflections on the Animal Rights and Welfare Debate**
- **Jan 20, 2010**, Ruth Schwartz Cowan, History and Sociology of Science: **DNA Banks and Genetic Tests, Should I make a deposit? Should I take one?**
- **Feb 16**, Max Mintz, Department of Computer Science **Quantum Computing**
- **March 17**, Jonathan Moreno, History and Sociology of Science: **Bioethics in Washington**
- **April 14**, Josh Plotkin, Department of Biology: **A Viral Evolution**
- **May 12**, Robert Kurzban, Department of Psychology: **The Cognitive Process Behind Hypocrisy**



## Science on Tap, A Science Café

*Science on Tap* is a monthly gathering in Philadelphia for anyone who is interested in

getting together with other people to discuss a range of engaging science topics.

Held at National Mechanics, a relaxed, convivial bar in Old City, *Science on Tap* features a brief, informal presentation by a scientist or other expert followed by lively conversation. The goal is to promote enthusiasm for science in a fun, spirited, and accessible way, while also meeting new people. Please come join the conversation! On the second Monday of each month at 6:00 PM.

### What's on tap: September 14, 2009 at 6:00 PM - Bringing Physics to Physicians

Robert D. Hicks, Ph.D.

College of Physicians of Philadelphia

#### Abstract

Founded more than two centuries ago, the College of Physicians of Philadelphia carries National Historic Landmark status as the birthplace of medicine in the United States. The main historical assets owned by the College are its historical library, once the primary medical reference library in the USA, and the Mütter Museum, founded 150 years ago, a collection of anatomical and pathological specimens and medical instruments. One feature of the collections is the cabinet of mementos, a "repository of historic souvenirs," which was assembled a century ago and maintained through assignment to the College's "best men." Although part of the museum collection for over 70 years, the cabinet remains in the vestibule of the College, a thing apart from other collections.

The cabinet's mementos include relics of the great men of medicine: a shoe buckle and watch owned by Benjamin Rush; Edward Jenner's inkstand and a lock of his hair; Joseph Lister's surgical tools and his glass tubes for tests of lactic acid fermentation; Pasteur's model of a tartrate crystal; and a quartz piezo-electric apparatus presented by Marie Curie and made by Pierre Curie. A tool for measuring the strength of an electron discharge from radium, this relic seems out of place. Why is this device part of a cabinet of medical mementos? How and why was this apparatus enshrined as a relic of medical history, and why did the College of Physicians seek a memento from Marie Curie, who presented it to the College in person? Robert Hicks argues that Dr. Robert Abbe, a Fellow of the College, who assembled the mementos, sought the Curie instrument to enhance his own standing as a pioneer in radiotherapy, and to signal to the medical professions the importance of radioactive substances to the 20<sup>th</sup> century physician's repertoire of tools and techniques. Abbe held radiotherapy as the most important new area of medical research for the 20<sup>th</sup> century. The Curie memento may be the

earliest surviving instrument to measure radioactivity.

Robert D. Hicks, Ph.D., directs the Mütter Museum and Historical Medical Library of The College of Physicians of Philadelphia. For over 35 years, Dr. Hicks has been involved with museums and historical sites as a volunteer and interpreter, and for half of this time as a consultant in planning exhibits and outreach programs. He formerly directed exhibits and collections at the Chemical Heritage Foundation in Philadelphia. His experience extends to military service, government service in management, policy development, and cultural property protection. His doctorate in maritime history from the University of Exeter, United Kingdom, focused on the articulation of historical themes in museum exhibits. He also holds degrees in anthropology/archaeology from the University of Arizona.

Science on Tap is sponsored by a consortium of five Philadelphia institutions: the Academy of Natural Sciences, the American Philosophical Society (APS) Museum, the Chemical Heritage Foundation (CHF), the Mütter Museum of The College of Physicians of Philadelphia, and the Wagner Free Institute of Science.

#### Upcoming Events

- October 12, 6:00 p.m. - Sabrina McCormick, Fellow at the American Academy for the Advancement of the Sciences. "No Family History: Investigating What's Behind the Breast Cancer Epidemic". Presented by The Chemical Heritage Foundation.
- November 9, 6:00 p.m. - Colin Purrington, Associate Professor of Biology at Swarthmore College. "Embracing Darwin". Presented by The American Philosophical Society (APS) Museum.
- December 14, 6:00 p.m. - Michael McCann, Professor of Biology, St. Joseph's University. Presented by The Wagner Free Institute of Science.

#### National Mechanics

22 South Third St.

Philadelphia PA 19106

215-701-4883

Free and Open to the public (age 21+)

[Gravity is the result of] *"a condensation causing a flow of ether with a corresponding thinning of the ether density associated with the increased velocity of flow."*

--- Sir Isaac Newton, 1675

(letters to Oldenburg, Robert Boyle)



1700 West Montgomery Avenue  
, Philadelphia, PA 19121  
ph 215-763-6529 [www.wagnerfreeinstitute.org](http://www.wagnerfreeinstitute.org)

The Wagner Free Institute of Science announces its free science courses for Fall 2009. The courses run from five to ten weeks. Lectures are held in the evening and last approximately one and a half hours. The courses are taught on an introductory college level and are appropriate for adults wishing to enrich their knowledge of the sciences, as well as for motivated junior and senior high school students. Courses begin on September 24<sup>th</sup>, and include:

**“Trees of Center City Philadelphia”** (Botany Series)

Professor Alfred E. Schuyler

Field trip course; 5 sessions beginning September 24.

Pre-registration required. Please note there is a pre-registration fee for this class only.

**“Physics and the World Wars: How Technology Shaped the Path of History”** (Physical Sciences Series)

Professor Paul J. Angiolillo

Course held at the Wynnefield Branch of the Free Library; 8 weeks on Wednesday evenings at 6:30 PM beginning September 30.

**“On Heavens and Humans: A Brief History of Astronomy and its Influence on Our Lives”** (History of Science Series)

Professor Sylwester Ratowt

Course held at the Independence Branch of the Free Library; 9 weeks on Monday evenings at 6:30 PM beginning October 5.

**“Death, Aging, and Mortality: Cultural and Biosocial Perspectives”** (Anthropology Series)

Professor Janet Monge

Course held at the University of Pennsylvania Museum of Archaeology and Anthropology; 6 weeks on Monday evenings at 6:30 PM beginning October 19.

All courses, unless otherwise indicated, are offered free of charge.

For full course information and syllabuses, call 215-763-6529 or visit [www.wagnerfreeinstitute.org](http://www.wagnerfreeinstitute.org)

***Weeknights at the Wagner:***

The Wagner Free Institute of Science will present two fall programs as part of its evening lecture series, “Weeknights at the Wagner”:

Thursday, October 15, 2009, 4-7 PM, Lecture at 5:30 PM – “Life at the Bottom of the World: Deep-Sea Cephalopods of the Atlantic” an illustrated presentation by Dr. Elizabeth Shea, Curator of Mollusks, Delaware Museum of Natural History

November 2009 – To Be Announced.

These lectures are free of charge.

***Family Open Houses:***

The Wagner Free Institute of Science will present two Family Open Houses this fall. These programs highlight a few of the many fields of scientific study and exploration that have been part of the Wagner’s history for the past 154 years. Presentations are given in the historic lecture hall with hands-on activities taking place in the museum. These family programs are appropriate for ages 6-12 but are enjoyed by teenagers and adults alike. These programs are free of charge.

Saturday, October 24, 2009, 12-4 PM, Presentation at 1 PM – “Whooo Goes Bump in the Night: A Spooky Creature Feature.” Children’s presentation by the Elmwood Park Zoo, featuring live nocturnal animals that are sure to give you goosebumps. Children are encouraged to come in costume.

Saturday, November 21, 2009 – 12-4 PM, Presentation at 1 PM – “Naturally Illuminating: The Science Behind Luminescence.” Children’s presentation by the Wagner Free Institute of Science, featuring hands-on experiments that demonstrate the difference between photoluminescence and chemoluminescence.



Portrait of William Wagner (1796 - 1885) painted by Thomas Sully in 1836.

## SCIENCE, PSEUDOSCIENCE AND THE LAW

**SCIENCE, PSEUDOSCIENCE AND THE LAW** will be the topic of PhACT's first event for the 2009/2010 year of activities. Our discussion leader will be Professor Lewis Mifsud who will lecture and have a Q & A session, so bring your questions about science, pseudoscience and how they relate to the law/

This event is will be hosted by Dr. David Cattell, chairman of the Physics Department at Community College of Philadelphia. **Saturday, September 19, 2009 at 2 PM in Lecture Room C2-28 in the Center for Business and Industry at the corner of 18th and Callowhill Streets.** Parking is easily available but is no longer free for PhACT attendees at CCP events. The Saturday parking rate is \$3.00. Enter the college parking lot on 17th Street which is one way southbound from Spring Garden Street. **The meeting site is handicap accessible and the event is free and open to the public.**

### SCIENCE, PSEUDOSCIENCE AND THE LAW

#### *Legal Authentication of Scientific Evidence*

Dr. Mifsud will initiate his presentation by providing the meaning of each key term which appears in his presentation's title, as he intends each term to be understood. Following a brief background of previous legal criteria toward evaluating evidence, the presentation will denote and detail the criteria first introduced as a result of the 1993 by the U.S. Supreme court in the case of William Daubert, et ux, etc., et al, Petitioners vs. Merrell Dow Pharmaceuticals, Inc., which presently needs to be met prior to a Federal Court accepting evidence proffered to be legitimate scientific evidence. Time permitting, the speaker will conclude with an example explaining a "Daubert Challenge", in which one litigant contests the scientific value of the evidence proffered by the opposing party.

#### **BIOGRAPHICAL SKETCH: LEWIS MIFSUD.** **Ph.D., M.S.E.E., P.E., C.Q.E., C.F.I.**

#### **Arbitration, Municipal, State and Federal Court- Qualified Testifying Expert**

Lewis Mifsud received his primary and secondary education on the island of Malta, in Europe, where he was born. At the age of 18, he initiated his college education in London, England, where in 1957 he earned his Full Certification/Degree from the City and Guilds of London Institute in Electronic/Telecommunications Engineering. In 1959, upon completion his studies toward GCE London University entrance examinations, at Acton Technical College in London, Lewis passed the GCE London University advanced level examinations in physics, chemistry, pure

mathematics and applied mathematics and was awarded the Best Student Prize from Acton Technical College; during the same year, Lewis entered Birkbeck College of the University of London. In the Spring of 1963, Lewis graduated with an Advanced Honors Special degree in Physics, which included all the required Ph.D. courses, and initiated his Ph.D. thesis research in

Experimental/Practical Physics. In the process of pursuing his Honors degree in Special Physics at Birkbeck, Lewis had W. Ehrenberg as advisor and teacher of the electronic properties of materials. Prof. Ehrenberg was one of two co-designers of the DNA X-Ray camera used by

**Inspect every piece of pseudoscience  
and you will find a security blanket, a  
thumb to suck, a skirt to hold. What  
does the scientist have to offer in  
exchange? Uncertainty! Insecurity!**

**— Isaac Asimov (1920 - 1992)  
*Past, Present, and Future* (1987)**

Rosalind Franklin toward the original determination of structure of DNA. While at Birkbeck, Lewis was taught quantum physics by Prof. David Bohm, a pioneer of Quantum Theory, and crystallography and the structure and properties of

materials by Prof. j. D. Bernal, a pioneer in X-Ray Crystallography, in 1962, Lewis was awarded a Birkbeck examination-based Physics Exhibition Award. A copy of Prof. Ehrenberg's referral letter is available on request. In the Fall of 1963, at a time he was working in England as an electronics- and mechanical-designs engineer, Lewis's Ph.D. research in physics was interrupted by a very lucrative invitation from the Radio Corporation of America to come to the United States to participate in the design and development of NASA spacecraft projects. Immediately upon his acceptance of RCA's offer, the American Embassy in London granted Lewis a preferential visa to travel to and work in the United States of America.

Following his arrival in Princeton, N.J., in January 1964, Lewis embarked on additional studies whilst holding a full time job with R.C.A. During his 4-year employment at R.C.A., working as electronics and electro-mechanical designs engineer, he contributed his analytical/mathematical expertise toward reviewing the NASA: "RANGER" (Moon-Impact Spacecraft photo-taking project) documentation. Following his initial analytical contribution, he contributed his hardware designs expertise to the following NASA projects; "TIROS" Weather Satellite, "NAV COMM" (Navy Communication Satellite), APTS (Automatic Picture-Taking System), "HDRSS" (High Data Rate Storage System), "OGO" (Orbiting Geophysical Observatory) and "MOLAB" (Moon Lunar Laboratory).

In 1968, he earned his second advanced degree from New Jersey's Rutgers University: a Master of Science degree in Electrical Engineering. In 1969 Lewis attained his American citizenship.

In 1970 he earned an additional advanced degree, namely: a Ph.D. in Engineering-Physics, also from Rutgers University and accepted a full-time tenure-track professorial position at the Pennsylvania State University. Also, in 1970, Dr. Mifsud held public office as Member of the Board of Education, S. Brunswick, New Jersey - as a result of obtaining the second highest

public vote of the nine election candidates applying for three open seats.

In 1975, Dr. Mifsud was recognized for his teaching competence by The Student Government Association of the Abington Campus of the Pennsylvania State University. In 1976, he was awarded tenure and, for a period of 18 years as a physics professor, taught: Classical and Relativity Physics, Quantum Theory, Mathematics, Electrical Engineering, Mechanical Engineering and Statistics. In addition to his academic degrees, Lewis also holds 6 examination-based licenses and certifications in the practical fields of: Professional Engineering, Quality Control and Explosion-Origin and Fire-Cause Determination, together with 19 years of electronic and mechanical equipment-design experience. Since 1982, Dr. Mifsud has been working with attorneys and insurance companies as a consulting and testifying expert in the areas of Product Liability and Personal Injury. He has had experience in civil cases involving strict liability, negligence and intentional torts.

Presently, toward maintaining his teaching skills in the art of elucidating esoteric topics to lay person, a necessary quality demanded of all expert witnesses, Dr. Mifsud holds a number of adjunct teaching positions, teaching a variety of titles, which include: "Forensic Science"; "Molecular Biology & Genetic Engineering"; "Critical Thinking, Argumentation & Effective Communication"; "Analyzing Philosophical & Moral Dilemmas"; "Fundamentals of Torts in Business Law"; "Rulings and Reasoning in U.S. Supreme Court Landmark Cases". Also, for attorneys, experts and insurance claims investigators. Dr. Mifsud offers seminars in the U.S. Supreme Court's Daubert criteria necessary for the courtroom admission of scientific evidence, a seminar which rewards attendees with Legal Continuing Education Credits; he also teaches seminars in determining the origin and cause of fires and explosions and seminars toward detecting fraudulent claims.

***“I maintain there is much more wonder in science than in pseudoscience. And in addition, to whatever measure this term has any meaning, science has the additional virtue, and it is not an inconsiderable one, of being true.”***

**- Dr. Carl Sagan (American Astronomer, Writer and Scientist, 1934-1996)**

## Don't Be In A Stew!

If you have an opinion on some matter that appears in Phactum or are bugged about some other topic, write it down in the form of an article or Letter to the Editor. Unwritten opinions are not very useful and by writing you can learn and clarify your own thoughts and perhaps share some wisdom with others. It is much better to express yourself than stew like this hapless couple.

There is no need to be in agreement with Phactum's writers, and especially the ill-tempered editor. Denunciation of the editor is allowed and suggestions to improve Phactum are very welcome. The ground rules are to keep profanity at a low level, no partisan politics, and no religious or anti-religious crusading please.

When denouncing the editor the letter "c" must be replaced by letter "k" or letter "s". Almost any topik is fair game. Hopefully letters and artikles will be lused.

Notice the rather diminutive Phactum Komplaint Department. We must be doing something pretty good, but it does strain kredibility that we are THAT good. If someone were to send a letter of komplaint to the editor we would probably even use larger font.



## Letters

Editor: I liked Don Nigroni's story about the screaming lady of Fort Mifflin".

Several years ago, PhACT member Bob Glickman and I stayed over night at Fort Mifflin along with local radio show people as part of taking a look at the ghost claims. We didn't see any ghosts, but can confirm the area is pretty creepy at night. I tried to sleep in the room that the lady ghost sightings are reported. Some say negative energy from skeptics subdues paranormal happenings. I did notice on the drive in a possible additional rational explanation for the screams. The Fort is located in a remote area far from homes and businesses- the road in is long and straight and from all the tire marks, I could tell, an ideal road for drag racing . . . Of course one would expect the high frequency tire burn out noise to travel through the swampy area better than the engine noises. Ironically, at the time we were there, the care

taker was decorating the area for Halloween and openly lamented that people have more interest in the site as a scary place than for the rich history. I happen to love the "weird places in Pennsylvania" book and have tried to visit ones near here.

By the way, if we can get someone to cover Joe Nickel's travel costs - he would love to speak to us on a Saturday and then look for the Jersey Devil the next day with some of us.

Eric Krieg  
Maple Glen, PA

Editor: I just read the latest issue of Phactum and was please to see that PhACT is supporting science education in the area by awarding a special award. Just a point of clarification; the Delaware Valley Science Fairs (DVSF) covers the tri-state area and is held in April at the Greater Philadelphia Expo Center in Oaks, PA. The Bucks County Science Research Competition is held at Delaware Valley College in March. The Bucks County Fair is one of 12 regional fairs that feeds into DVSF. DVSF is affiliated with the Intel International Science and Engineering Fair (ISEF), which is held in May.

I would be glad to assist in any way I can. Please see our website for more information: [www.dvsf.org](http://www.dvsf.org) Don't hesitate to contact me if you need additional information. Attached is a fact sheet from the 2009 DVSF.

Henry Disston,  
President and Director  
Delaware Valley Science Fairs, Inc.

Editors note: Mr. Disston's letter was actually addressed to PhACT's president, Eric Krieg. I had reported that the prize money generated by PhACT would be going toward prizes at the Delaware Valley Science Fair. I should have reported that it would be used at the Bucks County Science Research Competition where Eric Krieg is affiliated. Our standing at this point in time is \$50 toward the goal of \$300 prize money to be distributed to outstanding students at the March 2010 competition.

Editor: SSE scores again! One of "our guys", a Full Member of the Society for Scientific Exploration (SSE) has at least "partially" crossed into "The Promised Land" by getting reasonably "fair and balanced" 2-page coverage (and with a big color photo on the "Contents" page) in a relatively recent issue (December, 2007) of SCIENTIFIC AMERICAN, no less! TA-DA! (Sadly, he was "forced" to follow Michael Shermer's monthly column, which was a couple of pages ahead. Sigh!)

The scientist in question is one Jeff Meldrum, Ph.D. Quoting from the article: "Meldrum, an associate professor of anatomy and anthropology at Idaho State University, is an expert on foot morphology and locomotion in monkeys, apes



and hominids." The article is entitled "Bigfoot Anatomy" and is on page 50. Meldrum addressed SSE several years ago at our annual meeting in Kalispell, MT, and I have seen him on numerous, scientific, TV documentaries re. the Bigfoot phenomenon. I likely never would have found this article had it not been for a brief review of it in the SSE Journal's (JSE's) section, "Articles of Interest". I was able to read the full article from the S.A. issue (above) at "The Upper Moreland Free Public Library" in Willow Grove, and then borrow it as the basis for this letter. Other large libraries probably have it as well.

In addition to the article above, Meldrum's major Research Article in JSE, Issue 18:1, at [http://scientificexploration.org/journal/jse\\_18\\_1\\_meldrum.pdf](http://scientificexploration.org/journal/jse_18_1_meldrum.pdf) was the basis for his presentation to SSE at the MT meeting. (Note to readers: Because several B/W photos are included in this 15-page article, loading time is approximately 45 seconds, so please be patient.)

Meldrum's primary focus is on both plaster casts and on first-hand examination of purported Bigfoot footprints from numerous sources and locations. And "Yes", some of them are obvious fakes, but he keeps some of those fakes, probably for comparison with the many more "other ones". The sub-heading under the above S.A. article's title reads: "Sasquatch is just a legend, right? According to the evidence, maybe not, argues Jeffrey Meldrum -- a position he holds despite ostracism from his fellow anthropologists and university colleagues."

Another excerpt early in the article reads: The 14" prints (Paul) Freeman (a resident of Walla Walla, WA) showed him were interesting, Meldrum says, because some turned out at a 45-degree angle, suggesting that whatever made them had looked back over its shoulder. Some (actual prints in mud) showed skin whorls, some were flat with distinct anatomical detail, others were of running feet -- imprints of the front part of the foot only, of toes gripping the mud. Meldrum made casts and decided it



would be hard to hoax the running footprints, 'unless you had some device, some cable-loaded flexible toes.'

At the end of the article is a valuable lesson for skeptics: "The tension is inevitable for science on the fringe (I, LDL, prefer "...science on the-cutting edge!"), says Kent D. Stephens of Idaho State who co-authored a book with Meldrum on evolutionary biology and Mormonism. As he puts it: 'The stuff that is on the margins, the stuff that isn't popular -- we scientists are horrible at judging it. And we say our mistakes about the fringe are all historical; we claim we are not making those mistakes today. The fringe has produced wonderful science, and it has produced wonderfully abysmal science. It has never been a comfortable place to live.' "

And, may I add in closing: Skeptics seem terribly afraid of making Type-1 errors, i.e. believing something which is not true (which is typically a psychological carry-over from a traumatic experience in their youth: see my two essays in JSE, 16:1 and 18:4 at [scientificexploration.org](http://scientificexploration.org)). This condemns skeptics to a life of continual Type-2 errors, i.e. not believing something that is true!



Cartoon by Dave Lowe  
<http://www.paraabnormalthecomix.com/>  
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L. David Leiter  
Willow Grove, PA

Editor: Kudos to Howard Wilk for his two letters in the July/August 2009 issue of Phactum. Although I don't know him personally, his apparent personal philosophy (per those letters) makes him a fine prospect for membership in the Society for Scientific Exploration (SSE), [scientificexploration.org](http://scientificexploration.org)

Like Wilk, I too am a great fan of Ben Franklin, as I believe are most PhACT members. However, those same PhACT members seem unaware that Franklin believed in human reincarnation, as have many celebrities past and present. I don't believe in reincarnation, rather I accept human reincarnation as a natural phenomenon, based on the available scientific evidence. That evidence has been presented by many scientists over much of the last several centuries, but none of which surpasses the evidence from the research of

“ ... a wise and frugal Government, which shall restrain men from injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement, and shall not take from the mouth of labor the bread it has earned.”

- Thomas Jefferson, *First Inaugural Address, March 4, 1801*

the late Ian Stevenson, M.D.

If any Phactum reader can present a different interpretation than Franklin's own, anticipated future reincarnation in that epitaph, which Wilk presented in the first of his two letters, I would like to hear it!

In Wilk's second letter he quoted two of Franklins letters, and in the first of these, Franklin compliments Joseph Priestley directly for his research, and in the beginning of second letter Franklin refers to Priestley as "the honest heretic". There are still many "honest heretics" involved in cutting-edge scientific research, and many of them are fellow members of SSE. I invite my friends in PhACT to consider membership in SSE as well.

L. David Leiter

Willow Grove, PA

Associate Members' Representative, SSE

Editor: Ed Gracely asked for an explanation of skepticism in the July/August '09 Phactum. Here's the best one I've ever heard, by phone to me from the late Marcello Truzzi (a founding, and disappointed ex-, member of CSICOP, and a founding member of SSE until his death!). I don't know if he was the author, but here goes:

**"Skepticism is doubt, not denial!"**

It's a quotation so-called skeptics should always remember, but it may help the inquiring public as well! BTW, Ed, your comments re. Tom Napier's definition are spot-on! Your views indicate that you should definitely join SSE, my friend! Perhaps you can become PhACT's "Official Representative" there. You would be more than welcome!

Dave Leiter, P.E., BSME (Drexel '62)

Willow Grove, PA

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## Various Ruminations

Collected/Written by Ray Haupt  
(with help from others)

### Global Warming Skepticism

Global Warming certainly has sparked many debates on its causes, its effects, and even if it is a real issue. Here are a few thoughts of Australian geologist Ian Plimer on the matter of carbon dioxide.

*Carbon dioxide has an effect on the atmosphere and it has an effect for the first 50 parts per million and once it's done its job then it's finished and you can double it and quadruple it and it has no effect because we've seen that in the geological past, and we've seen it in times gone by when the carbon*

*dioxide content was 100 times the current content. We didn't have runaway global warming, we actually had glaciation, so there's immediately a disconnect. So carbon dioxide is absolutely vital for living on earth; it's plant food, all of life lives off carbon dioxide. To demonise it shows that you don't understand school child science. —Ian Plimer, interviewed on ABNNewswire, June 2009*

Is Plimer right? Opinions on that matter and other Global Warming issues are desired for consideration in Phactum.

### No Comment Department



### Creationist theme park shut down

Dinosaur Adventure Land, the Creationist oriented theme park operated by evangelist Kent Hovind, was seized on July 29, 2009 by order of a federal Judge in Pensacola, Florida.

The issue prompting the federal government to take action is that Hovind has not paid \$430,000 he owes in employee taxes. Hovind explains that he is employed by God, not the state. He therefore refused to pay taxes for 17 years since God's ministers should not be subject to payroll taxes.

Hovind operated in that manner for 17 years, all the while frequently transferring money between multiple accounts to mask his holdings from scrutiny

The law finally caught up with Hovind and in November of 2006 he was sentenced to ten years in prison. His wife, Jo, is also in jail for assisting him. Now his property is to be seized and sold.

### We Should Be Insulted

On August 2, 2009 James Randi wrote an article from which I have extracted a small excerpt. The full article can be found at: <http://www.randi.org/site/index.php/swift-blog/656-we-should-be-insulted.html>

**"It is incumbent on every generation to pay its own debts as it goes. A principle which if acted on would save one-half the wars of the world." - Thomas Jefferson**

*The "complimentary and alternative medicine" business brings in some \$34 billion a year in direct out-of-pocket spending from American consumers. The budget of the US National Institutes of Health - a major Federal agency - is not available to the average person, it seems. Looking in on the Internet for a simple dollar figure produces no results that I can find. A direct search for a "\$" sign reports no hits...*

Most of Mr. Randi's article deals with acupuncture, but his observation about the secretive nature of NIH spending correspond with my own when about a year ago I did report about clinical trials performed as part of the NCCAM section of the NIH.

I had noticed then that a great number of clinical trials on a wide variety of medical issues had been executed at various medical facilities around the country. That is all well and good but a common feature of those studies is that the results are not well publicized, if publicized at all, and the cost of the various studies is not made available on public websites. At this point I will not go into the matter that many of the clinical trials performed by NCCAM are clearly preposterous and the money, whatever the undisclosed amount may be, would better be allocated to real research where outcomes are shared and life saving knowledge accumulated.

I invite Phactum readers to confirm or contradict Mr. Randi's and my observations about NCCAM and other government health agencies, by way of letters to the editor or articles to be included in Phactum.

### **NCCAM promoting quack teaching**

Meanwhile, back at NCCAM Ranch, Dr. Stephen Barrett reports in his weekly Consumer Health Digest of September 3, 2009: *Two investigators have found that the National Center for Complementary and Alternative Medicine is funding low-quality educational programs in schools that train health professionals. From 2000 to 2003, NCCAM awarded 5-year education grants to 14 such schools in the United States and to the American Medical Students Association Foundation. The stated purpose of the grants was to integrate evidence-based information about "complementary and alternative medicine" ("CAM") into the curricula. After examining Web sites operated by grantees, the investigators concluded that their teachings about herbal remedies, chiropractic, acupuncture, and homeopathy were severely biased toward CAM and lacked appropriate criticisms. In several cases, they base positive conclusions on low-quality clinical trials without mentioning that larger, high-quality trials reported negative results. The investigators concluded that the programs they reviewed had failed to uphold educational standards and lack appropriate oversight. [Marcus DM, McCullough L. An evaluation of the evidence in "evidence-based" integrative medicine programs. Academic Medicine 84:1229-1233, 2009] <http://www.ncbi.nlm.nih.gov/pubmed/19707062> The bottom line-through not explicitly*

*stated in the article-is that NCCAM should stop funding programs that promote worthless methods to professional students.*

### **Odd Medical Device Department**

PhACT President Eric Krieg has sent this little item about a most unusual medical device. Tobacco smoke enema's had a certain popularity from the 1750's until the 1810's. The tobacco enema was used to infuse smoke into a patient's rectum for various medical purposes, primarily the resuscita-



tion of drowning victims. A rectal tube inserted into the anus was connected to a fumigator and bellows that forced the smoke towards the rectum. The warmth of the smoke was thought to promote respiration. This procedure eventually fell into disuse.

This device might well have some commercial potential, if not medical utility. It does not take great imagination to envision recreational uses of smoke enema machines, perhaps next to the Oxygen Bars at casinos with a full selection of designer scents: strawberry/kiwi, peach blossom, and that great favorite Key Lime. Stay tuned.

### **Free Energy in Australia**

Get a load of this website describing yet another "free energy" contraption that is overlooked by scientists and repressed by governments. [www.magniwork.com](http://www.magniwork.com)

This particular device is described by its inventor as a perpetual motion machine where more energy is produced than consumed, breaking all laws of physics. It will be on sale in two years for about \$5,000. We are skeptical and expect production delays.

### **Creationist Education and the Internet**

Creationists are a tenacious lot. Professor William Dembski at Southwestern Baptist Theological Seminary in Fort Worth, Texas, has an undergraduate course requirement involving insertion of pro Intelligent Design materials into "hostile" internet websites. The following excerpt is from the Dr. Dembski's 2009-2010 Academic Year Teaching schedule, all of which may be found at:

<http://www.designinference.com/teaching/teaching.htm>

*AP410 — This is the undergrad course. You have three things to do: (1) take the final exam (worth 40% of your grade); (2) write a 3,000-word essay on the theological significance of intelligent design (worth 40% of your grade); (3) provide at least 10 posts defending ID that you've made on "hostile" websites, the posts totaling 2,000 words, along with the URLs (i.e., web links) to each post (worth 20% of your grade).*

### On Improving English Spelling

"For example, in Year 1 that useless letter "c" would be dropped to be replaced either by "k" or "s", and likewise "x" would no longer be part of the alphabet. The only case in which "c" would be retained would be the "ch" formation, which will be dealt with later. Year 2 might reform "w" spelling, so that "which" and "one" would take the same consonant, while Year 3 might well abolish "y" replacing it with "i" and Year 4 might fix the "gj" anomaly once and for all.

Generally, then, the improvement would continue year by year with Year 5 doing away with useless double consonants, and Years 6-12 or so modifying vowels and the remaining voiced and unvoiced consonants. By Year 15 or so, it would finally be possible to make use of the redundant letters "c", "y" and "x" -- by now just a memory in the minds of those who do remember -- to replace "ch", "sh", and "th" respectively.

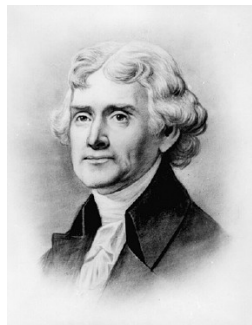
Finally, then, after some 20 years of orthographic reform, we would have a logical, coherent spelling in use throughout the English-speaking world."

Mark Twain (1835 - 1910), "A Plan for the Improvement of English Spelling"

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**"I predict future happiness for Americans if they can prevent the government from wasting the labors of the people under the pretense of taking care of them."**

— Thomas Jefferson



## Collider: The Search for the World's Smallest Particles

by Paul Halpern

Hardcover 272 pages August 2009  
ISBN: 978-0-470-28620-3

An accessible look at the hottest topic in physics and the experiment that will transform our understanding of the universe.

Understanding what our universe is physically made of is one of the oldest and most researched scientific quandaries to date. In the spring of 2009, the Large Hadron Collider will begin smashing particles to deconstruct matter to its smallest pieces and test the existence of the elusive and theoretical Higgs boson—a.k.a. the God particle—among other experiments. The results could confirm or disprove what we supposedly know about quarks, string theory, dark matter, dark energy, and the fundamental tenets of modern physics. Paul Halpern explains what scientists are searching for and why particle physics could well be on the verge of some of its greatest breakthroughs.

Paul Halpern, PhD, is Professor of Physics and Mathematics at the University of the Sciences in Philadelphia. He is the author of numerous books, including *The Great Beyond* (ISBN: 978-0-471-46595-9) and *What's Science Ever Done For Us?* (ISBN: 978-0-470-11460-5).

Books may be ordered online at:

<http://www.wiley.com/WileyCDA/WileyTitle/productCd-0470286202.html>



Cartoon by Chris Madden

<http://www.chrismadden.co.uk/moon/jigsaw.html>

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# What Makes US Different?

## by Paul Schlueter III

**We** humans are obviously primates, and we're clearly related to the other Great Apes (chimps, bonobos, gorillas, and orangutans). It's often cited that we share 98% of our genetic makeup with our nearest relative, chimpanzees. So, what's different, and what's the same? A special type of neuron in our brains is just becoming understood, and it sheds light on something that makes us special.

Neurons are the links between cells in our brains, routing neuro-electrical messages and chemical signals from point to point. Most neurons are star-shaped, with "strings" called dendrites extending from the points to other neurons in a complex interplay that is only barely understood. In the early 1920's Constantin von Economo discovered a special type of neuron, which he described formally in 1926. Having only two dendrites, one extending from each end of an elongated "spindle"-shaped body, von Economo neurons are about four times the size of typical neurons.

According to an article in the June 2009 Smithsonian

magazine ("The Social Brain", by Ingfei Chen), von Economo neurons process signals much faster than typical neurons, and this just might be a characteristic that makes large brains efficient enough for advanced social development. As it turns out, the Great Apes are the only primates to have them, and we humans have them in greater quantity than any other species! 1.25% of our neurons, or about half a million such cells, are of the special von Economo variety.

Von Economo neurons are found in two brain regions, the anterior cingulate cortex (which has a big role in processing emotion), and the frontal insula (which seems to be responsible for what we'd call "gut feelings"). Together, these areas are important in processing the complex interactions of an advanced social group where members recognize one another, form long term attachments, and appear to possess "theory of mind" - the sense of knowing what a fellow creature sees, feels, and might intend. It appears that the same set of animals which have

## Baron Constantin Alexander von Economo Freiherr von San Serff

Constantin Alexander Economo Freiherr von San Serff was born in Braila, Romania, in 1876 of wealthy aristocratic Greek parents. When he was one year old his family settled in Trieste, then part of the Austrian-Hungarian Empire. Constantin studied engineering for two years, then changed direction to study medicine. Following graduation he continued his education working with various scientists and medical researchers in Vienna, Paris, and in Munich worked with Alois Alzheimer.

In 1906 he began working at the psychiatric clinic of Julius Wagner von Jauregg in Vienna. He was fascinated by flying and became a balloon pilot and, in 1908, became one of the first Austrian airplane pilots. He served as a pilot on the South Tyrol front during World War I, receiving several commendations. In 1916 he was ordered back to Vienna to treat brain injuries in the clinic of Wagner von Jauregg and commenced his studies of encephalitis lethargica, a disease of the central nervous system that often proves fatal. This disease

has several forms, one of which often leaves survivors as Parkinson sufferers. There is



some speculation that in November 1918, at age 29 years, Adolf Hitler may have had von Economo's encephalitis, while he was a patient in a hospital, recovering from poison gas.

From 1915 to 1924 encephalitis lethargica was a rampant epidemic, primarily in Europe and North America, and unfortunately was often mistaken for Spanish Flu which killed many millions in its own right. Von Economo was recognized as a leading expert on encephalitis lethargica which became known as Von Economo's Disease.

In 1920, at age 43, von Economo married Princess Karoline von Schönburg-Hartenstein, thus obtaining his noble title.

Von Economo is credited for discovering the first spindle neurons, which are also known as von Economo neurons (VENs). This class of neurons refracts waves of neural signals as they are transmitted from one region of the brain to another, and have only been reported in humans, Great Apes, and whales.

In 1931 he became director of the newly organized brain research institute in connection with the psychiatric clinic, but died suddenly of heart disease - presumably a coronary, only a few months after the institute had been founded.

demonstrated the ability to recognize themselves in a mirror are those which have von Economo neurons (though I notice that birds are not mentioned in the Smithsonian article - I recall something about a bird recently having been shown to recognize his own mirror image).

Other, highly-social animal species which have been shown to possess von Economo neurons include elephants, and certain members of the whale family (humpback, fin, sperm, orca, and bottle-nosed dolphins). An interesting point that this brings up is that the von Economo neurons appear to have evolved separately, and at multiple times, on different branches of the tree of life! Whales and elephants diverged much further back than when the Great Apes diverged from monkeys, and not all whales have this feature, so it came along at least three times in natural history. Von Economo neurons appear to arise only when a species develops a brain of some particular size and complexity, seemingly as a response to an inherent need for greater processing speed! How remarkable is THAT?

Scientists are still not convinced that von Economo neurons are responsible for our higher social functions; in fact, the cells went unstudied for many decades, until very recently. There only appear to be a few specialists who have focused on these special cells, and they are not unanimous in their judgment of what these unique neurons represent. However, the sheer coincidence of their presence solely in the most social and intelligent of species, and the fact that we humans possess them in the greatest proportion of any species, makes this a fascinating topic. I, for one, will be watching the literature for future reports on ongoing studies of this particular type of brain cell.

**Von Economo's Disease** has become a matter of considerable and sad relevance to me, the editor of this newsletter. I had never heard of the disease before having read Paul Schlueter's article and doing a little more research on Dr. von Economo. I had, of course, heard of encephalitis, but had never looked into the matter.

My mother's younger brother, Pete, born in 1919, had participated in the Civilian Conservation Corp, a part of President Franklin D. Roosevelt's program to end the Great Depression. During his CCC service Pete worked on various construction projects around Las Cruces, New Mexico. He was also in the Naval Reserve. In 1939, he was called to active Navy duty in Rhoad Island, but shortly thereafter received an honorable discharge for the reason of having contracted **encephalitis lethargica**. He was 20 years old at the time.

Needless to say, Pete did not serve in World War 2, and not many years after discharge from the Navy was diagnosed with Parkinson's Disease which gradually worsened throughout his lifetime. Uncle Pete lived to 73 years of age, never in good health after age 20.

I thank Paul Schlueter for having drawn me toward this knowledge.

## Is 'IGNORANT' A Dirty Name?

by Paul Schlueter III

**I'll bet** you thought you'd heard the last of the flap over Miss California and the gay-activist Miss USA judge who didn't like her statement about believing that "marriage is for a man and a woman." Not so! After the CNN announcement that Carrie Prejean could keep her crown, the judge, Perez Hilton, was interviewed by phone for his comments. One of CNN's most conservative correspondents accused Hilton of "name calling" when Hilton described Prejean as, being "ignorant" and "a simple, simple girl.," Having heard the whole interview, I believe that Hilton's context was clearly stated; his reference to the term "ignorant" implied the sense that she did not know what she was discussing, and was thus without knowledge of the topic. It was the REPORTER who had declared the word to be "name calling", and who then proceeded with an ad hominen attack against Hilton for that perceived infraction of "civil debate."

*ignorant* - *adi.* 1. {without education or knowledge. 2. Exhibiting lack of education or knowledge: an ignorant mistake. 3. Unaware or uninformed: ignorant of what had happened. [from Latin, *ignorare*, meaning to be ignorant.] also: "Ignorant can refer to a person's low level of knowledge in general of, in a narrower sense, to his being uninformed or unaware of a specific thing." *American Heritage Dictionary, 2nd College Ed.*

Nowhere in the definition is "ignorant" called an epithet, a pejorative, or a "dirty name." Of course, during a press interview or live debate, or even during a private discussion, it is common for one party to attempt to change the subject by deliberately misinterpreting a specific term used by his oppo-

**"Being ignorant is not so much a shame, as being unwilling to learn."**

- *Benjamin Franklin 1706-1790*

nent; this is called "sophism" (a deceptive or fallacious argument), "hyperbole" (in argument, the tactic of making a point more inflammatory in order to enhance its effectiveness), and/or a "solecism" (a nonstandard usage of terminology or grammatical construction which leads to miscommunication or error.) Sadly, Hilton played into the tactic, and repeated the

term over and over. The best "soundbite response", given a moment to think, might have been just to say, "Ignorant is an adjective, not an epithet." Of course, that level of articulation is well beyond Hilton's range. He was, quite simply, out-matched against his professional TV correspondent opponent. Though Hilton correctly described the point he was clearly trying to make, it was successfully turned around against him with some grammatical dirty pool.

I've come up against the exact same problem in private discourse, and many readers may have, also. A critical thinker should be aware that using the phrase "argument from ignorance" (the practice of proclaiming "I don't know the explanation, so it must be the result of [insert your credulous belief here]") has very real potential of leading to a fistfight! The response is almost invariably, "Who YOU callin' ignorant, you @#\$% &\*?" I can also tell you, from hard experience beginning as early as grammar school, that trying to state what the real definition of "ignorant" is serves no useful purpose at all, after that point. Quite simply, the term "ignorant" is "a fighting word" when spoken to those to whom it most aptly applies! Curiously, these are often the very

same people who call smart people "nerds", who call knowledgeable explanation "arrogance", and who believe that "street smarts" outweigh "book learning" in every important situation. The irony that those who take the greatest offense to being called "ignorant" are anti-intellectuals themselves is probably the most astonishing aspect of this subject!

What this all comes down to is the curious American belief that one without knowledge is "just as good as" one WITH knowledge; after all, we're all "equal", aren't we? It really doesn't matter what level of education one actually has, nor what experience one has, or one's rank or position; the idea that "I'm just as good as anyone, and better than most" is ingrained into our self-image almost from the happy accident of our birth in this "democratic" nation. This real aspect of self-esteem is largely responsible for our reputation among

other countries for arrogance, USA centism, and the belief many of us hold that we are entitled to tell everyone else how to act, think, and believe. It can even (arguably) be traced back to responsibility of every true believer to spread the Word of God, Yahweh, Jehovah, or whatever His name is. To take it back to the beauty pageant flap, everyone strongly supports their own absolute Right to hold whatever belief they wish, to state their supreme Opinion openly and often, and to NEVER be criticized or judged poorly on the basis of what they've said. It doesn't take much of an intellect to trace the effect of THAT sort of thinking on our society.

In conclusion, then, it is MY arrogantly stated opinion that "IGNORANT" is Not a dirty name, but a term describing someone's lack of knowledge or education on a specific or general topic. I guess I'll just have to take the punches from all those who disagree. It's just too bad that such belligerence is now coming from a CNN correspondent, who definitely should know better!

P.S. Though it got much less attention from the popular media, American reporter Roxana Saberi, a very attractive young woman of apparent Middle Eastern descent

who was arrested and imprisoned in Iran for "espionage", was released from prison and allowed to return to the US with her parents, the same day as Donald Trump allowed Carrie Prejean to retain her Miss California crown (5/12/09). Welcome home, Roxana, and good luck to you. Now, can anybody tell me how to nominate Miss Saberi for Miss USA? Let's hope that her true hardships and personal jeopardy earn her some true benefits now that she's free again.

*Paul Schlueter III is serving Life in Prison in NE Pennsylvania. His supporters have recently created a website about him.* [www.jaylbird.org](http://www.jaylbird.org)

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*"You see Thag..? Names CAN break your bones. Especially when those names are carved on ROCKS."*

Cartoon by Nick D. Kim, <http://www.lab-initio.com>  
Used by permission.

**The more we progress the more we tend to progress. We advance not in arithmetical but in geometrical progression. We draw compound interest on the whole capital of knowledge and virtue which has been accumulated since the dawning of time. — Arthur Conan Doyle**

# A VICTORY FOR CRITICAL THINKING

## PROGRESS AGAINST HOMEOPATHY IN THIRD WORLD COUNTRIES

**Voice of Young Science (VoYS)** is a project of Sense About Science, a UK based organization dedicated to separating fact from fiction in important matters of science, especially in the health sciences. In June of this year VoYS challenged the World Health Organization on the matter of Homeopathy as treatment for serious disease in the developing world. That letter, penned by Julia Wilson, is below.

*Mr A Etukudo  
Division of AIDS, Tuberculosis and Malaria (ATM)  
WHO Africa*

*1st<sup>th</sup> June 2009  
Dear Mr Etukudo*

### ***Homeopathy and serious diseases in the developing world: an open letter from early career medics and researchers***

*We are calling on the WHO to condemn the promotion of homeopathy for treating TB, infant diarrhoea, influenza, malaria and HIV. Homeopathy does not protect people from, or treat, these diseases. Those of us working with the most rural and impoverished people of the world already struggle to deliver the medical help that is needed. When homeopathy stands in place of effective treatment, lives are lost.*

*Examples of homeopathy being promoted for these diseases include:*

- In Kenya, the largest homeopathic supplier, the Abha Light Foundation sells homeopathic medicines for malaria, diarrhoea and influenza. It now runs 20 health centres, 25 mobile clinics and five HIV/AIDS clinics.*
- In Tanzania, Jeremy Sherr and Sigsbert Rwegasira run three homeopathic clinics and claim to have government support to establish a school of homeopathy. Rwegasira claims to treat “no less than 100 malaria patients per day.” According to Sherr’s promotional material, “conventional medicine only supplies temporary relief, often at a great cost financially, and with many severe side effects”.*
- In Ethiopia, the Amma Resonance Healing Foundation, run by Peter Chappell, offers to treat AIDS patients with “resonance healing in the form of homeopathy”, as “an ideal alternative and complement for the treatment of HIV/AIDS in developing countries” because of “the very low costs of*

*producing the remedy” and because it has “no side effects”.*

- In Ghana, the Senya/Tamale Homeopathy Project treats malaria patients with homeopathy.*

*In Botswana, the Maun Homeopathy Project offers homeopathic treatment in several locations and mobile clinics for HIV related complaints such as herpes and diarrhoea “for those people who are HIV+ but who are not taking anti-retroviral drugs”.*

*Many people in developing countries urgently need access to evidence-based medical information and to the most effective means of treating these dangerous diseases. The promotion of homeopathy as effective or cheaper makes this difficult task even harder. It puts lives at risk, undermines conventional medicine and spreads misinformation.*

*We are sure that you will recognise these dangers and ask that you issue a clear international communication condemning the promotion of homeopathy for treating TB, infant diarrhoea, influenza, malaria and HIV. We are sure, too, that you will recognise the urgency of our request, and look forward to your response.*

*Yours sincerely*

***Julia Wilson***

*On behalf of the Voice of Young Science network  
Sense About Science, London*

*Signed also by about 35 medical professionals*

On August 21, 2009 Dr Leonor Sierra, Scientific Liaison, Sense About Science sent an update about the VoYS initiative with the WHO.

*Dear Friends*

*In June Voice of Young Science joined with other early career medics and researchers in Africa and wrote an open letter to the WHO, calling on the body to condemn the promotion of homeopathy for treating HIV, malaria, TB, infant diarrhoea and influenza.*



**The WHO has responded and said that it DOES NOT recommend the use of homeopathy for treating HIV, TB, malaria, influenza and infant diarrhoea.** The office of Dr Margaret Chan, Director-General of WHO, stated on 14th August 2009 that these responses "clearly express the WHO's position". Today the Voice of Young Science network, has written to the health ministers of all countries to publicise the WHO's position, asking them to combat the promotion of homeopathy for these dangerous diseases. The story can be found on the BBC website:

<http://news.bbc.co.uk/1/hi/health/8211925.stm> and at <http://www.senseaboutscience.org.uk/index.php/site/project/331/>

*We think is a fantastic step forward, creating an authoritative reference point for those of us who are battling these ludicrous claims in the field and trying to ensure good health care. It is only as a big step as we can make it and we want to ensure it doesn't get buried. Already many people are writing to their regional healthcare practices in Africa, alerting their local professional networks and putting up comments on blogs and news website.*

*Can you help? Will you send it to people you know? Can you alert any contacts in health care, health policy and health reporting? Can you write an article for your professional society, write something on your blog or post it onto a public forum?*

Best wishes

Dr Leonor Sierra  
Scientific Liaison, Sense About Science  
[www.senseaboutscience.org](http://www.senseaboutscience.org)

PhACT is pleased to help spread the word about homeopathy, as Dr. Sierra suggests, but the battle for Sensible Science is not at all won. It will be interesting to see how faithfully the WHO follows up on its promises. Readers might look at the BBC article noted above which indicates that Homeopaths are fighting back. The article says: *Paula Ross, chief executive of the Society of Homeopaths, said it was right to raise concerns about promotion of homeopathy as a cure for TB, malaria or HIV and Aids.*

*But she added: "This is just another poorly wrapped attempt to discredit homeopathy by Sense About Science.*

*"The irony is that in their efforts to promote evidence in medicine, they have failed to do their own homework.*

*"There is a strong and growing evidence base for homeopathy and most notably, this also includes childhood diarrhoea."*

*The UK's Faculty of Homeopathy added that there was also evidence homeopathy could help people with seasonal flu.*

*Dr Sara Eames, president of the faculty, said people should not be deprived of effective conventional medicines for serious disease.*

*But she added: "Millions die each year as those affected have no access to these drugs.*

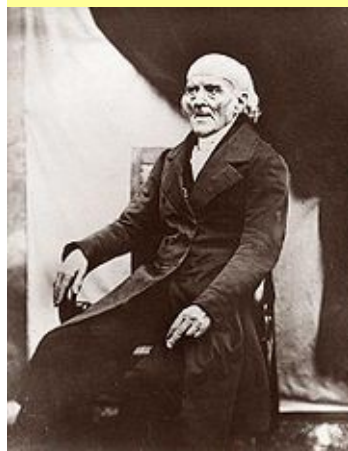
*"It therefore seems reasonable to consider what beneficial role homeopathy could play. What is needed is further research and investment into homeopathy."*

Also see this website which credits VoYS:

<http://globalhealth.kff.org/Daily-Reports/2009/August/21/GH-082109-Homeopathy.aspx>

## Christian Friedrich Samuel Hahnemann (1755 - 1843)

Samuel Hahnemann, the founder of homoeopathy, was as a young man proficient in languages and was conversant in at



Samuel Hahnemann - 1841

least nine in addition to his native German: English, French, Italian, Greek, Latin, Arabic, Syriac, Chaldaic and Hebrew.

Hahnemann studied medicine for two years at Leipzig and ten months at Vienna. He graduated MD at the University of Erlangen in 1779 and after one term's further study, qualified with honors with a thesis on the treatment of cramps, titled *Conspectus adfectuum spasmodicorum aetiologicus et*

*therapeuticus*. [A Dissertation on the Causes and Treatment of Cramps]. In 1781, he took a village doctor's position in the copper-mining area of Mansfeld, Saxony. And soon thereafter married Johanna Henriette Kuchler. They had eleven children.

Hahnemann claimed that the medicine of his time did as much harm as good. While translating William Cullen's *A Treatise on the Materia Medica*, Hahnemann encountered the claim that Cinchona, the bark of a Peruvian tree, was effective in treating malaria because of its astringency. Hahnemann began to research cinchona's effect on the human organism by self-application. He claimed that the drug evoked malaria-like symptoms in himself, and concluded that it would do so in any healthy individual. This led him to postulate a healing principle: "that which can produce a set of symptoms in a healthy individual, can treat a sick individual who is manifesting a similar set of symptoms." This principle, like cures like, became the basis for an approach to medicine which he gave the name homeopathy.

# Moon ice and Moonshine

by Tom Napier

I have great respect for Professor Robert Park but I don't share his odd antipathy to manned spaceflight. This aversion leads him to write rather silly things, one of which was reprinted in the July/August Phactum. He sees ice on the Moon as being no more useful as rocket fuel than the water in our oceans. I beg to differ.

## The hydrogen future

Although it burns without generating lasting greenhouse gases, hydrogen will never be the planet's great new chemical energy source. Here Dr. Park and I agree completely.

Public figures propose we use hydrogen as a fuel as it is "the most abundant element in the universe." This is true but not useful. Oil companies, which should know better, advertise their commitment to a hydrogen-fuelled future. Hydrogen's advocates rarely mention the real show-stopper; we don't have any hydrogen. Water contains lots but it's already burnt.

You can't produce energy by converting water into hydrogen and oxygen and then converting them back to water. This is as impossible as that perpetually-turning over-balanced wheel. Converting water into hydrogen requires an input of energy such as electricity. Generating that energy means burning fossil fuel, running a nuclear reactor or investing in wind or solar power. The only benefit of the hydrogen cycle is that hydrogen can fuel vehicles, although not easily.

At present the commonest source of hydrogen is natural gas, a compound of hydrogen and carbon. An input of energy can split these apart. Reacting natural gas with steam produces even more hydrogen but one by-product is carbon dioxide, a gas to be avoided. Besides, if the supply of natural gas weren't running low we wouldn't be talking about running cars on hydrogen in the first place.

## Using hydrogen

Hydrogen is an interesting fuel. It burns in air or oxygen with a flame that, because it is transparent, radiates little heat. This explains some of the alleged properties of "Brown's Gas." When you heat something with an oxygen-

hydrogen flame a pyrometer measures the temperature of the object, not the much higher temperature of the flame. This is the origin of Dennis Lee's claim that a Brown's Gas flame adjusts its temperature to suit the material being heated. It also explains why Brown's Gas is lousy for welding. Only the material touched by the flame is heated. In oxy-acetylene welding the flame contains white-hot soot particles which radiate heat to the work-piece. This is a much more efficient heat transfer process and explains why welders use oxy-acetylene and not so-called Brown's Gas.

The invisibility and low heat radiation of a hydrogen flame make it very hazardous. You get no warning that it's there then it suddenly burns your hand off. Burning hydrogen produces nothing but water vapor, a greenhouse gas but not an enduring one. While this makes a good sales pitch, it

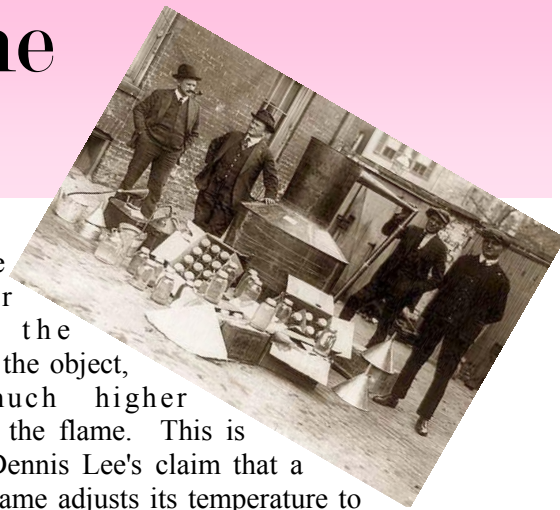
doesn't tell the whole story.

## Energy storage

Weight-for-weight hydrogen has a tremendous energy content, that's why it's used in liquid form to drive space rockets. Unfortunately, hydrogen gas is very light so storing an appreciable mass of it is really tough.

To carry enough hydrogen gas to power a vehicle for any length of time requires keeping it under high pressure in heavy steel cylinders. The alternative is to liquify it. At ambient pressure, liquid hydrogen must be kept below -423 F. Liquid hydrogen is made and handled on an industrial scale as fuel for the Space Shuttle and other launchers but is really not something to put into the hands of the general public.

One promising storage method is to adsorb hydrogen gas under a moderate pressure into a suitable powdered metal alloy. This works reasonably well but is not yet ready for



**Storing Hydrogen: Inflating a high-altitude balloon takes 160 cylinders of hydrogen. They need a truck to carry them around.**

prime time. The best, if horrendously expensive, metal for this purpose is the palladium beloved of cold-fusion enthusiasts. It would be embarrassing if hydrogen-powered cars were to spontaneously explode due to cold fusion in their fuel tanks.

### Hydrogen and space

We live at the bottom of a very deep gravitational well which has no ladders. To lift a spacecraft you have to push stuff out the back so that the reaction pushes the spacecraft upwards. The more you push out and the faster you push it the easier it is to escape Earth's gravity.

The problem is that you have to carry with you all the stuff you push out. Lifting that stuff means pushing out more stuff. Very soon you end up with a rocket using thousands of tons of fuel just to lift a few tons into Earth orbit. Most of that fuel is burned to lift and accelerate the rest of the fuel. Rocket fuels combine two jobs, supplying energy and supplying reaction mass. Burning a fuel with an oxidizer releases energy. This heats the combustion products and forces them very rapidly out the rear of the rocket. Every combination of fuels has a well defined maximum exhaust velocity and this sets a limit to how well it pushes your rocket. Hydrogen and oxygen is just about the best combination.

NASA fuels the Shuttle with liquid hydrogen derived from natural gas and liquid oxygen distilled from liquified air. Both, in principle, could be derived from water if enough energy were available to drive an electrolysis cell. On Earth this wouldn't make sense but, pace Dr. Park, things are different on the Moon.

### A lunar fill-up

If you want to return a spacecraft from the Moon, you first have to land it there fully fuelled. That fuel had to be lifted from the Earth and landed on the Moon. A large fraction of the 2000+ tonnes of fuel in each Saturn V was needed to carry 18 tonnes of fuel into lunar orbit. Ten tonnes lowered the Lander to the surface and brought its top half back to orbit. The remaining 8 tonnes let the Command Module break loose from the Moon and return to the Earth

It would be nice if we could refuel on the lunar surface. This would avoid using thousands of tonnes of fuel to get a few tonnes to the lunar surface. Dr. Park has overlooked that rocket fuel has two functions, it is both an energy source and a reaction mass. On the surface of the Moon you already have an energy source, intense sunlight or, possibly, a small nuclear reactor. You still need reaction mass

in a convenient form and, until now, we haven't had that. If ice exists in substantial quantities it makes an enormous difference to lunar exploration because we can make fuel from it by adding energy.

A relatively small manned rocket can take off from the Earth and make a direct descent on the Moon. It arrives with its fuel tanks empty but lands near a fuel plant that has previously been flown to the Moon using a cheap, non-manned cargo rocket. In the weeks or months between the two flights the fuel plant has mined ice and electrolyzed it into hydrogen and oxygen which are stored in liquid form. The empty lander can fill up its tanks and return to the Earth. Given large enough fuel stocks the lander can fly to other spots on the Moon, returning to the South Polar fuel dump as needed.

Landing a fuel plant requires one or more heavy-lift flights but this need only be done once. Many exploration flights can be carried out before the fuel plant needs to be replaced or moved.

### It works for Mars too

In 1996, Robert Zubrin proposed a similar live-off-the-land plan for a manned flight to Mars. He suggested landing a tank of liquid hydrogen on Mars. This would be used as feed-stock to convert atmospheric carbon dioxide into oxygen and methane to fuel the return flight. His cost estimate for a manned mission to Mars was \$50 billion, pocket change in these days of \$900 billion wars and \$700 billion bailouts. In terms of the fuel needed, the surface of the Moon is much closer to Mars than is the surface of the Earth. A cheap way of

getting to Mars would be to stop in lunar orbit and be refuelled by tanker flights from the hypothetical lunar icefield. And how do I know this? Some years ago I wrote an alternative-history story based on just that scenario. I checked the numbers.

### References:

Robert Park, What's New, May 22, 2009 [www.bobpark.org](http://www.bobpark.org)  
 Robert Zubrin, The Case for Mars, Touchstone, 1996  
 Robert Park, What's New, July 17, 2009 [www.bobpark.org](http://www.bobpark.org)

*Tom Napier has degrees in physics and electronics. While the Apollo program was at its height, Tom contributed to European space research by launching rockets from the island of Sardinia. He has designed radiation detectors for CERN and developed receivers for spacecraft telemetry.*



Assembling a payload in Sardinia

# Two Paranormal Theories of Residual Hauntings

By Don Nigrone



Some purportedly paranormal apparitions seem to interact with their surroundings while others instead simply repeat the same sequence over and over again and again. The latter type of cases, known as residual hauntings, might be due to imprints on the environment, perhaps on the surrounding stones, which under the right conditions can be activated to replay past events, frequently highly charged emotional events like



Cartoon by Dave Lowe  
<http://www.paraabnormalthecomic.com/>  
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shipwrecks, or due to retrocognition.

Precognition is paranormal knowledge of the future. Retrocognition is paranormal knowledge of the past such as of a past that still exists or in some way subsists or perhaps by occult knowledge of a past which not only no longer exists but doesn't even somehow subsist. While replays due to imprints are apparently observed by the normal senses, retrocognitive knowledge of past events presumably involves extrasensory perception. Retrocognitive knowledge of residual hauntings might be spontaneous and limited to certain types of events and could be triggered by certain special places.

However, there are various issues which should be considered in judging the plausibility of these two paranormal theories as explanations for residual hauntings:

1.) level issue – the ground level may change over time:

a.) imprint theory: one might expect the scenario to play out in relation to the current ground level if the surrounding environment's level has changed in a similar way over time, however, if some of the environment, like the surrounding stones, sank beneath the ground then the characters might be seen from their knees up since a stone pathway upon which they might have once walked is now below ground,

b.) retrocognition theory: one would expect that the scenario would play out in relation to the past ground level regardless of the current ground level.

2.) lighting issue – the lighting due to the sun, moon, clouds, etc. might change between the time of the past event and the current conditions:

a.) imprint theory: one might expect the scene to be influenced by the current lighting conditions since the replay would be subject to those current lighting conditions when it's being perceived by the normal senses,

b.) retrocognition theory: one might expect that the scene would be seen under the past lighting conditions regardless of the current conditions since the past event is being retrocognitively known presumably by a sixth sense such that if the lighting conditions for the past event were those of a dark night, though it's now a brightly moonlit night, then the lighting conditions should be those of the dark night.

3.) location issue – while one could locate the past event in relation to its occurrence on earth, the earth itself is flying through space and the actual location of the past event could really be millions and millions of miles away:

a.) imprint theory: one might expect the scenario to be seen at the location on earth where the past event was imprinted since the surrounding environment is also flying through space,

b.) retrocognition theory: one might expect that the scenario would be seen at its original location which is now far, far away in outer space.

4.) fading issue – replayed events might fade over time:

a.) imprint theory: one might expect the scene to appear less distinct as time goes by such that a replay of marching Roman soldiers might seem more faded than one of a grieving woman whose tragic event happened only years ago,

b.) retrocognition theory: one would expect no fading since these scenes are being retrocognitively known presumably by a sixth sense.

5.) period issue – styles, like dress and language, tend to change over time:

a.) imprint theory: one would expect that the apparitions would be dressed and would speak appropriately for their relevant historical period since those are the scenes that were imprinted on the surrounding environment,

b.) retrocognition theory: one would expect that such apparitions would be dressed and would speak appropriately for their relevant historical period since those are the scenes being retrocognitively known.

6.) camera issue – today, cameras, including surveillance cameras, are ubiquitous:

a.) imprint theory: one should expect cameras to be capturing paranormal phenomena like replays were they really occurring,

b.) retrocognition theory: even if past events could be retrocognitively known, one would not expect cameras to be able to provide evidence for that since those events would be known in that fashion presumably by extrasensory perception, not by our ordinary way of seeing things.

7.) observation issue – the way an event is known might affect what can be known about that event.

a.) imprint theory: one might expect a percipient to observe a replay basically as if he had been there at the time when the past event actually happened if that observation was made by his normal senses,

b.) retrocognition theory: if a scene is retrocognitively known due to ESP then it apparently should have once been seen normally by someone because there would presumably be no sight had no one ever seen it, like there would apparently be no sound were a tree to fall in a forest when nobody was around to hear it, and thus that scene would be retrocognitively known as it would have been seen by that other person, perhaps with poor eyesight uncorrected by eyeglasses and from that other person's angle which might have been that of a short or tall individual standing upright or seated.

The best way to evaluate how well these paranormal theories explain the facts might be to examine some individual cases, such as the Screaming Lady of Fort Mifflin or the ghost ship *HMS DeBraak* which is sometimes reportedly seen off Cape Henlopen, and to see how well they stand up to the issues raised above. And different residual haunting cases might be better explained by different theories. By examining cases one might be able to determine when the imprint theory is more plausible than the retrocognition theory and when some much more prosaic theories might offer some much more likely explanations for residual hauntings.

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*(Continued from page 1)*

angels slowly marching and countermarching to and fro in the clouds, their white robes and helmets glistening with a weird light.” She informed her parents, the phenomenon was seen by her father and “news of the mystery quickly spread from mouth to mouth, and in an incredible short space of time the inhabitants were out en masse gazing out in open mouthed astonishment while the white-robed hosts seemingly offended at the immense amount of genuine astonishment and wonder they were unearthing, slowly faded from sight”. The newspaper account then stated that about a week later but at around the same time of night some people in Sussex County, Delaware, namely, a farmer living near Georgetown, some of his neighbors, a man several miles away and people in Laurel, saw “bands of soldiers of great size, equipped in dazzling uniforms, their musket steels quivering and shimmering in the pale, weird light that seemed to be everywhere”. And “A few go as far as to say, in spite of the ridicule of their associates, that they distinctly saw in the midst of the soldiers, and conspicuous by reason of his size and commanding presence, the hero President himself, pale but with his every feature distinctly and vividly portrayed.” Also, in Talbot County, Maryland “A farmer living near Clara’s Point, on going out into his yard after dark, saw, as he related it afterwards to his neighbors, angels and soldiers marching side by side in the clouds”.

And in *The Natural History of Religion* (1757), David Hume noted: *There is an universal tendency among mankind to conceive all beings like themselves, and to transfer to every object, those qualities, with which they are familiarly acquainted, and of which they are intimately conscious. We find human faces in the moon, armies in the clouds; and by a natural propensity, if not corrected by experience and reflection, ascribe malice or good-will to every thing, that hurts or pleases us.*

In conclusion, people may clearly and distinctly perceive something significant even though the stimulus may be vague and obscure such as an image of Ronald Reagan in a cinnamon bun or a message when a recording is played backwards. The phenomenon is known as pareidolia. The image formed or sound heard and its interpretation can be influenced by one's beliefs. Thus, seeing the image of a radiant humanoid in the clouds might be interpreted as having seen a god by an ancient Greek, an angel by a medieval peasant or an extraterrestrial today, instead of being viewed as simply a natural cloud formation suffused with sun or moon light. And heavenly troops of angels and soldiers would make right and proper processions for a dead commander-in-chief in a mainly Christian nation.

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**Don Nigroni received a BS in economics in 1971 from St. Joseph's University and a MA in philosophy from Notre Dame in 1973. He retired in 2007 after working for 32 years as an economist with the US Bureau of Labor Statistics. He now spends much more time hiking, mountain biking, kayaking and bird watching..**

# PENNSYLVANIA'S GAMBLING ADDICTION

BY NATALIE C. ROGOL



**Five** years ago this month [July 2004], Gov. Rendell signed into law the signature policy achievement of his tenure -- legalized slot machine gambling. Act 71 of 2004 allows for 61,000 slot machines in 14 casinos throughout Pennsylvania. The governor promised many benefits from gambling revenue, the most appealing of which was a predicted \$1 billion in property tax relief.

With lawmakers considering expanding the state's gambling monopoly to include table games (such as poker and craps) to fill the current budget gap, it is important to consider its impact thus far. Unfortunately, Act 71 has failed to deliver the promised benefits. Instead of reducing property taxes, the governor created a political web of corruption. The egregious flaws in the legislation were pointed out five years ago, but regrettably ignored, giving taxpayers little to celebrate.

Licenses for slots casinos were sold for a mere \$50 million each, far below their probable market value, to politically chosen winners. This cost Pennsylvanians more than \$2 billion in potential revenue. In 2004, estimates conservatively set the worth of Philadelphia casinos at \$500 million each, and the Pittsburgh casino at \$300 million.

Even licenses at horse racing tracks have resold for more than \$50 million. The Meadows racetrack in Washington County was bought for \$53 million in 2001, but resold for \$225 million in 2005. This 325 percent increase in value does not include the cost of improvements just to house slot machines. The Pocono Downs facility was sold for \$280 million. This is revenue the state could have earned had it competitively bid slots licenses.

The property tax reductions haven't materialized either. While the administration estimated \$1 billion in annual property tax reductions, the actual amount in 2008-09 and for 2009-10 was around \$600 million each year. That amounts to about \$200 per Pennsylvania homeowner.

Yet because it took four years to deliver any gambling funds, property taxes skyrocketed while homeowners were

waiting for relief. Since 2004, annual school property tax collections have increased by an estimated \$3 billion, or five times the level of relief. On average, homeowners are paying \$800 more in school property taxes than before the slots law.

The Commonwealth Foundation and others also predicted that slots gambling would cut into state lottery sales. As the State Lottery's profits go to fund the Department of Aging, this should be a serious concern for lawmakers looking only at new revenue. Our predictions have proved to be accurate; slots gambling has negatively affected the lottery. The Legislative Budget and Finance Committee found that in counties with a casino, lottery ticket sales fell 4.2 percent. And statewide, lottery sales have been stagnant after years of double-digit growth.

## Comparative gross terminal revenues for Pennsylvania slots casinos in Fiscal year 2007/08 and fiscal year 2008/09

“Gross Terminal Revenue” in Pennsylvania Gaming Control Board parlance is the amount of money that remains in casino accounts after winners are paid. That money is then divided into a 55% share to the state for the purpose of property tax reduction, horse breeding, and funding development projects. The remaining 45% goes to the casino operators to pay all operating expenses and generate a profit for investors.

In fiscal year 2007/2008 Gross Terminal Revenue was \$1.404 billion, and for FY 2008/2009 was \$1.754 billion, a 24.86% increase. The state's 55% share came to \$772 million and \$964 million for those years respectively. The average number of operating slot machines at Pennsylvania gambling facilities was 15,354 in June 2008 and 21,718 in June 2009. State law allows for 61,000 slot machines to be distributed throughout the state, the most for any state except Nevada.

Besides these disappointments, the Gaming Control Board has proved costly and susceptible to corruption. The six board members have a combined salary of more than \$1 million, not including benefits, with a few earning more than the lieutenant governor.

The members are not required to work any minimum number of hours, and many hold outside jobs.

When the executive director stepped down from her position recently, the board paid her more generously than her contract stipulated, giving her an extra \$60,000. Board members took a recent trip to Italy that cost more than \$30,000, during a ban on out-of-state travel. The board also receives the perk of leasing luxury cars.

All in all, the board's expenses have added up to more than \$25 million per year. The cost overruns from the board are such that it had to repeatedly "borrow" from the Property Tax Relief Fund to pay its bills.

More discouraging is the board's failure at conducting background checks and investigations. Many employees were hired before they had completed any background check, including a senior employee whose background check continued five months after he was hired.

The lack of complete background checks has led to embarrassing situations for the board. One employee was charged for murdering his girlfriend, and then was found with drug paraphernalia. One employee was found to have falsified information on his background investigation questionnaire, but 10 months later was returned to his original position.

Perhaps the most infamous example of faulty investigation is the fiasco involving Louis DeNaples, who was awarded a license to open the Mount Airy Casino.

DeNaples was charged with four counts of perjury for lying about his connections with organized crime figures. In April his charges were dropped, in exchange for the transfer of the casino to his daughter.

Gov. Rendell's much-hyped slot machine legislation has failed to deliver on his soaring promises. Gambling's first five years in Pennsylvania have been an embarrassment for residents and state officials, something lawmakers should consider before further expanding legalized gambling.

*Natalie Rogol is a research fellow with the Commonwealth Foundation ([www.CommonwealthFoundation.org](http://www.CommonwealthFoundation.org)), a public policy education and research institute located in Harrisburg.*

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## Will Gamblers Get Out Alive?

By Gary Lange, Ph.D.

George lost his job and can't afford a vacation, but says, "I have \$40.00 so I may as well gamble—I might win thousands and be able to go on vacation." These economic times are challenging all of us to make different financial decisions. During the Great Depression, gambling was up and last year lottery sales were up in 42 states. (McMahon) Calls to the 1-800-BETS OFF helpline increased 41% from FY 2002 to FY 2008. McMahon notes a very serious side effect for gamblers is that "suicide rates among compulsive gamblers are more than 20 times higher than in the general population, according to the crisis center." Furthermore, suicide rates are between two and four times higher for people who can't find a job than for people who are employed, according to the American Association of Suicidology. Hence, we really need to help the unemployed gambler, George, get out alive!

Pathological Gamblers, like George, and other addicts may not be gambling or using drugs to feel good, but "to stop feeling bad". Gambling is a financial anomaly where one tries to gain wealth by engaging in a behavior which decreases wealth. Some of my recovering gamblers chuckle that "gambling is for those who are poor at math" and later learn that the only guarantee with gambling is that "the more you gamble, the more you'll lose."



MY PRIZABLE PART  
MY PRIZABLE PART  
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family, and "playing" the slots or other "games" of chance. In economic hard times, George may not be able to afford a vacation, but he can afford a chance at winning a trip to Hawaii. Other "action" gamblers are excited to bet with peers on sports or craps as they feel the neurotransmitter "highs" and forget their daily troubles.

A wonderfully prolific researcher and writer, Nancy Petry has identified several major precipitants of potentially hazardous gambling behavior: "a lot of free time, unstructured time; available cash (though not necessarily wealth); adverse moods, such as depression or loneliness; family conflict...and a trauma." (Buck) When our clients are going through tough economic times, the stress and Petrie's precipitants noted above can easily trigger gambling behavior. The loss of a job or home foreclosure can be traumatic and again trigger a gambling or addictive episode. I call Gambling Treatment, "Addiction Plus" because it has all of the attributes of addiction, plus other concomitant stressors or psychiatric disorders. Other Axis I and Personality Disorders are often present in problem gamblers that seek treatment. I often ask myself, "Which of the 4 presenting issues shall I start with?" knowing that I often will need to deal with all four simultaneously.

If sport betting, cards and casinos weren't bad enough, along comes Internet wagering. Gamblers do not have to plan ahead, get dressed or drive, they can just impulsively log on. Underage, minorities, disabled and non-English speaking

patrons can easily access gambling sites 24/7. "A recent report released by Ernst and Young indicates that online casinos are faring far better than their land based counterparts during the world economic slow down." (Royal Casino Guide)

Treatment and recovery for the problem gambler starts with at least a partial recognition of the problem and willingness to do something different. As therapists successfully treating problem gamblers, we need to employ all that we know about addiction, plus include treatment for impulsive and co-occurring disorders.

Pathological Gambling in the DSM-IV is an Impulse Control Disorder and requires knowledge of dealing with behavioral patterns similar to treating impulsive adolescents. Most problem gamblers are actually being treated by individual psychotherapists because there are very few Gambling Treatment Centers and the gamblers may not live near one or have ANY financial means to travel or admit themselves. Out Patient Gambling Treatment, according to experts like Robert Ladouceur (2007), should involve at least 12 structured sessions with specific homework assignments. The "softer" intervention techniques allow these clients who have atrociously poor stress management skills to stay aware of options. "GamBlock.com" is an easily downloadable and very helpful tool which will block new online gambling sites and software. The more we can help our clients to have abundant coping and supportive options, the less we'll have to worry about client's like George considering suicide and resorting to gambling as a way of coping with negative economic pressures. Of course we do want him to get out alive!

Buck, Rinker, (2009) "Rattled Americans Try Their Lottery



*Luck in Hard Times*", in the *Hartford Courant*, July 27, 2009. Ladouceur, Robert and Stella Lachance, (2007) *Overcoming Your Pathological Gambling Workbook*, Oxford University Press, New York, NY

McMahon, Kathy, (2009) "Greater depressions: social and behavioral trends of economic collapse", *Peak Oil Blues*, Jan 25, 2009.

Petry, Nancy, (2005). *Pathological Gambling: Etiology, Comorbidity, and Treatment*, [www.apa.org](http://www.apa.org).

Washington, DC "Online casinos top land-based venues during economic slowdown", (2009) *Royal Casino Guide*, Feb. 20, 2009, Adibear Media

**Gary Lange, Ph.D.** is a licensed Marriage and Family Therapist in private practice in Rancho Mirage, CA. He holds a National and California Certification as a Gambling Counselor and is Chair of the Training Committee for the California Council on Problem Gambling. Dr. Lange supervised the Family Program at the Betty Ford Center where he completed his dissertation on the recovery symptoms/patterns of family members. Additionally he is a Certified Addictions Specialist and has been a professor of Psychology with Cal State University, San Bernardino for the past fifteen years. Dr. Lange has done numerous professional presentations on problem gambling as well as the quarterly trainings for counselors seeking their Certification as a Gambling Counselor. Past topics included, "You Bet Your Life", "When Luck Runs Out". He has published articles for *The Counselor*, *The Therapist* magazines and is currently writing a book for treating families of gamblers. [GaryLangePhD.com](http://GaryLangePhD.com)

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**W. C. Fields**  
(1880 - 1946)

## W.C. Fields Quotations

The world is getting to be such a dangerous place, a man is lucky to get out of it alive.

It's morally wrong to allow a sucker to keep his money.

Never give a sucker an even break.

Horse sense is the thing a horse has which keeps it from betting on people.

I once spent a year in Philadelphia, I think it was on a Sunday.

A thing worth having is a thing worth cheating for.



## Why So Many Seniors Get Swindled: Brain Anomalies and Poor Decision- making in Older Adults

In a research reports published by the Dana Foundation and the National Institute of Health, Natalie Denburg, Ph.D., assistant professor of neurology and neuroscience at the University of Iowa Carver College of Medicine, suggests that some older adults experience flawed emotional responses that stem from abnormalities that develop in the brain's prefrontal cortex. Dr. Denburg discusses the brain functions of older adults noting that poor decision making is not necessarily a precursor to Alzheimer's Disease and in fact the portion of the brain involved is different from that of Alzheimer's victims. Furthermore the clinical symptoms appear to be more subtle than those of dementia.

An important tool in Dr. Denburg's research is the Iowa Gambling Task, (IGT) The IGT is a computerized psychological task thought to simulate real-life decision making. IGT is widely used in research of cognition and emotion. In the test four decks of cards are displayed and the participant is to select a card from any deck with the objective of accumulating the greatest amount of money. The decks have different characteristics in risk vs. reward, and two decks may be described as "Good" and two as "Bad". The "Good" decks have the virtues of low immediate reward and low long term loss. The "bad" decks offer high immediate rewards and also higher long term punishment.

In Dr. Denburg's studies the normal pattern of performance in healthy, non-elderly individuals is to begin the first trial by selecting more from the Bad decks than from the Good decks, because the Bad decks have the appeal of more immediate reward. As the game progresses, however, steep penalties are encountered in the Bad decks, and participants gradually shift their selections toward the Good decks. Results for otherwise healthy seeming older adults did indeed yield significantly different results in that the older participants were less likely to shift their selections to the "Good" decks.

It is well known in the underworld of shady business practice that older people are more easily deceived. The Federal Bureau of Investigation has estimated that there are 14,000 fraudulent telemarketing firms operating in the United States with 80% of these aiming their marketing at older individuals. Dr. Denburg goes on to observe that the sizeable number of older adults with decision-making deficits has provocative societal implications. The targeting of vulnerable individuals is a major problem.

Refer back to Dr. Gary Lange's article "Will Gamblers Get Out Alive" and think about the vast number of older adults packing the casinos in Nevada, New Jersey, and now in Pennsylvania. Go also to the article "Gambling Away

the Golden Years" by Dr. Lange and Dr. Darel Sorenson on page 12 of Phactum November/December 2008 ( <http://phact.org/data/phactums/Phactum%202008-11.pdf> ). The picture is bleak, the addiction powerful, lives are often devastated, and fraudsters are legally allowed to operate.

And the matter gets worse. Go back to Natalie Sobol's article, "Pennsylvania's Gambling Addiction", in this edition of Phactum for a description of how the Commonwealth of Pennsylvania is hardly a regulator of gambling activities, but it is a provocateur in the spread of casino gambling in Pennsylvania. And get a load of this paragraph from Ms. Sobol's essay:

*The Commonwealth Foundation and others also predicted that slots gambling would cut into state lottery sales. As the State Lottery's profits go to fund the Department of Aging, this should be a serious concern for lawmakers looking only at new revenue. Our predictions have proved to be accurate; slots gambling has negatively affected the lottery. The Legislative Budget and Finance Committee found that in counties with a casino, lottery ticket sales fell 4.2 percent. And statewide, lottery sales have been stagnant after years of double-digit growth.*

Natalie Sobol has described some of sordid and truly distasteful politics of the gambling scene in Pennsylvania. Dr. Lange and Dr. Sorenson have described some of the disastrous effects of gambling and the difficulties of treating such a powerful addiction. Dr. Denburg has described a possible physical cause for poor decision making. Older adults with impaired decision making abilities are as bad a combination as homeopathy and malaria. Scientists are offering explanations that may lead to cures. Politicians offers neither.

The full text of Dr. Denburg's report at Dana Foundation, "Why So Many Seniors Get Swindled: Brain Anomalies and Poor Decision-making in Older Adults", can be viewed online at: <http://www.dana.org/news/cerebrum/detail.aspx?id=23106>

The National Institute of Health publication by Dr. Denburg and others, "The Orbitofrontal Cortex, Real-World Decision Making and Normal Aging": can be found here: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2246008>

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~ALBERT EINSTEIN**

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