

Phactum

"Facts don't cease to exist because they are ignored."

~ Aldous Huxley
(1894 - 1963)

The Newsletter and Propaganda Organ of the
Philadelphia Association for Critical Thinking
March 2011

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Webmaster: Wes Powers <http://phact.org/>

PhACT Meeting - Saturday, March 19, 2011 at 2:00 PM

Dr. David Cattell, Chairman of the Physics Department of Philadelphia Community College, will host Professor Jon Nyquist, an Environmental Geologist at Temple University.

DISASTERS: GEOLOGY VS. HOLLYWOOD



At Community College of Philadelphia in room S2-03 of the Winnet Student Life Building, the round building on 17th Street about 500 feet south of Spring Garden Street. Admission is FREE and open to the public.

Professor Nyquist holds the Week's chair in Environmental Geology at Temple University. He uses movies as the cornerstone of his general education course, "Disasters: Geology vs. Hollywood," to teach science to non-science students. For developing the course, Nyquist was honored with an inaugural Provost's Award for Innovative Teaching in General Education. Nyquist began his career at the Oak Ridge National Laboratory in the Health Sciences Division in 1986. His research emphasized the use of aerial geophysical techniques to characterize land areas, help make land-use decisions, and support environmental restoration programs. Nyquist was

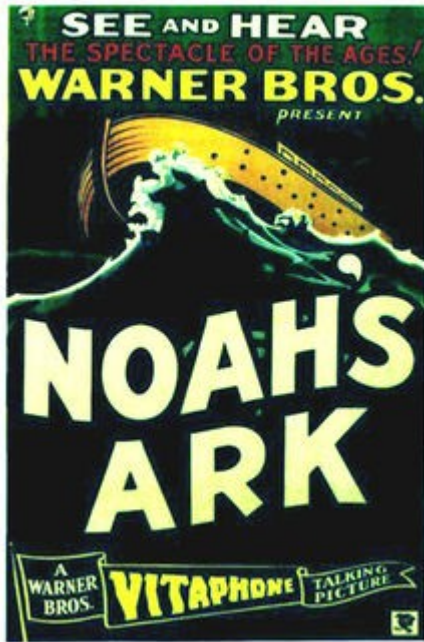
(Continued on page 2)

"Biographical history, as taught in our public schools, is still largely a history of boneheads: ridiculous kings and queens, paranoid political leaders, compulsive voyagers, ignorant generals - the flotsam and jetsam of historical currents. The men who radically altered history, the great scientists and mathematicians, are seldom mentioned, if at all."

Martin Gardner (1914 - 2010)

active in developing techniques to use remotely piloted airplanes to carry new types of geophysical sensors. He has been president of the Environmental and Engineering Geophysical Society.

Dr. Nyquist obtained his bachelor's and master's degrees in physics from Macalester College, St. Paul, MN, and the University of Maryland, respectively, and his doctorate in geophysics at the University of Wisconsin. He holds a PhD in Geophysics from the University of Wisconsin. Nyquist is active in the National Groundwater Association, the International Association of Mathematical Geologists, the Association of Unmanned Vehicle Systems International, and several geophysical societies.



1928 Warner Brothers film poster



1977 American International Pictures film poster

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2007 Lionsgate DVD cover

Wanted!!

Articles, poetry, Letters to the Editor, suggestions to improve Phactum,
Almost all topics are welcome - no celebrity gossip, please
Send submissions to phactpublicity@aol.com



William Safire (1929 - 2009)
journalist and Presidential
speechwriter

Do not put statements in the negative form.

And don't start sentences with a conjunction.

If you reread your work, you will find on rereading that a
great deal of repetition can be avoided by rereading and editing.

Never use a long word when a diminutive one will do.

Unqualified superlatives are the worst of all.

De-accession euphemisms.

If any word is improper at the end of a sentence, a linking verb is.

Avoid trendy locutions that sound flaky.

Last, but not least, avoid cliches like the plague.

~ William Safire, "Great Rules of Writing"

Errors

The careless Editor of Phactum bungled the date of the February 2011 Phactum on the Front page and every other page until observed by David Cattell and Tom Napier ... after Phactum had been distributed. Thanks for the notice Dave and Tom, but in future, can you please brush up on your clairvoyance skills and warn me in advance!!

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Letters to the Editor

Editor: Re: Ellenberg lottery article: (Phactum Letters, February 2011) It's important to point out that Ellenberg does not claim that the expected value of a \$1 ticket that has a 1 in 80,000,000 chance of winning a jackpot of \$280,000,000 is $(1/80 \text{ million}) \times \$280 \text{ million} = \$3.50$. Ellenberg and a link in Ellenberg's article to <http://www.slate.com/id/1008180/> point out that the expected value is less than \$3.50 because one might have to split the jackpot with other winners, and the jackpot figure is an annuity with a much smaller immediate cash payout [typically around half]. With regard to the annuity versus the cash option, as I write, the Mega Millions website <http://www.megamillions.com/> shows for tonight's drawing ESTIMATED JACKPOT \$40 MILLION. In much smaller characters underneath that it reads Cash Option: \$24.7 Million. It should be the other way around--the "real"

value of the prize is \$24.7 million. I never even pay attention to the so-called "jackpot" figure. That said, I've bought my ticket and look forward to tonight's drawing, with (almost) every expectation of winning nothing. From time to time I win at this game and at Powerball \$3, \$4--even as much as \$7!

You are absolutely right that the "social and psychological impact is far different" from the expected value: the utility to me in optimism and entertainment of the tickets I buy, especially when no one has hit for several weeks and the prize has grown, is greater than the expected value and is greater than the weekly \$4 I spend on them. (I buy 13 weeks of drawings of the games at a time (total: 52 \$1 tickets) so my travel expenses per ticket are trifling.) As I keep telling my wife, "one day our shit will come in!"

Howard J. Wilk
Philadelphia, PA

PS: I know someone who won 100 thousand dollars, and I know someone who knows someone who won 5 million dollars. The 5-million-dollar winner is a religious leader--maybe prayer really is good for something!

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Help Wanted!!

PhACT desires the services of a computer savvy member who would set up and maintain a Facebook presence for our organization. No pay, no benefits, and no opportunity for career advancement. Misotramontanists need not apply.

If interested contact Eric Krieg: erickrieg@verizon.net

Various Ruminations

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

Chemo Warfare to Chemo Therapy

In World War I near Ypres, Belgium in 1917 at the Battle of Passchendaele also known as the Third Battle of Ypres, the German army unleashed a gaseous substance known as sulphur mustard on British and Canadian soldiers. To chemists it may be described as $\text{CH}_2\text{-CH}_2\text{-S-CH}_2\text{-CH}_2\text{-Cl}$.

The eventual outcome of that battle which lasted from July to November was a small gain of territory for the British and a loss of about 310,000 men vs 260,000 casualties for the German army. There were casualties on both sides of that conflict caused by deployment of sulphur mustard. During World War I about 5% of soldiers exposed to mustard gas perished. Blindness was a common mutilation from that form of warfare.



British soldiers blinded by mustard gas

Sulphur mustard is a blistering agent, a vesicant that causes severe, delayed burns to the eyes, skin, and respiratory tract. Doctors noticed too that victims of sulphur mustard had damage to the bone marrow thus causing anemia, low white blood cell counts, and adverse effects upon the body's immune system. Sulphur mustard attacks a cell's DNA thus causing greater propensity for cancer, in particular cancers of the respiratory tract.

Another mustard compound, nitrogen mustard ($\text{Cl-CH}_2\text{-CH}_2\text{-S-CH}_2\text{-CH}_2\text{-Cl}$), was not used in World War I but during the 1930's various nations had stockpiles for possible use in combat. Meanwhile scientists were experimenting with nitrogen mustard using mice as test subjects in attempts to cure or lessen the effects of various cancers. There was some considerable success in this line of research.

Then, In 1942 a man known only as "J.D." was admitted to New Haven Hospital (which later was renamed Yale-New Haven Hospital). J.D. was suffering from massive tumors in his neck, lymphosarcoma, a malignant tumor of his lymph nodes, and was dying. Previous radiation treatment had yielded no improvement. J.D.'s only hope for survival was

an experimental treatment never previously used on a human but had favorable results on small test animals. Accordingly, J.D. submitted to this treatment of a new chemical called nitrogen mustard being intravenously applied to his bloodstream. He was the first chemotherapy patient.

J.D. experienced rapid improvement and in a month his tumors had become undetectable. Unfortunately, J.D.'s white blood cell count was decimated. Whatever cancer cells did remain had become resistant to the nitrogen mustard. J.D.'s lymphosarcoma made a relentless return. He went downhill quickly, suffering from bone marrow depression, bleeding and respiratory distress. On Dec. 1, 1942, the 96th day of his hospital stay, J.D. died.

Thus was born a new and powerful technique for treating cancer. It ultimately did not work out well for J.D. but millions of followers have benefitted. That is how science works ... some experiments work, some do not, but well observed and documented failed experiments add valuable scientific knowledge.

For more details about J.D. see this publication from the Yale Medical School:

<http://www.bulletin.yale.edu/article.aspx?id=8286>

The doctors at Yale Medical School, in 1942, made a huge step forward in the ability to treat cancer patients. That process is being constantly refined and at Abramson Cancer Center at University of Pennsylvania a new form of cancer treatment is being tested in its early stages but appears to have some promising results. [See that story on Page 12.](#)

Mustard gas and Homeopathy

While writing about the use of a chemical warfare agent being used as a cancer treatment it occurred to me that the chemicals used on J.D. had a very slight similarity to homeopathic remedies in that an intensely toxic substance has been transformed by dilution to become a medicine or what is purported to be medicine. That raised the question: has mus-

Online PhACT Discussion Board

PhACT does have an online discussion board facility where skeptics, critical thinkers, and others can discuss whatever might be on their minds. At the moment there is some discussion of "**The Physics of Free Will**" which is the title of a scholarly Special Edition of Phactum that was authored by Al Fonda. That may be found at: <http://phact.org/special.php>

All are invited to participate in discussion of that topic or some other topic. You need not be a PhACT member. The discussion board may be found at: <http://phactforum.org/>

tard gas been used as a homeopathic remedy?

Lo and behold in 1941-42 clinicians at homeopathic hospitals in Glasgow and London, in collaboration with the Ministry of Home Security, did indeed conduct a series of clinical trials involving mustard gas. To relieve the blisters and itching caused by mustard gas exposure homeopaths prescribed 30C dilutions of Poison Ivy (*Rhus toxicodendron*) or Spanish Fly (*Cantharides*).

Cantharis vesicatoria (Spanish fly)

Spanish fly doesn't actually come from a fly. It is made from the cantharides beetle, also called the blister beetle. The name comes from an intense irritant they generate as a defense mechanism. The beetles are collected, killed, dried and powdered, and the result is called Spanish fly.



Cantharides, being a natural inflammatory agent, can burn the mouth and throat and cause abdominal pain, vomiting, diarrhea and kidney damage even in small doses. It also strongly irritates the genito-urinary tract, and sex is one way to calm that itch.

As little as one thousandth of an ounce of the active chemical in cantharides is sufficient to cause kidney failure and death, making it one of the most dangerous substances ever to be associated with sexuality. It is classified medically as a Class One poison and a blistering agent. Fortunately, it is also illegal nearly worldwide.

A popular homeopathic technique known as isopathy was also employed. Isopathy is the treatment of disease by means of the causal agent or a product of the same disease. In this case then, it meant to treat mustard gas injury with more mustard gas. Homeopathic clinicians dutifully prepared medicines from mustard gas at a strength of 30C and did proceed with the clinical trials which reportedly had results favorable to homeopathy.

<http://www.jameslindlibrary.org/illustrating/articles/the-homeopathic-mustard-gas-trials-of-1941-42>

We are skeptical about efficacy of those mustard gas injury treatments. 30C indeed.

The James Randi Educational Foundation and Homeopathy

The James Randi Educational Foundation has started a petition drive aimed at pharmacists to come clean about the nature of homeopathic products ... mainly to acknowledge the fact that they do not work and are but a scam. This surely will not go over very well among some pharmacists and homeopathic product manufacturers, but the stubborn fact of lack of efficacy can not be ignored. Hopefully more of the public will one day wise up.

Go to the JREF website at: www.randi.org and sign the petition. There is a lot of interesting material at that website about homeopathy and a wide variety of other issues that should appeal to Critical Thinkers.

The James Randi Educational Foundation is not alone in reaction against homeopathy and other quackery. The New Zealand Skeptics are equally keen to expose the fraud and at their website very conveniently describe a product that is dispensed at 30C dilutions as were the mustard gas remedies. They write:

"Homeopathic products disguise the lack of original substance by using an arcane measurement system peculiar to the 200-old belief system. A product such as a homeopathic jet lag tablet may list 30C of Arnica Montana. The 30C means the initial Arnica present has been diluted to 0.000 000 000 000 000 000 000 000 000 000 000 000 000 000 1%), long past the point where even one molecule of Arnica is present."

I was too lazy to devise that number as a decimal but it certainly is more dramatic than its shorthand version "30C". You might be interested in the New Zealand Skeptics webpage on the matter of Homeopathy at:

<http://www.skeptics.org.nz/SK:homeopathy:223998057>

ZyVestra - a Homeopathic Remedy for Vertigo

It so happens at about the same time that I learned about the JREF initiative on homeopathy I heard an advertisement on the radio for a product called ZyVestra.

ZyVestra, the radio ad claims, will give natural vertigo and dizziness relief. See <http://www.zyvestra.com/>

At that website there most conveniently is a clinical breakdown of the ingredients in ZyVestra by Dr. Thomas Latino. Dr. Latino's credentials are not stated but the ingredients are explained in some considerable scientific detail. What is not explained is the dilution of those ingredients in the product. Fortunately that information, derived from the product label, can be found at the NIH website: <http://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?id=36465>

ZyVestra Active Ingredients:

Cocculus indicus 21X, 34X, 55X
 Ferrum metallicum 21X, 34X, 55X
 Gelsemium sempervirens 21X, 34X, 55X
 Phytolacca decandra 32X, 34X, 55X
 Pulsatilla 21X, 34X, 55X
 Silicea 21X, 34X, 55X

The NIH makes the following disclaimer: *"This homeopathic product has not been evaluated by the Food and Drug Administration for safety or efficacy. FDA is not aware of scientific evidence to support homeopathy as effective."*

The ingredients are all natural and supposedly have various characteristics for healing purposes, but how do they signify at such minute dilutions varying from 21X to 55X? At 21X dilution one could bathe in sulphuric acid and even

drink the stuff with no effect on the body.

I am highly skeptical of this remedy. Perhaps proper succussion is the key component to this product. Shaken, not stirred, please.

Vaccine Lecture at the College of Physicians of Philadelphia

On Tuesday, March 1, 2011 I had the good fortune to attend a lecture at the College of Physicians of Philadelphia. The speakers, Seth Mnookin, a journalist, and Dr. Paul Offit, a vaccinologist at Children's Hospital of Philadelphia, discussed the anxieties and misinformation that obscures clear thinking on the matter of vaccination, particularly of children. Very troubling is the situation that vaccine hysteria was launched by Dr. Andrew Wakefield who had produced a falsified report indicating that vaccines could cause autism in children. The fear spread widely despite lack of evidence, the result being fewer children receiving vaccines and rising incidence of communicable diseases.

Both speakers discussed their new books which are shown below and on the next page. Dr. Offit was PhACT's speaker February 2008.

Meanwhile, in Boston, there are fears of an outbreak of measles as is indicated from this article of March 3, 2011.

<http://www.aolhealth.com/2011/03/03/boston-measles-outbreak-vaccination/>

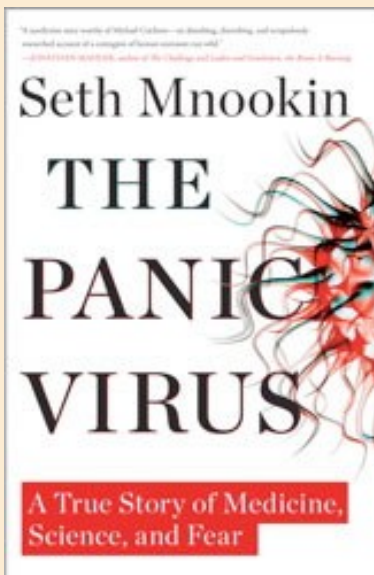
Life Came From Outer Space?

Panspermia (Greek: πανσπερμία from πᾶς/πᾶν (pas/pan) "all" and σπέρμα (sperma) "seed") is the hypothesis that life exists throughout the Universe, distributed by meteoroids, asteroids and planetoids.

A scientist, Dr. Richard B. Hoover, an astrobiologist with NASA's Marshall Space Flight Center, has discovered what appears to be fossilized bacteria on meteorites recovered in the Antarctic. The pictures certainly are tantalizing.

<http://www.foxnews.com/scitech/2011/03/05/exclusive-nasa-scientists-claims-evidence-alien-life-meteorite/>

But ... there is another article, (<http://www.foxnews.com/scitech/2011/03/07/alien-life-meteorites-skeptics-believers-weigh/>) that quotes several NASA scientists, who assert Hoover's claims are not well substantiated and should have been published in a more established peer reviewed journal before publication in the



The Panic Virus: A True Story of Medicine, Science, and Fear

By Seth Mnookin

Hardcover: 448 pages \$26.99

Publisher: Simon & Schuster (January 11, 2011)

ISBN-10: 1439158649 ISBN-13: 978-1439158647

In 1998 Andrew Wakefield, a British gastroenterologist with a history of self-promotion, published a paper with a shocking allegation: the measles-mumps-rubella vaccine might cause autism. The media seized hold of the story and, in the process, helped to launch one of the most devastating health scares ever. In the years to come Wakefield would be revealed as a profiteer in league with class-action lawyers, and he would eventually lose his medical license. Meanwhile one study after another failed to find any link between childhood vaccines and autism.

Yet the myth that vaccines somehow cause developmental disorders lives on. Despite the lack of corroborating evidence, it has been popularized by media personalities such as Oprah Winfrey and Jenny McCarthy and legitimized by journalists who claim that they are just being fair to "both sides" of an issue about which there is little debate. Meanwhile millions of dollars have been diverted from potential breakthroughs in autism research, families have spent their savings on ineffective "miracle cures," and declining vaccination rates have led to outbreaks of deadly illnesses like Hib, measles, and whooping cough. Most tragic of all is the increasing number of children dying from vaccine-preventable diseases.

In *The Panic Virus*, Seth Mnookin draws on interviews with parents, public-health advocates, scientists, and anti-vaccine activists to tackle a fundamental question: How do we decide what the truth is? The fascinating answer helps explain everything from the persistence of conspiracy theories about 9/11 to the appeal of talk-show hosts who demand that President Obama "prove" he was born in America.

The Panic Virus is a riveting and sometimes heart-breaking medical detective story that explores the limits of rational thought. It is the ultimate cautionary tale for our time.

online Journal of Cosmology (<http://journalofcosmology.com/Life100.html>). Another scientist states that a good time to have published this report might be April 1.

Arch-skeptic P.Z. Myers, a biologist at University of Minnesota-Morris, described the website as "the ginned-up website of a small group of crank academics."

So who to believe? Unfortunately this situation is too common and that Hydra of Misinformation rears its many ugly heads in many areas of science. The "life on a meteorite controversy" is but a tempest in a teapot when compared to more significant society impacting issues ... vaccinology and global warming to name but two.

Is it any wonder that sometimes the public is distrustful of science? When misinformation is generated by superstition that is bad; when generated by scientists it is worse.

Gambling Notes

♣ Get a load of this gambling story from the Philippines: Catholic church joins drive vs illegal gambling—Recently, the parish priest of St. Mary Magdalene Parish here has issued a pastoral policy banning the conduct of funeral mass to members of the Catholic Church if there is gambling during the wake. This measure is to help eradicate gambling in the capital town. Gambling during wakes is a practice and part of the culture in the province that sometimes law enforcers are confused on how to implement the anti-gambling law.

<http://www.pia.gov.ph/?m=1&t=1&id=17360>

One wonders what they are betting on and the odds.

♣ Band teacher steals, pawns instruments - A former high school music teacher (26) in Florida is accused of stealing musical instruments from his students to feed his gambling addiction. The Volusia County School District says it does not have the money to help replace the stolen equipment, and they will have to find the money themselves. <http://www.kpletv.com/Global/story.asp?S=14097441>

♣ Problem gamblers, others benefit from treatment - Fact Checker - The claim is Problem gambling treatment programs don't work, and even if they do, problem gamblers got themselves into their own messes and thus don't deserve state help. However, Bo Bernhard, director of gambling research at UNLV's International Gaming Institute, said there's no question treatment programs help. It isn't easy, but people who have gone through these programs report significant improvements, not only in their personal life and relationships, but also with their job, housing situation, financial situation and many other important areas of everyday functioning."

<http://www.rgj.com/article/20110301/NEWS20/102270365/1321/NEWS>

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DEADLY CHOICES

— HOW THE —
ANTI-VACCINE
— MOVEMENT —
THREATENS
— US ALL —

PAUL A. OFFIT, M.D.

Deadly Choices: How the Anti-Vaccine Movement Threatens Us All

By Paul A. Offit, M.D.

Hardcover: 288 pages \$27.50

Publisher: Basic Books; 1 edition (December 28, 2010)

ISBN-10: 0465021492 ISBN-13: 978-0465021499

In the second book this season (after journalist Seth Mnookin's *The Panic Virus*) to attack vaccine paranoia, Offit—who drew antivaccinist fire for *Autism's False Prophets*—presents a smart, hard-hitting exposé of vaccine pseudoscience. Offit brings outstanding credentials to the subject: he's a vaccinologist at Children's Hospital in Philadelphia and an expert in infectious diseases, and he tackles claims that childhood inoculations cause brain damage, autism, diabetes, and cancer, finding a farrago of misinformation, faulty research, and sly deceptions fed to distraught parents by media hype, ax-grinding activists, and personal-

injury lawyers. He embellishes his account with a sprightly history of paranoid medical populism—19th-century critics of the cowpox-derived smallpox vaccine insisted it could turn people into cows—and a blistering attack on celebrity antivaccine ideologues Jenny McCarthy, Jim Carrey, and Bill Maher and the medical writers who pander to parental anxieties. Offit dwells less than Mnookin on the sociology of the controversy and more on the science. The result is a thorough dismantling of antivaccine notions and a sober warning about the resurgence of deadly childhood infections stemming from declining vaccination rates. Worried parents, especially, will find this a lucid, compelling riposte to antivaccine fear-mongering.



First Philadelphia Science Festival April 15 - 28, 2011

The Chemistry of Collaboration Evident in Unique Programs that Reach the Scientist in Everyone

The Philadelphia Science Festival brings together more than 100 organizations of varying sizes and missions for an unprecedented collaboration – resulting in a truly Philadelphia-wide event fueled by the best scientific and educational resources the region has to offer.

For two weeks, the Festival will showcase how vital science and technology are to everyday life with an ambitious range of programs designed to engage and intrigue. Presented by The Dow Chemical Company, the Festival is part of a national movement to make science hands-on and accessible, and it builds on the city's rich history of originality and invention with dozens of free events at museums, schools, libraries and even street corners and concert halls. **Community College of Philadelphia and PhACT** are among the 100 organizations participating in this event.

A complete list of events can be had at this website: www.philasciencefestival.org/calendar

A short list of events: there are many more listed at the website

It's Personal: The Fight Against Cancer in a Carcinogenic World with Siddhartha Mukherjee

Wednesday, April 20, 2011, Time TBD | The Wistar Institute

Best-selling author Siddhartha Mukherjee (“The Emperor of All Maladies: A Biography of Cancer”) and a panel of the city’s top cancer researchers dive into a discussion on this long-feared illness and explore the question of how close we really are to understanding and curing cancer. (Registration required.)

PARTNERS: THE WISTAR INSTITUTE, UNIVERSITY OF THE SCIENCES IN PHILADELPHIA

Dean Kamen & Hacker’s Field Day: The Future Belongs to Innovators

Wednesday, April 20, 2011, 6pm/All day | The Franklin Institute

Discuss the importance of innovation, science, engineering and technology to the future of our society with acclaimed inventor, entrepreneur and engineer Dean Kamen. The 6pm discussion is part of an all-day Hacker’s Field Day where hackers, craftsmen and engineers – hobbyists and professionals – join forces in a competition to solder/hammer/drill/invent their way to the top!

PARTNERS: THE FRANKLIN INSTITUTE, NEXTFAB STUDIO, HIVE76, THE HACKTORY

Critical Decision Making: Science, Religion and the Law

Saturday, April 23, 2pm | Community College of Philadelphia

Join Judge John E. Jones, who presided over the 2005 Dover, Del., School District “intelligent design” case, as he shares his perspective on teaching evolution in the classroom and talks about the critical issues that led to his final decision.

PARTNERS: THE COMMUNITY COLLEGE OF PHILADELPHIA, PHILADELPHIA ASSOCIATION FOR CRITICAL THINKING

A Whole New World: Augmented Reality and Redesigning the Familiar

Tuesday, April 26, 2011, 6-8pm | Philadelphia Museum of Art’s Van Pelt Auditorium

Cutting-edge artists and software developers working at the intersection of art and science come together for a panel about the real and the imaginary, offering a tour through the potentials for an augmented future. (Registration required.)

PARTNERS: PHILADELPHIA MUSEUM OF ART, BREADBOARD/ESTHER KLINE GALLERY, PHILADELPHIA FESTIVAL OF THE ARTS, PHILLY TECH WEEK

Manya – A Visit with Marie Curie

Tuesday, April 26, 1pm | Academy of Natural Sciences Philadelphia

Wednesday, April 27, 6pm | Chemical Heritage Foundation

“Meet” famous scientist Marie Curie – the first person to win two Nobel prizes – as portrayed by storyteller Susan Marie Frontczak. Curie (1867-1934) was a Polish-born French physicist and chemist who pioneered the study of radioactivity.

PARTNERS: CHEMICAL HERITAGE FOUNDATION, THE COLLEGE OF PHYSICANS OF PHILADELPHIA, ACADEMY OF NATURAL SCIENCES, PHILADELPHIA INTERNATIONAL FESTIVAL OF THE ARTS

Scientific (Ir)reverence: History of Science

Thursday, April 28, Time TBD | Wagner Institute

A humorous look at the trial and error of scientific understanding through the ages – from witchcraft to eugenics. Actors, comedians and science historians come together to take you on an entertaining journey through our scientific triumphs – and failures.

PARTNERS: CHEMICAL HERITAGE FOUNDATION, PHILADELPHIA AREA CENTER FOR HISTORY OF SCIENCE

In addition, The Festival will include a series of Science Cafés, food-science events with partners like Yards Brewery, Philadelphia City Food Tours and the Kite & Key. A “sampling” of those events includes:

"Flavor Tripping:" The Magical Miracle Berry

Monday, April 18, 6pm | Continental Restaurant

One little red berry can change everything. Pop one of these miracle fruits into your mouth and lemons become sweet and chocolate, well, doesn't taste anything like chocolate. Before you experiment, you'll learn about how we taste and what is behind these unexpected sensations. Ticket required. (\$)

PARTNERS: Monell Center, La Salle University

Melting Moments of Bliss: The Science of Chocolate

Friday, April 22, 6pm | The Standard Tap

What makes seed of the tropical Theobroma cacao tree so darn good? Learn how it's converted into chocolate while you savor free samples with cocoa scientists from Mars Candy Company and taste experts from the Monell Center.

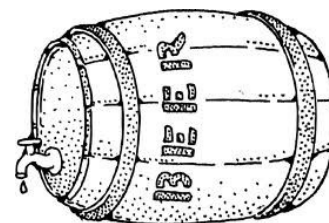
PARTNERS: Monell Center, Mars Candy Company

From Hops to Stein: The Science of Beer

Saturday, April 23, 7pm | Yards Brewery

Discover the magic behind brewing and the ways in which our taste buds and noses (yes, noses!) process these sudsy delights. While you're here, quaff a pint of the specially-brewed, limited-edition Philadelphia Science Festival Beer. (\$)

PARTNERS: The Franklin Institute, Yards, Monell Center, Two Guys on Beer



There will also be a series of Neighborhood Science events offered at more than 50 community centers, parks, gardens and Free Library branches across the region; and joint programming with the Philadelphia International Festival of the Arts (PIFA), such as the debut of a modern dance piece called “**The Perfect Flower**” on April 25. The “jumping off” point for the Festival is a stunt called The Big Jump, where students across Philadelphia will simultaneously jump at 11am on Friday, April 15 to see if their combined effort can generate a seismic event. It is followed the next day by a free Science Carnival on the Benjamin Franklin Parkway in conjunction with the Philadelphia Book Festival's Street Fair.

The Festival is presented by The Dow Chemical Company with additional sponsorship by Drexel University, University of the Sciences, GlaxoSmithKline, La Salle University, Philadelphia University, The University of Pennsylvania, PNC Bank, Day & Zimmermann, Temple University, K12, Quaker Chemical Corporation, The NASA Pennsylvania Space Grant Consortium, NextFab Studio, Villanova University, Geosyntec, and the University of Pennsylvania Center for Bioethics. It is organized by The Franklin Institute, which received a 3-year grant from the National Science Foundation.

ABOUT THE PHILADELPHIA SCIENCE FESTIVAL

The Philadelphia Science Festival is a citywide collaboration April 15-28 showcasing the impact of science and technology past, present and future. Part of a national movement to inspire the next generation of scientists and engineers, the Festival builds on Philadelphia's own rich history of innovation with dozens of free lectures, debates, hands-on activities, special exhibits and other informal learning experiences at museums, libraries and even street corners and concert halls. More than 105 institutions are collaborating to produce the inaugural Festival, which is funded in part by the National Science Foundation, presented by The Dow Chemical Company, and organized by The Franklin Institute. To learn more, visit PhilaScienceFestival.org or call 215-448-1128.



What would Ben think of this event?

Meeting Report(s) - February 2011

David Clark - "Destructive Cults"

These reports were prepared by Pavel Itersky and Said Elmenyawy, physics students of Dr. David Cattell at Community College of Philadelphia

Pavel Itersky

David Clarke defines *Destructive Cults* in his lecture at the Community College of Philadelphia through his depth of personal involvements, extensive experience in cult membership and more recently thought reform consulting.

His unique insights on the destructive nature of cultism serve to paint the picture of hypnosis and mind control that grasp at the mind of an unprepared person. Mr. Clarke discusses the methodologies and theories behind the psychological damage caused by destructive cults and the effects that exposure to these techniques may have. In his experiences people have committed suicide due to the destructiveness of these brainwashing methods.

What is a destructive cult?

Mr. Clarke defines a cult as a group of individuals that join a particular organization, but the type of organization is important when considering destructive cults. The word *cult* has different distinctions to different people but it is important to understand that destructive cults are more than weird people with strange beliefs. Rather it is those individuals that break away from their families and alienate important relationships in close-minded isolation that define the person that is affected by a destructive cult.

"The issue with destructive cults is the issue of deception" Mr. Clarke continues, where "ethical principles are discarded when treating an individual". These cults apply hypnosis on people without them knowing about it. The methodological conditioning that cults apply on members becomes an abusive process that causes mental damage. Ritualized chanting and meditation are just some ways in which a destructive cult can brainwash an individual into submitting.

Such submission takes a toll and some cult members pay a price when they fall under the influences of destructive techniques. Whether the price is financial or personal, Mr. Clarke's experiences demonstrate that in some occasions the price can be your life. Cult whistle blowers, for example, pay a devastating price, from threats to violence, if they decide to come out against a destructive cult.

David Clarke preaches the importance of understanding the methodologies applied by cults to subvert individuals because cults are recruiting on college campuses in the Philadelphia area. It is disturbing to know that there are cults recruiting in areas that I may frequent and it is important to understand their tactics so as not to be subverted.

Said Elmenyawy

Speaker of the day David Clark presented topic "Destructive Cults". He started his presentation by sharing a personal experience; he said that in his teens he was in a cult and one of the members committed suicide. The problem is that many cults that were famous in 80s and early 90s changed their names since and people are unaware of their dangerous impact as the names are not recognizable anymore.

What is a cult? Mr. Clark defined cult as accepting without questioning what a person is told. Due to the protection by the 1st Amendment, cults have freedom to act as they want and many cults came to America or originated there because of that, as well as to gain financial freedom. All cults have similarities in the way they originate their organization or group, in the power of their structure and in methods of their governance. The main issue with cults is the extraordinary control of members' lives and influence of everybody involved in the cult. The issue of brainwashing of those who participate is the method of destruction of cult members.

Historically speaking, "Cultus" is a Latin word and in 1640 it meant to care and to cultivate. English language developed word "cult" from it and started using it later as a theological term; cult became a term used to distinguish and detect heresy in the past. Now, the word cult in United States of America has the same meaning as the word sect has in Europe.

What makes cults destructive? Individuals join organization and devote their lives, their time and their income to the cult group. Cult leaders effectively use isolation

"Cult leaders succeed in dominating their followers because they have mastered the cruel art of exploiting universal human dependency and attachment needs in others." ~ "Traumatic abuse in cults" by Daniel Shaw, ex-member of Siddha Yoga, founded by Swami Swami Muktananda

from friends and family of their members and promote members' being close-minded and following only ideas and decisions of the cult. Cult has a serious issue of representation and an issue of ethical deception: in a cult things are different compared to what cult leaders present; all words have a double meaning. In many cults it takes a lot of money to learn what the organization thinks, as the leader(s) usually claim to have a special knowledge that they are willing to share with the "right people" for a nominal price. Whistleblowers in those cults would pay enormously if they decided to violate cult's copyrights and expose their truth. In many instances hypnosis or a use of nonverbal signs is applied on cult's members without the knowledge of those individuals. Often a huge mental damage is done to cult members through rituals, chanting and meditation. A study was done in Iowa that involved a graduate student in the field of Mathematics and Physics who had lost their abilities after being in a destructive cult for an extensive period of 2-5 years.

Cult organizations use information overload of their members by having a charismatic leader(ship) who would keep talking without giving people a chance to absorb, process and evaluate given information. These leaders have the ultimate authority and no alternative opinion is ever accepted. These leaders claim that something is communicated to them differently, in a divine way; they claim to possess a secret wisdom. People who do not have a background in cult operation or are unfamiliar with cults' main characteristics usually accept given information and get involved with a cult. People should involve critical thinking and ask questions like: do you know where every dime of your money goes? Or who are the family of cult's leaders and what is their financial position? Most likely the members are unaware of answers to these and many other questions about cult leaders. Effective mind control is being used by cult leaders incorporating jokes and casual conversations that seem spontaneous but are not, this type of behavior is usually staged to increase the impact on members. Change in members' diet follows including lack of protein; lack of meat in the diet can be justified with different excuses like hormones are dangerous or meat is bad in general, etc. If teenagers and young adults are involved with a cult, then issues of their complete body development appears and danger of undernourishment arises. Members' thinking in a cult is not their own anymore, their thinking is always controlled. There are consequences for non compliance with rules; if a member does not show up for the meeting, somebody will check on him/her. All members lives are controlled and closely monitored.

Many faith healing groups employ hypnotic effect in their communication with people: shock induction through the use of bright lights, suit of the speaker is usually made from a glowing material to ensure that he will remain the center of attention and speaker's loud shouting in the microphone to incorporate control over crowd. Hypnotic chanting can be included and people can be cut open; blood flood control during the operation is exercised under hypnosis as well.

How to identify a cult? Verification always needs to

be done to see if the organization is ethical. If it functions on the principal of ends justifying the means and trickery is involved, chances are that the organization is a cult. Having a motto "I do not have to tell the truth to those who are not ready to hear it" will identify a cult's leader(s).

Margaret Singer, a psychologist, came up with six steps of cult thought control: leadership of new members through a program without being aware of the final agenda, control of social and physical environment through controlling members' personal time and keeping members busy, systematically create a sense of helplessness and hopelessness in the person, manipulate system of reward and punishment to turn people away from their previous view and direct their focus and attention to learning the group's ideology, and set a system of logic and authoritarian structure that does not allow no feedback and can not be modified except by leader's approval.

If family and friends want to help their loved ones to regain freedom from cults, they should provide them with guidance through a path of critical thinking. If the person does not go through the critical thinking process, having the best information would not help and convince him/her.

There are many cult organizations out there and Mr. Clark mentioned a few names like "Legionaries of Christ", "Forever Family", "Unification Church", "Happy Christmas", "World Society Group", "Scientology Group", and "Mormons" – the oldest cult in the United States.

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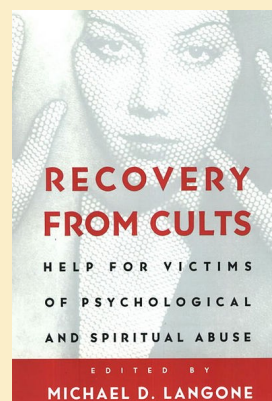
Recovery from Cults: Help for Victims of Psychological and Spiritual Abuse

Edited by Michael D. Langone
Publisher: W. W. Norton & Company;

1 edition (June 17, 1995)

Paperback: 432 pages \$17.95

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Drawing upon the clinical expertise of professionals and the personal experiences of those formerly involved in high-intensity mind-control groups, this book is a comprehensive guide to the cult experience. Michael Langone and his colleagues provide practical guidelines for helping former cult members manage the problems they encounter when leaving cults.

Immunotherapy: The Future of Cancer Treatment

Patient's Immune System Fights Cancer

Can your immune system, as it does the common cold, help stop cancer?

Clinicians and scientists at Penn's Abramson Cancer Center say yes and are leading the way in this revolutionary field of cancer research. Immunotherapy uses the immune system to fight cancer, reduce recurrence and lessen side effects caused by some cancer treatments.

The many weapons in the immunotherapy arsenal include: cancer vaccines, T-cell and antibody-based therapies and novel immunotherapy-boosting agents. Together, they have the potential to transform the way physicians treat—and even prevent—many forms of cancer.

Unlike traditional vaccines, which guard against the development of infectious diseases such as influenza or polio, cancer vaccines are therapeutic. They harness the body's immune system to fight against cancer cells that are already present.

T-cell therapy employs a patient's own immune cells to combat illness. Antibody-based therapy uses small proteins—either alone or attached to radioactive molecules in chemotherapy—to directly attack tumors and allow therapeutic agents to be delivered directly to cancer cells, sparing healthy cells.

Novel immunotherapy agents mimic, activate or augment immunity by boosting antibody, vaccine and T-cell therapies.

Carl H. June, M.D., Program Director of Translational Research, Abramson Family Cancer Research Institute and Professor, Department of Pathology and Laboratory Medicine and David L. Porter, M.D., Professor, Department of Medicine and Director of the Abramson Cancer Center's Blood and Bone Marrow Transplantation Program, and colleagues in the Hematologic Malignancies Program are collaborating to take a patient's own immune cells and genetically modify them. After this modification, cells are placed back into the patient to target leukemia cells and attack the disease. Drs. June and Porter's protocol was just approved by the Institutional Review Board, solidifying Penn as a leader in immunotherapy research on a national and global scale.

Drs. June and Porter are actively accepting referrals to treat people with acute and chronic lymphocytic leukemia (ALL and CLL) that relapsed after bone marrow transplantation. Their first three patients on this protocol had dramatic positive responses—providing hope where there had previously been none.

With very few centers around the country capable of pursuing this kind of immune system treatment, the Abramson Cancer Center is leading the field in this cutting-

edge technology and therapy that could drastically alter the prognosis of patients battling cancer. This clinical trial is already providing hope to patients whose other treatments have failed. If Drs. June and Porter can prove the efficacy of this treatment, their findings can be developed for other types of blood cancers and even solid tumors.

"Immunotherapy is the wave of the future for cancer treatment. Therapy this revolutionary is going to increase our ability to cure patients who in the past haven't had options. With the proper funding in place, we would have the ability to treat more patients, giving us the experience and the data necessary to open avenues to additional government funding, allowing us to accelerate this vital research." ~ David L. Porter, M.D.

Antibodies and T-cells are part of a remarkable defense that can detect and kill cancer cells while leaving healthy cells intact. Harnessing the power of these cells would create an innovative treatment solution for many solid tumor cancers—where discoveries for one type of cancer can be translated into therapies for numerous other cancer types. These therapies are thought to have fewer side effects and dramatically improve long-term quality of life.

Robert H. Vonderheide, M.D., D.Phil, Associate Professor of Medicine and newly appointed Program Leader for the Immunobiology Program, continues to bring new, ground-breaking immunotherapy treatments to patients in the Philadelphia region and beyond. Dr. Vonderheide recently presented results from early trials that used targeted antibodies, in combination with existing therapies, to treat pancreatic cancer. Patients were given an antibody that enhanced anti-tumor cellular immunity. Five of the first 21 patients treated experienced partial regression of their tumors, and 11 patients' diseases stabilized. The treatment's positive effects were observed in both the primary and metastatic tumors, and neither treatment caused any significant toxicity. Additional studies are now underway to evaluate the immunotherapy approach in larger groups of patients.

For more information on how to support the work of Drs. Porter, June or Vonderheide, contact Katie Dewees Detzel at (215) 746-1927 or kdewees@upenn.edu

Is 'FALSIFIABILITY' Understood?

by Paul Schlueter III

One of the core requirements of the scientific method is the need to set up hypothesis which can be tested, in order to determine whether test results corroborate the hypothesis, or fail to do so. In the jargon used by those familiar with this requirement, it is common to refer to such testability as "falsifiability." Within the scientific community, and among those educated in classic Reason, the meaning of the term is clear, and it is tossed off in conversation quite casually, with little chance of being misunderstood.

A problem DOES occur, however, when a reader or listener is unfamiliar with the complete meaning of the term. For example, scientifically-oriented people often point out that evolution is well tested and thoroughly corroborated, but creationism is not falsifiable, and therefore it doesn't qualify as science.

If you don't happen to know the full, formal definition of that term (and the scientifically illiterate who are most likely to support creationism are the least likely to know the full, formal definition!), it SOUNDS like what the speaker is saying is this: If creationism is not falsifiable, then it cannot be proven false. Ergo, it must be justifiable for me to cling to my unsupported belief, right?

Of course that's NOT so, but once you have to stop and clarify the term, you've already lost your argument! Try to explain to the creationist that his interpretation of your word is ignorant, and you insult him personally. Try to educate him about the actual meaning of this term in scientific discourse, and you are elitist (never mind that many fundamentalists make a frequent practice of redefining words, such as knowledge, evidence, and rational, so that they'll support their own doctrinal beliefs!) Ignore his misunderstanding, and you are insensitive and unwilling to entertain the ideas of other "smart" people who disagree with

you. Once you've used the term "falsifiable" in its established scientific context, YOU think you've made your point clear, when in fact all you've done is to have shot yourself (figuratively) in the foot. Yes, "FALSIFIABILITY" is misunderstood, the same as "theory" is misunderstood (as in, "Evolution is only a theory")

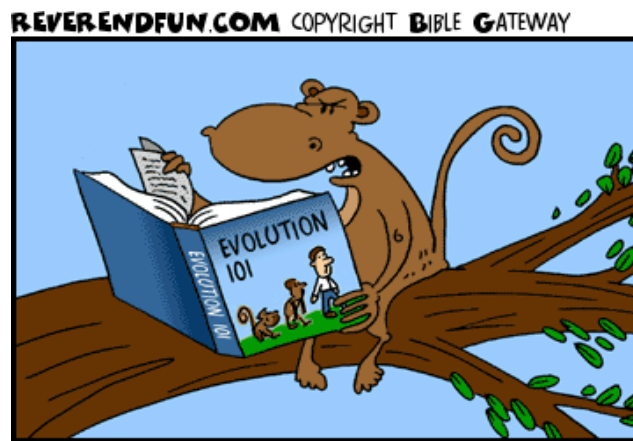
I propose that we should instead use the term "testability" when having public discussion, or when writing. Unless you intend to explain the entire statement I made in the first paragraph, above, discussing the falsifiability of a claim is actually counterproductive.

It's a sad comment about our culture that supposedly "smart" people cannot be counted on to understand words like theory and falsifiability; it's even scary to realize that, for some, the misunderstanding is deliberate and intentional, MEANT to cast doubt by pandering to the ignorance of the audience. However, we need to recognize the world in which we live for what it is, and the shortcomings of our culture for what they are. We need to take into account the way that our audience will INTERPRET the words we use, regardless of how accurately they reflect jargon-usage among our own community of

reasoned thinkers. And, if necessary, those of us who engage the public (and the opposition) in discussions about the issues of science which some listeners will consider "controversial" must carefully select the words we use, to avoid the most common occurrences of emotional and intellectual confrontation.

Of course, doing so will only work until the deliberately-ignorant manage to manufacture the next deliberate misunderstanding of some jargon-based term we use; like the moral battle between good and evil, the battle between knowledge and ignorance is likely to be never-ending.

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OH YEAH, THEY MAKE THIS STUFF UP AND THEN CLAIM THAT THEY EVOLVED FROM US ...
I'M SO SURE

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"In so far as a scientific statement speaks about reality, it must be falsifiable; and in so far as it is not falsifiable, it does not speak about reality."

~ Karl Popper (1902 - 1994), Austro-British philosopher and a professor at the London School of Economics

Human Sexuality and Evo Devo

by Paul Schlueter III

If that title didn't grab your attention, you're probably dead. It's the second word that did it; Freud may not have been right about everything, but there's a lot of validity behind his general idea that most of our mentality and behavior is driven by our sexual urge. Without sex, we quite literally would never have evolved! Further, sexual attraction and sexual mores of behavior (some instinctive, some consciously-rationalized) have had a major role in creating the human species we are, today.

Evo Devo is the really cool abbreviation for the science of evolutionary development. It's a relatively recent branch of specialty, which is informed by genetics, paleontology, psychology, and many other branches of study. It is, essentially, a field that tries to scrape together information from other possible sources, seeking to clarify and explain how organisms change over time through the processes of evolution and selection. As such, the breeding cycles of organisms are a very big part of evo devo studies.

Sometimes, paleontologists get lucky and find hard-tissue fossils of reproduction in progress, such as a nest of dinosaur eggs. From such physical evidence, we can deduce quite a bit



Dinosaur eggs in Dinosaur Hall at the Academy of Natural Sciences in Philadelphia.

of information about a species' reproductive system. It is exceedingly more difficult to deduce behaviors. Sexual organs are mostly relatively soft, and not prone to fossilization. If a female's fossil happened to form and preserve her bones during the relatively short window of time when she happened to be carrying

babies internally, and those babies had bones sufficiently hard to be preserved, we can deduce a few more details about where the uterus was located, how many offspring were in a typical birth group, etc. If we get lucky and find LOTS of such examples, we may even be able to piece together a portion of the intrauterine developmental stages of the organism; we've all heard that human fetuses progress in stages that resemble the appearance of many "simpler" organisms, while the body's form develops. Imaginative people have looked at images and "seen" tadpole tails, gills, flippers, and other such shapes in the different developmental stages of a human fetus, though clearly all those stages are merely the growth development of the complex forms of the human body (in other words, we are not actually tadpoles,

fish, and amphibians in the early stages of fetal development!)

This tendency should caution us about our tendency to imagine meaning in what we perceive; pareidolia is the tendency to "recognize" familiar objects in random images, and simulacra are the objects we think we see in the burn marks of toast, the curves of scrambled eggs, or the stains and shapes of a rocky surface. Among evo devo amateurs, there is certain to be a tendency to make more of what we see than is justified. Even the pros know that they have to be careful in how they describe their findings.

When it comes to human sexuality, we can observe extremely little in the fossil record. Luckily, humans have long had a tendency to create representative art, and archaeologists are routinely finding artifacts which resemble the female form so closely that the representations cannot be coincidental. So-called phallic images, on the other hand, are much more susceptible to subjective pareidolia; maybe the original purpose was to deliberately represent a phallus, but there's also a good chance that the resemblance is coincidental (even termite mounds sometimes resemble a phallus, and it's a fair bet that termites aren't thinking about wood - at least, not that way.)

We can also trace human sexuality through ancient texts; as long as there has been written language, people have written about human sexual behaviors. In one of the oldest texts we have, Gilgamesh sent a prostitute to collect Enkidu,

The Epic of Gilgamesh was the first written epic poem and one of the oldest pieces of literature in the world. It was a eulogy to Gilgamesh, King of Uruk. It was originally written on 12 clay tablets in cuneiform script.



Gilgamesh, originally a Sumerian legend recopied by the Assyrians, was composed and recited many times before written down. It was part of an earlier oral traditional. Assurbanipal, the last great king of Assyria, sent messengers out to search the archives of the ancient seats of learning in Babylon, Uruk, and Nippur, and to copy and translate into the

contemporary Akkadian Semitic those texts which were in the older Sumerian language of Mesopotamia. Amongst these texts, was the poem which we call the The Epic of Gilgamesh.

the wild man, from the wilderness with the lure of lust. The Biblical Old Testament is full of stories of who had whom, and how. In fact, the detailed (if rather convoluted) sexual rules laid down in Mosaic law can be taken as an indication of exactly what sort of routine behaviors of that time were so common that their proscription had to be codified and religiously enforced.

This brings me to the subject of which mates humans choose. If it is necessary to make religious law to limit behaviors, those behaviors must already exist, and even be common. Therefore, homosexuality, bestiality, and incest must have been sufficiently common that the ancient Jews felt it necessary to declare each of them an abomination and/or a sin. A man's casting of his seed upon the ground is prohibited, and there is even a provision for less-deliberate emissions of semen, which necessitate elaborate ritual cleansing and render the man "unclean" until nightfall. A careful reading brings to light other issues that would shock the modern mentality: If a man comes upon a woman in the forest and takes her by force, the rules say that he must take her as his wife (if it happens in town, it is presumed that she should have been able to scream for aid, and if she didn't, she must be stoned as a complicitous fornicator.) Either way, that woman has been defiled, even though modern thinking would hold that it was the man's action, therefore his sole responsibility.

The Bible goes to great lengths describing which relatives may become one's mate, and even which relatives one is prohibited from seeing naked. Did you know that the line drawn in the Old Testament for incest ends at Aunts/Uncles, leaving first cousins eligible? Modern animal breeders generally won't interbreed their charges so closely, but it was considered acceptable, even into twentieth century America, for people of our own living memory! Biblical authors felt it necessary to ban sexual encounters with both a mother and her daughter, yet if your brother died, you were expected to take his wife and children into your home (and subsequent "contact" was, with surprising realism, not prohibited.)

A curious twist pops up in relation to homosexual relationships. The Bible clearly prohibits a man from lying with another man, as if with a woman. Sodomy is specifically prohibited, in any of its varieties. However, FEMALE homosexuality is entirely ignored, as if the authors couldn't even imagine its existence! In fact, Biblical descriptions generally hold women to be responsible for tempting men into immoral behavior, and to warn men about succumbing to the wiles of such women, and a man's need for gratification is tightly, even obsessively, regulated. and controlled... but Biblical authors appear to be entirely ignorant of the female orgasm. If

nothing else, this certainly makes for an interesting observation of the cultural viewpoints of one human tribe during the early stages of human civilization.

It also leaves one to speculate about the unrecorded (lost?) mores and views of the rest of humanity, at approximately the same point in time; texts such as the far-Eastern Kama Sutra suggest that other cultures were far more at ease with sexual experimentation. Some readings of ancient Oriental texts suggest that men were trained to consider it their sexual duty to satisfy women, and in fact to use that activity as a tool to keep female behavior in line with social expectations. Clearly, a different culture had developed different outlooks on sexual behavior, which suggests that the "rules" of human sexuality are not as instinctive as they are intellectual and cultural.

There's another very interesting factor that figures into human sexuality and evo devo; the evidence of genetic studies indicates that certain families had much more influence over human evolution than others. Take for instance the observation that Gengis Khan's immediate offspring were quite prolific, and they seeded so many women across the Asian and Eurasian continents that their heritage can still be identified in modern DNA. Perhaps Alexander the Great could have carried the seed of near Eastern tribes into the far East during his conquests; at least one blockbuster film about his life suggests that his warriors

were more interested in sex with each other than with the locals they conquered. His sole legitimate heir is said to have been executed before siring others. Closer to our own cherished heritage, the knights of the Great Crusade are said to have been promiscuous philanderers, yet there is remarkably little record of how, where, and among whom they scattered their seed during their lengthy military campaigns. Perhaps they had the motive of religious piety (or at least, the public image of same) for keeping such behavior under cover.

We love to track down our blood heritages, and many of us hope to find famous ancestors in the process. It has been pointed out that, even if perfect records had somehow been kept (as we try to do, with poor success, today), there are only so many ancestors to go around, and if you track it far

enough, each of us today is related to some famous figure in history. Some simple numbers: Each generation doubles the number of ancestors, because everyone has two parents. If you count 20 generations, you had 1,048,576 ancestors, approximately 400 years ago (assuming an average generation gap of 20 years). Yet, as we go backward in time, the human population of the Earth diminishes! I've read claims say that that carrying ancestry backward to the time of Columbus, when we'd have had approx. 33.6M ancestors, there simply weren't that many people on the planet! Let's

**Alexander the Great
aka Alexander III of Macedon
(356–323 BC)**



not even try to count the ancestors as far back as the dawn of recorded history - assume, instead, that we're all distant cousins. I can't speak to its accuracy, but it has been said that there's more genetic diversity among chimpanzees on a single African mountain than among the entire human race. Our cultural tendency to keep to our own kind, and to exclude outsiders, has kept us more bottle-necked as a species than many of us have bothered to consider. In direct contrast, we seem instinctively inclined to find people who are different, or "exotic," more attractive than those we see around us all the time, so instinct and culture seem to be at least somewhat at odds.

Now, let's cast our imaginations back far beyond the first written records, before the first permanent cities, before the advent of agriculture (which gave us one of the earliest reasons to set down roots on a particular patch of ground.) It's relatively recent; farming is first identified in southern Europe only 7,400 years ago, give or take a lifetime (and it may have developed earlier, elsewhere). It was perhaps six times that long ago, roughly 44Kya, when the African species called "modern humans" or "homo sapiens" rapidly advanced their technology and societies, and first really began in earnest to populate the rest of the world. The truly interesting question is, what forms did human sexuality take during that period, as we literally became the dominant species of this planet?

We think we know some details. We think the typical size of a non-agricultural, non-industrial human tribe is limited to roughly 100 persons. Such a group simply wouldn't have the technology or local natural resources to feed and provide shelter for a larger group. Anthropology informs us, to some extent, with research into the lifestyles of the few isolated, aboriginal cultures that remain in our world today. Surprisingly, it is also possible to gain information from those currently on the fringes of modern society, marginalized by poverty, illiteracy, and sometimes ethnicity. We still tend to form groups of around 100 people (though the groups overlap), which practically anyone can verify simply by counting up the business and social contacts you know well enough to name their spouses and children.

So, let's assume an ancient tribe had 100 members. That tribe might have family sizes averaging from five to ten people per "tent," so figure 10 to 20 tents in a camp; that's an easy number to move around on short notice, an easy number to defend from raiding neighbor groups, and a reasonable number for a typical proportion of adult males to lead/feed. The women are likely to slightly outnumber the men, if you consider their daily lives to include a bit less risk of violent encounters with rivals, predators, or even prey. It is likely that one male in such a group will be the dominant patriarch, and for there to be a somewhat ritualized pecking order among the adults of both sexes. The intratribal economy is likely to be a combination of communal sharing and power-based tributes, balanced by reward-gifts from the patriarch to his subordinates.

Sexuality among the tribe is likely to be controlled by the cultural training the elders have passed down to their

offspring. It's probably a good bet that practices within the tribe will be relatively conservative and consistent, while those who strongly wish to engage in different practices either leave to seek better opportunities, or find themselves evicted for non-conformity. It's a reasonable assumption that restrictions will primarily be limited to WHOM one may engage in sexual activity with; lacking advanced, structured religious guidance from central sources, I think it's fair to assume that actual sexual practices performed with those permitted would have been limited only by inclination, and by whatever felt good. Sexual privacy in tribal cultures appears to have been less than we expect today, but there also appears to have been a nearly universal reluctance to engage in sex with menstruating women (who, in most known cultures, were expected to isolate themselves from men during menstruation.)

Inter-tribal relations are likely to have been periodic, and somewhat ritualized. Meetings to trade for goods and supplies are likely to represent one major opportunity to seek out mates, and historical indications suggest that it was largely the exchange of mates between small tribes that cemented the bonds between larger regional cultural groups. Those bonds are useful not only for economic trade and reasonable control of inbreeding, but they also serve to support the common defense, against raids from more-distant groups.

It is often said that prostitution is the oldest profession, doubtless due to the inference that women in ancient prehistory would have traded their sexual favors for such economic provisions as food, shelter, clothing, and tools. It is fairly reasonable to accept that sexual favors had some economic value, but why does that imply that women were party to the negotiations? It is far more likely that men controlled sexual access to women, and did so in direct relation to their own relative influence within the tribe or tribal group. This would mean that PIMPING is the oldest profession, don't you think?

It may well be that some women were treated well by the men of their tribes; the affection that seems to result from repetitive sexual encounters probably went a long way toward forming bonds between regular male-female mates. The evolutionary advantages of maintaining a peaceful, supportive tribal lifestyle seem rather obvious, so when a tribe stumbled upon such behaviors, they probably worked out quite well.

Jealousy, from either party, is too deeply inherent in our species to have been a recent development, so it's reasonable to consider that it held a significant role in evo devo. Those who responded with the greatest jealousy probably had more success in reproducing, simply because they developed more supportive relationships and helped to ensure minimal genetic drift from sex with others.

Though it is seldom discussed, jealousy might have had a role in controlling inbreeding. Obviously, the most opportunities for sex occur within one's closest social group. In tribal circumstances, the tribal group is likely to include the closest relatives, with relatively few distant relatives.

This situation would tend to lead to incest (which, despite modern sensibilities, can be argued to have been a frequent occurrence in tribal life). A strong sense of jealousy between partners, however, would serve to control contact between close family members, thus interfering with incestuous opportunities. I think it is fair to consider jealousy's role in evo devo to have been primarily useful in controlling inbreeding.

Outside the home camp, particularly when the men left the women at home, jealousy would not have played any significant role. For this reason, traveling men would have been much more likely to engage in sexual behavior when away from the home area. When a male wanders alone (rogue), his behavior is generally least civilized, and the most animalistic. He could spread his genetic seed at every opportunity, with almost no economic cost to himself (arguably, just the calories lost in the expenditure of energy required). A case could easily be made for the evolution of both seductive talents and a tendency toward opportunistic rape, and for those genes to have spread widely throughout the genome of humanity. It is difficult to imagine a complete evo devo picture without factoring in many special behaviors for rogue males. The wanderlust (aptly named!) is strongest in adolescence, precisely when aboriginal man had peak sexual drive, minimal influence among the home tribe, peak self-confidence, greatest physical endurance, and so on. This essential period in every male human's development is one our society overlooks with the direst potential hazard.

By all indications, it has often been necessary for members of the human race to identify others as either "close family," "extended family/tribe," "distant family/tribal group," and "all others." Regionalism and Nationalism appear to be recent developments requiring more sophistication in meta-scale cultural organization, a.k.a. "civilization." Anthropologists and linguists have long recognized the tendency for peoples to identify their tribal groups with a word that roughly translates to "human," while all outsiders fall into a category which doesn't quite measure up to such a prestigious label.

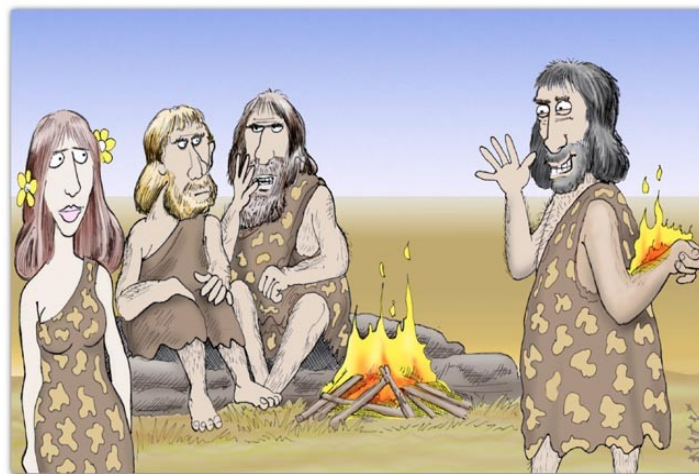
For raiding purposes, this is quite handy. You obviously don't want to ruin relations with the nearby relatives and friends of your tribal group by raiding their stores or kidnapping their women, but if you find yourself in a sudden, desperate need for either necessity, gathering up a few strong fellows from the tribal group and sneaking over to the next region to capture what you can is a fairly practical way to go

about it. Maybe you'll die, in which case you no longer need quite so much; alternatively, you may capture some exotic women, find a decent cache of supplies, and reduce the hunter/defender population of a regional competitor, forcing his people to withdraw to the support of their own greater tribal group to get through the next few winters!

This cultural example is certainly not the universal, exclusive formula, but there is enough evidence in historical records, anthropology, archaeology, and many other human sciences to justify using it as a fairly common standard. Also fairly common is the tendency to consider the women of such cultures as commodities, perhaps a few steps of importance above a nice stash of dried venison and leather goods. Younger women, particularly those just about to enter puberty, would naturally be the best "find" on such a raid, because they're small and easily-controlled, they're easier to dominate mentally in an effort to retrain them to conform to your home culture, and they're pretty certain not to have any newly-sired children already in their wombs. Female virginity, relatively simple for an adult to determine from physical examination, appears to have often meant the difference between a woman's being killed or kidnapped. Existing males, adult or child, were the most likely to be killed in raids, if they didn't manage to escape. Very young females, requiring a bit more of an investment in feeding and upbringing before they could begin to contribute children of their own, might have had the marginal value.

Back in the relative safety of home camp, captured girls would have been given over to resident women for training; historical observations suggest that conformity would have been enforced by violence from older women. The males of the tribe would eventually apply tribal custom to the task of determining how the men would distribute such new women among themselves. Those most attractive to the men would be most likely to be taken by the most dominant among the men.

Yet, what exactly would have been the measure of attractiveness? Certainly, a woman's pretty face is a factor; men throughout all of history have willingly made fools of themselves, stupidly laid down property or their own lives, and thrown away all stature over the lust for a woman's pretty face, and no characteristic so widespread and strong could merely be the result of the last few dozen generations of our evolution! However, the wisdom of age and experience, added to the advice of elders and peers, must have developed in tandem, because the survival of the group, the



"I don't know what Thag's up to, but I'm pretty sure he's carrying a concealed firearm..."

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

tribe, and the family depended in part upon the selection of women suitable for more than just gazing across the firepit!

Pure Darwinian natural selection would have favored the men best able to find REAL survival advantages in the choices he made among women. Choose the woman with heavier bones, and she will better survive the hardships of travel. Choose the one who easily stores fat, and she will better survive periodic famines. Choose less physical beauty, and she may be more likely to bear YOUR children, and not those of the handsome youth who spends every day trying to seduce her when your back is turned. I suggest that the most successful strategy for selecting women might well have been to gift your subordinates with the beauties, and to keep the ones who would give you the most, and the strongest, children. You might just manage to sire a few children on the pretty wife you've given your subordinate anyway, but you'll know that your woman's children are YOURS, which means a lot in evolutionary terms.

And besides, if YOU get raided in the future, your sturdy wife is most likely to remove your children to safety, while all the raiders are off chasing the pretty wife of your subordinate for a brief thrill (enhanced by the adrenaline of the raiding situation), most likely to be followed by her killing.

Why her killing, you ask in horror? Consider that the time many modern prostitutes feel that they are in the greatest potential danger from their johns is immediately AFTER the sexual service has been performed; a shocking percentage of everyday, ordinary men have what appears to be an instinctive tendency to mistreat women who are NOT regular mates, after sexual encounters! This is sometimes just disinterest, but may also escalate to name-calling (slut, pig, whore...), and even verbal or physical abuse.

I propose that this is a direct evolutionary holdover from prehistory. When men were within the home camp, they had motivation to treat their own tribal women with some measure of dignity, respect, and supportiveness; they were, after all, the mothers of their relatives.

However, women from outside the local tribe, yet within the tribal group, would have been valuable as POTENTIAL mates; a certain amount of selfish restriction would result from seeking intercourse with people from closely related

tribes, because each tribe had its own economic limitations, and wouldn't want to raise children not sired by their own men. If you want the woman, take her home to your own tribe, and support her yourself, rather than leaving her with a child we have to support!

Yet, the women of distant groups, not one's own extended

tribal group, were (like all those people) considered something less than human! In the raiding situation, when the main purpose for being there is to take economically valuable property, why would you want to accept the burden of a non-human woman? Why take the chances that she may be carrying a non-human child, that her man/children/tribe members might come after you, or that she might help to repopulate the tribe you're raiding? The animal instinct, I believe, for a raiding man is to rape and humiliate, at the very least, and as often as not, to kill the victim when finished. These behaviors prevail to this very day, in conflicts around the world. Even the most sophisticated, civilized nations have to deal with incidents when, in combat situations, soldiers take their sexual spoils of war. When one sees "enemy" first, sexual behavior takes on an entirely different character than it would among the home society.

Here again, it is the pre-pubescent female who has the greatest survival advantage. The human male animal looks at even a "non-human enemy" female as

having potential as a future tribal member, and is likely to kidnap her and adopt her for future benefit. Similar advantage might apply to an appealing woman capable of "switching on" seductive charms when suddenly cornered; if an attacking male can be seduced into taking her home for himself, then at least she has survived the raid (this may actually have been the greatest evolutionary benefit of female beauty.)

Everyone else from a raided tribe is subject to slaying, simply to reduce the competition they represent, unless they manage to escape by flight or concealment. From the evidence of known history, men are killed in fighting, children are killed as something akin to vermin whenever encountered, and the women are used for sexual gratification, then sexually humiliated/assaulted, and likely as not, finally killed in disgust. This simply seems to be the nature of our species' males in violent or aggressive

Helen of Troy



Helen is portrayed here with Paris, the most famous of her many suitors. Hers is "the face that launched a thousand ships". There is some considerable debate that the Trojan War had ever happened but the legend may well have been based on some war that had occurred around the 12th Century BC. The painting is by Guido Reni (1575 - 1642), an Italian painter of the Baroque style. The painting is at the Louvre, in Paris.

circumstances. Kidnapping an adult beauty might well have occurred, but it was probably one of those stupid, ill-advised efforts that led to disaster; see the story of Helen of Troy!

I'm not saying that any of this is how things SHOULD be (morality). I'm saying that who we are as a species today (beneath our ever-so-thin veneers of civility and morality) is the direct result of who, among our ancestors, survived and had the most descendants to carry down the genotype. Like formal evo devo, my theory is an amalgam of the observations, experience, and learning that I've acquired over a period of time (subject to revision when I learn more.) I don't say that this is how all ancient humans lived, but I think any of them would readily recognize such a life if you described it to them (probably, in typical human fashion, it would be recognized as the way in which "those other not-quite-human creatures" outside their own respectable tribe live.)

How does such a picture benefit us today? Somewhere along the way, I've come to pick up the idea that accepting too many of the myths we tell ourselves about our nature is dangerous; we tend to place ourselves a little too high up on a pedestal, and deny even the dimmest possibility that we have any such tendencies within ourselves. That leaves us open to being too trusting of each other, to allowing ourselves too much latitude in terms of self-restraint, and sometimes, to acting in the very ways that we say we never would or could.

Look at how we choose our (long- OR short-term) mates today, amid growing rates of teen pregnancy, rampant absentee fatherhood, and some of the shortest marriages and highest divorce rates in historical memory. Is the development of human sexuality progressing positively, or regressing? Will your daughter's sexual/reproductive life likely look better than your mother's, or worse?

We are animals, a variety of ape that happens to have a lot of talent for language, technology, art, philosophy, and so on. We are moderately civilized, but nowhere near as civilized as we like to pretend we are. Rather than being ready to found/join the United Federation of Planets, we are much in need of a collective time-out from Klaatu and Gort, to be followed by being sent back to our collective room to think about what we've done. Only if we truthfully evaluate who we are, as the animals beneath the veneer, will we be prepared to enter into the coming age of genetic manipulation, of social engineering, and of co-existing within elbow-bumping range of our fellows on a depleted planet. To have a good idea of what we once were leads us to better know what we now are, so that we can perhaps figure out how to become what we wishfully proclaim ourselves to be.

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

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Old Lady Hip Accident

by Albert Fried-Cassorla

Old lady on a bench at Macy's, talking to me
 "These days it's so hard to get around,
 Did I tell ya? At the curb by Target,
 I fell and went straight down to the ground
 "I hurt my hip. That's why I'm sittin' here at Macy's
 customer bench
 catchin' my breath and looking around.

"You seem like a nice young fella,
 and I guess that's why I'm tellin' ya my story"
 "It's no good. My husband just died on
 the operating table
 That's God's truth.
 And even if it hurts when I walk,
 I get out as often as I am able."

"It wasn't right that, with me at 75, my son died at 50.
 If it'd been me instead of him, that
 would've been okay.
 I'd rather it was me, any day."
 "I'm tired now, but I gotta keep movin',
 but thanks, young man, you're kind to me, thank you for
 listening."

(Based on a true conversation, Winter, 2010)

Albert Fried-Cassorla is a teacher for the School District of Philadelphia, is a philosopher, playwright, poet, and in 1999 was a finalist in the Montgomery County (PA) Poet Laureate's Contest.

Thank you, Albert.
 Phactum readers are invited to submit original poetry.

The distinction between historian and poet is not in the one writing prose and the other verse... the one describes the thing that has been, and the other a kind of thing that might be. Hence poetry is something more philosophic and of graver import than history, since its statements are of the nature rather of universals, whereas those of history are singulars.

~Aristotle, On Poetics

PhACT CALENDAR

Dr. David Cattell, Chairman of the Physics Department of Community College of Philadelphia hosts meetings of **PhACT** - at 2:00 PM on the third Saturday of most months at Community College of Philadelphia... Parking is easily available and costs \$3.75 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, March 19, 2011 - Real Geology vs Hollywood Disaster Movies - Professor Jon Nyquist, an environmental geophysicist at Temple University will be our speaker. **See page 1 for more details.** This event is **FREE** and open to the general public.

Saturday, April 23, 2011 - Science and the Court Room: Judge John Jones. 2:00 to 3:30 PM in room S2-19 (the Great Hall) in the Winnet Student Life Building just south of 17th and Spring Garden St.

The *Kitzmiller v. Dover Area School District* trial involving attempts to put "Intelligent Design" in public school books has been called the most significant trial defending Science teaching since the 1925 Scopes Monkey trial. Judge Jones, a Lutheran republican was nominated by former Senator Rick Santorum (a creationist activist) and appointed by George Bush. But he is strongly committed to judicial independence. Judge Jones ruling was that "Intelligent Design" (basically creationism with a new name) is a religious theory, not scientific and banned from public classrooms. He ended up getting death threats against his family and was protected for a time by a US Marshall. This case ended up being an expensive crushing defeat for the school district (who later voted out the school board members who started it), and for religionists who Judge Jones found had lied under oath. A summary of the ruling is: Teaching intelligent design in public school biology classes violates the Establishment Clause of the First Amendment to the Constitution of the United States (and Article I, Section 3 of the Pennsylvania State Constitution) because intelligent design is not science and "cannot uncouple itself from its creationist, and thus religious, antecedents." PhACT is glad for this victory for science and are pleased to host Judge Jones at the Community College of Philadelphia.

Saturday, May 21, 2011 - Annual PhACT Banquet at Sorello Rose in Flourtown, PA. Thomas Beebee, Professor of Comparative Literature at Pennsylvania State University will discuss the **End of the World**, including the **End of the World** scheduled for that day. Should our meal begin with dessert?

Friday, March 11, 8:00 PM: Delaware Valley Mensa General Membership Meeting at the Police Administration Building, 750 Race Street, Philadelphia, PA. Please note: During the meeting, parking is allowed behind the building (despite the "Police Officers Only" notice) and IT IS FREE! This meeting is DVM's only activity specifically open to the public. Feel free to extend invitations to friends, neighbors, relatives, colleagues, jarheads, airheads, bubbleheads, and headbangers..

How did the Soviet Union acquire the secrets to the Atomic Bomb? Yes, we know the public story; the trial, the denial, and incrimination of the

Rosenbergs but is there more to this story? Is there a local Philadelphia connection to all this spy mystery? Allan Hornblum, a professor at Temple University and part of the Philadelphia's Sherriff's Office has researched this subject and has written about the infamous Philly spy, Harry Gold, the person who gave the secrets of the Atomic Bomb to the Soviets during WWII.

Mr. Hornblum is an accomplished author, having penned: *Acres of Skin* - Definitive study of the history of using American prisoners as test subjects for medical research; *Confessions of a Second Story Man* - History

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.

of Philadelphia's Mythic Irish Mob; and Sentenced To Science - First personal & graphic account of one man's experience as an imprisoned human guinea pig. Mr. Hornblum's books have received international attention including being featured on national news shows such as Good Morning America, the CBS Evening News, Court TV, the BBC, and Deutsche Welle. He is also one of the few authors to have his books earn coverage on the front pages of the New York Times and the Philadelphia Inquirer. The Invisible Harry Gold (Yale University Press, 2010) has received national media attention and been reviewed in the Wall Street Journal, the New York Times, the Washington Times, and the Weekly Standard.

You can learn more about Mr. Hornblum and The Man Who Gave the Soviets the Atom Bomb by browsing http://www.weeklystandard.com/articles/accidental-spy_519576.html.

Prior to the meeting, those who can, are invited to attend the pre-General Membership Meeting Dinner at a secret location someplace in the heart of "the City with a Million Eat'ries"'s very own Chinatown or Ol'City. This is an excellent opportunity to have a good meal and get to speak with the evening's guest, one on one. Contact Pete Stevens (215-235-pete) to reserve your place at dinner, by NOON on Friday.

Saturday, March 12, 1:30 p.m. - 3:00 p.m., followed by refreshments at National Science Foundation, Room 110, 4201 Wilson Blvd, Arlington, VA, (Near Ballston-Marymount University Metro), Enter NSF from the corner of N Stuart St & 9th St N

National Capital Area Skeptics (NCAS) Meeting

"Madison Avenue or Charles Darwin: Who Invented Beauty?"

Elisabeth Cornwell, Ph.D. - Executive Director of the U.S. branch of the Richard Dawkins Foundation for Reason and Science (RDFRS)

Is beauty created by Madison Avenue ad men (and women), or is beauty a human universal as evolutionary psychologists argue? If it is a human universal — why? What are the adaptive advantages to clear skin or a shapely figure? Are there signals specific to what women want as opposed to what men want? Why do men and women differ in what they find attractive? What do they find similarly attractive? By looking at humans through the Darwinian lens of sexual selection, you will never look at another advertisement the same way again.

Dr. R. Elisabeth 'Liz' Cornwell, Ph.D., is the first Executive Director of the U.S. branch of the Richard Dawkins Foundation for Reason and Science (RDFRS). An evolutionary psychologist, her research has examined the underlying mechanisms of human mate selection, looking at such factors as hormones, pheromones, aging, asymmetry, and facial features.

For more information, visit:

<http://www.ncas.org/2011/02/who-invented-beauty-madison-avenue-or.html>

Sunday, March 13, 2011 at 2pm at Laurel Hill Cemetery 3822 Ridge Avenue - Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

The Quick and the Dead: Early Transportation to Philadelphia's Final Destination

When 30,000 people a season visited Laurel Hill in the mid-1800s, they had many different travel choices: boat, train, carriage and streetcar. This tour will introduce you to the owners, builders, and inventors of all of these varied modes of transportation that made our nation unified. Philadelphia was a driving force as the industrial capital of the world, and transportation

was the key. Meet the Traction Twins: Mr. Elkins and Mr. Widener, among many others who contributed and profited through transportation.

Laurel Hill is one of Philadelphia's premier historic sites, and one of the only cemeteries in the United States to be honored as a National Historic Landmark, where countless people of both local and national fame are buried. Its natural beauty renders it a bucolic retreat nestled within the city's limits overlooking the Schuylkill River. The cemetery's beautiful green space is further complimented by the breathtaking art, sculpture and architecture that can be found here. \$15.00 general / \$12.00 members / \$10.00 seniors & students. Children under 12 are free.



Monday, March 14, 2011 at 6:00 p.m. at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106

Science on Tap is a monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation.

"**Living the High Life: Insights on the Private Lives of Giraffes**" This month, **Christine Bartos**, curator of ungulates and small mammals at the **Philadelphia Zoo**, will talk about some of the physical adaptations of giraffes. As the tallest mammals on earth, giraffes have certain advantages, such as reaching food that other species can't. So, how did giraffes reach such lofty heights? Find out how giraffes are moved, how to keep them healthy, and what their personalities are really like.

Presented by the American Philosophical Society (APS) Museum.

Free. Open to the public (age 21+ or accompanied by chaperone 25 years or older).

Monday, March 14, 2011 at 6:00 p.m.: Reception, 6:30 p.m. - 8:30:

Program and Exhibits. At The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103

www.ansp.org/environmental/

215-299-1108 cep@ansp.org

Energy Audits - Your Building's Return on Investments

Everybody's talking about reducing their energy costs, but where does a condo or co-op building start the process?

Featuring:

Patrick Bunn, Magrann Associates

Discussing the value of a "whole building" energy audit for condo communities and what opportunities may reveal for energy savings, enhanced health and comfort for residents, and strategies for improving capital improvements.

Robert Medlock, Vice President of Business Banking, M&T Bank

Securing financing for your building's green infrastructure improvements and projects

William Vinal, Sunburst Energy Systems

Only pay for the energy you use. MR. Vinal discusses how condo and co-op owners can reduce energy use and save money by installing wireless electric meters in their units.

Tom McHugh, President, Monitor Data Corporation

Addressing how you are billed when you have installed your own electricity meter.

To register, please visit: <http://condoenergyaudits.eventbrite.com/>

Presented in collaboration with the Green Condominium and Co-op Initiative

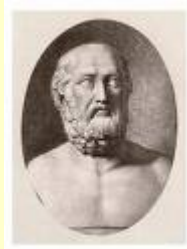
Wednesday, March 16, 2011 - 4:00 - 7:00 PM, Lecture at 5:30 PM at the Wagner Free Institute of Science, 1700 West Montgomery Avenue, Philadelphia, PA 19121

A New Formula: A Behind the Scenes Look at the Wagner's Building Conservation Plan

Presented by Architectural Conservators DOROTHY KROTZER and MARLENE GOEKE

Learn more about the intriguing field of architectural conservation, a profession that blends science, history, and design in order to understand why buildings deteriorate and what can be done to save them. Using the Wagner Free Institute's exhibit hall ceiling as a case study, this talk will focus on how conservators investigate historic buildings and the diagnostic

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.





Marlene Goeke surveys the Wagner Free Institute's exhibit hall ceiling.

tools they use in the field and laboratory to develop solutions for restoration projects.

Dorothy Krotzer is the Director of the Philadelphia office of Building Conservation Associates (BCA), a consulting firm that assists in all aspects of building restoration.

Marlene Goeke is a staff conservator at BCA and a recent graduate of the University of Pennsylvania's

Graduate Program in Historic Preservation.

The speakers led the recent Getty Foundation-funded study of the Wagner's plaster ceiling.

ph 215-763-6529 www.wagnerfreeinstitute.org

WEDNESDAY, MARCH 16, 2011 at 12noon 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

The Science Center: Rocking Philadelphia's Cradle of Eds, Meds, and Innovation

Established in 1963, the University City Science Center was the first, and continues to be one of the largest, urban research parks in the United States. What began as a collaboration among several local academic institutions has grown to include thirty-two colleges, universities and research institutions. Throughout its history, the Science Center has provided physical space and other resources to help commercialize new technologies and nurture new companies. Learn more about the past, present, and future of America's oldest, largest urban science research park.

Speaker: Stephen Tang, PhD, MBA

Dr. Tang became President and CEO of The University City Science Center in February 2008. A seasoned life science, energy technology, and management consulting executive, Dr. Tang previously served as group vice president and general manager with Olympus America Inc., as president and CEO of Millennium Cell Inc., as vice president of A.T. Kearney Inc., and as vice president and co-managing director of the global chemical and environmental practice for Gemini Consulting Inc. He has also served as the Assistant Director and Senior Research Engineer at the Lehigh University Center for Molecular Bioscience and Biotechnology. Dr. Tang earned a doctorate in Chemical Engineering from Lehigh University, an M.B.A. from the Wharton School of Business at the University of Pennsylvania, and a B.S. in Chemistry from the College of William and Mary.

Cost: \$10.00 includes lunch.

<http://www.eventbrite.com/event/1111439345>

Wednesday, March 16, 2011 at 7:00 PM Penn Science Café. At the MarBar, 40th and Walnut streets, 2nd floor of the Marathon Grill, menu items available for purchase. **Stealing the Past: Collectors and Museums of the 21st Century - Richard Leventhal, Curator, Penn Museum.**

What would people in the United States say if one day we woke up and found that the Liberty Bell had been stolen and was in a museum in another country? When asked to return the symbol of our country, the museum replied that it would be better cared for in their museum and therefore they would not return it.

Does this story sound outrageous? Stories similar to this can be found throughout the world as the global heritage is slowly being looted from archaeological sites and off the walls of churches and museums to feed the ever-growing appetite of collectors and museums from wealthy countries around the world.

Dr. Richard M. Leventhal, professor of Anthropology, curator of the American Section at Penn Museum, and former Williams Director of the

Penn Museum, is founder and director of the new Penn Cultural Heritage Center. The PCHC draws upon the expertise of the Museum's curators, researchers and students to educate diverse audiences, including law enforcement, customs officers, lawyers, policymakers, and academics involved in cultural property protection and issues-as well as community stakeholders and the general public.

Free and open to the Public. <http://www.upenn.edu/pennnews/sciencecafe>

Thursday, March 17 | 6:30 PM Philadelphia College of Physicians

The Kate Hurd-Mead Lecture, jointly sponsored by the Section on Medical History and the Legacy Center of Drexel University College of Medicine. Yvonne McEwen from the Center for the Study of the Two World Wars at the University of Edinburgh will speak on Lesions of the Will or Wounds of the Spirit?: Shellshock in Women in World War I. Ms. McEwen holds degrees in nursing and in history, and is a visiting scholar at the Legacy Center, which comprises the Archives and Special Collections on Women in Medicine.

Co-sponsored by the Section on Medical History and the Legacy Center of Drexel University College of Medicine

NOTE THAT THIS EVENT WILL TAKE PLACE AT THE EAST FALLS CAMPUS OF DREXEL UNIVERSITY COLLEGE OF MEDICINE, 2900 WEST QUEEN LANE, PHILADELPHIA. RSVP is requested: please contact Karen Ernst at the Legacy Center at 215-991-8340 or kernst@drexelmed.edu.

Thursday, March 17, 2011 - St. Patrick's Day

How Irish Dancing Started -

http://www.youtube.com/watch?v=m0rrLdWLu_0

Thursday, March 17, 2011 at 5:30pm. at Laurel Hill Cemetery 3822 Ridge Avenue - Philadelphia, PA19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

In Heaven There is No Beer...That is why We Drink it Here: St. Patrick's Day Tour & Toast

Though dead men tell no tales, there are two places that we can learn much about them: the wake-house and Laurel Hill Cemetery. Join us at the latter, as we celebrate St. Patrick's Day, while honoring the heritage and accomplishments of our proudest Irish souls, now gone to their final reward. 'Tis a festive occasion to be enjoyed by the living, for earth has no sorrows that heaven cannot heal! So, while we await healing, let us tip our hats, take our drinks, and expand our minds at Laurel Hill!

Afterwards, join us in our historic Gatehouse, where the beer will be plenty and the 'spirits' will be merry.

Advance Registration required. \$25.00 general / \$22.00 members / \$20.00 seniors & students

Friday, March 18, 2011 • Reception: 5:30 p.m. • Program: 6:00 p.m., at the American Philosophical Society, Benjamin Franklin Hall, 427 Chestnut Street, Philadelphia

Tories: Fighting for the King in America's First Civil War

Thomas B. Allen is the author of numerous history books, including *George Washington, Spymaster* and *Remember Valley Forge*. Allen is a contributor to *Smithsonian Magazine*, *National Geographic*, *Military History Quarterly*, *Naval History*, the *U.S. Naval Institute's Proceedings*, and other publications. He was named by the U.S. Naval Institute as 2004 Naval History Author of the Year "for the sustained high quality of his literary contributions to Naval History magazine." A surprising, insightful narrative, *TORIES* unearths little known information about Loyalists. New York City and Philadelphia were Tory strongholds throughout the Revolution; at times, Georgia and the Carolinas had more trained and armed Tories than British Redcoats; Lord Dunmore, a Virginia royal governor, offered freedom to any slave that joined the British fight, creating thousands of black Loyalists; Scottish Highlanders, though onetime foes of the British, fought for the crown in exchange for land grants; and William Franklin, son of Benjamin Franklin, led a brutal Tory guerrilla force that terrorized New Jersey.



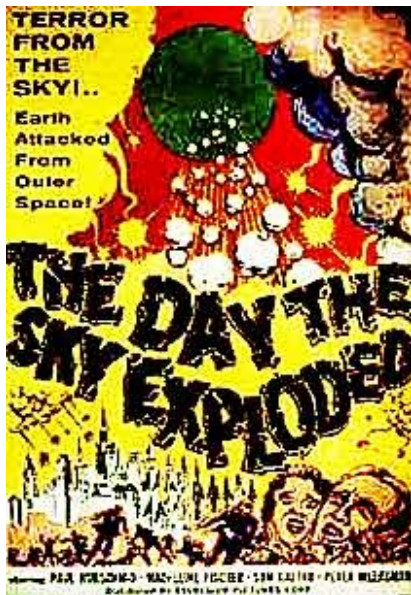
Free. To register: <http://www.amphilsoc.org/node/2517>

Friday, March 18, 2011 at 7:00 PM - Delaware Valley Amateur Astronomers in the Greater Plymouth Community Center, 2910 Jolly Rd, Plymouth Meeting, PA

Traveling with a Telescope - Lt. Col. Preston Smith

Free and open to the public. <http://dvaa.org>

Saturday, March 19, 2011 - Real Geology vs Hollywood Disaster Movies - PhACT Event. Professor Jon Nyquist, an environmental geophysicist at Temple University will be our speaker. See page 1 for more details. This event is FREE and open to the general public.



1958 poster for American release of the film

Saturday, March 19, 10 am – 4 pm (rain/snow date is March 26) -) at The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103.

Fossil Collecting Field Study

Join Ned Gilmore, collection manager of the Vertebrate Paleontology Department, as he takes you back in time 70 million years to the Late Cretaceous. Discover animals and plants that once lived in the primeval swamps and seas of our region by examining ancient sediments exposed from the diggings of the Chesapeake and Delaware Canal. Keep what you find!

(Scientifically significant specimens may be retained for the Academy's paleontology collections.)

\$35/members; \$40/non-members, Maximum of 20 participants, Call 215-299-1060 to register.

www.ansp.org/environmental/

Sunday, March 20, 2011 at 2 – 4 pm, Jazz Luncheon Presented by Regol Concerts: The Lenny Pierro Group

Featuring vocalist Katie Eagleson, Al Harrison trumpet, Lenny Pierro saxophone and arranger, Tom Lawton piano, Madison Rast bass, Grant MacAvoy drums.

All tickets \$12, \$10 for groups of 15 or more and \$5 for children under 12 Includes lunch. At Abington Presbyterian Church, 1082 Old York Road, Abington, PA 19001 (corner of Old York and Susquehanna Roads).

Awesome music, fabulous food! Make your reservations early for this late luncheon!

215.528.0582 www.regolconcerts.org

University of the Sciences Celebrates A Festival of American Music from March 21-27 Week-long festival features concerts, performances, and speakers

For more on this week-long celebration held from March 21-27, 2011, visit: www.usciences.edu/misherfestival

All events are free and open to the public unless noted.

Monday, March 21, 11:45 a.m. to 12:15 p.m., University of the Sciences (600 S. 43rd St., Philadelphia) Valley Forge Fife and Drum: A 30-minute parade performance by Valley Forge Fife and Drum. In case of rain, the band will play in the McNeil Science and Technology Center atrium.

Monday, March 21, 7 p.m., McNeil Science and Technology Center (45th St. at Woodland Ave.) American Musicals Faculty Recital: Faculty members sing well known and less heard selections from musical theatre and film. A light reception will follow.

Tuesday, March 22, 12:30 to 1:15 p.m., McNeil Science and Technology Center (45th St. at Woodland Ave.) American Chamber Music: Student Recital: Chamber groups from the Kingsessing Singers and Players present music from the American folk, spiritual, and art music idioms.

Tuesday, March 22, 7 to 9 p.m., Starbucks (42nd and Woodland Avenues) Coffeehouse/Open Mic Night at USciences' Starbucks: All are welcome at this open-mic event. Performers are encouraged to bring their favorite American music or your own compositions.

Wednesday, March 23, 1:30 to 3 p.m., McNeil Science and Technology Center (45th St. at Woodland Ave.) The Honors Colloquium Presents Pulitzer Prize and Grammy Award Winning Composer George Crumb: Joined by pianist Marcantonio Barone, George Crumb talks about his music and a career that has spanned over 65 years.

Thursday, March 24, 5 to 7 p.m., McNeil Science and Technology Center (45th St. at Woodland Ave.) Routes to Recovery and Philadelphia: Dr. Nick Spitzer will speak about the Routes to Recovery series, Philadelphia music explorations, and the role of representing community-based vernacular music and performance in public media. Reception to follow with a musical performance.

Friday, March 25, Noon to 1 p.m., McNeil Science and Technology Center (45th St. at Woodland Ave.) Native Nations Dance Theater: Native Nations showcases the joy and presence of Native American artists and culture in our communities.

Friday, March 25, 8 to 9:30 p.m., McNeil Science and Technology Center (45th St. at Woodland Ave.) Philadelphia Funk Authority: The Philadelphia Funk Authority prides itself on providing the ultimate party and dance experience, regardless of venue.

Tuesday, March 22, 2011 at noon to 1:00 PM. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

Brown Bag Lecture: "Pedagogy and Practicing at Medicine in Surgeon's Square, Edinburgh: Anatomy outside the Academy"

A talk by Carin Berkowitz

Although the surgeon-anatomist John Bell (1763–1820) was a popular teacher, he functioned not only outside, but also in direct opposition to, the Edinburgh medical establishment. This talk examines what it meant to practice anatomy in late 18th- and early 19th-century Edinburgh outside the university and without its sanction. Conflict with the establishment shaped Bell's teaching possibilities, and teaching was central to his ideas about developing anatomy as a science.

Bell attended lectures at the University of Edinburgh. He took classes there when the university's medical school was at its height, attending the lectures of Joseph Black, William Cullen, and Alexander Monro Secundus. Bell's was the very essence of a traditional education; yet after the university rejected his proposals to lecture on the application of anatomy to surgical practice, Bell set up his own school at Surgeon's Square in Edinburgh. At his private anatomy school he cemented his position as an outsider and entered into a number of conflicts with university faculty. As a result of a dispute with James Gregory, Bell was also eventually excluded

from the Royal Infirmary.

Although Bell continued to write and to practice after this, he closed his school. Practical dissection and experience—the practicing of medicine—only available through affiliation with the infirmary, were crucial to Bell's visions of medical science and medical pedagogy.

About the Speaker

Carin Berkowitz is associate director of the Beckman Center at CHF. She received her Ph.D. in science and technology studies from Cornell University in 2010, with a dissertation entitled "Medical Science as Pedagogy in Early Nineteenth-Century Britain: Charles Bell and the Politics of London Medical Reform." She was the recipient of the American Association for the History of Medicine's 2010 Shryock Medal and spent 2009–2010 as a Philadelphia Area Center for the History of Science writing fellow.

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

Tuesday, March 22, 2011 from 6:00 PM - 8:30 PM at the The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103

www.ansp.org/environmental/

215-299-1108 cep@ansp.org

Impacts of Marcellus Shale Drilling on Pennsylvania Agriculture

Drilling for natural gas in the Marcellus Shale formation has become one of the hottest environmental issues in the Commonwealth of Pennsylvania. We are presented with a new and potentially enormous energy resource right under our feet, but at the same time our state is faced with the possibility of new threats to environments and communities. Come hear a panel of experts for a new view of this complex issue. Free. To register:

<http://agricultureandmarcellus.eventbrite.com/>

Wednesday, March 23, 2011 - at 7:30 P.M. - at Broad Axe Tavern, 901 West Butler Pike, Ambler, PA 19002, **American Revolution Round Table of Philadelphia (ARRTOP)**

Kim Hanley appearing as Abigail Adams. <http://ahtheatre.org/america/home/abigail-adams> - This meeting is free and open to the public. <http://arrtop.com/>

Wednesday, March 23, 2011 Reception at 5:30, Program at 6:00 p.m. at the Library Company of Philadelphia, 1314 Locust Street, Philadelphia, PA 19107

"Technology Versus Art: The Early Daguerreotype's Confounding Status in Philadelphia, 1839-1845"

Sarah Gillespie, current William H. Helfand American Visual Culture Fellow at the Library Company, will discuss the initial reception of the daguerreotype in Philadelphia. The Library Company holds over 200 daguerreotypes, primarily produced in Philadelphia between 1840 and 1860. Many of these early photographs were recently on display in the Library Company's exhibition "Catching a Shadow: Daguerreotypes in Philadelphia, 1839-1860" and can now be seen in the online exhibition.

Free and open to the public. Please email lpropst@librarycompany.org or call 215.546.3181 to RSVP for this event.

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

Wednesday, March 23, 2011 at 6:30 PM - 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

The Foundations of Morality: Biology, Religion, Culture

In this exciting lecture, Francisco J. Ayala, University Professor and Donald Bren Professor of Biological Sciences at the University of California, Irvine, will outline what we currently know about the evolutionary history of humans for the last four million years, from bipedal but small-brained Australopithecus to modern Homo sapiens, our species, through the prolific tool-maker Homo habilis and the continent-wanderer Homo erectus. His talk will continue, identifying anatomical traits that distin-

guish human beings from other animals, and pointing out our two kinds of heredity, the biological and the cultural. Finally, he will explore ethical behavior as a model case of a distinctive human trait, and seek to ascertain the causal connections between human ethics and human biology.

Speaker: Francisco J. Ayala, University Professor and Donald Bren Professor of Biological Sciences at the University of California, Irvine FREE. To register: <http://ayala.eventbrite.com/>

Saturday, March 26, 2011 at 1:00 PM, Museum is open 12:00 to 4:00 PM, at the Wagner Free Institute of Science, 1700 West Montgomery Avenue, Philadelphia, PA 19121

Westbrook Lecture 2011 - "Adventures Among Ants"

Mark W. Moffett, Smithsonian Institution

Ecologist, entomologist, National Geographic photographer and intrepid world-traveler, Mark Moffett will discuss his research on ants from the Amazon to Borneo. Nicknamed "The Indiana Jones of Entomology" by the National Geographic Society, Dr. Moffett has traveled the globe studying

the mysterious world of ants, discovering new species and behaviors in the process. His talk will explore the many parallels between ant colonies and human societies.

Dr. Mark Moffett is a Research Associate in Entomology at the Smithsonian Institution. His work focuses on the ecology of forest canopies and the behavior of social insects. He studied under E.O. Wilson at Harvard University, and oversaw the world's largest ant collection at the Museum of Comparative Zoology. He is the author of 80 peer-reviewed publications and 3 books, including *Adventures Among Ants*, winner of the 2010 National Outdoor Book Award, and has appeared on the *Colbert Report* and *Late Night with Conan O'Brien*. Free. **ph 215-763-6529** www.wagnerfreeinstitute.org

Thursday, March 31, 2011 at 7:30PM - Bart D. Ehrman | "Forged: Writing in the Name of God—Why the Bible's Authors Are Not Who We Think They Are" at Free Library of Philadelphia, 1901 Vine Street, 19103. Bart D. Ehrman is the author of more than 20 books, including the New York Times bestsellers *Misquoting Jesus*, *God's Problem*, and *Jesus, Interrupted*. The James A.

Gray Distinguished Professor of Religious Studies at the University of North Carolina, Chapel Hill, Ehrman is a leading authority on the historical Jesus, early Christian apocrypha, the apostolic fathers, and the manuscript tradition of the New Testament. In *Forged*, Ehrman offers new, original research that reveals the contentious religious, political, and personal rivalries that shaped the form and content of the New Testament—and considers the evidence and implications of forgeries in the Bible. Cost: \$15 General Admission, \$7 Students

| <http://libraryphila.tix.com/Event.asp?Event=329967>

Sat. & Sun., April 2 & 3, 2011 - 10:00 - 4:00 PM - The 3rd Regiment Infantry United States Colored Troops Civil War Re-enactors will present programs of civil war history focusing on the contributions of Colored troops in the Civil War. This event will be at historic Fort Mifflin located at Fort Mifflin & Hog Island Roads near Philadelphia International Airport. Admission is free with the price of admission to the Fort.

For more information:

3rd Regiment: www.3rdusct.org

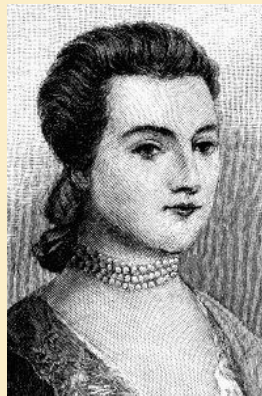
Fort Mifflin: www.fortmifflin.us

Saturday, April 2, 2011 at Noon at Cedar Hill Cemetery, Frankford Ave. Philadelphia

General George G. Meade Society

Re-Dedication of the repaired monument to Col. Edwin Glenn, commander of the 198th P.V. 6th Union League Regiment, Killed in Action at the Battle of Five Forks, Va. April 1, 1861. Sponsored by the Civil War Round Table of the Union League of Philadelphia. Union military and civilian reenactors, heritage and veterans' groups and the public are Welcome!

Abigail Adams (1744 - 1818)
Illustration from Harper's
New Monthly Magazine,
(March 1884)



Tuesday, April 5, 2011 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

For this year's annual Robert L. Sadoff, MD, FCPP Lecture, Eileen Biernat, author and psychologist from St. Paul, Minnesota, will discuss her latest publication *Stalking Mary*. The book explores the unhealthy, decade-long fixation that Ming Sen Shiue had with his high school algebra teacher, Mary Stauffer. Shiue's obsession ultimately came to a head in a violent conclusion that took Minnesota headlines by storm some thirty years ago. Join Biernat as she takes an in-depth look at this case study, examining the many facets of stalking and the dangers it presents.

Speaker: Eileen Biernat, author of the book, *Stalking Mary*

Free. To register: <http://sadoff.eventbrite.com/>

Saturday, April 9, 2011

General George G. Meade Society

Annual Grand Army Museum Preservation Dinner

at Cannstatter Volksfest Verein, 9130 Academy Rd. Phila., PA 19114 (215) 332-0121

11am open for book browsing, and signings;

12 noon cocktails;

1pm luncheon

2pm presentation: "**Birth of the Army of the Potomac**" by noted historian: Jeffry Wert, Presentation of the 'Grand Army Award' for preservation efforts, Fundraiser raffle of prints; door prizes; books; sutlers; entertainment; fun!

Cost: \$40 per person - \$75 per couple. Choice of Beef, Chicken, or Salmon

To reserve contact: garmuslib@verizon.net; or call: 215-289-6484

Deadline: April 2, 2011!

Saturday & Sunday, April 9 & 10, 2011

Northeast Conference on Science & Skepticism 2011

The third annual Northeast Conference on Science & Skepticism (NECSS – pronounced "nexus") will be at the Baruch Performing Arts Center in Manhattan. As its name suggests, NECSS explores the intersection of science, skepticism, the media, and society for the purpose of promoting a more rational world. Scheduled speakers include Eugenie C. Scott, Phil Plait, Steve Novella, John Allen Paulos, and many more. For more information, visit <http://www.necsscon.org/>

April 12–13, 1861) - The Battle of Fort Sumter - the bombardment and surrender of Fort Sumter, near Charleston, South Carolina, started the American Civil War.

Wednesday, April 13, 2011 at 7:30 PM - Rittenhouse Astronomical Society Monthly Meeting. At the Franklin Institute, Free.

www.rittenhouseastronomicalsociety.org

Thursday, April 14, 2011 5:30 PM - 7:30 PM at APS Museum in Philosophical Hall, 104 South 5th St. - Rose Is a Rose Is a Rose. . . Or Is It? If Empress Josephine Met Gertrude Stein

Roses exotic and roses erotic; roses botanical and roses theoretical.

A girl named Rose who became Napoleon's wife and Empress of France.

A famous American expatriate in Paris who called Alice B. Toklas her Rose.

This program will include lively presentations and discussion between rosarian Stephen Scaniello and modernist scholar Barbara Will (Dartmouth College). It will be moderated by APS Museum Director Sue Ann Prince, who curated the museum's exhibition *Of Elephants and Roses: Encounters with French Natural History, 1790-1830* (opening March 25, 2011).

In the early 19th century, Empress Josephine cultivated 250 varieties of roses at her Malmaison estate, and the rose soon became a symbol of

love. One hundred years later, modernist expatriate Gertrude Stein declared, "Rose is a rose is a rose." Her resonant repetition referred to Alice B. Toklas, upended the romantic rose, and offered up an icon of avant-garde modernism.

What a rose was to Josephine was decidedly not what a rose was to Gertrude.

Program:

5:30-6:30: Preview and curatorial tour of *Of Elephants and Roses*, including famed artist J.-P. Redouté's watercolors on vellum and his illustrations in *Les Roses* inspired by Josephine's roses at Malmaison

6:30-7:30: Presentations and discussion

The program is part of the Philadelphia Festival for the Arts (PIFA 2011) and is co-sponsored by Wyck Historic House and Gardens, site of the oldest rose garden in America and home to many of the roses loved by the Empress Josephine.

Free. <http://www.amphilsoc.org/>

Friday, April 15, 2:00 – 5:45 p.m., followed by a reception at the Library Company of Philadelphia, 1314 Locust Street, Philadelphia, PA 19107. "Motives of Honor, Pleasure, and Profit: Plantation Management in the Colonial Chesapeake, 1607-1765"

Join us for the Tenth Annual Conference of the Program in Early American Economy and Society that will be devoted to an exploration of this recent book by historian Lorena Walsh. This conference is free and open to the public but pre-registration is required. Please visit our events page at www.librarycompany.org/events or call 215.546.3181 to learn more and to register.

Saturday, April 16, 2011 8:00 am - 2:00 pm

The General George B. Meade Society

CALL TO ARMS!

Philadelphia Commemoration of the First Volunteers to the Front. Parade, Grand Review, Living History and Ceremonies.

All Union military and civilian reenactors and Heritage groups are welcome to participate in the launch event for the Sesquicentennial. NO Fee. Advance registration required. Mounted cavalry encouraged. Be a part of history! Philadelphia launches its Civil War 150 commemorations and salutes the city's response to President Lincoln's first call for volunteers with a march that re-creates the original route past historic Independence

Hall and through the nineteenth-century city. Further details and online registration: <http://www.civilwarphilly.net/parade/> Report to free and supervised parking area at Broad & Washington in Center City by 8:00am. Shuttle buses to Parade formation at National Constitution Center at 9:00am. Parade steps off at 10:00am. Living History at Broad & Washington, followed by reception/tours at the Union League. Co-sponsored by the Civil War History Consortium and Union League of Philadelphia.

Questions: parade@civilwarphilly.net; call 215 563 6500 x6461

Wednesday, April 13, 2011 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

The History of Childbirth

Speaker: Randi Hutter Epstein, MD is a medical writer and adjunct professor at The Graduate School of Journalism, Columbia University and the managing editor of the *Yale Journal for Humanities in Medicine*. *Get Me Out: A History of Childbirth from the Garden of Eden to the Sperm Bank* is her first book.

Free. To register: <http://www.eventbrite.com/event/1179763705>

Wednesday, April 20, 2011 at 12 noon, 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



**Empress Joséphine Bonaparte
(23 June 1763 – 29 May 1814)**

Islam and the West

Islam is a global factor with which the West must contend. What are the bases of the faith? What exactly does it say about jihad, women, and tolerance? How does it differ from Christianity and Judaism? Why is it such a contentious issue in Europe? Why is the impact of Islam in Europe different from that in the United States? What is the portent for the West? How should the West respond to Islam? These and other issues will be addressed in this topical and engrossing talk.

Speaker: Buntzie Ellis Churchill

Buntzie Ellis Churchill served for twenty-three years as President of the World Affairs Council of Philadelphia. In this capacity, she hosted dozens of world leaders, from Mikhail Gorbachev and Margaret Thatcher to Henry Kissinger and Colin Powell. A member of the Council on Foreign Relations, Mrs. Churchill has also served as a trustee of many non-profit organizations, including the Pennsylvania Institute of Technology and Drexel University. For a decade she hosted a daily radio show, WorldViews, interviewing experts on international issues. In 2009 she co-authored (with the doyen of Middle East studies, Bernard Lewis) the book *Islam: The Religion and the People*. She has been awarded several honorary doctorates.

Cost: \$10.00 includes lunch.

<http://www.eventbrite.com/event/1111471441>

Wednesday, April 20, 2011 at 7:00 PM - Penn Science Cafe - At the MarBar, 40th and Walnut streets, 2nd floor of the Marathon Grill, menu items available for purchase - **From Barbershops to Basketball Courts: Culturally Relevant Interventions in the African American Community** - **Howard Stevenson, Associate Professor of Applied Psychology, Graduate School of Education**

Dr. Stevenson's research and consultation work identify cultural strengths that exist within families and seek to integrate those strengths into interventions to improve the psychological adjustment of children and adolescents and families.

Free and open to the Public. <http://www.upenn.edu/pennnews/sciencecafe>

Thursday, April 21, 2011 at 7:30PM Elijah Anderson | The Cosmopolitan Canopy: Race and Civility in Everyday Life, at the Free Library of Philadelphia, 1901 Vine Street, 19103 - Acclaimed sociologist Elijah Anderson has been called "one of our best urban ethnographers" by the New York Times Book Review. Formerly the Charles and William L. Day Distinguished Professor of the Social Sciences at the University of Pennsylvania, Anderson is currently the William K. Lanman, Jr. Professor of Sociology at Yale University. He is the author of *Code of the Street* and *Streetwise*, two compelling books about life in America's inner-cities based on research completed in Philadelphia. In *The Cosmopolitan Canopy*, Philadelphia is the setting for Anderson's investigation of the complex interplay of urban social nexuses—like Rittenhouse Square, Reading Terminal Market, and 30th Street Station—that he dubs "cosmopolitan canopies." FREE. No tickets required. For Info: 215-567-4341.

Saturday, April 23, 2011 - Judge John E. Jones III, presiding judge at the *Kitzmiller v. Dover Area School District* trial concerning the teaching of Creationism in the public schools, will be the **PhACT** speaker.

Wednesday, April 27, 2011 - at 7:30 P.M. - at Broad Axe Tavern, 901 West Butler Pike, Ambler, PA 19002, American Revolution Round Table of Philadelphia (ARRTOP) Todd Braisted on Loyalists - This meeting is free and open to the public. <http://arrtop.com/>

Thursday, April 28, 2011 from 6:00 PM - 8:30 PM at the The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103

www.ansp.org/environmental/
215-299-1108 cep@ansp.org

Innovative Agriculture for the 21st Century

Modern agriculture techniques have given us unprecedented amounts of food. However, critics note the large amounts of water, energy, and chemi-

cals required for these yields have uncertain impacts on long-term soil fertility and the health of both humans and the environment.

Some growers are working to address these issues by practicing cutting-edge techniques that incorporate ecological principles. Join us as local experts discuss organic and sustainable agriculture, the comprehensive technique known as permaculture, and growing trends in urban agriculture.

To register, please visit: <http://innovativeagriculture.eventbrite.com/>

April 29, 30, May 1 2011 at NESHAMINY STATE PARK, BENSALEM, PENNSYLVANIA, Near Street Road Exit of I-95

22nd Annual Neshaminy Civil War Reenactment LIVING HISTORY & BATTLE REENACTMENT

Portraying: the Battles of Bolivar Heights & Ball's Bluff - 'War on the Upper Potomac' October, 1861

Camps open 9AM - Battles at 2:00PM on Saturday and 1:30PM on Sunday
* Many authentic military and civilian reenactors are expected;

* Visit both Union and Confederate camps where troops will demonstrate military and camp scenes and discuss aspects of Civil War history

* See troops drilling, mounted cavalry, artillery

* Living history presentations, period music;

* Sutlers tent village selling period items, jewelry, crafts, military items, souvenirs etc.

* Food vendors plus picnic facilities

* Parking lots close to all of the action

* Fun and educational for every member of the family;

* Free Admission and Free Parking!

<http://www.dcnr.state.pa.us/stateparks/parks/neshaminy.aspx>

Registration: www.28pvi.org

Co-sponsored by: The 28th PA Regiment, the Army of Northern Virginia, The Historical Society of Bensalem Township, The Grand Army of the Republic Civil War Museum & Library, the Delaware Valley Civil War Round Table, Neshaminy State Park, and Waste Management, Inc. Information: call 610-809-6540 or e-mail:

KGC28PVI@COMCAST.NET

Wednesday, May 11, 2011 at 7:30 PM - Rittenhouse Astronomical Society Monthly Meeting. At the Franklin Institute, Free.

www.rittenhouseastronomicalsociety.org

Thursday, May 12, 2011 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

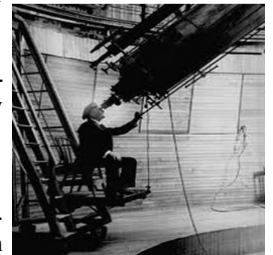
POX: An American History, a talk by author Michael Willrich

Historian Michael Willrich discusses his book *POX: An American History* (The Penguin Press; March 31, 2011), which offers a gripping chronicle of how the nation's continent-wide fight against smallpox in the early 1900s launched one of the most important civil liberties struggles of the twentieth century. Willrich explores the intersection of public health initiatives and private medical decisions as well as the polarizing debate about the morality, ethics, safety, and effectiveness of vaccines.

In *POX: An American History*, Willrich suggests that many of the questions first raised by the Progressive-era antivaccination movement are still with us today as we consider the federal government's role in ensuring access to health care: How far should the government go to protect us? What happens when the interests of public health collide with religious beliefs and personal conscience?

Willrich explores the government's response to the deadly smallpox epidemic at the dawn of the activist progressive era and during a moment of great optimism about modern medicine. The measures enacted to contain the disease—quarantines, pesthouses, and "virus squads"—sparked a wave of popular resistance among Americans who perceived them as a threat to their health and to their rights.

Free. To register: <http://pox.eventbrite.com/>



Wednesday, May 18, 2011 at 7:00 PM Penn Science Cafe -At the MarBar, 40th and Walnut streets, 2nd floor of the Marathon Grill, menu items available for purchase - **Neuroeconomics: Decision Making and the Brain** - **Joe Kable, Associate Professor of Psychology**

Recent discoveries are shedding light on the neural mechanisms that underlie decisions. Kable, a social neuroscientist who studies decision-making, will discuss the new field of neuroeconomics and how neuroscience informs work in economics and marketing, and at a practical level how neuroscience is being used in business. Kable's research seeks to understand how people make decisions, and in tracing out the underlying psychological and neural mechanisms of choice. His laboratory draws on methods and ideas from social and cognitive neuroscience, experimental economics, and personality psychology.

Free and open to the Public. <http://www.upenn.edu/pennnews/sciencecafe>

Saturday, May 21, 2011 The **End of the World** will occur again at approximately 6:58 PM.

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

Sunday May 22, 2011 at 10:00 AM. Meet at the gatehouse of Laurel Hill Cemetery, 3822 Ridge Avenue, in Philadelphia

Gravesite placement of veterans' flags at Laurel Hill Cemetery

The group assembled will place US flags on the graves of veterans' of all wars. As time and manpower permit, the cemeteries to be covered include Laurel Hill, Mt. Moriah, Mt. Peace & St. James the Less. Refreshments and lunch provided. All welcome! 215-228-8200

Monday, May 23, 2011 from 6:00 PM - 8:30 PM at the The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103

www.ansp.org/environmental/
215-299-1108 cep@ansp.org

Local Food - Safe Food: Bringing it to Market

Many people support the idea of purchasing local, sustainably grown food, but the current system for distributing and regulating food production makes it difficult for local growers to get their products out to the public. Safety regulations, in particular, are designed to protect the public from issues in large-scale industrial food production, and in many cases do not address the issues of local, sustainable food.

In this program we will hear from experts in agriculture, health, and food policy to determine the best way to increase availability of local food while still ensuring consumer safety.

Free. To register, please visit:

<http://www.localfoodsafeeventbrite.com>

Wednesday, May 25, 2011 - at 7:30 P.M. - at Broad Axe Tavern, 901 West Butler Pike, Ambler, PA 19002, American Revolution Round Table of Philadelphia (ARRTOP) J. Kevin Graffagnino, Director of the William L. Clements Library at the University of Michigan. He will speak on "**The Quotable Ethan Allen.**" Leader of the Green Mountain Boys, hero of Ticonderoga, defender of independent Vermont, and the New England frontier's version of Daniel Boone or Davy Crockett, Ethan Allen was also a prolific and passionate writer. Based on his 2005 book with H. Nicholas Muller III, *The Quotable Ethan Allen*, Kevin Graffagnino's lecture offers a representative selection of Ethan's fiery rhetoric on the Yankee v. Yorker struggle for control of Vermont, the American Revolution, theology, the rights of man, and other subjects that attracted his attention. Anyone who's encountered Ethan Allen in early American history will enjoy this encounter with Ethan in his own words. - This meeting is free and open to the public. <http://arrtop.com/>

Sunday, May 29, 2011. at 12 noon at Historic Laurel Hill Cemetery, 3822 Ridge Ave. Philadelphia.

Annual Memorial Day Observed Recreating Original G.A.R. Decoration Day Service of 1868:

The traditional Decoration Day service of the Grand Army Meade Post #1 will be recreated at Historic Laurel Hill Cemetery, All are welcome to attend and participate in the ceremony.

Laurel Hill is the site of the first Memorial Day Observance in Philadelphia on this date in 1868. Special bronze veterans' markers will be dedicated at the graves of veterans. Speakers, ceremonies and pageant will highlight this special ceremony. Afterwards the entourage will gather at the grave of General Meade, hero of Gettysburg to perform the traditional service to honor all veterans who fell defending the Nation. Wreath-laying, speeches, music and honor guards will enhance the ceremony. Historical groups, veterans, and citizens are urged to participate. Wreaths, military contingents, color guards, music and period civilians are encouraged to participate.

Refreshments served after the ceremony. Tours of the historic cemetery available.

Co-sponsored by the General Meade Society of Philadelphia; Friends of Laurel Hill; American Legion Post #405; Post #1 Society, Union League; Anna M. Ross Camp #1, Sons of Union Veterans. For information, call: 215-228-8200

Wednesday, June 8, 2011 at 7:30 PM - Rittenhouse Astronomical Society Monthly Meeting. At the Franklin Institute, Free.

www.rittenhouseastronomicalsociety.org

August 19 – 20 - 21 2011

'Battle of Belmont Plateau' - Civil War Reenactment

LIVING HISTORY & BATTLE REENACTMENT – Commemoration of the 150th Anniversary of the Civil War Belmont Grove, West Fairmount Park, Philadelphia, PA
Portraying: Authentic Civil War Battles and 'Living History featuring Philadelphia's participation

Camps open daily at 9AM - Battles at 1:30PM on Saturday and Sunday

- * Many authentic military and civilian reenactors are expected;
- * Visit both Union and Confederate camps where troops will demonstrate camp life and discuss aspects of Civil War history and military topics;
- * See troops drilling, mounted cavalry, artillery
- * Living history presentations, period music;
- * Sutlers tent village selling period items, jewelry, crafts, military items, souvenirs etc.
- * Food vendors plus picnic facilities
- * Parking lots close to all of the action
- * Fun and educational for every member of the family;
- * Free Admission and Free Parking!

Near Exit off I-76 Schuylkill Expressway

Directions to Belmont Plateau and Belmont Grove Camp area in West Fairmount Park:

<http://www.epru.org/news/directions.php?d=40>

Further details and online registration: <http://www.civilwarphilly.net/reenactment>

Questions: reenactment@civilwarphilly.net or call 215 563 6500 x6461
Co-sponsored by the Philadelphia Civil War Consortium and Union League of Philadelphia.



Ethan Allen
(1737 - 1789)



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:
PhACT
639 W. Ellet Street
Philadelphia, PA 19119

Name: _____

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Prizes awarded in 2011	= \$ 500.00
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Please donate. Small contributions are preferred and donations in excess of the 2011 goal will be applied to the 2012 Prize Fund or some other youth science education project not yet determined.

ALL money collected for this project will be used for student prizes. PhACT members and others are invited to participate as judges. Contact Eric Krieg for more information: erickrieg@verizon.net

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