

Phactum

The Newsletter and AntiWoo Woo Organ of the
Philadelphia Association for Critical Thinking
January/February/March 2014

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The Paleolithic hunters who painted the unsurpassed animal murals on the ceiling of the cave at Altamira had only rudimentary tools. Art is older than production for use, and play older than work. Man was shaped less by what he had to do than by what he did in playful moments. It is the child in man that is the source of his uniqueness and creativeness, and the playground is the optimal milieu for the unfolding of his capacities.

~ Eric Hoffer (1902 - 1983)

On the front cover is an example of cave art depicting a deer hunt from Cavalls cave, near Valltorta, Spain.

The so-called Mediterranean Arc Cave Paintings of the Iberian peninsula is home to numerous examples of rock paintings and etchings. These works of art date from thousands of years ago and share common style and characteristics which make them genuinely exceptional. That is why they have been declared a part of our World Heritage by UNESCO.

This rock art was created between the Neolithic era and the Copper Age (10,000- 4,000 B.C.). The paintings and etchings are located in open air rock shelters and caves. Most are sketched on limestone rock, normally in red, black and white. Their main features include the both human and animal figures often engaged in intense actions, which depict episodes of war, hunting, daily life and dance rituals.

There are a total of 727 pictorial groups which have the UNESCO World Heritage designation, located in different areas of Andalusia, Aragon, Castile-La Mancha, Catalonia, Region of Valencia and Murcia.

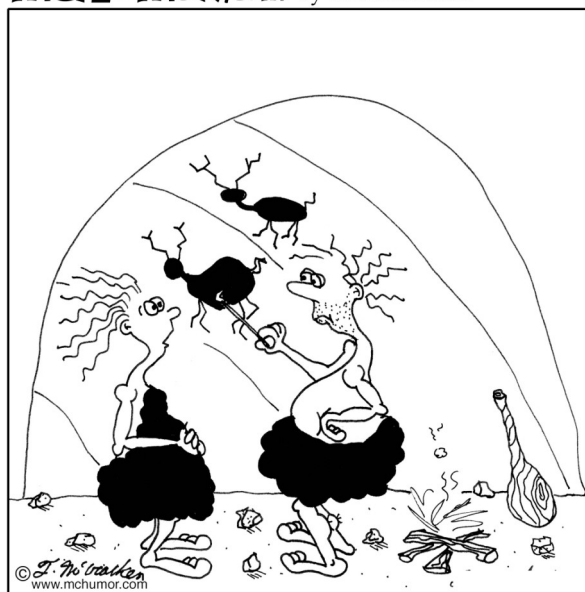


Two examples of Cave painting at Lascaux, France. From about 17,000 BC, somewhat older than the Spanish cave art.

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MCHUMOR.com by T. McCracken



"Very nice, but will it put mammoth meat on the table?"

UPCOMING PHACT EVENTS

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.., Parking is easily available and costs \$4.00 for all day. 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.**



Lectures are generally 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, at 2:00 PM, unless otherwise noted.

Saturday, January 18, 2014 at 2:00 PM - Lecture

Faye Flam, science writer, and **Dr. David Cragin**, toxicologist, will discuss **Genetically Modified Organisms (GMOs) and Science in the Media**

Are GMOs dangerous? Untested? What scares us? What doesn't? How do scare stories get started? Faye Flam, a nationally known science writer, and Dr. David Cragin, a toxicologist and risk assessment expert will discuss science in the media with a specific focus on GMOs.

Faye Flam is a science journalist, science writing teacher and journalism critic. She has written for Science, The Philadelphia Inquirer, The Washington Post and Science News. She's covered physics, space, biology, environmental science and medicine and launched two weekly columns, one on sex and the other on evolution. She was recently awarded the Friend of Darwin award from the National Center for Science Education for the evolution column. She is currently a writer-in-residence at Ursinus College and a journalism critic for the Knight Foundation. She is the author of The Score, how the quest for sex shaped the modern man. Faye's blogsite is: <http://fayeflamwriter.com/>

Dr. Dave Cragin is the Associate Director of Chemical Notification and Registration for a large pharmaceutical company. For more than 10 years, he has taught a graduate course on risk assessment and critical thinking as an Adjunct Professor of Health Policy and Public Health for the University of the Sciences, Philadelphia. Since 2008, he has also taught a subset of this class as a Professor of the International Program in Pharmaceutical Engineering Management of Peking University, Beijing, China. He speaks Chinese. Previously, he was risk assessment manager and toxicology manager for several companies in the oil, chemical, and pesticide industries. Dr. Cragin is a Past-President of the Mid-Atlantic Society of Toxicology, the largest chapter of the Society of Toxicology, and a Councilor for the Philadelphia Association for Critical Thinking. He has also contributed to Society of Toxicology's K-12 education programs and has given many talks on careers in science for kids ranging from K-9th grade. He received his Ph.D. in Pharmacology and Toxicology from University of California, Davis, his B.S. in Zoology from the University of Rhode Island, and is a Diplomate of the American Board of Toxicology.

Saturday, February 15, 2014 at 2:00 PM - Lecture

Ted Schick, Professor of Philosophy at Muhlenberg College, will discuss **Neuroethics: the Perils and Potential of Brain Science.**

Advances in neuroscience, biochemistry, and genetics have brought a new set of ethical questions to the fore. We now have the ability to not only monitor brain functioning in real time (through such devices as PET scanners and MRIs) but also to alter the structure of the brain (through drugs, surgery, implants, genetic engineering, etc.). But the brain is the seat of the mind; it directly affects how we think, feel, and act. Any change in brain structure can have a profound effect on the self. So what constitutes ethical uses of these technologies? For example: If we could identify people with brain structures that are highly correlated with criminal behavior, should we give people with those structures reduced sentences? Should we force them to undergo treatment? If we could use brain scans to reliably tell whether someone witnessed a crime or is lying, should we be able to force them to be scanned? Would that be like forcing someone to testify against themselves or like forcing them to give a DNA sample? If brain-altering procedures existed to erase memories, make people less shy or more intelligent, etc., should they be made available on the open market?

(Continued on page 4)

Dr. Ted Schick is Professor of Philosophy and Director of the Muhlenberg Scholars Program at Muhlenberg College. Born in Davenport, Iowa, he received his B.A. from Harvard University and his Ph.D. from Brown University. He has received the Lindback award for Distinguished Teaching as well as a Hoffman Research Fellowship. In addition to creating the Muhlenberg Scholars Program, he also created and directed Muhlenberg's First Year Seminar Program and served as the Director of Academic Computing. He has authored three texts: *How to Think About Weird Things: Critical Thinking for a New Age* (with Lewis Vaughn), *Doing Philosophy: An Introduction Through Thought Experiments* (with Lewis Vaughn), and *Readings in the Philosophy of Science: from Positivism to Postmodernism*. He serves on the editorial board of *Philo* and has published numerous articles on the nature of knowledge, reality, and value. His work also appears in a number of volumes of Open Court's *Philosophy and Popular Culture* series including: *Seinfeld and Philosophy*, *The Matrix and Philosophy*, *The Lord of the Rings and Philosophy*, *More Matrix and Philosophy*, *Star Trek and Philosophy*, *Led Zeppelin and Philosophy* as well as Blackwell's *Beer and Philosophy*. His articles have been reprinted in a number of publications including: *Toward a New Political Humanism*, edited by Barry Seidman and Neil Murphy; *God* edited by Timothy Robinson; *The Improbability of God*, edited by Michael Martin, *Science, Religion, and Society: an Encyclopedia of History, Culture, and Controversy*, edited by Arri Eisen and Gary Laderman, *The Skeptic Encyclopedia of Pseudoscience* edited by Michael Shermer; *Culture Wars*, edited by Mary E. Williams, *Philosophy and Contemporary Issues*, edited by Burr and Goldinger, and *Introduction to Philosophy: Knowledge, God, Mind, Morality*, edited by David Ohreen. His current teaching interests include, philosophy of science, philosophy of mind, and biomedical ethics.

Saturday, March 15, 2014 at 2:00 PM - Lecture

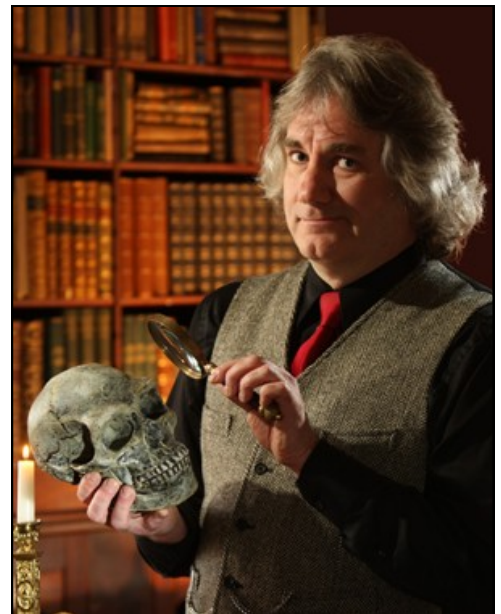
Professor Brian Regal of Kean University in Union New Jersey will discuss **Big-foot and Cryptozoology**.

Dr. Brian Regal, an assistant professor in the Department of History, is an historian of science, with a specialty in human evolution and its relationship to religion, politics and American national origin theories. He is also interested in fringe and pseudoscience, writing and lecturing on the evolution/creation controversy, and monster studies/cryptozoology, at conferences in the United States, United Kingdom and Europe, and has done radio and podcast interviews. His current research focuses on the role of monster studies in the formation of evolution theory, particularly the relationship between amateur and professional scientists.

An elected fellow of the Linnaean Society of London, Regal's research has taken him to some of the oldest libraries and archives in the world, and relies upon the use of primary source documents. His first book, *Henry Fairfield Osborn: Race and the Search for the Origins of Man* (2002) was nominated for the 2003 Pfizer Award and won the 2005 Bela Kornitzer Award. His book *Human Evolution: A Guide to the Debates* (2005) was profiled in an Air America Radio interview with host Janeane Garofalo. He also wrote the introduction to the *Autobiography of Charles Darwin* (2005) and the *Darwin Compendium* (2006) and is the author of *Pseudoscience: A Critical Encyclopedia* (2009).

His most recent book, *Searching for Sasquatch: Crackpots, Eggheads, and Cryptozoology* (2011), is an examination of the world of monster hunting and its place in the history of science. His current research is on the role of monster studies in the formation of evolution theory.

A United States Army veteran, Regal earned a B.A. in history from Kean in 1995. He also earned an M.A. in American history and literature in 1996 and a Ph. D. in Modern History and Literature in 2001, both from Drew University.

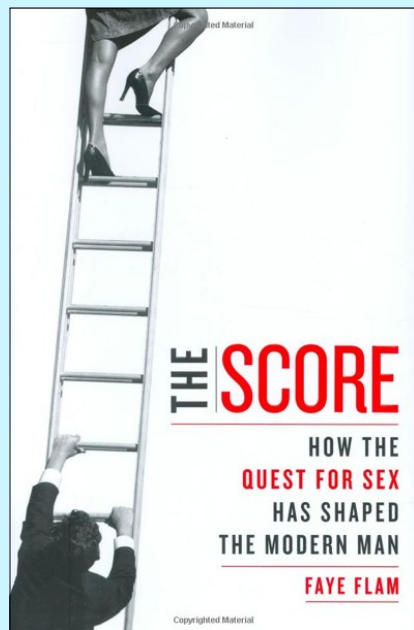


Monday, April 28, 2014 - Lecture

Michael Shermer, PhD, founder of the Skeptics Society and Editor-in-chief of *Skeptic Magazine*, will be the speaker at PhACT's contributed event at the Philadelphia Science Festival. Note that this lecture will neither be at the usual meeting location or time. More details will be available in the next Phactum. Stay tuned.

Saturday, May 17, 2014 - PhACT Scientific Expedition

Don Nigroni, a longtime PhACT member, naturalist, and monster hunter extraordinary, will lead another monster/ghost hunting expedition. Past failures to capture the Jersey Devil and the Ape Boy of the Chester Swamps do not deter enthusiasm for future success in such ventures. More details in the next Phactum.



The Score: How The Quest For Sex Has Shaped The Modern Man

by Faye Flam

Hardcover: 224 pages Publisher: Avery (June 12, 2008)
ISBN-10: 1583333126

A smart, witty, and fresh look at the male side of the male-female relationship from a science writer and sex columnist at The Philadelphia Inquirer.

Beginning with a “boot camp” for wannabe pickup artists—where men pay thousands of dollars for three days of classroom seminars on how to get women into bed—Faye Flam’s quest for a deeper understanding of men takes her back through the evolutionary history of the human male.

Sweeping from the birth of the first male and female organisms to the sexual foibles of twenty-first-century humans, Flam shows how a small difference in the size of the first sperm and eggs set off a war between the sexes that we’re still fighting today. Since this primordial split, a consistent pattern of behavior has emerged: males use a stunning variety of strategies to make themselves attractive to females, and females put them through the wringer.

By placing the human male in the context of the natural world, Flam highlights some intriguing resemblances among males of all species, but also the unique challenges that men face when courting women—whether for a lifelong partnership or a one-night stand. Flam ultimately reveals that millions of years of evolution have left the love lives of humans suspended somewhere between monogamy and promiscuity, and that it is this eons-old tension between males and females that has created the modern man.



How to Think about Weird Things: Critical Thinking for a New Age

by Ted Shick and Lewis Vaughn

Publisher: McGraw-Hill Humanities/Social Sciences/Languages; 7 edition (January 28, 2013)
ISBN-10: 0078038367 ISBN-13: 978-0078038365 Paperback: 352 pages

This brief, affordable text helps students to think critically, using examples from the weird claims and beliefs that abound in our culture to demonstrate the sound evaluation of any claim. It explains step-by-step how to sort through reasons, evaluate evidence, and tell when a claim (no matter how strange) is likely to be true. The emphasis is neither on debunking nor on advocating specific assertions, but on explaining principles of critical thinking that enable readers to evaluate claims for themselves. The authors focus on types of logical arguments and proofs, making How to Think about Weird Things a versatile supplement for logic, critical thinking, philosophy of science, or any other science appreciation courses.

Searching for Sasquatch: Crackpots, Eggheads, and Cryptozoology

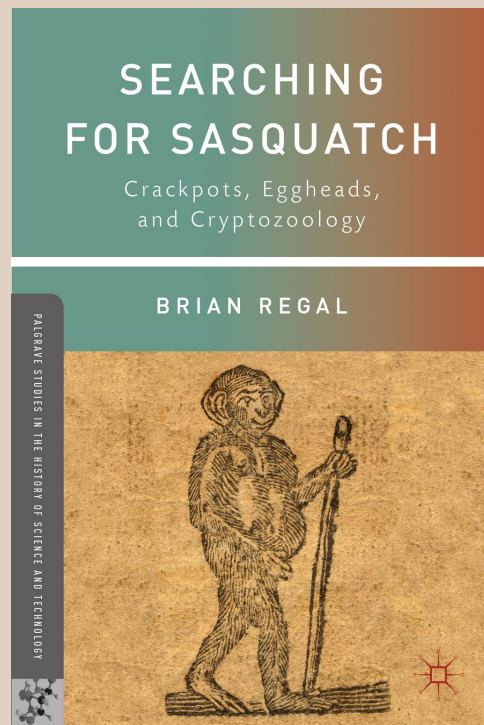
by Brian Regal

Paperback: 264 pages

Publisher: Palgrave Macmillan; Reprint edition (August 21, 2013)

ISBN-10: 1137349433 ISBN-13: 978-1137349439

Bigfoot hunters and their brethren are often depicted as outcasts, misfits, or passionate amateurs toiling in solitude. But has this always been the case? This fresh and entertaining study looks at the surprisingly complex relationship between professional scientists and cryptozoologists. The traditional heroic narrative of monster-hunting in the late twentieth century treats mainstream, academic scientists (the eggheads) as villains who reject the possibility of anomalous primates and cryptozoology as unworthy of study. It gives a privileged place to passionate amateur naturalists (the crackpots) who soldier on against great odds and an obstinate public to bring knowledge of these creatures to light. However, as historian Brian Regal shows, this is misleading: many professional scientists eagerly sought anomalous primates, examining their traces and working out evolutionary paradigms to explain them. Even though scientific thinking held that creatures such as Bigfoot, Sasquatch, and Yeti did not and could not exist, these scientists risked their careers because they believed them to be a genuine biological reality.



Cartoon by Dave Lowe
<http://www.paraabnormalthecomix.com/>
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Letters to the Editor

Letters to the editor are encouraged

Editor: Before Roger Patterson claimed that he filmed a female Bigfoot on October 20, 1967, he had a book published in 1966 entitled *Do Abominable Snowmen of America Really Exist?* about Bigfoot. On its penultimate page was an offer to “Become a member of ‘THE ABOMINABLE SNOWMEN CLUB OF AMERICA.’” With membership came a certificate, signed by none other than the club’s president, Roger Patterson, two records, four bulletins and “If you are selected, you will have a special part (paid a salary) in the Expedition.” The final page noted that the cost for this two year membership was \$5.95 plus 50 cents for postage and handling. And shown here is a copy of the last page of that book with an illustration of the spiffy official membership certificate!

Don Nigroni
Glenolden, PA

Editor: The article “Comb Jelly DNA Startles Scientists” (Phactum, November/December 2013, p. 14) describes the independent evolution of flight in insects, birds, and bats. There's one more group to mention: the pterosaurs, “flying reptiles that flourished during all periods (Triassic, Jurassic,



This fossil pterosaur is suspended from the ceiling in the Natural History Museum at University of Texas in Austin. This specimen was discovered in what is now Big Bend National Park, in West Texas. It lived about 65 million years ago, during the late Cretaceous Period. Its wingspan is about 40 feet.

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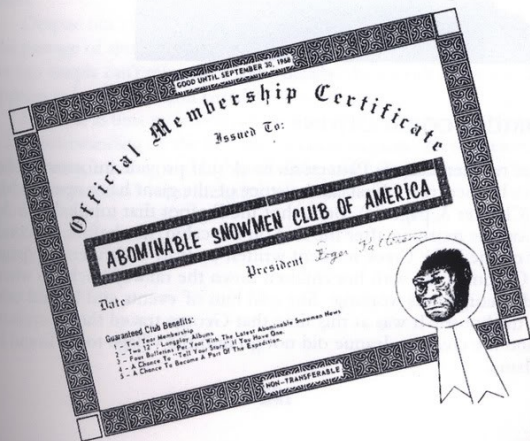
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and Cretaceous) of the Mesozoic Era (251 million to 66 million years ago). Although pterosaurs are not dinosaurs, both are archosaurs, or “ruling reptiles,” a group to which birds and crocodiles also belong.” (<http://www.britannica.com/EBchecked/topic/481999/pterosaur>, accessed 30 October 2013)

Howard J. Wilk
Philadelphia

Editor: I respond here to an article in SKEPTIC V18N2 2013, Gender Differences, What Science Says and Why It’s Mostly Wrong, P19ff, by Harriet Hall, M. D.

I am perplexed by the very conversation about the essential difference between male and female. The very question needs questioning: I have to ask why there is a question and why is anyone asking it. The author tells us that any “toddler can tell a boy from a girl” but then says there is no “one simple reliable test to determine whether an individual is male or female”. “TEST”? The only way, we are told, to test ideas about male and female differences is to “study children in isolation from all cultural influences, which is impossible.” What human baby “in isolation” would or could even exist for any study? So how can any study be made EXCEPT in social situations? The idea that human beings can be studied in a primitive originality is absurd as human beings do not exist except as social creatures, however primitive.

The author refers to genital adrenal hyperplasia (CAH) causing a girl to be “born looking like a boy”. This makes no sense as it (CAH) affects both male and female fetuses: as per <http://www.mayoclinic.com/print/congenital-adrenal-hyperplasia/DS00915/METHOD=print&DSECTION=all>, “Congenital adrenal hyperplasia can cause problems with

normal growth and development in children — including normal development of the genitals. It affects both males and females.” And “The most obvious sign of classic congenital adrenal hyperplasia in girls is often abnormal-appearing genitals that look more male than female, which may include an enlarged clitoris — a condition called ambiguous external genitalia. Other signs and symptoms in girls also reflect exposure to elevated levels of male sex hormones (androgens) while in the womb.” Later, the Mayo Clinic article says: “Congenital adrenal hyperplasia affects your adrenal glands, a pair of walnut-sized organs located above your kidneys.” Which has nothing to do with sex, boy, girl, male, female. AND: what does the author even mean by a “girl” looking like a “boy”?

Differences in genitalia exist and are noticeable, and, from experience, not requiring much time, are noted, and the differences are a socially useful way to distinguish humans even if it is “social”: for what other way can humans make a social (or cultural) distinction other than socially? “Males” “mate” with “Females” in the human world and not as insects, and children are born socially and not as insects but as humans and necessarily are born socially (or otherwise such babies die fast). If there is a “useful” distinction between male and female it is for reproduction, irrespective of the number of humans that do not reproductively-mate successfully, if at all, irrespective of the number of offspring that happen (or do not happen) or that do not or can not live long, and irrespective of the differences in various genitalia.

Similarly with XXY, XXX, XO, XXXY, and, in addition to the author’s list, XY/XXY, 46,XX, 48,XXYY, 17,XXY, 48,XYYY, the irregulars to the XX and XY. None of these “mean” anything for “male” and “female” except as they are (gasp) useful and, or, or consequential socially. (They happen to mean something medically, and thusly socially.)

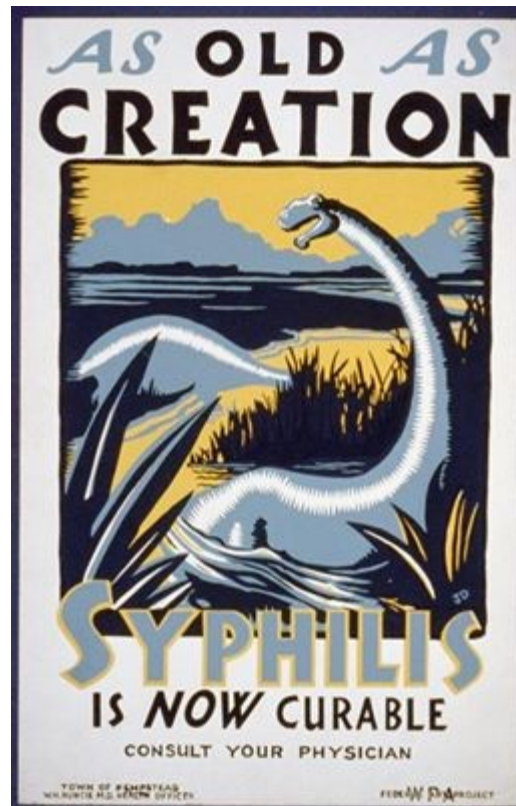
There are many differences between humans we can just see and must react to (such as blindness and diabetes), and these cannot be studied as primitive and isolated from culture. The essential, important, and fundamental differences in “male” and “female” are the social consequences of, at least, certain genital anatomical differences, and the uses made of them, and necessarily so, as we humans are social. This is also the case for ALL human anatomical differences, whether genital or otherwise. That some humans bear babies and take up time and energy dealing with the consequences of mating is a reality that necessarily has personal and social and back-

again-personal consequences just as does eating and hunting and otherwise “being” (gasp) human.

Is not the “Male” and “Female” distinction a useful if incomplete and too-often irrationally interpreted distinction? IT IS NECESSARILY SOCIAL, no matter what. XXXY and Y-infertility and other chromosomal irregularities are interesting, and medically useful, but how so socially beyond the medical? If 50% of males end up 46,XX types, there would very well be beyond-medical but very definite social and sexual consequences, as there must be if 50% of males end up exclusively homosexual.

Which brings up a problem with the notion that anatomy means nothing but accidental irrelevant anatomical differences. Male and Female homosexuals do not sexually react to just any anatomical differences. Or, even in a 100% heterosexual 50-50 but 100% - we - all - otherwise - look - alike primitive humanoid original pre-cultural society, there would, of necessity, be “differences” in behavior due to anatomy. There’d be differences as to who got to the food first, versus later, too! And differing consequences!

Mitchell Brown
Holmes, PA



1937 US Public Health poster
courtesy of The Quack Doctor

Editor: Whatever happened to political correctness, the phrase, anyway? I had the feeling that its use has declined in recent years, which feeling was confirmed by Google's Ngram viewer (<https://books.google.com/ngrams>), which shows that "politically correct" has dropped from its peak use in 1996 of 0.0000770390% of two-word phrases in English-language books to 0.0000469219% in 2008, the last year for which data are available, and shows a similar decline for "political correctness" from 0.0000700848% in 1995 to 0.0000382693% in 2008.

Where did it go? My theory is that what was considered proper by some and a disease of the intellect by others (like me) has become the "new normal": so common that it's become unremarkable, in the sense that no one bothers to talk about it or write about it anymore. Now just about everyone is in agreement that every person or at least every group of people is exactly the same as every other person or group in every way. Or, as Kurt Vonnegut wrote--you can look it up--in *Slaughterhouse-Five*, when he studied anthropology at the University of Chicago after WWII he was taught "that there was absolutely no difference between anybody."

Howard J. Wilk
Philadelphia

Editor: Big Mega Millions jackpot tonight, Friday 13 December 2013. I had tickets with I think 49 different numbers on them, most of the 75 numbers it's possible to pick. None of the 6 numbers chosen tonight were in the 49. Sounds like bad news, no? No; good news really.

There was a TV show called Numb3rs [sic] a few years back, about a mathematical whiz kid named Charlie Eppes who helps his FBI-agent brother solve crimes. I thought it was a lousy show for all the usual lousy-TV-show reasons; his brother manages to get in a gunfight every week; every female math student, FBI agent, prosecutor, etc. is young and good-looking; you get the picture. They even managed to contrive in the stupid, vulgar joke about why women are bad at math, except that Charlie turns it around to explain that his young, good-looking, female math student (and love interest--not completely forbidden but frowned upon these days) is too good of a mathematician to believe the stupid premise and punchline of the joke.

Still, there was an interesting episode where Charlie tests an apparent psychic whom Charlie believes is just using the usual magician's tricks to appear to be a psychic. So Charlie and I think one of the young, good-looking female FBI agents tests the psychic by (I think) having him predict the color, red or black, of each card in a deck before it's turned over. They go through like a dozen cards and the psychic gets every one wrong. The FBI agent dismisses the psychic as a bust, but Charlie points out that the psychic was just playing them because getting every card wrong is just as unlikely as getting every card right. Charlie keeps investigating until he discovers the tricks the psychic is using, some simple reflection-type stuff, I think.

So, my apparent bad news is actually good news, on account of I've hit on a foolproof method of picking winning numbers. All I have to do is pick a lot of numbers--then ignore them and pick the other numbers! I'm a genius!

Howard J. Wilk
Philadelphia

Editor: I was searching my email for an email from Denise something-or-other from the Chemical Heritage Foundation, a "library-museum-center for scholars" here in Philadelphia. My search found the email I was looking for, from one Denise Creedon, Vice President for Institutional Advancement, and also an email from her as the Director of the American Chemical Society. That's not unusual, that a person wears more than one hat in related professional or non-profit organizations.

Then I looked a little more closely. The Chemical Heritage Foundation Denise Cree- is indeed Denise Creedon, but the American Chemical Society Denise Cree- is Denise Creech. What are the chances?

Here's another one. I have a friend I've known since Junior High who still calls me "Wendell", as in "Wendell Willkie", 1940 GOP nominee for President. Wilk, Willkie, get it? What I didn't know until a few weeks ago is that Wendell Willkie married a woman named Edith Wilk, no previous relation to him (or to me, AFAIK). It's occurrences like these that from time to time make me shout out, "End simulation!"

Howard J. Wilk
Philadelphia

Your opinion counts .. PhACT Members and others are invited to submit letters and articles to be published in Phactum. You need not be a reincarnation of Margaret Mitchell to participate in Phactum and your writing need not be an elegant romance such as *Gone With the Wind*. Your ideas do matter.

If you have a point of view on some topic in Phactum, whether in agreement or opposed, why not write it down and send it in? Do not hesitate to comment on matters that have not been in Phactum since we constantly wish to present information of interest to Critical Thinkers. We try not to get into religion bashing or partisan politics, but the rest of the Universe is fair game for civil discussion. You need not be in agreement with the editor of this propaganda sheet but we do reserve the right to print your entry with Invisible Ink.

Suggestions to improve Phactum are very appreciated and original poetry is welcome.

Send submissions by email: Phactpublicity@AOL.com



Margaret Mitchell (1900 - 1949) was best known for writing the American classic *Gone With the Wind*, for which she won the Pulitzer Prize for Fiction in 1937.

Editor: This is one for the ages. I hadn't looked at international.nytimes.com all day. I went to the home page and scrolled down to the Movies section where there was a link to an article "Along Came a Computer-Generated..." with a photo of what looked like a giant (computer-generated) insect. I scrolled down further and got to the Science section where there was a link to "Matter: Toe Fossil Provides Complete Neanderthal Genome" with a photo. So, fossils, computer-generated monsters and beasts...

I was recently reading an article that was either about scientists' reactions to the science in TV shows and movies like *Breaking Bad* and *Jurassic Park*, or maybe it was just about what paleontologists thought about *Jurassic Park*. Having resurrected dinosaurs rampaging around didn't bother them. What they found implausible and really bothered them was how easy it was for the movie paleontologists to dig up fossils. (They were in sand, maybe? Don't remember.) "Plausibility" is a funny thing. A note about it, below.

I don't remember the digging up of fossils. What I do remember, and it really bothers me, is when the scientist played by Jeff Goldblum is telling off the proprietor of the park, something like how the proprietor just took the work of others and added a little. As if resurrecting dinosaurs wasn't an enormous advancement in itself. I'd been thinking about that scene lately.

Back to the Times. I continued scrolling down and got to the "T Magazine" section where there was a link to an article (no photo)... "Talking Talent/Jeff Goldblum, Star of the Off-Broadway Play 'Domesticated'".

A note about plausibility in fiction (it's a funny thing): My daughter is a big *Star Wars* fan. She tells me there's a *Star Wars* book or animation or something or other, not one of the six movies, where a character speaks of a "Pyrrhic victory". Fans complained about that because it refers back to specific Earth events (when King Pyrrhus of Ancient Greece defeated Roman armies at great cost to his own forces). So, that somehow we're watching events from a long time ago, in a galaxy far, far, away, and most of the characters are speaking English, and doesn't Han Solo look exactly like the 20th- and 21st-century Earth actor Harrison Ford? – these are not problems, but Pyrrhic victory – that's a problem.

Howard J. Wilk
Philadelphia

Editor: The Appalachian Trail (AT) is around 2,200 miles long, going from Springer Mountain in Georgia to Mount Katahdin in Maine. Some hardy souls, known as thru-hikers, traverse the entire length in one continuous trek. And the AT has become so popular that even Bigfoot seems to occasionally hike it.

The Bigfoot Field Researchers Organization (BFRO) lists but one case for Berks County, Pennsylvania. The reporter believed his encounter occurred in early February 1991. He said that he was on top of Blue Mountain at the intersection of the AT and Marshall's Path, which is 3.4 miles from Port

Clinton by way of the AT. This grouse hunter was allegedly shooting away and yelling to a friend when something with very long black hair that was about seven to seven and a half feet tall ran uphill towards him before turning around and going away. The reporter noted that he thought the creature "heard the gunshots or the yelling and wanted to find who was making the noise". According to a follow-up report by a BFRO investigator, the hunter "stated that it looked like the creature in the Patterson film."

Perhaps, but another possibility is that a large black bear with black fur was hibernating nearby for the winter, was awakened and approached the hunter in order to discover the cause of all the commotion. Black bears are light sleepers



The author at the intersection of the AT and Marshall's Path on December 28, 2013. Photograph by Robb Kerr.

when hibernating and are easily woken up. Upon learning the reason his slumber was disturbed, the poor bear then simply wandered off to again try to catch some z's.

Don Nigroni
Glenolden, PA

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Various Ruminations

of Woo Woo and Real Science

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

Bill Wisdom - R.I.P.

Sadly we report that long time PhACT member, Bill Wisdom, passed away on December 15, 2013 at age 78.

Bill was Professor of Philosophy at Temple University since 1964. Bill was highly instrumental in founding PhACT and he had been an active member for many years. More recently had been an active participant with Freethought Society activities.

Bill was an enthusiast for old time music and he did spend some considerable time writing. Some of his writings can be viewed online at:

<http://www.unconventional-wisdom.com/WAW>

Eric Krieg, former president of PhACT writes about Bill: "In the Summer of 1994 I first saw Bill at a CSICOP sponsored meeting in Essington. I furtively memorized his address sign-in list. After Barry Karr mentioned phony ESP claims, I turned to Bill and said, "I hear that a lot - Please concentrate on your address to see if I can read your mind" and recited it back to him. I was a little bummed he only smiled unimpressed. I soon worked with him as another of "the first 12 disciples meeting in an upper room" to create PhACT's charter, purpose, etc. He donated time and money getting us started and 3 times shared lectures with PhACT. He was among a faction that would have preferred to allow discussion on purely religious claims. He was always an active addition to our group. Among my warm memories, are of him, Fritzzy, and Wes Powers playing and singing Appalachian "hillbilly" music - and quite well. I gathered much of the spark of his life was lost along with his only son. I always respected him for questioning the faith he was raised at a time few would dare. I believe during his decades of teaching college courses on philosophy, he would have inspired countless people to question any aspects of what they are told. A worthy message from a worthy life lived. I'm proud to be among those who knew him and keep the best of him alive."

R.I.P.

Homeopaths Without Borders

You have probably heard of a French secular humanitarian-aid non-governmental organization called *Medecins Sans Frontieres* (MSF), a good natured and well intended charity that has delivered effective medical care to some of the poorest of the poor throughout the world regardless of age, religion, race, etc. The organization sets up missions in war-torn places and in regions that have suffered massive natural disasters such as Haiti. In the United States and Canada this organization which received the 1999 Nobel Peace Prize for its efforts is known as Doctors Without Borders.



MEDECINS SANS FRONTIERES
DOCTORS WITHOUT BORDERS

And now, not to be outdone, American homeopaths in 1996 incorporated a charitable non-profit organization known as Homeopaths Without Borders (HWB) which like MSF ventures to poor countries to deliver services. HWB is registered as a 501-C-3 organization that solicits and gratefully accepts tax deductible donations.

There has been some criticism of HWB that is easily found online. HWB mimics MSF in style but not in substance since the HWB offerings are devoid of evidence based medicine. The individuals involved with HWB may be well intended, they probably are, but good intentions while dispensing false hopes, medical quackery of the most preposterous sort, and minute quantities of distilled water are not what desperately sick, very poor people need.

It is outrageous too that Homeopaths Without Borders is supported by US Tax codes. It shouldn't be.

One pundit, Mark Crislip in 2011, observes that *Medecins Sans Frontieres* imposters are growing in number and includes Chiropractors Without Borders, Naturopaths Without Borders, Reiki Without Borders, and Herbalists Without Borders. The common thread other than being fellow quacks is that many are heading to Haiti. Mr. Crislip suggests that Haitians need a Border.

"The only thing necessary for the triumph of disease is for good men to do homeopathy."

~ not Edmund Burke

The Skeptical Raptor

While browsing about the internet looking at Homeopathy Without Borders I did stumble upon The Skeptical Raptor, a most interesting website.

The Raptor (I do not know his name) writes about himself: "After spending years in the medical industry, I decided



to blog about my thoughts on a wide range of issues in the health-care industry, science, and skepticism. I am a firm supporter of science-based medicine. I will debunk quackery and pseudo-science whenever possible."

I like this website. The Raptor is direct and gets to the point as he encourages science and debunks pseudoscience and many forms of quackery.

The Raptor's blog site may be found here:

<http://www.skepticalraptor.com/>

The Raptor's blog about Homeopathy Without Borders

may be found here: <http://www.skepticalraptor.com/skepticalraptorblog.php/homeopaths-borders-humanitarians/>

The Raptor is aggressive in propelling good science as related to vaccines and on the home page has a link labeled "Jenny". It leads to an eye-opening section of the blog listing vaccine avoidance body count and also number of cases of autism caused by vaccines. View it.

Homeopath Explains the Theory of Relativity

OY!! Have a good vibration!!!

<http://www.youtube.com/watch?v=kA6rUU0K9xE>

Professor Fakes AIDS Vaccine Data

The New York Post reported that an Iowa State University professor, Dr. Dong-Pyou Han, falsified results of AIDS vaccine testing. The bogus findings helped Han's team obtain \$19 million in research grants from the National Institutes of Health. <http://nypost.com/2013/12/26/professor-admits-faking-aids-vaccine-to-get-19m-in-grants/>

This is outrageous. Research money is scarce and one would think that the Federal Government would aggressively prosecute a situation such as this. It was investigated and the Federal Register writes:

Dr. Han has entered into a Voluntary Exclusion Agreement and has voluntarily agreed for a period of three (3) years, beginning on November 25, 2013:

(1) To exclude himself from any contracting or sub-contracting with any agency of the United States Government and from eligibility or involvement in nonprocurement programs of the United States Government referred to as "covered transactions" pursuant to HHS' Implementation (2 CFR Part 376 et seq) of OMB Guidelines to Agencies on Government wide Debarment and Suspension, 2 CFR Part 180 (collectively the "Debarment Regulations"); and

(2) to exclude himself voluntarily from serving in any advisory capacity to the U.S. Public Health Service (PHS) including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee, or as a consultant."

That's it? The Federal Government was defrauded and Dr. Han is allowed to voluntarily exclude himself from some government funded programs for a period of a measly three years. That judgement is an outrage.

Meanwhile there is this from the University Herald:

Dr. Ivan Oransky, a physician and medical journalist, wrote about the sanctions against Han and said the researcher will be banned from participating in federally funded work. He said it is a harsh penalty, but also that he would like to see such activity punished by the federal government.

"This is fraud, and the question is whether it's a big enough case for the government to go after," Oransky

said, according to the Register. "I think it's time for the government to criminally prosecute more of these cases."

Dr. Oransky calls that harsh punishment? And a \$19 million fraud is not of sufficient magnitude for the Federal Government to prosecute?

See: <http://www.universityherald.com/articles/6450/20131226/isu-researcher-produced-fake-aids-vaccine-results-that-raised-19-million-in-federal-grants-for-the-school.htm>

Gambling Notes

♣ Senior Gambling Addiction Rates Are Soaring in America, Driven by Corporate Greed and Bad Govt. Policy

Seniors are the fastest growing population of gamblers. They are gambling away their income, their savings, and their chance for a secure future. When they lose, they can't make it up or start over. It's a no-win game, driven by a greedy industry united in unholy alliance with policy makers and politicians who turn a blind eye to the social and economic costs of gambling. Allowing this to happen to our elders is a measure of our humanity and the success of our society. Right now, we aren't measuring up.



<http://www.alternet.org/economy/gambling-and-seniors>

♣ People in poor neighbourhoods are twice as likely to have gambling problems, study finds

Based on representative telephone interviews with nearly 5,000 people, ages 14 to 90, in the United States, the study found that problem gambling was twice as likely in neighbourhoods with the highest levels of concentrated poverty compared to neighbourhoods with the lowest poverty levels. We found that neighborhood disadvantage had a substantial effect on problem gambling, even after controlling for a person's socioeconomic status, age, gender or race," says Grace M. Barnes, PhD, RIA senior research scientist and first author.

<http://medicalxpress.com/news/2014-01-people-poor-neighborhoods-gambling-problems.html>

♣ Two winners claim \$771 million lottery prize

Two lucky winning tickets have been sold in the near-record \$636 million (NZ\$771 million) US Mega Millions drawing: one at a tiny newsstand in Atlanta, and the other at a gift shop in California.

For selling a winning ticket in Tuesday's drawing, the owner of the news stand, Nguyen, will get \$1 million, California Lottery officials said.

But his counterparts in Georgia Young Soo Lee and Young Lee, who own a Gateway Newsstand at an office building in upscale northern Atlanta gets no bonus beyond the usual 6 per cent commission on lottery sales, Georgia lottery officials said.

<http://www.nzherald.co.nz/world/news/article.cfm?>

[c_id=2&objectid=11175246](#)

See Howard Wilk's story on [page 26](#).

♣ Father loses daughter in gambling, to marry her off to the winner

In a shocking incident, a gambler has fixed his 13-year-old daughter's marriage to his neighbour after losing to him during a marathon gambling session at Krishnapur - Buritala village in Malda district.

The father, a compulsive gambler, was locked in a gambling bout with local youth Sukumar Mandal on December 1. After losing everything, he put his girl at stake, and again lost. The two families started making wedding plans immediately after that.

<http://indiatoday.intoday.in/story/father-loses-daughter-in-gambling-to-marry-her-off-to-winner/1/331004.html>

♣ Rise of the machines puts punters at bigger risk, says gambling addict

Fixed odds betting terminals (FOBTs), which offer high-stakes, high-speed casino games such as roulette, were dubbed the "crack cocaine of gambling" almost the day they arrived in Britain. Solitary, uninterrupted machine play, it was claimed, produced a trance-like state, not dissimilar to that experienced by a drug addict.

According to researchers while the number of people addicted to the gambling represents only 1% of the total number of gamblers, such is the extent of their habit that they contribute up to 50% of industry betting revenue.

Now clean for more than a year, the computer programmer says there are parallels with drug taking.

<http://www.theguardian.com/society/2013/dec/13/gambling-addiction-fixed-odds-betting-terminals>

♣ Problem Gambling Expert Testifies on Impacts of Federal Bill to Legalize Internet Poker

Dr. Rachel Volberg, University of Massachusetts-Amherst, testifies at the US House of Representatives Committee on the "State of Online Gaming". The hearing was held Tuesday, December 10, 2013 in Washington, D.C. Dr. Volberg, who has studied gambling for more than 25 years, states there will likely be an increase in gambling addiction as a result of the expansion of online gambling. She notes that when internet gambling is legalized the ease of access and increased availability are just two factors that have been shown to lead to more gambling problems

<http://www.virtual-strategy.com/2013/12/10/problem-gambling-expert-testifies-impacts-federal-bill-legalize-internet-poker>

A New Poll on Evolution

Glenn Branch, Deputy Director, National Center for Science Education, has reported a new poll in the NCSE weekly newsletter, Evolution and Climate Education Update: January 3, 2014:

Six in ten Americans accept human evolution, while a third

hold that humans and other living things have existed in their present form since the beginning of time, according to a new report from the Pew Research Center. Asked, "Which comes closer to your view?" and presented with "Humans and other living things have evolved over time" and "Humans and other living things have existed in their present form since the beginning of time," 60% of respondents accepted the evolution option, 33% the creationist option, and 7% said that they didn't know or refused to answer. In 2009, 61% of respondents accepted the evolution option, 31% the creationist option, and 8% said that they didn't know or refused to answer.

Those who agreed that humans have evolved over time were asked whether they thought "humans and other living things have evolved due to natural processes such as natural selection" or "a supreme being guided the evolution of living things for the purpose of creating humans and other life in the form it exists today"; 53% preferred natural processes, 40% preferred guidance by a supreme being, and 7% said that they didn't know or refused to answer. Thus 32% of all the respondents chose evolution through natural processes, 24% chose guided evolution, and 33% chose creationism. In 2009, 32% chose evolution through natural processes, 22% chose guided evolution, and 31% chose creationism.

The survey also asked a different group about evolution in such a way as not to highlight human evolution, with the word "animals" substituted for "humans." There was little difference: 63% of respondents accepted the evolution option, 32% the creationist option, and 5% said that they didn't know or refused to answer. Those who agreed that animals have evolved over time were asked whether they thought it was due to natural selection or guidance by a supreme being: 56% preferred natural processes, 38% preferred guidance by a supreme being, and 8% said that they didn't know or refused to answer. Thus 35% of all the respondents chose evolution through natural processes, 24% chose guided evolution, and 32% chose creationism.

The Pew Research Center's report commented, "These beliefs differ strongly by religious group. White evangelical Protestants are particularly likely to believe that humans have existed in their present form since the beginning of time. Roughly two-thirds (64%) express this view, as do half of black Protestants (50%). By comparison, only 15% of white mainline Protestants share this opinion. There also are sizable differences by party affiliation in beliefs about evolution, and the gap between Republicans and Democrats has grown. In 2009, 54% of Republicans and 64% of Democrats said humans have evolved over time, a difference of 10 percentage points. Today, 43% of Republicans and 67% of Democrats say humans have evolved, a 24-point gap."

See: <http://www.pewforum.org/2013/12/30/publics-views-on-human-evolution/>

Meeting Report - November 2013

"Why Symmetry Matters" a description of the beautiful simplicity of the universe by Professor Dave Goldberg, a physicist and cosmologist at Drexel University

Reported by Dominic Docimo who is a Physics student of Dr. David Cattell at Community College of Philadelphia.

David Goldberg, Professor of Physics at Drexel University and author of the book *"The Universe in the Rearview Mirror: How Hidden Symmetries Shape Reality,"* spoke at the last PhACT meeting on the subject of symmetry in the Cosmos. The talk he gave was quite interesting in the way he related symmetries in all fields of science but at the same time the crux of his lecture is in the ways nature breaks symmetry.

In many ways it seems that the laws of physics are completely arbitrary; time moves forward yet only forward, matter produces left-handed neutrinos and anti-matter produces right-handed neutrinos so naturally they will annihilate each other if they meet, or physical laws of the universe are the same everywhere except the laws for the macroscopic world and the subatomic world are different. Professor Goldberg explained that these differences are what is currently the main driving interests in science. He related the story of a notable scientist and mathematician Emmy Noether to us whom was the first to solve the problem of the conservation of energy in Albert Einstein's theory of general relativity but also proved that energy was conserved in every physical system that has time translation symmetry. This is important because when you combine this fact with our newly discovered ever expanding universe it breaks the symmetry of the Big Bang; the implied "Big Crunch" (recollapse) will never happen because gravity cannot overpower the Big Bang. Professor Goldberg also talked about the direction of time which as far as we can tell only moves in one direction. Why should time only move in one direction? This is a question that to

this day still confounds all of science, but he explained that if one were to replace all the matter in the universe with anti-matter and reverse the direction of time there would be no way to tell. The universe would act exactly the same. This brings up an important issue: what is the difference between anti-matter and matter? It is quite simple really matter and anti-matter have opposite charges and the neutrinos they produce have opposite spins. This is quite an arbitrary difference. To further examine the subject why is the universe primarily made up of matter rather than anti-matter? Why is one more abundant than the other? As far as we can tell there is no reason at all.

Through the examination of symmetry and the symmetry breaking qualities of the universe we have walked right to the edge of human knowledge. There exist theories on what will happen to the universe towards the end of its life (if it has an end) but all of them are incomplete. There also exist theories on why the universe is matter but these theories are equally incomplete. The questions that are left are what make symmetry so interesting since they always leave us expecting the other half of the image and even completed symmetries such as the matter/anti-matter mystery leave us wondering why. Thus we are forced to accept an element of chaos in our universe; but it is a thoroughly unsatisfactory solution to system which we are only beginning to understand.

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"But every day I go to work I'm making a bet that the universe is simple, symmetric, and aesthetically pleasing—a universe that we humans, with our limited perspective, will someday understand."

~ George Smoot, b. 1945, astrophysicist UC Berkley, Nobel Prize in Physics 2006

The Universe in the Rearview Mirror: How Hidden Symmetries Shape Reality

by Dave Goldberg

Publisher: Dutton Adult (July 11, 2013) Hardcover: 352 pages
ISBN-10: 0525953663 ISBN-13: 978-0525953661

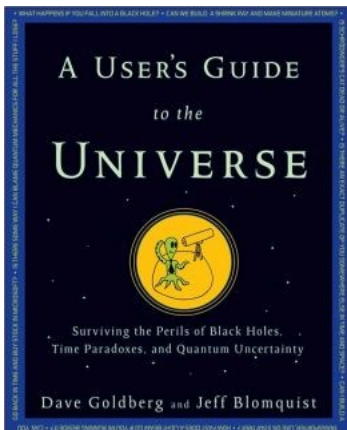
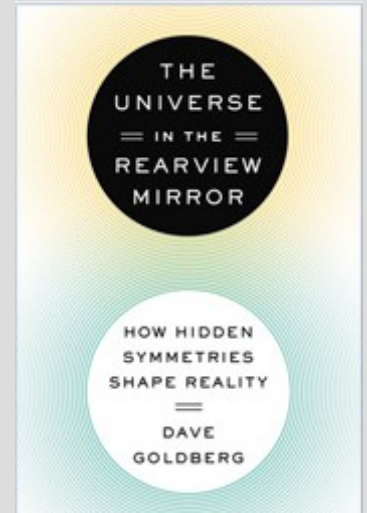
A physicist speeds across space, time and everything in between showing that our elegant universe—from the Higgs boson to antimatter to the most massive group of galaxies—is shaped by hidden symmetries that have driven all our recent discoveries about the universe and all the ones to come.

Why is the sky dark at night? Is it possible to build a shrink-ray gun? If there is antimatter, can there be antipeople? Why are past, present, and future our only options? Are time and space like a butterfly's wings?

No one but Dave Goldberg, the coolest nerd physicist on the planet, could give a hyper drive tour of the universe like this one. Not only does he answer the questions your stoner friends came up with in college, but he also reveals the most profound discoveries of physics with infectious, Carl Sagan-like enthusiasm and accessibility.

Goldberg's narrative is populated with giants from the history of physics, and the biggest turns out to be an unsung genius and Nazi holocaust escapee named Emmy Noether—the other Einstein. She was unrecognized, even unpaid, throughout most of her career simply because she was a woman. Nevertheless, her theorem relating conservation laws to symmetries is widely regarded to be as important as Einstein's notion of the speed of light. Einstein himself said she was "the most significant creative mathematical genius thus far produced since the higher education of women began."

Symmetry is the unsung great idea behind all the big physics of the last one hundred years—and what lies ahead. In this book, Goldberg makes mindbending science not just comprehensible but gripping. Fasten your seat belt.



A User's Guide to the Universe: Surviving the Perils of Black Holes, Time Paradoxes, and Quantum Uncertainty

by Dave Goldberg

Publisher: Wiley; 1 edition (February 1, 2010) Hardcover: 304 pages
ISBN-10: 0470496517 ISBN-13: 978-0470496510

Answers to science's most enduring questions from "Can I break the light-speed barrier like on Star Trek?" and "Is there life on other planets?" to "What is empty space made of?"

This is an indispensable guide to physics that offers readers an overview of the most popular physics topics written in an accessible, irreverent, and engaging manner while still maintaining a tone of wry skepticism. Even the novice will be able to follow along, as the topics are addressed using plain English and (almost) no equations. Veterans of popular physics will also find their nagging questions addressed, like whether the universe can expand faster than light, and for that matter, what the universe is expanding into anyway.

Gives a one-stop tour of all the big questions that capture the public imagination including string theory, quantum mechanics, parallel universes, and the beginning of time

Explains serious science in an entertaining, conversational, and easy-to-understand way

Includes dozens of delightfully groan-worthy cartoons that explain everything from special relativity to Dark Matter

Filled with fascinating information and insights, this book will both deepen and transform your understanding of the universe.



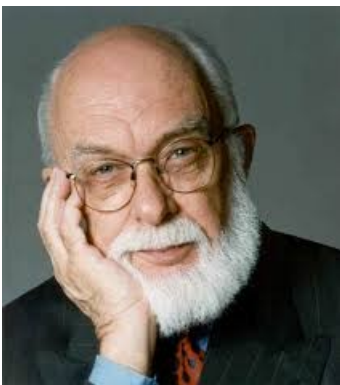
**Mark Your Calendars!
April 25 - May 3, 2014**

Fourth Annual Philadelphia Science Festival

Friday, April 25 - Saturday, May 3, 2014

www.philsciencefestival.org

For the fourth year in a row, Philadelphia's museums, parks, libraries, restaurants, and bars will play host to nearly 100 events-many FREE-celebrating science and technology.



**The Amazing
James Randi**

In 2013 PhACT was host to The Amazing Randi for a fascinating lecture at the Franklin Institute touching upon many areas of science and Critical Thinking.

This year, 2014, PhACT will host Michael Shermer, founder of the Skeptics Society, and editor-in-chief of Skeptic Magazine, for what is bound to be a provocative lecture to be held on Monday evening, April 28, 2014 at Community College of Philadelphia.



Michael Shermer

More details will be forthcoming in the April edition of Phactum.



At the Wagner Free Institute of Science

1700 W. Montgomery Ave., Philadelphia, PA 19121 215-763-6529 Tuesday-Friday 9am-4pm

<http://www.wagnerfreeinstitute.org>

Lectures

Thursday, January 30, 2014, 6:00PM

The Echoes of Their Wings: The Life and Legacy of the Passenger Pigeon

A presentation and book signing by Joel Greenberg, Passenger Pigeon Project and Field Museum



Image: Palumbus migratorius [passenger pigeon], The Natural History of Carolina, Florida and the Bahama Islands, Mark Catesby, London, 1731. Library of the Wagner Free Institute of Science.

Thursday, February 13, 2014 at 6:00PM

Putting the X and Y in SEXY: How Genes Turn us into Boys and Girls (and Sometimes a Bit of Both)

An Illustrated Lecture by DR. SCOTT GILBERT of Swarthmore College

Thursday, March 6, 2014 at 6:00 PM

Instruments and Order

An Illustrated Lecture by DR. EMILY DOLAN of University of Pennsylvania

Winter and Spring 2014 Free Courses

For course descriptions, to view course syllabuses, and to preregister visit the website:

<http://www.wagnerfreeinstitute.org>

or call 215-763-6529 x 23.

BOTANY SERIES~ Wild Things: Toward a More Sustainable Natural Garden Professor Karen Snetselaar

1 Tuesday and 5 Mondays, Jan. 21 - Feb. 24, 2014, 6:30 - 7:30 PM at Pennsylvania Horticultural Society, 100 N. 20th St. (20th & Arch Sts.) This course requires preregistration.

BIOLOGICAL SCIENCES SERIES

Introduction to Pollination Biology

Professor Tatyana Livshultz

6 Wednesdays, Jan. 22 - Feb. 26, 2014, 6:30 - 7:45 PM at Independence Branch of the Free Library, 18 S. 7th Street No preregistration necessary. Register at the first class.

PALEONTOLOGY/GEOLOGY SERIES

Sedimentary Rock: Geology's Time Capsule

Professor Jason Downs

8 Saturdays, Feb. 1 - March 22, 2014, 10:30 AM - Noon at Penn Museum, 33rd and Spruce Streets (3260 South Street)

This course requires preregistration.

ENVIRONMENTAL SCIENCE SERIES

Land and Water: The Changing Hydrology and Ecology of Philadelphia

Professor David Hewitt

6 Mondays, March 31 - May 5, 2014, 6:30 - 7:30 PM. at Pennsylvania Horticultural Society, 100 N. 20th St. (20th and Arch Sts.)

This course requires preregistration.

All Lectures and Adult Courses sponsored by the Wagner Free Institute of Science are **Free and Open to the Public.** Donations are appreciated.

Off the Beaten Path

By Kim A. Sheridan

Snowy Days Are Here Again



Our area is being invaded by hordes from the North. These creatures are large, nearly white, with sharp talons and luminous yellow eyes. The Abominable Snowman? No, snowy owls.

These large owls range from the usually all white adult male to females and juveniles who are white with dark bars and spots. In North America, they make their living on the grasslands and open

tundra, hunting lemmings and other small mammals, by day as well as night.

In many years, New Jersey might see two or three of these large birds at most. But this year, since Thanksgiving, there have been reports of over twenty snowy owls in the state, many clustered along the shore and the Delaware Bay. Other Mid-Atlantic states are reporting similar influxes of owls.



Snowy Owl at Edwin B. Forsythe National Wildlife Refuge, December 13, 2013

What in the name of Harry Potter is going on?

Snowy owls are among a number of species of birds subject to winter irruptions in which large



Snowy Owl preening at Forsythe NWR

numbers of birds appear in areas far outside their normal range. These events are unpredictable in both their frequency and intensity.

It would appear that the winter of 2013-2014 is shaping up to be an irruption year of historic proportions. "It has the potential to be the biggest irruption ever," Cape May Bird Observatory Director Pete Dunne has said.

Reports of snowy owls being seen in Pennsylvania are coming in from Berks, Chester and Lancaster counties as well as State College and Presque Isle State Park on Lake Erie. The birds are turning up in Long Island, New York, Ohio, and Boston, as far south as North Carolina, and there's even been one vacationing in Bermuda.

The owls are looking for treeless areas that resemble the tundra they're used to so they're most likely to be seen in places like beaches, marshes and fields, and, oddly, airports. In fact, in the highly developed Northeast, where native grasslands have all but disappeared, airports may be the best available open habitat for these birds. Sightings of owls – and conflicts with aircraft - have occurred at airports in Syracuse, Boston, New York and North Philadelphia.

Experts are divided on the cause of the irruption. The easy answer is the cyclical fluctuation of the lemming population, their main food source up north. The owls may produce large numbers of owlets when lemmings are abundant but skip breeding altogether when prey is scarce. The driving force behind the irruption may well be an overabundance of prey, leading to an owl population boom. Come the Arctic winter, there are more owls than available food. According to Jeffrey Gordon, president of the American Birding Association, "If these

birds were able to find adequate prey further north, they would not be moving south. It may be that the population of owls is very high, or the population of prey is very low, or both..." Pete Dunne concurred, as did Don Freiday, ranger at Edwin B. Forsythe National Wildlife Refuge in New Jersey where the birds have been causing a sensation for weeks.

Norman Smith, who catches and relocates snowy owls at Boston's Logan Airport for the Massachusetts Audubon Society, disagreed, pointing out that many of the birds are arriving in good condition. "Is it something that is happening in the Arctic habitat?" he asked. At this point, ornithologists have more questions than answers. Chris Wood, a researcher at the Cornell Lab of Ornithology said of the irruption, "That it comes on the heels of several other big pushes [of snowy owls] raises significant questions about why this is happening. These snowy owls may well be sharing a message for us about conditions in the Arctic. But there are many variables at work."

If you are interested in seeing these magnificent birds for yourself, there are a number of opportunities in the area. Your best resource is the Cornell Laboratory of Ornithology's online bird survey, eBird, which has been tracking the irruption thanks to reports of hundreds of amateur observers. Their article on the phenomenon (see below link) includes links to real-time maps showing the most recent sightings. On arrival at a likely location, check



Snowy Owl portrait at Forsythe NWR

shorelines first, then scan open fields, beaches and marshes, paying special attention to trees, nest platforms and other elevated structures.

If you are lucky enough to find a Snowy Owl, please consider reporting it to eBird. I can assure you that every encounter is a hoot!

Cornell Laboratory of Ornithology – eBird database project:

<http://ebird.org/content/ebird/news/gotsnowies2013/>

Where to see snowy owls:

Edwin B. Forsythe National Wildlife Refuge, 800 Great Creek Road, Galloway, New Jersey 08205

http://www.fws.gov/refuge/Edwin_B_Forsythe/

Bombay Hook National Wildlife Refuge, 2591 Whitehall Neck Road, Smyrna, DE 19977

http://www.fws.gov/refuge/Bombay_Hook/

Barnegat Lighthouse State Park, Broadway Ave, Barnegat Light, NJ 08006

<http://www.state.nj.us/dep/parksandforests/parks/barnlig.html>

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Kim Sheridan is an ardent amateur naturalist and wildlife observer based in Havertown, Pennsylvania.. She may often be found in forest or marsh with camera in hand.



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Snowy Owl looking out over the marsh at Forsythe NWR



The Wantage Event

by Don Nigroni

Mysterious apelike creatures have reportedly been encountered in every state on the continent. In *Monsters of New Jersey* (2010), Loren Coleman and Bruce G. Hallenbeck wrote that “High Point State Park is a hotbed of sightings” of Big Red Eye. The park is located in northwestern New Jersey in Sussex County and nearby is Wantage Township where a famous incident occurred on a farm there in 1977 and became known as the Wantage Event. The information in the two newspaper articles mentioned below is from the website of the Bigfoot Field Researchers Organization (BFRO) at http://www.bfro.net/GDB/show_county_reports.asp?state=nj&county=Sussex

A Tuesday, May 17, 1977 article in the *New Jersey Herald* entitled *Wantage Family in Terror of Odd Creature for Week* noted that “police say it probably was a hungry bear that terrorized a family last week on Wolfpit Road”. However, according to the family, it “was seven feet tall, covered with

missing, she said” and “None appeared to have been used for food.” Then on Friday night it “appeared silently at the same place under a mercury-vapor lamp which lights up the farmyard.” And, according to her husband, “At first all I saw were these two red eyes staring at me from over there” and “He and others with him ‘opened up’ on the thing, firing more than 30 rounds” but “The beast then escaped through the apple orchard.” “Three state troopers have filed separate reports on the Sites’ incident” and “they have concluded that the incident involved a marauding bear.”

However, a Friday, May 20, 1977 piece in the same paper entitled *Authorities Call Wantage Beast 'An Unidentified Woods Animal'* stated that “State Police and the N.J. Division of Fish and Game released a joint statement yesterday, saying they have concluded that whatever killed eight rabbits on a farm here last week was ‘an unidentified woods animal,’ and that it may have been a wild dog.” Also noted was that “Bears, however now reportedly have been seen in the vicinity of the farm owned by Richard Sites on Wolfpit Road” and that “Police originally said it probably was a bear”.

According to State Police Sgt. Ernest Seremi, it was “tentatively determined” “that the perpetrator is some type of



The author by Wantage Township sign on November 28, 2013.
Photograph by Robb Kerr.

hair, had a beard and mustache and walked on its hind feet.” Barbara Sites “said she heard no commotion last Tuesday night” but “When she went out the next morning” “she found a solid, wooden garage door torn from its heavy hinges” and “Inside, she said she found six of the family’s pet rabbits dead or dying of horrible wounds.” Also, “Two rabbits were



Appalachian Trail in High Point State Park
on November 29, 2013.
Photograph by Don Nigroni.



**Monument atop High Point in High Point State Park
on November 28, 2013.
Photograph by Don Nigroni**

woods animal, possibly a raccoon or wild dog, with little likelihood of it being a bear." The item ends by noting that "Two groups of volunteers, the Society for the Investigation of the Unexplained and Vestigia, are probing the Sites farm for evidence of 'Bigfoot', an alleged man-like creature said to have been spotted in that county, but never proven to exist."

From *All About Chicken Predators* (Saturday, November 2, 2013) -- <http://professorchickenspredators.webs.com/fox.htm> -- we learn about the prey of foxes:

Prey: The fox will catch and kill chickens, ducks, geese, turkeys, quail, lambs, piglets, guinea pigs (cavies), rabbits, pigeons and even cats. When they get into a coop full of poultry, they will not just kill one, but get into a killing frenzy as the frightened birds flap around. It is not uncommon for one fox to wipe out 100 chickens in a night.

So perhaps a red fox (*Vulpes vulpes*) had killed the eight pet rabbits in a killing frenzy sometime during the night of Tuesday, May 10th and Wednesday, May 11th and then took off with just two of them to eat.

And Heidi Mullendore in the Fall 2009 *Wild!Watch* -- <http://www.dcnr.state.pa.us/wrcp/wildnotes/fall109/wildwatch2-fall09.html> -- wrote about eyeshine:

The eyes of foxes, opossums, bear and owls show red eyeshine; bobcats and deer usually exhibit a greenish shine; bullfrogs also show green and skunks show amber.

American black bears are big and hairy and may seem to be bipeds if seen standing on their hind legs trying to see or smell some distant creature in order to identify it. Hence, we should not be surprised if the large, hairy creature seen on its hind legs with glowing red eyes on Friday night, May 13th was really just an American black bear (*Ursus americanus*).

Unlike Bigfoot, both red foxes and American black bears actually are in Sussex County, New Jersey. The deaths of the pet rabbits might have been due to a killing frenzy by an unseen red fox. An American black bear with glowing red eyes may have been spotted in the vicinity days later. These two unrelated occurrences could have then been erroneously connected resulting in an innocent bear being mistaken for a non-existent Bigfoot and the latter unjustly blamed for the slaughter of the pet rabbits!

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..

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The Blood-Sucking Forvolaka

by Paul Schlueter III

I've found a "new cryptozoology specimen" in a very old Hammer film. The movie is "Isle of the Dead," starring Boris Karloff as a Greek General. The "forvolaka" is never seen, only proclaimed to exist by the superstitious. My spelling is probably incorrect, merely taken phonetically. It is forVOL-a-ka, and the second and third syllables are identical to the first two of "volatile." In the film the mythical creature is described variously as part-wolf and as a blood-sucker, and its victims are said to rise from death and also seek blood meals from the living. I saw the movie just before Halloween, on TCM, and it's an oldie in black and white, probably from the late '50s or early '60s.

In the story, a General (Karloff) travels to an island to visit the grave of his wife, in the company of a civilian reporter. He finds the grave despoiled; an archaeologist on the island claims responsibility, because his research has created a market for grave goods, which the locals obtained by robbing graves. A plague begins to sicken some on the island, killing everyone infected within about a day. The General sends for his company Doctor, who places the island under medical quarantine. The General is highly deferential to his Doctor's scientific knowledge, and supports the latter's pronouncements with his full military authority.

A woman on the island is a known victim of cataleptic "trances," during which she appears dead for up to a day. For obvious reasons, she is terrified of being mistaken for dead and prematurely buried. Her husband falls victim to the plague, and she requires extraordinary proof of his death, before finally accepting it. The General, in an effort to avoid contamination of the living, meanwhile orders all dead to be buried immediately.

A local woman, perhaps a Mother Superior, insists in asides to the General that the cataleptic woman's nurse/companion might be a forvolaka; she is red-cheeked and full of vitality, while everyone else is sickening and dying. According to the nun, she must therefore be both feeding off the

blood of the healthy, and bringing the plague upon them in the process. At first, the General sticks to his skeptical rationality, with the Doctor's support. As an amusing side story, the archaeologist jokingly prays to Hermes for aid; the General reveals his inner leanings toward superstition by adding a bundle of twigs to a votive fire in the temple, where the archaeologist has just made his prayer.

Next, the Doctor falls sick, and after a brief scene in which he accepts death without succumbing to the woo-woo, he dies. It just so happens that the cataleptic woman happens to fall into a trance at just this wrong moment.

The nurse/companion tries to keep the trance a secret from the others, but it is discovered by the busybodies of the island. After a few cursory "tests," she's declared dead by the incompetents present, and nailed into a makeshift coffin, then interred into a stone vault above ground. Meanwhile, the nurse must remain ever more wary of the General, who is beginning to fall victim to the nun's whisperings of "forvolaka!"

The General then comes down with early symptoms of the plague. The nun seeks his soldierly aid in defeating the forvolaka before he becomes too weak to fight the creature, and in the course of the conversation, they hear distant creaking and rending of wood. The cataleptic has awakened, gone mad in the confines of her coffin, and finally burst it asunder to escape and prowl the night as some homicidal wraith!

As the wraith seeks out the General and the nun to wreak vengeance, she steals a Neptunian trident from the archaeologist, with which she stabs the nun to death in the nurse's bedchamber. The nurse goes to bed, and sees the dead nun, but just thinks she's sleeping. The General nonetheless comes for the nurse, and of course he discovers that the nun is dead. Naturally, he blames the nurse. The wraith, hiding there in the room, stabs the General as well while he goes after the nurse. In a mad dash to escape, the wraith plunges over a cliff to her own death, which is seen by the reporter and the archaeologist; they understand the truth of the circumstances,



Isle of the Dead (1945) is one of producer Val Lewton's horror films

and return to find the nurse still being pursued by the dying General.

Finally, the prevailing winds turn Southerly (a scirocco), which is taken as an indication that the plague-carrying fleas will be overheated and die off, removing further threat from healthy islanders. The crisis is averted by the hand of, well, whatever you believe controls the direction of the winds.

In this interesting old suspense/horror film, I found a remarkable parallel to modern concerns. Karloff's General was clearly raised in a superstitious third-world culture, and despite his military training and his acquired skepticism, he proves incapable of resisting the nun's mutterings and blame-casting in their common time of crisis. Even when all present are aware of the scientific diagnosis of a flea-borne plague, the religious authority sways the old warrior back to superstition, and they blame the healthy young nurse for their woes on no greater evidence than her winsome good looks. Together, they conspire to murder the young woman in order to save themselves from a perceived supernatural threat. The General's education is insufficient to withstand the power of a good spooky myth.

Today, there are still cultures in which myth leads to the killing of innocents. There continue to be almost routine witch-slayings in India, as are frequently reported by their skeptical publications (our esteemed editor may even have a

few copies lying around for review, if you ask him, but you can also verify this on the internet.) The incidents are some-

times motivated by routine jealousy or greed in local conflicts, but it seems that remote rural villages are quite willing to execute just about anyone accused of being a witch, even today. The recent murder of India's leading rationalist, Narendra Dabholkar, led the Maharashtra state government to try to make the sale of charms, potions, and magical rituals illegal, because they lead to victimization of the gullible (as reported in the Week, Aug. 30, 2013).

Meanwhile, witchery has become quite popular in American TV and film. There is a new season of American Horror Story which revolves around a coven which is a school for young witches. There's a new series on Lifetime about four sexy young witches. And, the old Stephen King

story, "Carrie," has been remade a second time, for current theatrical release. A general shift in public attitudes has made Wicca a rather popular alternative religion, and practitioners consider themselves to be witches (though not in the Wizard of Oz sense, perhaps). There is probably someone within your personal circle of acquaintances who calls themselves either a Wiccan or a Neo-Druid, pagan beliefs which are condemned by the Old Testament (thou shalt not suffer a witch to live, etc.) In an inconvenient circumstance, witches are broadly-defined by both supporters and detractors; a witch is what you want one to be.

"Oh, my dear, if you only knew how strange is the matter regarding which I am here, it is you who would laugh. I have learned not to think little of any one's belief, no matter how strange it may be. I have tried to keep an open mind, and it is not the ordinary things of life that could close it, but the strange things, the extraordinary things, the things that make one doubt if they be mad or sane."



~ Bram Stoker, Dracula

Indian anti-superstition activist Narendra Dabholkar shot dead

Narendra Dabholkar, a rationalist campaigner who urged state of Maharashtra to pass an anti-black magic bill was murdered by motorbike assailants on August 20, 2013 in Pune, a city of about four million in Maharashtra, India.

Dabholkar reportedly infuriated some rightwing Hindus by his move to outlaw the practices of aesthetics known also as 'godmen'. Many "godmen" claim to perform miracles so as to impress their devotees. They summon spirits, conjure up objects, provide talismans for curing ailments, walk on fire and pierce their tongues with steel skewers.

Dabholkar's anti-superstition organisation, the Maharashtra Blind Faith Eradication Committee, had offered a reward of 500,000 rupees (about \$8,000) to anyone claiming to be a spiritual diviner who could successfully summon spirits.

Besides lobbying in the legislature, Dabholkar's group was involved in a school outreach program across Maharashtra, which seeks to encourage rational thought among students and expose religious charlatans.

Dabholkar was qualified as a doctor but gave up his profession to devote himself to the rationalist cause. He edited a weekly magazine and was closely associated with the founder of the Indian Rationalist Association, Sanal Edamaruku, who had to flee to Europe following death threats and blasphemy cases against him.

The state government has announced a reward of 1m rupees (about \$16,000) for information leading to the arrest of Dabholkar's killers.



The website for the Maharashtra Blind Faith Eradication Committee is <http://antisuperstition.org>

If you want to believe in them, perhaps you can find forvolakas creeping around in the darkness, too. Vampires, a similar being in most ways, are equally as popular as witches. Werewolves are also quite common, if you can believe popular media representations, though most varieties of werewolf seem to be moderately on humanity's side against the vampires of the world. At least when they aren't EATING humans...

Ask any pubescent lad in your neighborhood, and he can probably tell you all the characteristics which define a werewolf, a vampire, a witch, a wizard, etc. There are so many film and TV depictions of fictitious beings that, once kids get old enough to watch spooky shows, they soak up the mythology like sponges soak up water.

We cannot forget the myths of modern religion; each faith has its supernatural yarns to spin, and the cloth of our culture (worldwide) is woven with as many strands of fantasy as strands of knowledge and science.

And finally, our books and educational institutions preserve the mythologies of cultures now extinct; most of us can recite the better known Greek and Roman myths, and perhaps even some Norse myth as well (Tuesday, Wednesday, Thursday, and Friday are all named after Norse gods, after all). Celtic myth did not survive quite as well, having been stamped out quite thoroughly by Catholics in the Middle Ages. Native American mythologies are now both popular and acceptable for Americans to "respect." Asian myths are sometimes very popular today. Islam stands tall, on its own two feet, in nearly as many varieties as Protestant Christianity. African mythologies have largely been displaced by either Christianity or Islam, but neo- versions of some traditional African religions have been revived (let's not forget the Caribbean varieties, which are quite popular in some Southern rural areas, the New Orleans region, and of course, TV and film).

All have their mythological creatures, and all have their demons. Given a faithful believer, anyone labeled as any of those demons might very well stand a chance of facing fanatical fervor exercised against them.

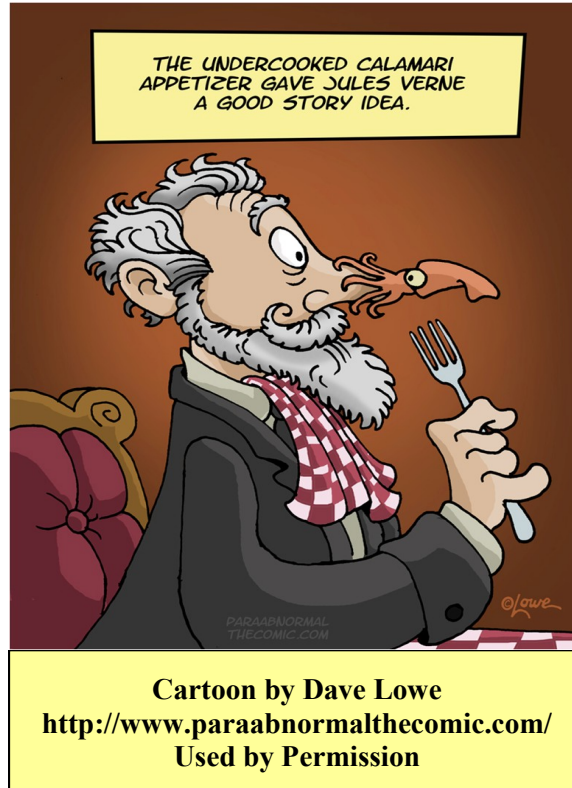
Even the so-called secular establishment has its demons. Call a person a pedophile, and you have branded him with today's scarlet letter. Our society has a religiously-blind animosity toward molesters that needs no real evidence or proof to unleash its full hatred and most vicious punishments. Homosexuality is currently caught in a tug-of-war between liberal supporters and conservative detractors, in political fervor rather than religious fanaticism.

In Philadelphia, it became so difficult for ex-cons to find a job it was necessary for liberals to push through the "Ban the Box" initiative to proscribe premature dismissal of job applications from ex-cons before any other qualification was even recognized. Even our so-called Democracy has become a nearly-balanced competition between opposed political stances which thrive on demonizing one another, ignoring inconvenient facts, and blindly promoting their own pet philosophies with shouting-match fervor. Go on, try to tell me that I'm wrong! Whether I'm on the Left, the Right, or in the Middle, my position is beyond question, and all other positions are sheer idiocy (and probably corrupt, to boot).

We like to think of ourselves as modern and civilized, but we are only separated from our mindless prejudices by the thinnest veneer of scientific knowledge. As the movie "Isle of the Dead" showed some fifty or sixty

years ago, we have not come quite so far from our superstitious heritages as we might like to believe.

Paul Schlueter III is serving Life in Prison in NE Pennsylvania. His supporters have created a website about him. www.jaybird.org



“The spectacle of what is called religion, or at any rate organised religion, in India and elsewhere, has filled me with horror and I have frequently condemned it and wished to make a clean sweep of it. Almost always it seemed to stand for blind belief and reaction, dogma and bigotry, superstition, exploitation and the preservation of vested interests.”

~ Jawaharlal Nehru

Some Thoughts as I Ponder The Mega Millions Drawing Tonight, Tuesday 17 December 2013

by Howard J. Wilk

I'm a Mega Millions gamer (gamers being a much more respectable class of people than gamblers). I always buy one ticket every 13 weeks that's good for the next 26 drawings at two drawings per week. When the jackpot rises to over \$100 million, I start to buy extra tickets. When I do I'll buy one extra ticket for every \$20 million in the jackpot. Yesterday, when I bought my tickets, the cash jackpot (the only value that really means anything) was, I think, about \$316 million. I bought 15 tickets. 16 tickets would be closer to one extra ticket per every \$20 million in the jackpot, but if I bought 16, I would be wasting money! I would be buying extra tickets trying to win less than my gaming plan of one ticket per jackpot \$20 million, spending money with a profligacy associated with only the desperate or delusional (or discerning investors – v.i.). Now, for me, I acquire utils playing the lottery, but it is, after all, a bad investment most of the time. Better to underbuy than to overbuy.

Not all tickets have the same expected value, and I usually buy more valuable tickets. I taught you before what “expected value” means, and which tickets are more valuable, but I won't teach you again, because if you play the lottery, the more you know about which are the more valuable tickets, the less valuable they'll be for me.

My “standard ticket” consists of what I believe to be the most valuable numbers. If I buy another 5 tickets for one drawing, I'll choose other valuable but not as-valuable numbers. For any additional tickets I let the machine pick what are claimed to be random numbers.

What are the odds? Consider an example simpler than Mega Millions: What are the odds in *Let's Make a Deal*? You can represent odds as being between 0% (or 0) (impossibility) and 100% (or 1) (certainty). There are three doors, Door No. 1, Door No. 2, and Door No. 3, and there's a car behind one of the doors. Behind each of the other two doors there's a goat. Chances are 100% (1) that the car is behind Door No. 1, 0% (0) that it's behind Door No. 2, and 0% (0) that it's behind Door No. 3...or 100% (1) that it's behind Door No. 2, 0% (0) that it's behind Door No. 1, and 0% (0) that it's be-

hind Door No. 3...or 100% (1) that it's behind Door No. 3, 0% (0) that it's behind Door No. 1, and 0% (0) that it's behind Door No. 2. I mean, I can state with 100% (1) certainty that the car is 100% (1) behind one of the doors! That's *what is*. Not very useful, is it?

What are my odds? What's at stake? First of all, keep your car. I'm playing for the beertendress at Schnitzelnazi's in the dirndl who wears it so well and had her photo posted on ourcity.com yesterday. I'm playing for keeps. My odds are 33 1/3% (1/3) that she's behind each of the doors numbered 1, 2, and 3. Know-it-alls will point out that I'm assuming it's a fair game and that the producers of the show don't, for example, put the prize behind Door No. 3 37% of the time and tell only contestants whom they like that they do that. I'll grant you that it's possible; the late great Bill Wisdom used to say something like it's possible to turn a frog into a prince but it's impossible that there could be a married bachelor. But the chances are infinitesimal that a game show or quiz show is or has ever been fixed. Do some research or just watch the movie *Quiz Show*.

I'm making no such assumptions. But until I have information to the contrary, I'll rely on my general knowledge of the universe and my confidence in the integrity of Monty Hall (born and raised in Winnipeg!) and will continue to play under the theory that she's behind each of the doors one-third of the time.

What does that mean? If we reran this moment, over and over again, the number of times she's behind each of the doors numbered 1, 2, and 3 will be very close to one-third of the total number of runs? How is this testable? “This moment” has come and gone, never to be repeated. This isn't *Groundhog Day*. This sort of thing troubles me. What, it doesn't trouble you? Write your own essay.

But wait! I hear her pining for me from behind Door No. 2. Now what are my odds? There's been no change in *what is*; she's still behind the same door she was before I heard her. There *is* a change in *what I know about what is*, and my



MCHUMOR.com by T. McCracken



“Do you really think the possibility you may have won 10 million dollars in some sweepstakes is the best life insurance you should have?”

Cartoon by T. McCracken
<http://www.mchumor.com/>
 Used by Permission

odds have changed accordingly. This is Wisdom, Bill.

The same principle is at work in the Monty Hall problem (look it up). What many even really, really smart people find paradoxical (in fact many of them refuse to believe) is that there’s been no change in *what is* after Monty opens one of the doors to reveal a goat – the car hasn’t moved and could still be behind either of two doors – but because there’s been a change in what a contestant knows about what is (one of the doors the car isn’t behind), his or her odds have changed.

What are the odds in the Mega Millions drawing tonight? I don’t know. What are my odds? 258,890,850 to 1 for any one of my tickets. My odds would change if I learned more, like if I looked up the history of all the numbers ever drawn, or more recently drawn, which is public information. The usual statement of odds assumes a number of things that can’t be assumed, like it’s a fair game. It might not be a fair game, either because of technical limitations in the randomness of the drawing of the balls, or because of a fix.

Consider the 1980 Pennsylvania Lottery Scandal, the “Triple Six Fix”. The three-digit Daily Number was rigged so that only 4s or 6s would be picked. What put the fixers in a fix is that they bet heavily on 4-4-4, 4-4-6, 4-6-4, 4-6-6, 6-4-4, 6-4-6, 6-6-4, and 6-6-6, and they couldn’t keep their mouths shut so that their friends and associates did the same. Also, they “chose poorly” the 4s and the 6s, because there was a good possibility that the number that would come up would be 6-6-6, which always attracts attention, because hexakosioihexekontahexaphobics associate it with the Beast, or the Antichrist, or the Devil, or Satan, etc. so much so that some “unfortunate” girl in Kentucky pulled out of her regional cross-country championship race and lost her chance to compete at the state championships after her coach drew bib number 6-6-6 and she refused to wear it.

There was a Saturday Night Live skit that I remember vaguely, and maybe some other time will try to look up, where some person (maybe a baby) is for some reason suspected of being or being an associate of the Beast or the whatever. The person is lying down, face up. John Belushi (I think) is standing “above” the person’s head, leans over, brushes the person’s hair aside, and announces with relief that on the person’s forehead is 9-9-9.

In fact 6-6-6 did come up, as the name “Triple Six Fix” might suggest. What were the chances of that? 1 in 8? Not necessarily. That would be assuming that it was a fair/unfair game! We don’t know that.

The fixers invested poorly. They could have invested wisely had they chosen other balls, kept their mouths shut,

Many orthodox people speak as though it were the business of sceptics to disprove received dogmas rather than of dogmatists to prove them. This is, of course, a mistake. If I were to suggest that between the Earth and Mars there is a china teapot revolving about the sun in an elliptical orbit, nobody would be able to disprove my assertion provided I were careful to add that the teapot is too small to be revealed even by our most powerful telescopes. But if I were to go on to say that, since my assertion cannot be disproved, it is intolerable presumption on the part of human reason to doubt it, I should rightly be thought to be talking nonsense.

~ Bertrand Russell (1872–1970)

and kept their wallets shut a little more than they did.

Earlier this evening when I checked, the jackpot was up to \$341.2 million (as it still is as I write this). Had it been convenient, I would have bought another two tickets, but I didn't because it would have been too crowded that close to the drawing, and I hadn't planned on being out on any other errand. Will one of the two tickets I would have bought be the one to hit the jackpot? If pigs could fly. If the commission to paint the ceiling of the Sistine Chapel had gone to the Michelangeli identical twins, it would have been painted in half the time. It's ridiculous to speculate!

By contrast, if a ticket-printer error prints a ticket with numbers different than what I marked on the "playslip", I'll buy the ticket (and also get printed and buy the ticket I had intended to buy), even though if I wanted to I could leave it on the counter, no sale. I don't believe that a ticket I leave behind will hit. But it is certain to hit whether I

believe in it or not.

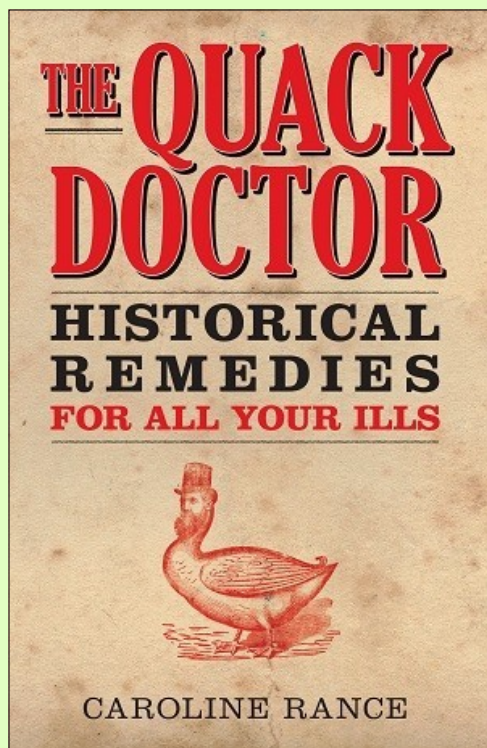
Science, not superstition!

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Howard Wilk is a Philadelphia based chemist, a long time skeptic, and an amateur pundit.

Author's afterthought: Wednesday 18 December 2013: I won TWO DOLLARS! Thus confirming for me the general soundness of my methods. Please note that with small lottery winnings you must buy more tickets (similar to printer errors; v.s.).

Editor's note: On December 17, 2013, after this article was written, the Mega Millions lottery had two winners sharing a prize of \$648 million. Odds of winning the jackpot are 1 in 258,890,850.



The Quack Doctor: Historical Remedies for all your Ills

by Caroline Rance

Paperback Published: 2013-10-15 ISBN: 9780752487731

From the harangues of charlatans to the sophisticated advertising of the Victorian era, quackery sports a colourful history. Featuring entertaining advertisements from the nineteenth and early twentieth centuries, this book investigates the inventive ways in which quack remedies were promoted – and suggests that the people who bought them should not be written off as gullible after all. There's the Methodist minister and his museum of intestinal worms, the obesity cure that turned fat into sweat, and the device that brought the fresh air of Italy into British homes. The story of quack advertising is bawdy, gruesome, funny and sometimes moving – and in this book it takes to the stage to promote itself as a fascinating part of the history of medicine.

This book may be purchased at Amazon.com

PHACT CALENDAR

PhACT Events

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.., Parking is easily available and costs \$4.00 for all day. 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, January 18, 2014 at 2:00 PM - Lecture

Faye Flam, science writer, and **Dr. David Cragin**, toxicologist, will discuss **Genetically Modified Organisms (GMOs) and Science in the Media**

Saturday, February 15, 2014 at 2:00 PM - Lecture

Ted Schick, Professor of Philosophy at Muhlenberg College, will discuss **Neuroethics: the Perils and Potential of Brain Science.**

Saturday, March 15, 2014 at 2:00 PM - Lecture

Professor Brian Regal of Kean University in Union New Jersey will discuss **Bigfoot and Cryptozoology.** University.

Monday, April 28, 2014 - Lecture

Michael Shermer, PhD, founder of the Skeptics Society and Editor-in-chief of Skeptic Magazine, will be the speaker at PhACT's contributed event at the Philadelphia Science Festival. Note that this lecture will neither be at the usual meeting location or time. More details will be available in the next Phactum. Stay tuned.

Saturday, May 17, 2014 - PhACT Scientific Expedition

Don Nigroni, a longtime PhACT member, naturalist, and monster hunter extraordinary, will lead another monster/ghost hunting expedition. Past failures to capture the Jersey Devil and the Ape Boy of the Chester Swamps do not deter enthusiasm for future success in such ventures. More details in the next Phactum.

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. 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. Phactum does not accept paid advertising.



The Philadelphia Area Center for the History of Science (PACHS) maintains an extensive calendar of events about the history of science, technology and medicine that may contain some interesting events not listed in the Phactum Calendar. Check out their website at:

<http://www.pachs.net/events>

Monday, January 13, 2014 at 6:00 p.m at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106

Science on Tap

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer. This month's Science of Tap is brought to you by the Wagner Free Institute of Science.

Must be 21 or accompanied by parent. Free and open to the Public.

<http://scienceontaphilly.com/>

Monday, January 13, 2013 at 6:00 PM-8:00 PM at The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103 www.ansp.org 215-299-1108

Sustainability: A Gubernatorial Forum

Please join us on January 13 as we welcome the Keystone State's 2014 gubernatorial candidates for a forum on sustainability. This forum will focus on important sustainability issues throughout Pennsylvania and is your chance to get to know your candidates.

Tuesday, January 14, 2014 at 7:30PM at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/authorevents/>

Max Tegmark | **Our Mathematical Universe: My Quest for the Ultimate Nature of Reality** with Dave Goldberg | **The Universe in the Rearview Mirror: How Hidden Symmetries Shape Reality**

"Not your run-of-the mill cosmologist" (Discover), **Max Tegmark** explores the complex origins and ultimate fate of the cosmos in his erudite and entertaining writing. The Swedish-born theoretical physicist is the author of more than 200 technical papers and has created several of the fundamental data analysis tools, theories, and measurement systems that have advanced modern cosmological study. Elected Fellow of the American Physical Society in 2012, he directs the Foundation Questions Institute and is a professor at the Massachusetts Institute of Technology. In *Our Mathematical Universe*, Tegmark explains revolutionary theories about the very nature of reality with common sense, wit, and passion.

Dave Goldberg co-authored *A User's Guide to the Universe*, an irreverent and entertaining guide to the real-life physics behind some of the most nagging questions about extraterrestrial life, parallel universes, dark matter, and a score of other pop-science topics. He has been featured on NPR's Studio 360, has contributed to Slate and the Los Angeles Times, writes the "Ask a Physicist" column for io9.com, and teaches at Drexel University. "An informative, math-free, and completely entertaining look at the concept of symmetry in physics" (Publishers Weekly), *The Universe in the Rearview Mirror* reveals the profound forces behind the elegant fabric of reality while also answering the nerd questions about the

possibility of shrink-ray guns and warp-speed travel.

Free and Open to the Public.

Wednesday, January 15, 2014 at 11:00AM at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/>

The Lessons of History

Dr. Richardson Dilworth, Director of the Center for Public Policy and Associate Professor of Political Science at Drexel University, provides a historical look back at political corruption in Philadelphia and the determination of reformers to clean up the system.

The lecture begins at 11:00 a.m. and will be presented in Room 108, just past the Home Page Café. For more information, please call Central Senior Services at 215-686-5311.

Free and Open to the Public.

PhACT Lecture

Saturday, January 18, 2014 at 2:00 PM - Faye Flam, science writer, and **Dr. David Cragin**, toxicologist, will discuss **Genetically Modified Organisms (GMOs) and Science in the Media**

Monday January 20, 2013 at 6:30pm at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

http://www.collphyphil.org/prog_calendar.htm

Comic Books and Surgery: A Very Graphic Novel

The arts can inform surgical instruction in many ways, incorporating emotion, self-reflection, and aesthetic experiences, while developing cognitive processes about surgical skills, medicine, and the human condition allowing students to make metaphors and derive a greater experience from their medical education. The overlap between surgical and art skills, drawing in particular, is a remarkable parallel. The lives of Cushing, Max Brodel, and DaVinci illustrate this overlap, leading to a discussion of how surgeons learn and are trained, and how much of it parallels art.

Speakers: C.S. Babaian, MS, Med, Biology Educator and Scientific Artist; Ara A. Chalian, MD, FACS, Associate Professor of Otorhinolaryngology: Head and Neck Surgery at the University of Pennsylvania.

Pre-registration for all programs and events is strongly urged. For further

SOCRATES CAFE is moderated by: Lewis Mifsud, Ph.D., P.E., a member of PhACT and of The American Academy of Forensic Sciences. At 7:00 PM every Monday evening except holidays (on Tuesdays after a Monday holiday) at the Springfield Township Public Library (215-836-5300) at 1600 Papermill Mill Road, Wyndmoor, PA. 19038. This philosophical discussions group is free and open to the public. Join us and share your critical thinking, questions and opinions.



A New Reading Circle: The Institute for Religion and Science.

Our Reading Circle is meeting from 6:30 pm – 8:00 pm beginning in November on the second Monday of the month in the William Walker Room of the Logue Library to discuss **Ilia Delio's *The Emergent Christ***. If you are interested in joining us, please contact us at Institute4RS@chc.edu

See website: www.irands.org

information regarding events and registration, please e-mail info@collegeofphysicians.org or call 215-399-2341.

Wednesday, January 22, 2013 at 6:30pm at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

http://www.collphyphil.org/prog_calendar.htm

Football: America's Pride or America's Shame?

On February 2nd, sports fans across the world will turn their attention to Super Bowl XLVIII. The National Football League has become a financial behemoth, earning as much as \$9 billion a year in total revenue. Underneath the successes, superstars, and pageantry, however, is the growing problem of player safety, especially related to concussions and the brain.

Speakers: Doug Swift, MD, FCPP, Former NFL Linebacker and Member of the '72 and '73 Super Bowl Champion Miami Dolphins; H. Football: America's Pride or America's Shame?

Branch Coslett, MD, William N. Kelley Professor in Neurology at the Hospital of the University of Pennsylvania; Paul Butler, MD, Retired General Surgeon and School Board Member who Voted to Shut Down Football at his Local High School

Pre-registration for all programs and events is strongly urged. For further information regarding events and registration, please e-mail info@collegeofphysicians.org or call 215-399-2341.

Wednesday Jan 22 6:00 PM-9:00 PM at **The Academy of Natural Sciences**, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103 www.ansp.org 215-299-1108

Adult Class: Reptile Sketching

Get out your sketchbooks—it's a snake! This class provides a rare opportunity to sketch live reptiles as you observe them up close with guidance from Academy staff.

Tuesday, January 28, 2014 at 12:00 to 1:00 p.m at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: "Won't Get Fooled Again": The Primacy of Chemistry in the Founding of America"

A talk by Brent Lane Free and Open to the Public

Friday, January 24 at 10:00am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

MONTHLY FOURTH FRIDAY TOUR: HOT SPOTS and STORIED PLOTS

In life and in death, we all have stories to tell and what better place to hear tales of wonder than Philadelphia's most famous home of the dead? Join Laurel Hill Cemetery for an informative overview of Laurel Hill's long and colorful history, which will include many of the marble masterpieces, stunning views and legendary stories that afford the cemetery its WOW factor. This is the perfect tour for first-time visitors to Laurel Hill, and anyone else who enjoys beautiful art, scenic nature and fascinating history. "Hot Spots and Storied Plots" will be presented monthly as part of Laurel Hill Cemetery's Fourth Friday tour series, which take place on the fourth Friday of every month at 10:00am.

The cost is \$8/person general admission; \$5/members. Tickets can be purchased at the door, or in advance by phone (215) 228-8200

Wednesday, January 29, 2014 at 11:00AM at the Free Library of Philadelphia, 1901 Vine Street, 19103 <http://libwww.freelibrary.org/>

Keystone Corruption

Pittsburgh Tribune-Review State Capitol Reporter Brad Bumsted has been investigating and reporting on corruption in Harrisburg since the 1970s. He is the author of the new book *Keystone Corruption: A Pennsylvania Insider's View of a State Gone Wrong*.

The lecture begins at 11:00 a.m. and will be presented in Room 108, just past the Home Page Café. For more information, please call Central Senior Services at 215-686-5311. Free and Open to the Public.

Wednesday, January 29, 2014 at 7:00 PM. American Revolution Round Table of Philadelphia. Location to be determined. Check website.

Kim Burdick on "*Seized in September*" which is about the Revolutionary War in Delaware in the fall of 1777.

ARRTOP events are Free and Open to the Public.

<http://arrtop.com>

Thursday, January 30, 2014 at 6:00 PM at the **Wagner Free Institute of Science**, 1700 West Montgomery Avenue, Philadelphia, PA 19121

ph 215-763-6529 www.wagnerfreeinstitute.org

The Echoes of their Wings:

The Life and Legacy of the Passenger Pigeon

An illustrated presentation and book signing by Joel Greenberg, Passenger Pigeon Project and Field Museum

A book signing will follow the lecture.

Free and Open to the Public.

Thursday, January 30, 2014 at 12:30PM - 01:30PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Brown Bag Lecture: Preserving Heritage is Good Local Business: Saving Sites with Economic Development

Archaeological research and preservation have traditionally brought few economic benefits to the local communities in which sites are located. And to the extent such benefits existed, they lasted only as long as a particular project or program was ongoing. As a result, communities have utilized their sites in ways that are economically superior, including looting, agriculture, and home building. In this talk, Dr. Lawrence S. Coben, Executive Director, Sustainable Preservation Initiative, argues that only through locally controlled and sustainable economic development can this process be reversed, and that only through providing an alternative to destructive uses can we save much of the world's cultural patrimony. Sponsored by the Penn Cultural Heritage Center. Free admission. For more information, call 215.746.4475 Free and Open to the Public.

Saturday February 1, 2013 at 10:00 AM-4:30 PM at **The Academy of Natural Sciences**, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103 www.ansp.org 215-299-1108

Paleo Illustration: Bringing Ancient Beasts to Life

Whether you're a paleontologist or a budding artist looking to improve your dinosaur illustrations, this class is for you. Join Dinosaur Hall Manager and paleo-illustrator Jason Poole as he shares the history of dinosaur illustration, information about dinosaur anatomy, and illustration techniques.

Tuesday, February 4, 2014 at 12:00 to 1:00 p.m. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: "Such a Sister Became Such a Brother": Lady Ranelagh's Influence on Robert Boyle"

A talk by Michelle DiMeo Free and Open to the Public

Tuesday, February 4, 2014 at 7:00 PM at Washington Memorial Chapel, on Route 23 in Valley Forge.

Friends of Valley Forge Park

The Historical Evolution of Valley Forge

Marc Brier, a ranger at Valley Forge National Historical Park, discusses the many and varied visions of this iconic American treasure.

<http://www.friendsofvalleyforge.org/speaker-series.shtml>

Free and Open to the Public.

Wednesday, February 5, 2014 at 06:00PM - 07:30PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

"Great Voyages" Lecture: Titanic to the Iron Age

Robert Ballard, Director, Institute for Archaeological Oceanography

Lost History Beneath the Sea from Titanic to the Iron Age

In this talk, Dr. Ballard reviews his 25-year career in deep-water archaeology—a career that has taken him all over the world in search of

human history lost in the deep waters of the world's oceans using the latest in advanced exploration technology.

Individual lecture with advance registration: \$5, general public; \$2, Penn Museum members; \$10 at the door based on availability. Free for students with college ID.

Register now for February 5.

Saturday, February 8 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

TRANSPLANTED SOULS: ANOTHER TRY AT ETERNAL REST

It's Philadelphia 2014, where do your ancestors rest? Over a century's worth of city expansion stretching industrial and residential limits has made that a hard question to answer. Ground once reserved as places for the dead became prime real estate for urban growth making the phrase "rest in peace" a relative sentiment at best.

The cost is \$12/person general admission; \$10/students and seniors; \$9/ members. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Nancy Wright

Monday, February 10, 2014 at 6:00 p.m at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106

Science on Tap

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

This month's Science of Tap is brought to you by the Academy of Natural Sciences of Philadelphia.

Must be 21 or accompanied by parent. Free and open to the Public.

<http://scienceontaphilly.com/>

Tuesday, February 11, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: Alex Csiszar

A talk by Alex Csiszar

Csiszar will give a lecture based on the book he has been researching, which charts the rise of the modern scientific journal.

Free and Open to the Public

Tuesday, February 11, 2014 at 11:00AM at the Free Library of Philadelphia, 1901 Vine Street, 19103 <http://libwww.freelibrary.org/>

A Prosecutor's Perspective

Supervisory Assistant United States Attorney, Corruption, Labor Racketeering, Civil Rights, and Tax Fraud Section, Richard Barrett will explain how the U.S. Department of Justice investigates and prosecutes corrupt public officials.

The lecture begins at 11:00 a.m. and will be presented in Room 108, just past the Home Page Café. For more information, please call Central Senior Services at 215-686-5311. Free and Open to the Public.

Wednesday, February 12, 2014 at 7:00 PM at Frankford Hall on Frankford Avenue just north of Girard Avenue.

Philadelphia Nerd Nite ... be there and be square, yo.

Science discussions, good food, good company, and plenty of beer!

For more information see the website at

<http://philadelphia.nerdnite.com/updates/>

Open to the Public. Admission \$5.00

Email us at: nerdnitephilly@gmail.com

Wednesday, February 12, 2014 at 6:00 PM at World Cafe Live, 3025 Walnut Street, Philadelphia PA, at 6:00 pm.

Laboratory for Research on the Structure of Matter - Science Cafe

"Rabies: A Perpetual Killer Disease"

William Wunner - Wistar Institute, Philadelphia

<http://www.lrsmpenn.edu/events/sciencecafes/index.html>

Free and Open to the Public.

Wednesday, February 12, 2014 at 7:15 PM at the Fels Planetarium, The Franklin Institute, 222 North 20th Street, Philadelphia, PA 19103

The Rittenhouse Astronomical Society

Astronomy lecture open to the General Public. See website for more details:

<http://www.rittenhouseastronomicalsociety.org/>

Thursday, February 13, 2014 at 6:00 PM at the Wagner Free Institute of Science, 1700 West Montgomery Avenue, Philadelphia, PA 19121

ph 215-763-6529 www.wagnerfreeinstitute.org

Putting the X and Y in SEXY: How Genes Turn us into Boys and Girls (and Sometimes a Bit of Both)

An Illustrated Lecture by Dr. Scott Gilbert, Swarthmore College

Free and Open to the Public.

Friday, February 14, 2014

at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

AN INDECENT PROPOSAL: EROTICA and the AMERICAN CIVIL WAR

A VALENTINES DAY PROGRAM and RECEPTION

DETAILS TBD

PhACT Lecture

Saturday, February 15, 2014 at 2:00 PM
Ted Schick, Professor of Philosophy at Muhlenberg College, will discuss Neuroethics: the Perils and Potential of Brain Science.

Sunday, February 16, 2014 at 02:00PM - 03:30PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Pompeii Lecture Series: Dining and Lovemaking in Pompeii

Dr. Brian Rose, Curator-in-Charge, Mediterranean Section, speaks. The destruction of Pompeii and Herculaneum in 79 CE allows us to reconstruct extensively the nature of daily life in an Early Imperial Roman town, especially the residents' attitudes toward food and sex. Dr. Rose presents an overview of those attitudes by examining the archaeological discoveries in both cities, including the wall paintings, mosaics, dining rooms, and food remains. The discussion also includes cookbooks and dinner parties as well as prostitution and same-sex relationships.

Admission: \$10, general public; \$5, Penn Museum members and Franklin Institute members.

Sunday, February 16, 2014 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

FRIENDS IN HIGH PLACES:

LAUREL HILL'S PRESIDENTIAL CONNECTIONS

Everyone knows the famed presidents for which the holiday has received its name, but what about their friends, confidantes, or outspoken citizens who became a thorn in their sides? This President's Day, celebrate at Laurel Hill Cemetery and get a good look at the people behind the scenes of America's highest office. Meet the doctor who presided over Thomas Jefferson's last days, the influential magazine editor who lobbied four U.S. presidents requesting that Thanksgiving be declared a national holiday, and the renowned opera singer who recorded Theodore Roosevelt's preferred version of a favorite song. All these and more connections will provide fascinating sidelights into the lives of our presidents.

The cost is \$12/person general admission; \$10/students and seniors; \$9/ members. Tickets can be purchased at the door, or in advance by phone

(215) 228-8200 or online.

Guide: Rich Wilhelm

Monday, February 17, 2014, 7p.m at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Philadelphia, PA 19118
The Institute for Science and Religion

Wonder and the Need for Alliances between Science and Religion

Scott F. Gilbert, PhD Professor of Biology, Swarthmore College

<http://www.irands.org>

Free and Open to the Public. A free will donation is requested.

Tuesday, February 18, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: Juan-Andres Leon

A talk by Juan-Andres Leon

Juan-Andres Leon will give a lecture based on his research conducted at the Chemical Heritage Foundation on the incursion of mathematical models and computer simulations in postwar industrial and academic chemistry in the United States. Free and Open to the Public

Wednesday, February 19, 2014 at 11:00AM at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/>

What Are You Going To Do About It?

Committee of Seventy President and CEO Zack Stalberg discusses the kind of charter and legislative changes that would help to prevent--and fight--political corruption going forward.

The lecture begins at 11:00 a.m. and will be presented in Room 108, just past the Home Page Café. For more information, please call Central Senior Services at 215-686-5311. Free and Open to the Public.

Thursday February 20, 2013 at 6:30 PM-10:00 PM at **The Academy of Natural Sciences**, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103 www.ansp.org 215-299-1108

Mega-Bad Movie Night: Jurassic Park III



Join us at the Academy after hours to watch an "awesomely awful" movie. Witty experts will be onstage to offer their quips and sidesplitting comments on the many scientific absurdities—think Mystery Science Theater 3000!

Saturday, February 22, 2014 at 03:30PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Afternoon Lecture: Secrets of the Mountain-of-Anubis: Recent Discoveries at the Tomb and Mortuary Complex of Pharaoh Senwosret III

In recent years, excavations have been going on inside the subterranean tomb of Senwosret III at South Abydos, as well as a program of expanded investigation of the wider landscape and settlement of the mortuary complex of Wah-Sut-Khakaure. In this lecture, Dr. Josef Wegner, Associate Curator, Penn Museum Egyptian Section, looks at the current work on the subterranean tomb located beneath the sacred peak of the Mountain-of-Anubis, including the ARCE-funded restoration and site protection project. The lecture will also look at other activities at Abydos, including work on subsidiary mastabas, the Middle Kingdom town site excavations, as well as the exciting results from excavations of the private cemeteries. Sponsored by the American Research Center in Egypt—Pennsylvania chapter.

Admission: \$8, general public; \$5, Penn Museum members; free for ARCE-PA members. For more information, visit www.arce-pa.org.

Friday, February 28, 2014 at 10:00am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

MONTHLY FOURTH FRIDAY TOUR:

HOT SPOTS and STORIED PLOTS

In life and in death, we all have stories to tell and what better place to hear tales of wonder than Philadelphia's most famous home of the dead? Join Laurel Hill Cemetery for an informative overview of Laurel Hill's long and colorful history, which will include many of the marble masterpieces, stunning views and legendary stories that afford the cemetery its WOW factor.

Monday February 24, 2014 at 7:00 PM - American Revolution Round Table of Philadelphia. Location to be determined. Check website.

Don N. Hagist will speak on "Sixty Men at Monmouth".

ARRTOP events are Free and Open to the Public.

<http://arrtop.com>

Tuesday, February 25, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: Robin Scheffler

Free and Open to the Public

Tuesday, March 4, 2014 at 7:00 PM at Washington Memorial Chapel, on Route 23 in Valley Forge.

Friends of Valley Forge Park

An Evening with Martha Washington: General's Wife and President's Lady

Historic interpreter Carol Spacht presents a fascinating first-person look at a first lady.

<http://www.friendsofvalleyforge.org/speaker-series.shtml>

Free and Open to the Public.

Tuesday, March 4, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

A talk by Kurtis Hessel

Free and Open to the Public

Wednesday, March 5, 2014 at 06:00PM - 07:30PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

"Great Voyages" Lecture: Kon Tiki

Clark Erickson, Professor, Anthropology, University of Pennsylvania

Thor Heyerdahl and Kon Tiki: A Grand Experiment in Archaeology

Individual lecture with advance registration: \$5, general public; \$2, Penn Museum members; \$10 at the door based on availability. Free for students with college ID.

Wednesday, March 5, 2014 at 6:00 PM at World Cafe Live, 3025 Walnut Street, Philadelphia PA, at 6:00 pm.

Laboratory for Research on the Structure of Matter - Science Cafe

"Rock Mechanics of Fracking"

Tim Bechtel - Enviroscan Inc. & Univ. of Pennsylvania

<http://www.lrs.m.upenn.edu/events/sciencecafes/index.html>

Free and Open to the Public.

Thursday, March 6, 2014 at 6:00 PM at the **Wagner Free Institute of Science**, 1700 West Montgomery Avenue, Philadelphia, PA 19121

ph 215-763-6529 www.wagnerfreeinstitute.org

Instruments and Order

An Illustrated Lecture by Dr. Emily Dolan, University of Pennsylvania

Free and Open to the Public.

Monday, March 10, 2014 at 6:00 p.m at **National Mechanics**, 22 S. Third Street, Philadelphia, PA 19106

Science on Tap



Calling All Astronomers! Rittenhouse Astronomical Society

Monthly Meetings! Bring all of your out-of this-world questions! Join The Rittenhouse

Astronomical Society the second Wednesday of each month at 7:30 p.m. in the Fels Planetarium at the Franklin Institute. The society offers all persons an opportunity to participate in the activities of an astronomical group at the laymen's level. They aim to spread knowledge, awareness and enjoyment of astronomy and astronomical issues. It is a popular science club that keeps its members up-to-date on the latest developments. No experience is necessary to attend the FREE meetings. Come with your astronomy questions!

www.rittenhouseastronomicalsociety.org/

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer.

This month's Science of Tap is brought to you by the Chemical Heritage Foundation.

Must be 21 or accompanied by parent. Free and open to the Public.

<http://scienceontapphilly.com/>

Tuesday, March 11, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: Emily B. Stanback

A talk by Emily B. Stanback

Stanback will give a lecture based on her project "Romantic Experimentation: Radical Science and the Politics of Disability," which explores radical science and self-experimentation in the Romantic era, and their relation to discourses on disability.

Free and Open to the Public

Wednesday, March 12, 2014 at 7:15 PM at the Fels Planetarium, The Franklin Institute, 222 North 20th Street, Philadelphia, PA 19103

The Rittenhouse Astronomical Society

Astronomy lecture open to the General Public. See website for more details: <http://www.rittenhouseastronomicalsociety.org/>

Wednesday, March 12, 2014 at 7:00 PM at Frankford Hall on Frankford Avenue just north of Girard Avenue.

Philadelphia Nerd Nite ... be there and be square, yo.

Science discussions, good food, good company, and plenty of beer!

For more information see the website at

<http://philadelphia.nerdnite.com/updates/>

Open to the Public. Admission \$5.00

Email us at: nerdnitephilly@gmail.com

Wednesday, March 12, 2014, 7p.m at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Philadelphia, PA 19118

The Institute for Science and Religion

Is the History of Religions on the Brink of a New Axial Age?

Paul Knitter, PhD is the Emeritus Paul Tillich Professor of Theology, World Religions, and Culture at Union Theological Seminary, New York.

<http://www.irands.org>

Free and Open to the Public. A free will donation is requested.

Saturday, March 15 and Sunday, March 16, 2014 at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA 19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

BURY THE DEAD

CO-PRESENTED WITH THE RENEGADE COMPANY

The frailty of man, the brutality of war and the power of guilt are all

themes explored in this year's One Book, One Philadelphia selection, *Yellow Birds* by Kevin Powers. Join The Renegade Company, a Philadelphia-based theatrical group, as they explore the themes of soldier life and effects of war mentioned in Kevin Powers' novel with a staged reading of Irwin Shaw's 1936 drama, *Bury the Dead*. Set in the "second year of a war that is to begin tomorrow," the dead on a battlefield refuse burial and enlist the living to resist the generals in this harrowing anti-war drama.

Renegade will be co-presenting the reading with Laurel Hill Cemetery for an immersive audience experience. The backdrop of the cemetery and the opportunity to view the show amongst the stones provides a fitting setting for this examination of life, death and everything in between. After the performance there will be a Q & A with the Cemetery, Renegade staff, and a Veteran's Organization to discuss the relevance of Shaw's drama and soldier life. *Bury The Dead* is presented by special arrangement with Dramatists Play Service, Inc., New York and is part of the One Book, One Philadelphia program.

Two performances of *Bury the Dead* are scheduled at Laurel Hill Cemetery: Saturday, March 15 and Sunday, March 16. All performances begin at 3:00pm. Ticket holders can check in at Laurel Hill Cemetery's Gatehouse entrance, 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot directly across the street from the Gatehouse. Bring your own blankets, beach chairs, snacks and/or beverages.

The cost for the program is \$20/person general admission. Advance reservations are requested. Tickets can be purchased in advance by calling (215) 228-8200 at the door, or online. Tickets will also be available at the door.

PhACT Lecture

Saturday, March 15, 2014 at 2:00 PM

Professor Brian Regal of Keane University in Union New Jersey will discuss Bigfoot and Cryptozoology.

Wednesday, March 16, 2014 at 02:00PM - 03:30PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

Pompeii Lecture Series: Visiting with the Ancients—Herculaneum, Pompeii and the Grand Tour

Victoria Coates, Penn Department of Art History, speaks. The Grand Tour, a phenomenon of upper-class young men from Northern Europe visiting the classical ruins of the south, was well established by the time Herculaneum and then Pompeii were excavated in the 18th century. Their recovery transformed the practice, however, adding a new de rigueur stop on the itinerary where eager antiquarians were promised an opportunity to directly encounter the Roman past. Victoria Coates explains how these elite travelers experienced the new excavations. Admission: \$10, general public; \$5, Penn Museum members and Franklin Institute members.

Tuesday, March 18, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: Daniel Margocz

A talk by Daniel Margocz.

Free and Open to the Public

Tuesday, March 18, 2014 at 7:30PM at the Free Library of Philadelphia, 1901 Vine Street, 19103

<http://libwww.freelibrary.org/authorevents/>

Wendy Ruderman and Barbara Laker | Busted: A Tale of Corruption and Betrayal in the City of Brotherly Love

When prolific drug informant Benny Martinez walked into the offices of Philadelphia Daily News reporters Wendy Ruderman and Barbara Laker in 2009, he triggered events that would ultimately expose one of the biggest police corruption scandals in Philadelphia history. Spurred by Martinez's

allegations of falsified search warrants and fabricated evidence, Ruderman and Laker uncovered allegations against an elite narcotics squad that included committing sexual assaults, disabling surveillance cameras during drug raids, and robbing small retailers. Laker and Ruderman's investigation and 10-month Daily News series "Tainted Justice" resulted in an FBI probe, the review of hundreds of criminal cases in Philadelphia, and the 2010 Pulitzer Prize for investigative reporting. In their new book *Busted*, Ruderman and Laker recount their daring reportage. Free and Open to the Public.

Tuesday, March 25, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: "Epistolary Chymistry, The Philosophical Golden Chicken, and Recipes for the Reform of Medicine"

A talk by Joel Klein

Between 1619 and 1637 the Wittenberg professor of medicine, Daniel Sennert (1572–1637), exchanged over 200 letters with fellow physician and chymist Michael Döring (d. 1644). These letters have hitherto received almost no attention, but they provide a unique glimpse into the world of 17th-century chymical medicine in the university as well as the forms of early scientific communication.

Free and Open to the Public

Friday, March 28 at 10:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

MONTHLY FOURTH FRIDAY TOUR SERIES: HOT SPOTS and STORIED PLOTS

The cost is \$8/person general admission; \$5/members. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Steve Maurer

Saturday, March 29 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

DESIGNING FOR THE DEAD: THE ART and ARCHITECTURE OF LAUREL HILL

Noted architects like John Notman, William Strickland, Frank Furness, John J. McArthur, C.C. Zantinger, Horace Trumbauer and Napoleon LeBrun competed fiercely for the chance to design for the dead. Join us on a walking tour of Laurel Hill Cemetery, where we will see monuments created by these early architects, as well as artists such as Alexander Milne Calder, his son Alexander Stirling Calder, and sculptress Harriet Frishmuth, whose works grace many of Laurel Hill's memorials. Tour stops will also include the gravesites of portraitist Thomas Sully and watercolorist William Trost Richards. The tour will examine changing tastes and fashions in grave markers over the past two centuries, from the classical obelisks and urns of the Federal period, to the richly decorated crosses of the Gothic Revival, to the massive mausoleums of the Gilded Age.

The cost is \$12/person general admission; \$10/students and seniors; \$9/members. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Thomas H. Keels

Monday March 31, 2014 at 7:00 PM - American Revolution Round Table of Philadelphia. Location to be determined. Check website.

Ruma Chopra (San Jose State University, California) will speak on **Enemies of Britain in the Atlantic World, 1750-1800.**

ARRTOP events are Free and Open to the Public.

<http://arrtop.com>

Tuesday, April 1, 2014 at 7:00 PM at Washington Memorial Chapel, on Route 23 in Valley Forge.

Friends of Valley Forge Park

Women's Work in the Eighteenth Century

Clarissa Dillon, an expert in eighteenth century foodways, offers a show-and-tell of the many skills needed by women of colonial times.

<http://www.friendsofvalleyforge.org/speaker-series.shtml>

Free and Open to the Public.

Tuesday, April 1, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: Rebecca Guenard

A talk by Rebecca Guenard

Free and Open to the Public

Wednesday, April 02, 2014 at 06:00PM - 07:30PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

<http://www.penn.museum/events-calendar>

"Great Voyages" Lecture: The Odyssey

Peter Struck, Associate Professor, Classical Studies, University of Pennsylvania

The Odyssey, Nostalgia, and the Lost Home

Homer's tale of the wandering hero has loaned its name to the English language for the very idea of a long wandering voyage. In this talk, Dr. Struck considers the idea of a displacement in the epic poem, and how Odysseus negotiates his status as someone separated from where he belongs.

Individual lecture with advance registration: \$5, general public; \$2, Penn Museum members; \$10 at the door based on availability. Free for students with college ID.

Wednesday, April 2, 2014 at 6:00 PM at World Cafe Live, 3025 Walnut Street, Philadelphia PA, at 6:00 pm.

Laboratory for Research on the Structure of Matter - Science Cafe

"Eating in a Material World"

Schuyler Patton - Central High School, Philadelphia

Russ Composto - MSE, University of Pennsylvania

<http://www.lrsm.upenn.edu/events/sciencecafes/index.html>

Free and Open to the Public.

Tuesday, April 8, 2014 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.chemheritage.org> Tel: 215-925-2222

Brown Bag Lecture: Carin Berkowitz

A talk by Carin Berkowitz

Carin Berkowitz is director of the Beckman Center for the History of Chemistry. She is broadly interested in the intersections of science and medicine in the late Enlightenment and early 19th century and in the place of pedagogy in medical science.

Free and Open to the Public

Wednesday, April 9, 2014 at 7:00 PM at Frankford Hall on Frankford Avenue just north of Girard Avenue.

Philadelphia Nerd Nite ... be there and be square, yo.

Science discussions, good food, good company, and plenty of beer!

For more information see the website at

<http://philadelphia.nerdnite.com/updates/>

Open to the Public. Admission \$5.00

Email us at: nerdnitephilly@gmail.com

PhACT Lecture

Monday, April 28, 2014

Michael Shermer, PhD, founder of the Skeptics Society and Editor-in-chief of Skeptic Magazine, will be the speaker at PhACT's contributed event at the Philadelphia Science Festival. Note that this lecture will neither be at the usual meeting location or time. More details will be available in the next Phactum.

I support the aims of PhACT and would like to join/rejoin for the next year. The annual membership is \$15 and \$10 for students which includes e-mail delivery of Phactum.

If you wish **US Mail delivery annual membership is \$25.** Checks should be payable to **PhACT.**

Membership dues of \$ _____ enclosed to pay for _____ years of membership.

Donation of \$ _____ enclosed for additional support
Donation of \$ _____ dedicated for High School Science Fair prizes

Mail checks to:
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The Philadelphia Association for Critical Thinking is grateful

for the hospitality extended by Community College of Philadelphia and especially Dr. David Cattell, Chair of the Physics Department, for hosting PhACT and giving us access to such excellent facilities. Part of CCP's mission is to serve Philadelphia as a premiere learning institution and PhACT is pleased to support this goal by having talks on wide ranging, engaging, and educational topics. Students and faculty are invited to be active participants in our activities.

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The PhACT website is: www.phact.org

Phactum is, distributed 4 times a year beginning January 2014 and is the main propaganda organ for the Philadelphia Association for Critical Thinking.

If you are not a supporting member/subscriber we invite you to become one. \$15 for a one year membership to PhACT with email Phactum subscription. \$25 for US Mail subscription. Donations are welcome.

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Phactum Editor, Ray Haupt
phactpublicity@aol.com

“The opposite of the religious fanatic is not the fanatical atheist but the gentle cynic who cares not whether there is a god or not.”

– Eric Hoffer (1902 - 1983), American social philosopher