

Phactum

"Mind, like parachute, only function when open. "

~ Charlie Chan

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

April 2013

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Come to the Philadelphia Science Festival with PhACT

Our April Meeting will be at the Franklin Institute and our special guest will be

James "The Amazing" Randi

Saturday, April 20, 2013 at 11:00 AM to 1:00 PM

This event is Free and Open to the Public but you must register at:

<http://www.philasciencefestival.org/event/79-science-pseudoscience-and-nonsense-a-clarification-by-james-randi>

More information on Pages 2 and 3

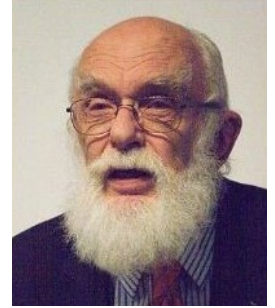
"Do not expect to arrive at certainty in every subject which you pursue. There are a hundred things wherein we mortals. . . must be content with probability, where our best light and reasoning will reach no farther."

~Isaac Watts~(1674-1748), English hymnwriter, theologian and logician.



2013 Philadelphia Science Festival April 18 – April 28

PhACT's contribution to the
2013 Philadelphia Science Festival will be,
in partnership with the Franklin Institute, to host
James "The Amazing" Randi
who will present a program of science and magic to
mystify, amuse, and to educate.

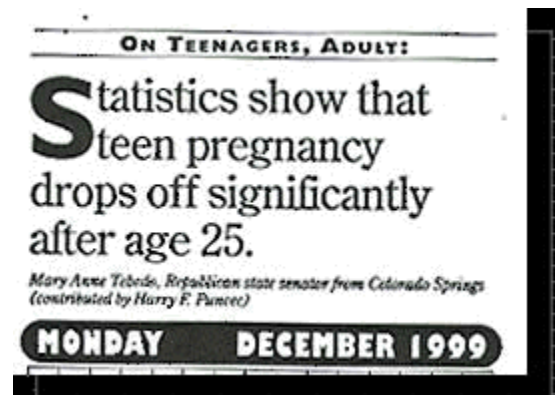


At the Franklin Institute
Saturday, April 20, 2013 at 11:00 AM to 1:00 PM
Free and open to the Public. Seating is limited.

James "the Amazing" Randi has an international reputation as a magician and escape artist, but today he is best known as the world's most tireless investigator and demystifier of paranormal and pseudoscientific claims. He has received numerous awards and recognitions, including a Fellowship from the John D. and Catherine T. MacArthur Foundation and a one-hour PBS NOVA special on Randi's major investigations. He is the author of numerous books, including *The Truth About Uri Geller*, *The Faith Healers*, *Flim-Flam!*, and *An Encyclopedia of Claims, Frauds, and Hoaxes of the Occult and Supernatural*. His lectures and television appearances have delighted – and vexed – audiences around the world. In 1996, the James Randi Education Foundation was established to further Randi's work. Randi's long-standing challenge to psychics now stands as a \$1,000,000 prize administered by the Foundation. It remains unclaimed.

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**The Philadelphia Association for Critical Thinking
in partnership with the Franklin Institute
Invites You
To a science oriented lecture by:
The Amazing James Randi
Who will also Create Illusions that Amuse and Astound**



Artist: Amy Davis Roth

surlyramics.com

**At the Franklin Institute,
20th and Benjamin Franklin Parkway
Saturday, April 20, 2013 at 11:00 AM to 1:00 PM
Free and open to the Public. Seating is limited.**

PhACT Expedition to the Heinz NWR

Saturday, May 18, 2013

Elusive, bi-pedal, ape-like creatures have been reported from every state except Hawaii. Bigfoot in the Pacific Northwest, the Fouke Monster in Arkansas, Momo in Missouri, Florida has its Skunk Ape and at the Heinz National Wildlife Refuge we have the Ape Boy of the Chester Swamps. You are invited to join PhACT for an expedition to Heinz where we will be searching for the Ape Boy, a half-ape, half-human cryptid with thick red fur who is said to be lurking somewhere in the refuge. Our

guide will be Don Nigroni who has hiked, biked, and kayaked there for many years and is a volunteer Weed Warrior at Heinz. In the 21st century, due to an improved environment, new wildlife has been appearing in this urban refuge, including nesting bald eagles, the North American beaver and the North American river otter. Accompanying our expedition will be Jeff Cooney and Robb Kerr, Weed Warrior trainers at



View of Philadelphia from the wetlands at John Heinz National Wildlife Refuge at Tinicum



A trail follows Darby Creek at John Heinz National Wildlife Refuge at Tinicum in Philadelphia. Photo by Heather Jerue, USFWS

Heinz who will be providing zoological and botanical information about the site, and professional photographer Ned Levi, who will be photo-documenting the day's activities. We will meet at the Visitor Center at 10:00 AM and will be hiking 3.3 miles around the impoundment. We may not find the Ape Boy but we will learn about the rich history and natural history of this urban wildlife refuge. Bring insect repellent, sturdy shoes, lunch, binoculars, and a camera. The event is free and open to the public. For more information see: <http://www.fws.gov/heinz/welcome.htm>



Some residents of John Heinz National Wildlife Refuge - Photo by Bill Buchanan/USFWS



© 2012 Martin Dellwo

North American river otter spotted in the impoundment at the Heinz NWR on June 10, 2012. Photo by Martin Dellwo.

In the 21st century, new wildlife has been appearing at the Heinz NWR, including nesting bald eagles, the American beaver and the northern river otter. Here is incontrovertible photographic evidence of such (otter slide, stripped bark, eagles nest) taken March 20, 2013 by Don Nigrone.



North American river otter slide leading into the impoundment at the Heinz NWR. Photo taken by Don Nigrone on March 20, 2013



Bark stripped by the North American beaver near Hoy's Pond at the Heinz NWR. Photo taken by Don Nigrone on March 20, 2013



Bald eagle's nest on Oak Island in the impoundment at the Heinz NWR. Photo taken by Don Nigrone on March 20, 2013.



Tree about to be felled by the North American beaver near Hoy's Pond at the Heinz NWR. Photo taken by Don Nigrone on March 20, 2013.



Adult bald eagle on the nest. Photo taken by Don Nigrone on March 20, 2013

Letters to the Editor

Editor: Re the resurgence of information on gambling in Phactum.

I propose that someone take up the mantle of submitting articles outlining all the reasons that alcohol should be banned in this country. Statistics can be stated regarding the negative impact of alcohol as it spread through areas where it formerly wasn't available. Tales could be told about households with promise and love that were destroyed by the availability of alcohol etc. These articles could show up in every Phactum for more than a year until the hue and cry against the topic having nothing to do with investigating false claims of science so overwhelms the editor, that he informs the submitter of the onslaught that such articles don't belong in Phactum and will no longer be published.

Then a suitable amount of time can pass and that person can submit another round of stuff on alcoholism and it will be published again.

Alfred Erpel
Doylestown, PA

Editor: Today I was reading something on Wikipedia, and decided to click "Random article" a few times, something I've done in the past, though not for a while. On I think it was the fourth click I got to the "Mutiny on the Bounty" page. What are the chances of that, like, a million to one or something? Actually, yes: There are more than 4,110,000 articles in the English-language Wikipedia; if you do the math, you can figure out that the chances against getting to that page in the first four random pages are at least 1,027,501 to 1. So this occurrence would really be most astonishing—if I had set out to see if I could reach the "Mutiny on the Bounty" page within four random pages. But of course I didn't, and although the chances of getting to any particular page are greater than a million to one, the chances of getting

to some page are, of course, 100%.

But wait—after a few letters from me in Phactum about all the freaky coincidences (or not?) that happen to me, the chances against my getting to a Wikipedia article about something recently discussed by me in Phactum have still got to be pretty high. It didn't need to be the "Mutiny on the Bounty" page—it could have been, say, the "Evolution" page or "Yogi Berra" page or "Czech Republic" page—but the list of relevant pages is still relatively short, and the likelihood of my getting to one of them still very, very low. (Because, among other things, "relevant" in this context is somewhat imprecise, exact odds can't be given.)

From the "Mutiny on the Bounty" page, the next four clicks got me to the "KCBL", "Avi Shlaim", "Tim Beck (American football, born 1966)", and "Martin James Bartlett" pages—none of which are close in any meaningful sense to being a "hit". That's more like what's to be expected.

Howard J. Wilk
Philadelphia

Editor: I read in several skeptic articles the dislike of Karl Popper's falsifiability condition for any real theory. I also read that some people do not like the falsifiable condition. Because of Popper's such specific condition, they argue, he denies ad hoc theories as realistic and denies them authentically scientific credibility. Ad Hoc-kians consider ad hoc's as good as any other theory and do not need to "satisfy" falsifiability conditions. Falsifiability, they argue, is harsh &/or actually uselessly harmful.

Ad-hoc-kians argue: Are not ALL theories ad hoc? They are thought up for various circumstances in the first place, aren't they? The reply from some others might be: (1) They are ok until they do not work and are revised, modified, reworked, tossed, &/or stopped being worked on. (2) Or, they are ok until those working on the theory/hypothesis stop bothering to do the WORK and begin to simply believe, &, so, stop WORKING-as-science-demands they actually WORK.

NOT ALL theories are falsifiable. Tautologies and mere beliefs are two easy targets for examples. If theorists simply believe the world is round, ad-hoc-kianly, then the world's irregularities become the falsifiables, as that would be the automatically ad-hoc-kian solution, and we'd get circles within circles or worse.

If ad-hoc-kian theorists do not critique the as-hoc-kianisms, by considering the negatives &, by logic, work out the consequences, they just aint doing the science, and aint doing the work... They be doing the fraud, the non-science, and the non-sense.

Consider the very words theory, hypothesis, and belief. Psychotics I have known are very logical and very exacting. To an extreme. They insist that since "theories" and "hypotheses" are "just" "educated guesses" that then they are no better than "informed beliefs". They are NOT WRONG. (But the ad-hoc-kians are wrong if they were to insist they are.) The psychotic "scientists" of the "informed beliefs"

Fletcher Christian (1764-1793), the leader of the *Bounty* mutineers supposedly looked like this portrait ... never



mind the artist only had a short description from Captain Bligh ... "5ft 9in tall, with a very dark-brown complexion, dark brown hair, bow-legged, subject to violent sweating, nervous, of a pleasing countenance, commanding and with a star

tattooed on his right breast." Christian bears little resemblance to Mel Gibson, Clark Gable, or Marlon Brando and certainly not like dashing Errol Flynn. Perhaps a Wikipedia random pick on one of those actors would qualify as a "hit", the odds being much improved.

absolutely agree with the ad-hoc-kians that all theories are ad hoc. By that they mean the “theory of evolution” and the “theory of relativity” and the “theory of anything else” as “therefore” no better, nor worse, than the “educated belief” and the “informed belief”, and the psychotic no-we-do-not-say-insane-anymore alternative realities. As so put, they are NOT WRONG.

There is the further notion that the universe “can” “come” “from” “nothing”, as I read in some of the, related to the foregoing, skeptic articles. There are articles about just “how” the universe comes from nothing versus the religious & anti-science-but-not-religious arguments toward the very same thing. I can not intelligently summarize the debate. It is nonsense. As Madeleine Murray O’Hare unconditionally indicated, in one of her more lucid moments, you can not intelligently, nor successfully, argue the non-science/non-senses of the religious for you end up on their turf and are forced to use their terms and that means their terminology: you HAVE to argue otherwise on turf that is not theirs. On the psychotic’s turf the psychotics & their terminological exactitudes will destroy the skeptic.

There is no such thing nor can there be a “nothing” from which “something” can “come”. Such talk by skeptics & scientists in debates with higher-power-ists, &c, is useless and, as psychotics know, useful only to justify “nothingness” as a “reality”: for otherwise, they accurately measure it, why are the skeptics/scientists even talking about it? They then say aloud “AH-HA, GOTCHA”, & then say “therefore” “nothingness” is “real” and thereby the psychotics are demonstrated & shown to be absolutely NOT WRONG.

The skeptic/scientist espousing the very idea of “the universe” as a “closed system” equating, eventually a universal

lot of nothing, or, that the sum total of everything, ultimately, is zero, are just the things psychotics dream of as the very “proof” of the higher-powerfuls and other-than-realities.

Socrates used to use the then old joke that “I know nothing”. He knew the notion of some absolute nothingness to be, back then, as (1) absurd talk, (2) a useless tautology, (3) a logical paradox, or (4) a self-contradiction, depending. Nothing “exists” only if we play games. Socrates knew nothing because he actually meant, as it was then generally understood, that he knew something, in this case at least nothing, which was then seen as something which exists, not not-exist. This is so simply because absolute nothing yields absolutely nothing to talk about!!! So how can such be debated and how can skeptics/scientists debate such with psychotics/higher-powerists- and-other-ad-hoc-kians? Socrates joke was so old in his time that they would modernly utter “DUH?!” in derision to our modern nothingness debates.

Mitchell Brown
Holmes, Pennsylvania

Fellow critical thinkers:

Perhaps you can help me solve a mystery. Last month (February 2013) I got the letter described below. I’ve changed the sender’s name and return address except that I didn’t change the sender’s last name—Howard—which might be significant.

My name and address and the sender’s name and address are hand-printed in blue ink on an ordinary white envelope. It’s not a No. 10 business envelope but the one that’s smaller (I don’t know the number) that’s often used for personal correspondence. There’s a “forever” first-class stuck-on-paper stamp on the envelope but it looks like it was run through a



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The advertisement features several ceramic jewelry items with various designs: a star, a brain, a tree, a rocket, a globe, a brain with the word "THINK", a brain with the word "Use.", a brain with the word "QUESTION EVERYTHING", a brain with the word "NERDY to me.", a brain with the word "LEARN Something New Every Day.", a brain with the word "Hypothesis", a brain with the word "The Scientific Method", a brain with the word "Data (results)", a brain with the word "Experiment", and a brain with the word "Conditions".

postage meter; it's black and white with a 2D barcode but with no stamp "artwork".

The letter is from
D. Howard
603 Toro Dr
Chattanooga TN 37416

Inside there are five coupons, all the same. Abbreviated a little here they read on the front: "SAVE \$2.00 NOW on TWO (2) 2-liter bottles of . . . Dr Pepper® . . . when you also purchase ONE (1) Freschetta® . . . or Tony's® pizza"; on the back there's the usual coupon details. The coupons expired 2/28/2013 so they were still good for a little while when I got them. I didn't use them; aside from wanting to hold onto them as possible clues, I don't often drink Dr Pepper or ever eat pizza.

Here's the thing: I have no idea who "D. Howard" is or why he or she would send me these coupons. Google tells me there is a "Dan Howard" at the address, but there's no information that would suggest he's important or interesting or has some connection to me, just the usual traces of online information just about any ordinary person generates. I could pay for more information, but I don't want to.

Can anyone explain to me why I got this letter? At least one enquiring mind (mine) wants to know.

Howard J. Wilk
Philadelphia

Editor's note: "**Knowledge only gained through curiosity.**" (Charlie Chan at the Wax Museum)

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Various Ruminations

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

The Ig Noble Prize

PhACT member Al Erpel has been a long time enthusiast and subscriber to Improbable Research, an organization that collects (and sometimes conducts) improbable research. He recommends a magazine they publish called *Annals of Im-*

probable Research. The Improbable Research organization administers the Ig Nobel Prizes.

The Ig Nobel Prizes honor achievements that first make people laugh, and then make them think.

The prizes are intended to celebrate the unusual, honor the imagi-

native — and spur people's interest in science, medicine, and technology. Every year, in a gala ceremony in Harvard's Sanders Theatre, 1200 splendidly eccentric spectators watch the winners step forward to accept their Prizes. These are



"The Stinker", the official mascot of the Ig Nobel Prizes.

Carver Science Fair

Board members Dave Langdon and Becky Strickland judged the Carver Science Fair at Temple University on March 12. The fair, which has been operating yearly since 1979, has touched the lives of over 36,000 students. It is open to all students attending school or homeschooled in Philadelphia County.

This year's fair showcased nearly 600 exhibits in 14 scientific disciplines. PhACT prizes are given to middle school students for excellence in critical thinking. Specifically we

looked at projects that were manipulating a variable and followed proper scientific procedure. We narrowed our selection down to 7 exhibits, and after speaking with each student we awarded 3 equal prizes to:

Joel Koshy, Baldi MS, Natural vs. Synthetic Antibiotics (medicine/health)

Ayanna Lemon, Independence Charter MS, The Priming Effect (behavioral science)

Julia Valentino, St Mary Interparochial, C is for Cookie (consumer science)

Congratulations to our winners!

"How far you go in life depends on your being tender with the young, compassionate with the aged, sympathetic with the striving, and tolerant of the weak and the strong. Because someday in life you will have been all of these"

~ George Washington Carver, American scientist, (1864-1943)

physically handed out by genuinely bemused genuine Nobel laureates.

The 23rd First Annual Ig Nobel Prize ceremony will happen on Thursday, September 12, 2013. Tickets will go on sale in mid-summer 2013, available exclusively from the Harvard Box Office.

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

Reversal of evolution

The Daily Mail reports that scientists at University of Michigan have performed genetic studies of the common dust mite and determined that tiny free-living house dust mites, which thrive in mattresses, sofas and carpets in even the cleanest of homes, evolved from parasites, which in turn evolved from free-living organisms millions of years ago. The study, called 'Is permanent parasitism reversible? Critical evidence from early evolution of house dust mites,' was published in the journal *Systematic Biology*.

The Daily Mail article seems to suggest that evolution can work in reverse and is not a forward only aspect of biology. Can that be what the scientists really mean? It seems to me that the dust mites have adapted to a changed environment and have not actually gone back in time in some odd way to be just as they were at a previous more primitive level of evolution.

Dr. Llyd Wells had written a short article for *Phactum* (October 2008, p9.) that discusses an experiment with virus by Dr. Sol Spiegelman in 1967. In a controlled laboratory Spiegelman took random virus and after 75 replications determined that the remaining virus had vastly minimized genomes that suited the environment while others did not survive. The surviving virus were known as "Spiegelman's Monster" and were much simpler organisms carrying only the genetic material needed to survive in their environment. Was this a case of "reverse evolution" or is it merely adaptation?

I invite informed opinions on this matter.

<http://www.dailymail.co.uk/sciencetech/article-2291228/Have-scientists-discovered-reverse-evolution-Study-shows-house-dust-mites-abandoned-parasitic-lifestyle-free-living-just-like-ancestors.html>

Ted Daeschler has a new fish

Dr. Ted Daeschler, a paleontologist at the Academy of Natural Sciences of Philadelphia who was PhACT's speaker April 2007, has discovered a new fish. Well, the new fish is not so new being from the Devonian Era about 375 Million Years ago, but it is new to Ted and new to science.

Daeschler and his colleagues from the *Tiktaalik* research team including Academy research associate Dr. Jason Downs, have now described another new lobe-finned fish species from the same time and place in the Canadian Arctic. They describe the new species, *Holoptychius bergmanni*, in the latest issue of the *Proceedings of the Academy of Natural Sciences of Philadelphia*.

"It was a tough world back there in the Devonian. There

were a lot of big predatory fish with big teeth and heavy armor of interlocking scales on their bodies," said Daeschler.

Daeschler said *Holoptychius* and *Tiktaalik* were both



Dr. Ted Daeschler holds a lower jaw fossil of *Holoptychius bergmanni*, a new Devonian fish species he and colleagues discovered in the Canadian Arctic

large predatory fishes adapted to life in stream environments. The two species may have competed with one another for similar prey, although it is possible they specialized in slightly different niches; *Tiktaalik*'s tetrapod-like skeletal features made it especially well suited to living in the shallowest waters.

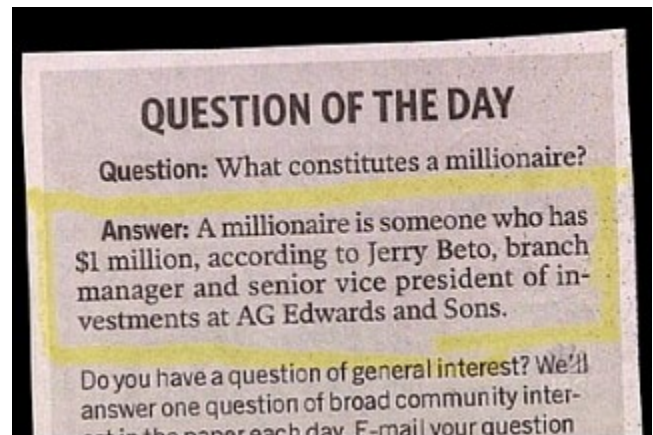
The fossil specimens of *Holoptychius bergmanni* that researchers used to characterize this new species come from multiple individuals and include lower jaws with teeth, skull pieces including the skull roof and braincase, and parts of the shoulder girdles. The complete fish would have been 2 to 3 feet long when it was alive.

Ted and his team also recently discovered another armored Devonian fish called *Phyllolepis thompsoni* in Pennsylvania. Pennsylvania may not be as exotic as Ellesmere Island, but at least there are no polar bears! For more details on this find see:

<http://newsblog.drexel.edu/2013/03/27/dusting-for-prints-from-a-fossil-fish-to-understand-evolutionary-change/>

Congratulations, Ted. Keep digging!! We are eager to learn more.

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Meeting Report - March 2013

The Museum of Scientifically Proven Supernatural and Paranormal Phenomena discussion led by Bob Glickman, President of PhACT

By Mark Meyer

Mark Meyer is a Physics student of Dr. David Cattell at Community College of Philadelphia

Bob Glickman, the president of PhACT, gave a presentation on a web site he runs, the Museum of Scientifically Proven Supernatural and Paranormal Phenomena. It is a museum curiously empty of exhibits. He started with a short speech about his childhood and how he came to be a skeptic. He was born into a Roman Catholic family that also believed in psychics. As he grew up cognitive dissonance set in and he turned from the church and looked more into physics. He eventually realized that he was his own hot reading as it were and turned from them to skepticism. He talked about watching so called psychics be confronted by skeptics and put to the test only to fail.

He also talked about his work as a nurse, specifically in the emergency room, and how it interacts with his philosophy. He says that patients in the emergency room may have just had their feet pulled from out under them. They have their

own coping methods and that while those methods may be nothing more than wishful thinking, handing that proclamation down from on high during their worst moments is not helpful.

He says that ramming skepticism down people's throats doesn't work, but instead to poke at them, make it funny, try to get them in a receptive mood. This is the point of the museum, the 'exhibits' of which he then shared. Most are simply slides of empty shelves or frames, with a label such as "Alien Technology Collection." Others are simply amusing quotes, or faux headlines about supernatural and paranormal events failing to occur. He finished his talk by describing some of the trouble he had with using Facebook to spread his message.

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Therapeutic Touch and Me

By Bob Glickman



The road to critical thinking isn't always straight, well lit or demarcated with proper signage. Sometimes you may not even know you're on the road until you find yourself standing in the middle of it.

I was raised with the Big Three. They were always there for me on the front lines, always delivering. Of course, by the Big Three, I am referring to Santa Claus, the Easter Bunny and the Tooth Fairy. What an excellent set of data points! By the age of 5, many times I had toys and candy delivered to the house on a yearly basis. Come on! This had to be the clearest data ever. All signal (data supported by evidence) and no static (data that is unsupported by evidence, errant or meant to deceive), magic was definitely real and life was good.

During the ages 4 & 5, a period when we lived near Atlantic City, there were frequent trips back "home" to Philly, and I would see the houses, lots of houses. Eventually the notion that Santa, in one night, could deliver toys to all of those houses such as the endless reams of row homes in Philly, the houses down the shore and all of the ones in between, was stretching the boundaries of my reality and increasing the amount of static in my life. The problem was that the data I was considering to be static turned out to be signal. By the age of 6, Santa Claus and friends collapsed with a single question to my mother, who was disappointed by my realization. At the time, I thought this was a shame because I was just getting used to the cash for teeth program.

It turns out the Christmas, Easter and cash for teeth programs would remain intact because they were not dependent on magic belief but the importance of family. However, what did not go unnoticed was how easily static can be arranged to look like signal. That rearrangement is the stock and trade of stage magicians. So based on preference, context and whether or not a layer of sacredness has been slathered on it, static can be quite the formidable force.

Of course, the two other "real" pillars of magical thought, religion and psychics, were still intact.

Long story short, when you are born into a Roman Catholic family, the deal is be a good person (not a problem, always tried my best although I can hardly claim a 100% success rate), be kind to others (ditto), be smart and learn as much as you can (I always found learning to be fun), do the right thing and always do whatever the Catholic Church says to do and everything will be fine. In high school, I again found that the static in my life was building, I needed to get answers to my questions, but this was far different from Santa Claus. People's entire worldviews, self worth and emotional well being are tied up in these key questions, especially for people who were close to me. Overall, I found cutting my religious ties was a sanity-saving relief, but my family and friends were now on one side of the fence and I had just crossed the line to the "evil" side. Cut adrift without guidelines, a road map or the notion of an internet, I pushed along.

I would like to edit my life to say that I became a lifelong Skeptic at this point but that would be inaccurate. My grandmother was "born with the caul," the mystic veil over the face that means to some psychic powers. The caul is simply a leftover piece of the amniotic sack over the face that if not quickly attended to would have the same effect as a plastic bag but that didn't stop the supernatural stories from being told.

Being promised magic since birth, I pursued that world with gusto including psychic consultations (until she told me to cool it - go figure), an early Therapeutic Touch nurse, UFOs, chiropractors and even AMWAY. The first chink in the armor was alleged psychic Uri Geller's 1973 appearance on Johnny Carson's Tonight Show. After several successful showings on various other TV shows, Geller hit a brick wall that night and said he wasn't feeling strong. He actually indicated that it was Carson who was preventing him from using

"The art of healing comes from nature and not from the physician. Therefore, the physician must start from nature with an open mind."

~ Paracelsus (1493-1544)

his powers correctly. It was not significant to me at the time but it would be the first time of many where I saw an interesting phenomenon occur. The only people with any measurable supernatural power are Skeptics. Anyone claiming magical powers immediately has them neutralized as soon as the Skeptic shows up.

What was going on behind the scene was that Carson had his staff consult with stage magician James “the Amazing” Randi. Randi simply told the staff how to prevent Geller from using basic magic tricks that could appear to be psychic powers. So there was nothing to block Geller’s actual psychic powers if he indeed had them. Geller appeared on the Tonight Show out of his element because he was not allowed to touch the props ahead of time or bring his own props.

The Carson level of scrutiny should be the standard for talk-shows today. This occurred at a time when the 60 Minutes news program would routinely expose some unscrupulous banker or politician with his hand in the cookie jar. Unfortunately, the existing standard has 60 Minutes correspondents like Katie Couric (former) and Anderson Cooper (current) become microphone jockeys for psychics speaking with the dead.

Randi’s activities on Carson would catch my attention from time to time such as his “psychic surgery” demonstration in 1986 and the exposure of Peter Popoff in 1987. Popoff was the preacher who was doing his best to look miraculous in the eyes of his flock while in reality he was secretly being prompted by his wife via radio. She had a nasty habit of reading “prayer cards” that the faithful had filled out on arrival to the venue they would be working. Randi and his assistant Steve Shaw researched Popoff’s methods and found the radio signal he was using and recorded it. This exposure was the inspiration for the Steve Martin film Leap of Faith although it did not inspire the producers to credit Randi.

Randi had a TV special that aired in 1989 called Exploring Psychic Powers Live, and this was again another turning point for me. Now there was an overwhelming amount of static coming from the psychic world. In the course of this show, Sylvia Browne, Uri Geller, psychics, astrology, dowsing, psychometry and auras were all placed in the static bin

and another road to critical thinking began that night.

By becoming a nurse, I put myself on the front lines of dealing with people at their most vulnerable. People live their lives in various degrees of pain; be it physical or psychological, large or small, they all have pain. The pain may be close to the surface or deep inside. Sometimes you will find that the person in the most distress isn’t the patient but the person who came with them.

When I was a floor nurse, most of the patients had varying degrees of pain and worry but at least knew of their history and why they were there. Moving to the pinnacle of human discomfort, the ER added the variables of unexpected life altering change and the possible realization of the permanency of that change. Although you go there for treatment and relief, in the ER fear and pain are prominent features. It is not a coincidence that fear and pain are the top two forces in life that make people irrational and ones most used by people who want to control other people.

As nurses and healthcare members, we tend to categorize people by their problems, such as the gall bladder in Room 4 or the fractured pelvis in the orthopedic room. You sometimes have to jostle yourself to remember that the patient in Holding Room 3 as of that morning did not know that they were going to turn into the lung cancer patient by the afternoon.

So the ER had and still has all of the great drama in life: pain, fear, misery, hopelessness and, for some, permanent life changing events. Many times I would go home from work and hug my kids because of things I may have dealt with that day. Although 20 years in the past, two events are never far from my thoughts. The first one involved a three year old who pulled the chest of drawers on top of himself and was asphyxiated. The other was a young woman who was washing her clothes in the basement when a flash fire started and in the panic, smoke and confusion could not find and save her two-year old. The child went to a children’s hospital to be pronounced dead, the mother came to our facility for “treatment.” Well, we did the best we could but we had no real treatment that day and we actually needed our own.

Black or gallows humor is common in the world of the ER:

Peter Popoff, born 1946 in Germany, is



a prominent televangelist whose mystical powers had been busted by James Randi in 1987. His ministry was taking in over \$4 million a month at that time but Popoff declared bankruptcy soon after his encounter with Randi. Despite having been exposed as a fake Popoff’s ministry did recover and in 2005 received over \$23 million in revenue. Popoff and his wife had a combined income of about \$1 million in 2005. In 2006 his for profit business became a religious organization and was therefore tax exempt. It seems that business is good. In 2007 Popoff bought a house for \$4.5 million. He drives a Porsche and a Mercedes-Benz. One can only wonder if Popoff believes any of what he preaches. Any skeptics care to start a religion?

“The last thing a person needs to treat their 2nd Degree burn is a Bikini Wax.” We too bring our own pain with us as we try to navigate our way through each hectic 8, 10 or 12 hour shift. There is great release that a good laugh brings as you deal with the inherent stress of the environment. I was always keen to the idea that the patient could use a good laugh as well. I did it all the time and not once did I have to be taken down to some dungeon office for being “inappropriate.” Sometimes, the patient would knock me off my feet trying to play a game of “Can you top this?” and tread into territory that I did not expect.

People and their ability to deal with stress vary immensely. Each person you deal with may or may not have effective coping skills and the ability to comfort themselves. For some people, their coping mechanisms may be without any scientific or logical merit. These mechanisms may be totally magical in nature and were assigned to them at birth just as I had many ideas assigned to me.

In the ER, it was my job to help people get through their individual crisis. While it is factually accurate that there have been several double-blind studies showing that intercessory prayer has no statistical effect, pointing out that their coping skills are not scientific or appropriate is inappropriate. Creating static for them would only add to their stress level, misery and pain.

Critical thinkers know that there is a dirty laundry list of coping techniques and ideas that are based on, nonsense such as homeopathy, a magic book, or the “knowledge” of a psychic. So critical thinking might seem like a good idea to you but keep in mind to those whose ability to cope is based on magical or noncritical ideas, critical thinking is like a punch in the face. Meaningful dialogue rarely follows a punch in the face. Critical thinkers should realize that giving others a modicum of respect regarding their need for whatever coping skill or device they depend upon is not the same as agreeing with it or supporting it.

Critical thinking cannot be forced onto others but can be more easily introduced through calculated doses and methods. My personal approach is through humor but being careful trying not to offend the listener. Granted there will be plenty of people out there that like to be offended because they love and live to strike back. Some people do not know how to be good without a villain with which to be compared. Do not volunteer to be someone else’s villain but do not volunteer to be their doormat either. A person has the right to not have to succumb to someone else’s static-riddled point of view. Sometime, pushing or fighting back is essential to maintain your freedom of thought as well.

"The art of medicine consists of amusing the patient while Nature cures the disease."

~ Voltaire

During the infancy of the internet, having a computer with a dial-up modem was a big thing. It gave access to the Bulletin Boards, a way of communicating with others based on a topic. On one such board in 1993, I came across my first reference to the Skeptical Inquirer and its publisher, CSICOP, the Committee for the Scientific Investigation of Claims of the Paranormal (now known as CSI, Committee for Skeptical Inquiry). After buying the latest and a few back issues, I was fascinated to learn that James Randi was one of the original members and disappointed that he had recently left due to lawsuits brought by Uri Geller.

In 1994, CSI held a conference in Philadelphia. I looked forward to meet people with a similar interest in science (signal) and nonsense (static). With a little prodding from CSI’s Joe Nickell and Barry Karr, PhACT, the Philadelphia Association for Critical Thinking, formed as a result of that meeting. In the months that followed as PhACT

was trying to get organized, the presidency became vacant and I decided to step into the role, as it would advance a special project I had envisioned and which was burning a hole in my pocket. In the meantime, PhACT’s growing pains would ensue.

Initially, I and a few others thought that PhACT would emulate CSI where our focus would be on Scientific Skepticism topics such as psychics, UFOs, alternative medicine and the occasional bleeding statue. Others wanted to be totally complete and be skeptical of every magic or religion related topic even though there were other groups in the area whose focus was exactly that. My interest was to have a wide scope that would allow us be an active force in the community. I had no interest in running a group unlimited in scope but extremely limited in audience. I personally did not want to be placed in the situation of attacking people’s comfort measures and coping skills as I feel that it would be a direct violation of my role as a nurse. As it turned out, PhACT retained the CSI model.

My special project stemmed from a talk given by a guest lecturer who was teaching at a local Visiting Nurse Association office back in 1978. Spending a few days at the VNA was part of my nursing school training and the lecturer spoke about something called Therapeutic Touch. The version she described was different than the current accepted version of Energy Field Detection and repair. Being the sole male in the room, I was picked to be the Guinea pig. She had me extend my right arm in front of me parallel to the floor. She pushed down on my wrist, and my arm did not budge. She waved her hand down my center meridian (from neck to groin) and pushed down on my wrist again. This time, I could not keep my arm up. She then waved her hand up my meridian and I was back to normal. I was amazed and promptly used my

new supernatural talent on others, unaware of the ideomotor effect or oblivious to the thought that you just keep pushing down on the arm until it moves.

In 1995, a nursing journal called Today's OR Nurse featured an article that said that operating room nurses should be using TT to clear patients' energy fields during the many phases of an operating room visit. My concern was that if uncritical articles like these appear and go unchallenged, somewhere down the road TT will become mainstream and I will be considered negligent because I withheld a "vital" treatment from my patient.

TT lore says the human body radiates an energy field 4-8 inches from the skin and a patient could be healed by a TT practitioner (TTP) waving his or her hands through the field. Thinking back to Randi's Exploring Psychic Powers Live show, I realized that the Aura Test matched what needed to be done to create a test of TT. In the Aura Test, the psychic picked ten subjects with identifiable auras. A wall was erected with slots 1- 10 clearly labeled. The subjects were led to the opposite side of the wall. A random process determined which slot would be occupied by a subject. When the subjects were in place, the auras would be visible from the psychic's side of the wall as they poked over the wall. Four slots were occupied, yet the psychic saw auras poking over all 10 slot tops.

A TT demonstration was arranged by some of my co-workers, PhACT and me. A TTP, Linda Degnan RN, was more than happy to come to our facility (Frankford Hospital's Frankford Campus, now known as Aria Health). Degnan thought that the Today's OR Nurse article was valid and agreed that TT belonged in the operating room. As a group, the people at this demonstration wanted only the best for our patients and the same level of efficacy we would expect from

any other technique or device used in the operating room. By the end of her demonstration, none of us was able to feel an energy field, nor were we convinced that the TTP could either. However, she did recommend that we take her \$125 course and then we would learn how to feel a field. At this point, even those in our crowd who might have started out the evening being receptive to the ideas of TT could feel the static in the air.

Now if we removed the concept of feeling an energy field and replaced it with levitation, wouldn't it be prudent to know that the person who was going to teach you to levitate be able to demonstrate that they themselves could levitate first before you spent your money?

Degnan made several amazing claims about her ability to feel and distinguish between energy fields. So in order to justify spending that kind of money on her TT course, we proposed a test based on her claims. We had 6 subjects available, each with their own distinct energy field (older man with a heart history, woman with history of breast cancer, other adults and children). Each one could take a turn lying on a bed and be covered by a sheet and a blanket. Degnan would then assess the field emanating through the blanket and identify the person underneath. She refused. A simpler test with either an adult (with their large energy field) or a child (small field) would be hidden under blankets was then offered. She refused that too. We then offered the simplest test possible: either a person was under the blankets or just more blankets under the blanket. She refused this as well.

It's amazing how she went from claiming to be able feel a broken bone through a cast to not being able to distinguish between a human and a blanket in such a short amount of time. It was a great event for PhACT and the basis for an article in the nursing journal RN Magazine. We also garnered the interest of James Randi himself and a desire for a

**A potent quack, long versed in human ills,
Who first insults the victim whom he kills;
Whose murd'rous hand a drowsy bench protect,
And whose most tender mercy is neglect.**

~ George Crabbe (1754-1832)
The Village, bk.1, l.282.

"Don't you believe in flying saucers, they ask me? Don't you believe in telepathy? — in ancient astronauts? — in the Bermuda triangle? — in life after death?"

No, I reply. No, no, no, no, and again no.

One person recently, goaded into desperation by the litany of unrelieved negation, burst out "Don't you believe in anything?"

Yes", I said. "I believe in evidence. I believe in observation, measurement, and reasoning, confirmed by independent observers. I'll believe anything, no matter how wild and ridiculous, if there is evidence for it. The wilder and more ridiculous something is, however, the firmer and more solid the evidence will have to be."

~ Isaac Asimov (1920-1992)

joint TT Challenge. For me, getting to work with Randi harkened back to the Christmas mornings as a 5 year old.

After numerous phone calls and emails, a TT protocol was developed and a formal TT Challenge was made. The protocol utilized a two sleeve fiberglass construction dubbed the "TT 109" which was to be placed to a standard hospital bedside table. On the basis of a coin toss and using a double-blind format, either the subject's left or right arm would be

"Therapeutic touch is a contemporary interpretation of several ancient healing practices in which the practitioners consciously direct or sensitively modulate human energies."

~ Dolores Krieger, Ph.D., R.N., Professor Emeritus at New York University

inserted in the unit. The TTP would assess the energy fields through the sleeves and declare which sleeve was occupied.

Numerous inquiries with TT organizations and bulletin boards generated a lot of buzz. The buzz was mostly about how misguided we were in our investigation, at least according to the TT world, as their research was impeccable by their standards. Randi flew into north central PA for a speech at Bloomsburg University on a Thursday night arranged by DeeAnne Wymer, Professor of Anthropology at BU and a PhACT member. The next morning it was a car ride to Philadelphia with me as the driver, my wife Sue in the front passenger seat and DeeAnne and the Amazing One in the back seats. It was all the fun of a rollercoaster without the motion sickness.

That night on November 8, 1996, back at Frankford Hospital again, our sole participant out of a possible 40,000 active practitioners, Nancy Woods was ready to be tested, sort of. Although the protocol was agreed to ahead of time, Woods abilities and claims were morphing before our ears. Randi said that this was typical of claimants. What struck me most was how congenial Randi was with Ms. Woods even as we played a game of nailing Jell-O to the wall to get a new workable protocol. Woods claimed she was mostly interested in showing how well TT works.

Similar to the event with TTP Degnan, we had back up plans and people. My daughter Brianne was 13 at this time and had been suffering with chronic headaches because of a TMJ-type chewing disorder and had a moderate headache the evening of the test. Woods said she loved to work with migraines. After a few minutes of energy field manipulation, Woods asked Brianne if she felt any improvement. Brianne

responded, "No," but later told me that she almost responded "Yes" as a reaction to the insistent manner that Woods used to ask her.

Another potential subject was a colleague, another OR nurse at Frankford. The TT 109 was designed to hold arms or legs and she had been having pain in her left foot. This should have made a fine marker in her energy field for the test. Woods said she did feel a cold sensation over the affected left foot and ankle and in the process of assessing it, Woods stated that she was already making a difference in the field and that the cold sensation in the field was almost gone. My colleague made an important observation at this point, "But my foot still hurts!"

Finally a protocol that both parties felt most comfortable with emerged. Woods was able to differentiate between one woman with a sore elbow and a man with normal arms. On the Open Test, with the subjects in plain sight, Woods scored 10 out of 10. We proceeded to the Closed Test where the only difference was that a curtain was drawn and Woods could no longer visually identify the subject. She scored 11 out of 20, results consistent with chance. No money changed hands that night. All participants, potential subjects and interested onlookers saw how fair the test was and how Randi's participation was clearly that of just another onlooker.

A second test session for all TTPs was scheduled for early June of 1997 in Fort Lauderdale, Florida. A personal invitation was sent by certified mail to TT co-creator Deloris Krieger. With 40,000 TTPs and \$1 million now on the line, the test went unacknowledged. So this is how the Nursing and TT world deals with its static: ignore it.

After a 16 year lull, TT thrives but much more quietly. "Disturbed Energy Field" is still an official NANDA-I Nursing diagnosis designation, with TT being the sole treatment for the "disturbance." The American Nurses Association allows courses on TT to be eligible for Continuing Education Unit credits for nursing licensure and certification requirements. So TT is still a source of static for me. All the data points are showing that the nursing profession does not mind if nurses are misleading their patients by telling them they have magic powers.

My road to critical thinking turned out to have multiple paths, and I travelled down each one of them. I am probably on another one as I write this, and I am okay with that. As soon as you think you know it all, you have stopped thinking.

Bob Glickman is a long time skeptic and critical thinker. He is the current President of PhACT and in real-life is a Registered Nurse.

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ADAPTABILITY: The Mark of Actual Intelligence

by Paul Schlueter III

Adaptability is a bigger deal than you might think. We tend to take it for granted, because it's a trait we have inherited from millions of years of evolution. Adaptability is the ability to change our actions and behaviors when called for by circumstances. Just this single trait has allowed humanity to spread from our home in Africa to cover the entire planet, and even begin leaving it to put our mark on others.

There's a related trait, adaptation, which is more the result of chance modification on the instinctive, or even cellular, level. Adaptation is what happens when an organism experiences ordinary evolution. When the DNA is copied in reproductive cells, it is not perfectly reproduced from parent to offspring. The twin strands in the DNA helix peel apart, but they still don't quite produce exact copies; the offspring can end up with genes from either strand, not just the ones present on one of the strands. Additionally, accidental miscopies of the "letters" of genetic code (A, G, C, or T, which stand as symbols for the nucleotides themselves) can accidentally occur at random points along the strand. The result is that offspring are always just a little bit different than each parent (the same thing happens, to a lesser extent, in species which reproduce by essentially cloning themselves).

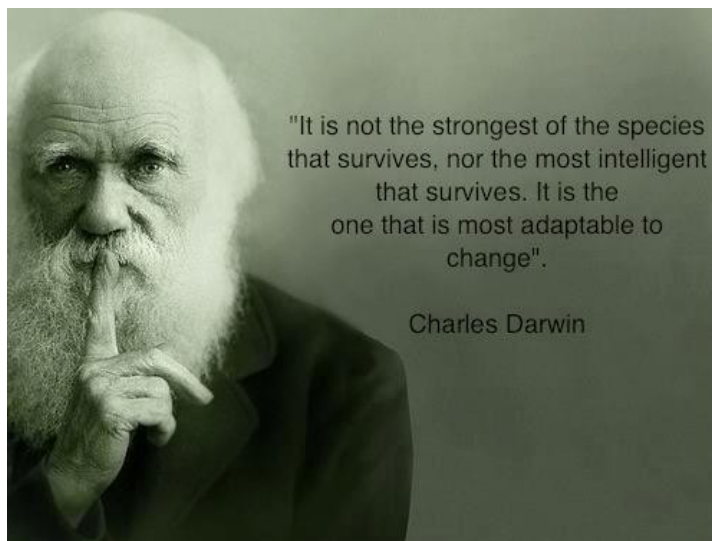
When one slightly-different offspring happens to inherit a set of traits (abilities and behaviors, shapes and colorations, etc.) which are better suited to its environment, that individual is statistically more likely to survive and reproduce. When a sibling's inherited traits are less suitable, the sibling's chances of survival and reproduction are statistically decreased. Thus, the environment tends to select among the offspring for the traits best adapted to reproductive success. We are just on the frontiers of recognizing how numerous and complex these adaptations

can be, and how subtle changes in the DNA accumulate over vast periods of time to produce different species which have different success rates than their predecessors (some becoming better adapted, and those with poor adaptation gradually becoming extinct). The important key to recognize here is that such genetic change is not directed or chosen by the organism; it occurs purely by chance (with some moderate influence by certain environmental factors, also usually occurring without conscious guidance or direction.)

Adaptability is different. Adaptability is an adaptation, but only one sort of adaptation among many possible sorts. In our case (and the case of several other species which we are now beginning to recognize as sharing a trait we call "intelligence"), adaptability is the ability to mentally perceive that some behavior or activity is more beneficial than another, and to choose to take the beneficial course. Adaptability is at least an order of magnitude beyond the instinct to withdraw from pain or to move toward an appetizing smell. It depends on that vague and indefinable condition known as "consciousness." To be adaptable, we must first be conscious of our choices, and in fact we must also have a

good ability for predicting the outcomes of either choice.

Through adaptability, our ancestors (probably at least as far back as Australopithicenes!) were able to use simple tools, to make those tools out of natural resources, and to teach one another the skills they have discovered. By choosing to adapt the natural resource to a more useful form, we benefitted ourselves, and achieved greater reproductive success. As we learned (and evolved), we prevailed, until now we have become THE dominant animal species on this planet. We have come so far, in fact, that many of us hold dear the belief that we are separate and distinct from the animal world, "created" (as it would seem) in the image of Gods we ourselves invented while developing our spoken



cultural heritage. We are indeed special, and even different, but rational thinking demands that we must acknowledge our animal (and purely natural) evolutionary lineage.

Somewhere along the way, as we developed civilization and culture, we also developed psychological paradigms which might be called "beliefs." When a construction of thought appeared to produce a satisfying explanation of some mystery, we adopted it as a "belief," and passed it along to others through language. Over time, we tended to use complexly structured sets of beliefs to devise myths, legends, *philosophies*, and religions. Those, in turn, led to the written codification of mores and morals, laws and regulations. As we segregated ourselves according to those paradigms which we individually thought made the greatest sense, we battled (figuratively and/or literally) to impose our chosen perspective on those we could control. Now, worldwide, we have an enormous variety of beliefs, mixed up in practically every imaginable combination and variety, and we define ourselves according to how we have each "chosen" to live our lives and direct our thoughts.

We have begun to leave behind us those great religions which once dominated culture and thought. Judaism produced the offshoots of Christianity and Islam. Christianity (of the Catholic variety) produce the offshoot of

Protestantism, then the many complex (and subtly distinct) denominations and congregations we can identify among the many churches of any moderately-sized American community. Islam produced the distinct Shiite and Sunni branches (primarily Arabian in origin), and in America, the distinctive FOI (Fraternity of Islam). These offshoots, and many others I couldn't begin to name, are the result of "schisms," events where one group distances itself from the older group because they have developed a different way of believing (or perhaps, because they wish to restore a previous, discontinued way of believing). One thing such groups all seem to have in common: They all seek to establish themselves as the permanent paradigm. Contention and argument is discouraged.

Enter the Rational thinkers, a couple thousand years ago, who first began to formulate consistent rules of logic and reasoning. After many fits and fumbles, along came something we'd now recognize as scientific inquiry, by which thinkers are encouraged to challenge the accepted paradigm and discover new, subtle distinctions of truth. Finally, it seems, we've discovered a school of thinking that permits us to achieve both the ability to distinguish what is actually true (particularly in the natural, physical world), and to theoretically adapt our own behaviors (on the individual

From Samuel Johnson's 1755 *A Dictionary of the English Language*.

ADAPTA'TION. *n. f.* [from *adapt.*] The act of 'fitting one thing to another; the fitness of one thing to another.

Some species there be of middle natures, that is, of bird and beast, as bats; yet are their parts so fet together, that we cannot define the beginning or end of either, there being a commixtion of both, rather than *adaptation* or cement of the one unto the other. *Brown's Vulgar Errours, b. iii. c. ii.*

Their adhesion may be in part ascribed, either to some elastical motion in the pressed glass, or to the exquisite *adaptation* of the almost numberless, though very small, asperities of the one, and the numerous little cavities of the other; whereby the surfaces do lock in with one another, or are, as it were, clasped together. *Boyle.*

Brown's Vulgar Errours refers to *Pseudodoxia Epidemica* or *Enquiries into very many received tenets and commonly presumed truths*, a work by Sir Thomas Browne (1605-1692), an English author of wide knowledge in diverse fields. The first use of the word electricity was coined by Browne in *Pseudodoxia Epidemica*. Other words invented by Browne and used to this day include "medical," "suicide," "exhaustion," "hallucination", "coma," and astonishingly, "computer". The book is also significant in the history of science because its arguments were some of the first to cast doubt on the widely-believed hypothesis of spontaneous generation or abiogenesis, the idea that life can originate from inorganic, inanimate matter.

Sir Thomas Browne's remarkable work can be found on-line at:
<http://penelope.uchicago.edu/pseudodoxia/pseudodoxia.shtml>

and/or societal levels) to the greatest benefit of any particular chosen group.

Aha... you noticed that, did you? Yes, I wrote "chosen group," because we are STILL creatures of our natural heritage, of our animal natures, and we are in competition with one another for dominance and reproductive success, just as we have always been through a billion years of living evolution! When we adapt our behaviors and actions, we are in fact choosing sides, picking teams in an effort to gain advantage for "our kind."

You have chosen to read the newsletter of an organization of so-called "critical thinkers." For some of us, that phrase means "people who refuse to believe in Bigfoot, Nessie, E.T., and Dracula." For others, it includes a serious (and to various degrees, "reasoned") rejection of the God paradigm (not all "critical thinkers" are agnostics or atheists, but many are.)

But once you've defined yourself as a "critical thinker," exactly how far do you elect to challenge the paradigms of your own beliefs? A fabulous example is the question of whether Neanderthals and "humans" interbred, leaving telltale genetic evidence. Almost since the first discovery of *H. neanderthalensis*, science believed that they were a distinct species which went extinct without having corrupted our own fine and unique bloodline(s). Very recently, it has been discovered that this is not necessarily so; Neanderthal DNA is present among all non-African peoples, indicating an intermixing with every group which dispersed from Africa early in our diaspora. Only those Africans whose ancestors never left the continent lack the telltale Neanderthal DNA mark. So, have YOU been adaptable enough to accept this revelation of science, or do you prefer to cling to what "everybody knows," and continue insisting that men never interbred with "those beasts?" Some of you readers will fall on each side of the question, though I don't dare attempt to predict the ratio.

'Conservatism' is a mental attitude that is directly opposed to "adaptability." Conservative thinking seeks to conserve the accepted paradigm(s) of the past (though, of course, how FAR into the past is always rather vague). Adaptability requires the ongoing and unending process of evaluating new evidence and accepting that which passes muster, requiring the paradigm to evolve over time. Adaptability also demands openness to differing points of view and arguments, because it's scarcely a "evolution" of intellect to simply refuse to listen to whatever doesn't

correspond to one's existing beliefs.

One of my greatest personal frustrations is the Law's own sort of conservatism. The doctrine of "finality of conviction" is very nearly insurmountable, and laws are frequently written (or interpreted) in such a manner as to strengthen the

Law's resolve to never change a decision it has already made. When DNA evidence was first brought into the courtrooms in the 1980s, Prosecutors were more than willing to use it to secure convictions, but they strenuously opposed (and still do) the admission of exculpatory DNA evidence where it might overturn an older conviction. They have invented numerous bars to the presentation of "newly-discovered evidence," including holding that one's tardiness (and/or "lack of diligence") in discovering exculpatory evidence is somehow so threatening to the preservation of previously "proven" guilt that it is essential to preclude any

consideration of whatever new evidence is discovered "too late!"

Imagine if science had a due diligence time bar upon evidence; if Galileo had not discovered the fact that Earth orbits the Sun within the statutory time period, it would never have even been eligible for a fair hearing! We'd all still be insisting that the sun rises and sets, rather than... oh. (See what I mean about the tenaciousness of old ideas?)

Even today, an issue now before Pennsylvania's Courts is the fate of nearly 500 persons who were sentenced to mandatory life without parole for homicides committed as juveniles; the Supreme Court of the United States (SCOTUS) ruled on June 25, 2012, that such mandatory sentences were unconstitutional. The SCOTUS ruling relied heavily upon what it called "the evolution of legal standards" (a slow, but admittedly real process), in light of recently developed evidence that human brains continue developing those regions most relevant to judgement, intentionality, empathy, and maturity (all factors in determining legal culpability) well into an individual's mid-20s. Do "youthful offenders" who aren't technically among the "juvenile" category (arbitrarily cut off at midnight of their 18th birthdays) deserve proportionate protection of the U.S. Constitution on a similar basis? Many Courts are refusing to even entertain the latter question, proclaiming that it is so outrageous as to require no adversarial arguments, no expert testimony, etc.

In fact, many Courts are refusing to entertain even juvenile Lifers' claims, opining that the SCOTUS ruling does



Reconstruction of a Neanderthal child, from a skeleton found in Gibraltar in 1926. Tomographic scanning was used to convert the remains into a computer model, from which a physical model was constructed using stereolithography. ANTHROPOLOGICAL INSTITUTE, UNIVERSITY OF ZÜRICH

not apply retroactively to cases already decided (there's that finality of conviction paradigm, again). The matter will certainly be debated in Courts all over the country for many years to come, but one thing we may be assured of is the certainty that Prosecutors everywhere will seek to conserve existing convictions regardless of any evolution of legal standards the SCOTUS imposes. Also, the affected inmates will continue to seek some hope of achieving eventual release from incarceration. The sides are chosen, the issue is clear (however complex its reasoning may be), and the correctional system will adapt (only as it's forced) to comply with the eventual outcome.

In a society which proclaims itself to be the standard by which the world should view "the rule of Law," we have had many ups and downs in the adaptation of Law to scientific knowledge.

We must also recognize that a devoutly Christian (and registered Republican) Judge Jones ruled, not so long ago, that Intelligent Design (as a relatively new creationist paradigm) was not valid science, and it could not be taught in American science classes. No, it is NOT valid as a competing scientific theory, and yes, it IS nothing more than Creationism in dubious disguise. The Law evolved in favor of reason in that instance. Can we count on it to continue in the same direction?

As with evolution of organisms by natural selection, the Law appears to be nearly random in its evolutionary direction. The passage of new statute depends upon the whims of political influence. The interpretation of the Courts is only a step or two away from arbitrary, usually favoring those with money and political influence over the ordinary

individual's "rights." Even the SCOTUS itself is subject to the vagaries of Presidential appointment, and the natural lifespans of sitting jurists, so its tendencies change over time.

One of the highest "rational institutions" of modern humanity, the American system of Legal Jurisprudence, STILL hasn't made any firm choice between preference for scientific rationality or the opinions of the political mob. The political consensus may yet prevail, which is my biggest patriotic dread.

Of course, even science itself remains subject to influence from existing paradigms, and from the bias introduced by the funding authorities' executive decision-making. We're some way off from the intellectual ideal of a world in which a scientist may operate free from bias and outside influence, in pursuit of pure truth. We probably won't achieve that until we turn over all serious intellectual pursuits to thinking machines, which would be supported in turn by a mechanical infrastructure to guarantee rational funding decisions, supply sourcing, and facility maintenance. We remain animals at heart, and we remember (on a genetic level) the lean nature of a world where the next meal or shelter is subject to competition with other animals that may well be stronger and tougher than us. Adaptability served us well in getting here, but it only continues to serve us as long as we choose to exercise it - by free choice.

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

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Erasmus Darwin (1731-1802) - Grandfather of Charles

"Ere Time began, from flaming Chaos hurl'd
Rose the bright spheres, which form the circling world;
Earths from each sun'll with quick explosions burst,
And second planets issued from the first.
Then, whilst the sea at their coeval birth,
Surge over surge, invol'd the shoreless earth;
Nurs'd by warm sun-beams in primeval caves
Organic Life began beneath the waves.
"First HEAT from chemic dissolution springs,
And gives to matter its eccentric wings:
With strong REPULSION parts the exploding mass,
Melts into lymph, or kindles into gas.
ATTRACTION next, as earth or air subsides,
The ponderous atoms from the light divides,
Approaching parts with quick embrace combines,
Swells into spheres, and lengthens into lines.
Last, as fine goads the gluten-threads excite,
Cords grapple cords, and webs with webs unite;
And quick CONTRACTION with ethereal flame

Lights into life the fibre-woven frame. -
Hence without parent by spontaneous birth
Rise the first specks of animated earth;
From Nature's womb the plant or insect swims,
And buds or breathes, with microscopic limbs.
~ The Temple of Nature (1802)
Canto I.IV lines 227-250

ORGANIC LIFE beneath the shoreless waves
Was born and nurs'd in ocean's pearly caves;
First forms minute, unseen by spheric glass,
Move on the mud, or pierce the watery mass;
These, as successive generations bloom,
New powers acquire and larger limbs assume;
Whence countless groups of vegetation spring,
And breathing realms of fin and feet and wing.
~ The Temple of Nature (1802)
Canto I.V lines 295-302

Pursuing Pain Relief: Opium in the World of William Penn

by Clarissa F. Dillon, Ph.D.



Visitors to historic sites are interested in past practices and colonial medical treatments are high on the list. The use of narcotics is something often asked about. There are some odd stories out there.

In the most recent newsletter of The 1696 Thomas Massey House there was the following:

[at a past Colonial Harvest Fair] Within the little open stall marked "Herbs and Spices" was a gentleman who, along with being a war re-enactor, has studied the use of herbs In Colonial America This full-bearded re-enactor reported that doctors would cover their hands with a solution of laudanum [tincture of opium], and while on horseback ride among the troops. Many men would step up in order to lick the drug off the medic's hand. He explained that this was an at-tempt to calm the nerves before going into battle.¹

The writer's next sentence was fortunate: *"Though I have been' unable to verify this fact, the information gave me a heavy heart."*

Although I know very little about military practices during the American Revolution, I did wonder about this. Thinking prac-tically, but without any documentation, I would have thought doc-tors would have been busy before a battle laying out instruments and supplies. In any case, I wanted to know about the source for this information, so I called a board member at the site. He gave me the name of Bob Bardsley, a "Living History Reenactor." I called Bob, whom I had met on several sites, and we talked about this practice. When asked about his documentation or the source, he said it was probably from the Civil War and the source was probably a fellow Civil War re-enactor from the South who had found the information in a newspaper. In my research in soldiers' -diaries from the Revolution, I have never found a reference to the administration of any opium or laudanum to the troops before a battle, in that or any other way.



***Papaver somniferum*, the opium poppy and the source for seeds often used in baking.**

That reminded me of an experience a friend had some years ago. Deborah Peterson was demonstrating hearth cooking at an his-toric site. A man and his wife spent some time watching her and listening to her presentation. Finally the man told her she had a wonderfully complete display of equipment, but where was the blanket? When she asked about this, he said they always kept a blanket nearby so when their clothing caught fire, they could ex-tinguish the flames. He went on to say that housework was such excruciating drudgery in colonial times that women kept laudanum to swig when things got too bad. He explained that women kept their supply on a shelf up inside the chimney and would have to step into the fireplace to get and return the bottle. That's when their clothing would catch fire. He added that he knew this was so because he and his wife lived in an old house and had dis-covered several bottles on a shelf inside the chimney and they must have contained laudanum.

Opium products needed to be investigated in more appropriate period sources. It has been available for centuries. It comes from the milky sap of, Papaver Somniferum and can be processed into various medicinal preparation that *...specially prevaile to rooue [sic] sleepe, and to stay and repress distillations*

*or rheums,... Opium or the condensed iuice of Poppie heads... taken either inwardly, or outwardly applied to the head, prouoke sleep. Opium somewhat plenti-fully taken doth also bring death,...*²
 Opium not only caused sleep; it also eased pain but was *"not to b used but in extreme necessitie,..."*³

By the 18th century, opium was being decocted in water, then made into Syrup of Diocodium; it was also made into the Thebaic Tincture or Laudanum. The latter was considered more dangerous than the syrup or decoction when used as a sedative.⁴

Pharmaceutical manuals of the period provide information about the common preparations *"...now available in the shops and prescribed in regular practice."*⁵

Opium was offered for sale in Philadelphia newspapers by Frederick Phile in the 14 November 1778 Pennsylvania Packet and William Richards in the 21 June 1780 Pennsylvania Gazette. Both opium and laudanum "a soporific tincture,"⁶ were available from James Peters in the 23 February 1764 Pennsylvania Gazette.

Laudanum was also called Tincture of Opium.⁷ This medicine could be prepared by physicians, apothecaries, and even by ordinary housewives.⁸ A *"Recipe for black Anodyne Drops..."* called for half a pound of opium and states: *"...five Drops of this mixture is equal to 15 or [sic; should be of?] liquid laudanum"*.⁹ Both opium and laudanum were ingredients in pain-killers, like those to treat toothaches.¹⁰ Elizabeth Drinker reported using laudanum for this problem.¹¹ She also administered opiates for various abdominal problems, like *"disordered bowels,"* colic, and griping.¹² Another local woman used drops containing laudanum to treat babies for colic pain.¹³

These drops were also used in a very different situation.

Our James Duning has been for some time past very strange in his behaviour, sometimes talks of leav-ing us, 'tho he says he has no cause for so doing, then changes his mind and appears easy--

Phillippus Aureolus Theophrastus Bombastus von Hohenheim (1493–1541)

was a German-Swiss alchemist and physician of the 16th century. As a boy he went by the name Theophrastus but sometime after graduating from University of Vienna in 1510 with a baccalaureate in medicine he began using the name **Paracelsus** meaning "greater than Celsus". Aulus Cornelius Celsus was a first century Roman physician.



Paracelsus observed that opium was more soluble in alcohol than water. He experimented with various opium/alcohol concoctions and eventually developed a "tincture of opium" for treating pain that he call "laudanum". Paracelsus' laudanum contained crushed pearl, musk, and amber. Laudanum, as listed in the London Pharmacopoeia (1618), was a pill made from opium, saffron, castor, ambergris, musk and nutmeg.

Laudanum was an important remedy for 17th and 18th century physicians as there were few drugs that could cause relief from pain and problems such as constipation and sleeplessness. It has largely fallen out of use but is still available as an "unapproved drug" and is regulated under the Controlled Substances Act of 1970.

Paracelsus' contributions to medicine and science did not end with laudanum. In 1530 he studied syphilis and developed a mercury based treatment which likely was not very effective. He studied the miner's disease, silicosis, and determined it was caused by inhaling metal vapors, that it was not a result of offending the "mountain spirits". He studied goiter and determined that it was caused by metals . . . the treatment being a mercury/sulphur compound.

Paracelsus felt that many poisonous substances properly administered could be employed as remedies for disease. He developed ideas that "like cures like" and seems to have anticipated the homeopathy of Samuel Hahnemann two centuries later. None the less, Paracelsus did make substantial contributions to medicine.

"All substances are poisons; there is none which is not a poison. The right dose differentiates a poison...."
 ~ Paracelsus

this evening Benn. Oliver ask'd to speak with HD, told him James was at his house crying, that he could not find out what ail'd him, but said his conduct was very strange--James came in some time after and ask'd my husband if he would forgive him, what hast thou done amiss? he said he had sometimes overfed the Horses, at another time suffer'd them to run away--poor fellow: I fear he has something at heart that we know not off--he ne-ver was faulted for the above matters, one we look'd on as an accident, the other knew nothing of--if it was so.¹⁴

A few days later, when James came again and talked of leaving, the Drinkers took steps: "...WD. gave him 15 drops Liquid Laudanum in a glass wine, with a small cake, he took the wine, but would not eat--I proposed to HD. after he was gone to bed, to send tomorrow for a physician."¹⁵ On 10 May 1795, James left.

As well as knowing that opium and its products produced sleep and eased pain, people were aware that there was a danger other than death. An advertisement bound into a book between pages 630 and 631 said that the contents "...were produced during a painful state of the Author's health, and the injurious effects of a long course of opium..."¹⁶ Although the term "addiction" was not used, it would seem that that had been "the injurious effects of a long course of opium."

There has been some interest in myths and legends in American history recently. We don't know how and where some of them come from, but it seems that there is a never-ending supply to keep researchers busy trying to document or refute them. Laudanum seems to have joined the list.

Endnotes

1. Lillian Vecchio, "Harvest Day at the Massey House [no date]" *The Endeavour*, Fall-Winter issue January 2013, n.p.
2. John Gerard, *The Herball or Generall Historie of Plantes*, rev. & ed. by Thomas Johnson London: Printed by Adam Islip ...1633; facsimile reprint by Dover Publications, Inc., New York, 1975), p. 400 [note: page number should be 370].
3. *Ibid.*, p. 400.
4. Sir John Hill, M.D., *The Useful Family Herbal...* 2nd ed. (London: Printed for W. Johnston ...1755; Xerox copy from The British Library, London), pp. 296-297.
5. John Quincy, M.D., *Pharmacopoeia Officinalis & Extemporanea* 14th ed. (London: Printed for T. Longman...1782), p. 253.
6. Samuel Johnson, *A Dictionary of the English Language...* in 2 vols (London: Printed by W. Strahan...1755; facsimile reprint by Longman Group UK Limited, Harlow, UK, 1990), n.p.
7. *The New Dispensatory:...* (London: Printed for J. Nourse... 1753), p. 422.
8. See, for example: E. Smith, *The Compleat Housewife:...* 15th ed. (London: Printed for R. Ware ...1753; facsimile re-print by Literary Services and Production Limited, London, 1968), p. 262.
9. *To Strengthen, to Comfort, and to Heal: Receipt Book for* John H. Mundall, ed. & self-pub. by Clarissa F. Dillon, 2004 from a manuscript in The College of Physicians of Philadelphia, p. 2.
10. William Buchan, M.D., *Domestic Medicine:...* [orig. pub. 1769; Phila ed. 1771] A New Ed. Boston: Printed for Joseph Bum-stead, 1809, p. 252.
11. *The Diary of Elizabeth Drinker*, ed. by Elaine Forman Crane Boston: Northeastern University Press, 1991), p. 582; p. 617; p. 1083.
12. *Ibid.*, p. 575; p. 1075; p. 1130; p. 719; p. 723; p. 726; p. 1200; p. 1226; p. 985; p. 1003; p. 1005; p. 1038.
13. "The Receipt Book of Margaret Morris" (Unpublished manuscript in The Quaker Collection, Haverford College, Haverford, PA), p. 9.
14. Drinker, op. cit., p. 677.
15. *Ibid.*, pp. 679-280.
16. J.B. Bordley, *Essays and Notes on Husbandry and Rural Affairs*, 2nd ed. Philadelphia: Printed by Budd and Bartram for Thomas Dobson...1799.

Clarissa F. Dillon, Ph.D., is a historian specializing in the customs and technology of 18th century America, in particular the lives of ordinary women in that period of time. She earned her PhD in history at Bryn Mawr College.

PHACT CALENDAR

PhACT Events

Dr. David Cattell, Chairman of the Physics Department of Community College of Philadelphia hosts meetings of **PhACT** - at 2:00 PM on the third Saturday of most months at Community College of Philadelphia., Parking is easily available and costs \$4.00 for all day. Enter the college parking lot on 17th Street which is one way south bound. This meeting site is handicap accessible. **PhACT Meetings are Free and open to the public unless otherwise noted.**



Saturday, April 20, 2013 - PhACT will participate in the 2013 Philadelphia Science Festival. The Amazing James Randi will be our guest speaker. See more on Page 1.

Sunday, April 21, 2013 - Brunch with James Randi

Join us for an informal brunch with James Randi the day after his PhACT appearance at the Philadelphia Science Festival.

Location: Brauhaus Shmitz, 718 South Street, Philadelphia, PA, 19147 267-909-8814

Open to all PhACT members and their guests. Cost is \$35 per person. To reserve a place, contact Bob Glickman at president@phact.org, or visit our Facebook page or our Meetup page.

Saturday, May 18, 2013 - PhACT Expedition to the Heinz NWR

On Saturday, May 18, 2013, you are invited to join PhACT for an expedition to the John Heinz National Wildlife Refuge at Tinicum where we will look for the Ape Boy of the Chester Swamps, a half-ape, half-human creature with thick reddish fur, something like a local Bigfoot, who is said to be lurking somewhere in the refuge. Our guide will be Don Nigrone who has hiked, biked and kayaked there for many years and is a volunteer Weed Warrior at Heinz. We will meet at the Visitor Center at 10:00 AM and will be hiking 3.3 miles around the impoundment. We may not find the Ape Boy but we will learn about the rich history and natural history of this urban wildlife refuge. Bring insect repellent, sturdy shoes, lunch, binoculars and a camera. The event is free. See page 3.

Saturday, September 21, 2013 - AIDS Denialism - Nicoli Nattrass of South Africa will talk on AIDS denialism. Hundreds of thousands of people are thought to have died based on misinformation concerning AIDS and treatments. Learn about how science is reducing the deaths and spread of the disease even though irrationalism has been doing the opposite.

The **PhACT Calendar** is open to members and non-members who wish to announce meetings and events of other groups of which they are interested or affiliated. These events should be of some general interest to the Skeptical or Scientific community and should be within a reasonable radius of Philadelphia. Send submissions to the editor at phactpublicity@aol.com. Keep the announcements brief. Space is limited and insertions will be made on a first come-first served basis after the needs of PhACT are accomplished. Phactum does not accept paid advertising.



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

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

Monday, April 8, 2013 @ 8:00 PM - 9:00 PM at Delaware County Institute of Science, 11 Veterans Square, Media, PA 19063

<http://delcoscience.org>

"Frick's Lock to Du Pont- How the Industrial Revolution Saved America"

A lecture by Gene Pisale, author and member of Chester County Historical Society

Lectures are FREE and presented upstairs in the Lecture Hall.

Doors open by 7:30 PM. Lectures begin at 8 PM.

Tuesday, April 9, 2013: at 7 PM at Chestnut Hill College, Commonwealth Chateau (Bldg. 20), Sugar Loaf Campus, 9230 Germantown Avenue, Philadelphia, PA 19118. <http://www.irands.org>

This lecture is presented by The Institute for Religion and Science hosted by Chestnut Hill College.

"The Role of Place in Technology and Spirituality."

John Staudenmaier, SJ, PH.D., Professor of History of Technology and Engineering Ethics and Assistant to the President for Mission & Identity, University of Detroit Mercy has served as editor-in-chief of Technology and Culture, The International Quarterly of the Society for the History of Technology (T&C), as visiting professor at MIT's Science, Technology and Society Program; as research fellow at MIT's Dibner Institute, as Gasson Professor at Boston College, and as visiting scholar at Santa Clara University's Center for Science Technology and Society. Staudenmaier consults with museums about exhibits, with television producers about historical programs, and with science and technology reporters about articles in process. A short sample of published works suggests the kinds of questions that attract his attention: Technology's Storytellers: Reweaving the Human Fabric (MIT Press); "The Politics and Ethics of Engineering;" "Denying the Holy Dark: The Enlightenment and the European Mystical Tradition;" and "Rationality vs. Contingency in the History of Technology." In 2011, The Society for the History of Technology presented him their Leonardo da Vinci Medal. The mp3 version of his plenary lecture can be found at <http://www.udmercy.edu/udmcasts/by-date/2011/11-04-staudenmaier-da-vinci.htm>

Open to the public. For those who are able to contribute to our efforts, a Free Will Donation is requested.

Tuesday, April 9, 2013 at 12:00 to 1:00 PM at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

"Jean-Baptiste Dumas (1800–1884): Chemistry, Industry, Labor, and the French Bourgeoisie"

A talk by Andrew Butrica

From 1832 until his death the chemist Jean-Baptiste Dumas was a member of the Academy of Sciences and the Société d'Encouragement pour l'Industrie Nationale, founded in 1801 to improve French industry through a marriage of science and practice. As president of the Société d'Encouragement from 1845 to 1884, Dumas transformed the society from a servant of state industrial policy to a master of private funding and initiatives aimed at the emergent bourgeoisie. The reinvented society catered to bourgeois consumption and taste with consumer goods whose manufacture rested on an alliance of science and practice and a marriage of industry and agriculture. It also upheld the bourgeois social order (that included the artisan class) that the bourgeoisie aspired to dominate.

Andrew Butrica has a PhD. and an M.A. degree in the history of technology and science from Iowa State University and a B.A. degree in history from Rutgers University. He was formerly associated with the Centre d'Histoire des Sciences et Techniques in Paris. When not consulting for the historical offices of NASA and the Office of the Secretary of Defense, he is researching and writing a book-length history of the Société d'Encouragement pour l'Industrie Nationale during the "long" nineteenth century (1801–1914). It focuses on the broad connections among industrial policy, politics, science, labor, and philanthropy as the society in stages transformed itself from an outgrowth of the interior ministry, to an expression of bourgeois culture, and finally, as the long century was concluding, to an engineering society. Free and open to the public.

Wednesday, April 10, 2013 at 6:30 pm at World Cafe Live, 3025 Walnut Street, Philadelphia PA.

World Cafe Live

"Ultrafast DNA sequencing - Speed reading the blueprint of life"

Robert Johnson

Physics & Astronomy, University of Pennsylvania

The blueprints of a living creature are stored in long, chainlike molecules known as DNA. These blueprints are written in a code format using four chemical bases called A, C, G and T. The particular sequence of these bases determines almost everything about the creature including what type of creature it is, what it eats, what it looks like and how long it lives. We can learn an extraordinary amount about a living organism by reading the sequence of bases in its DNA. However, the number of bases in an organism's DNA can be enormous and reading them all can be time consuming and expensive. For example, human DNA contains about 3 billion bases. The first complete sequence of human DNA was obtained in 2003 after about 12 years of work costing almost \$3 billion.

Cheaper, faster and more reliable methods to sequence DNA are highly desirable. These methods would not only facilitate biological

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



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

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

See website: www.irands.org

research but also revolutionize medicine and personal healthcare. The ability to speed-read DNA could be achieved by threading DNA molecules through small holes in graphene (pictured above), a material closely related to graphite (pencil lead). In this talk I will describe current research towards the development of ultrafast DNA sequencing technology and how such technology could impact society.

Free and open to the Public.

Thursday, April 11, 2013 at 7:30PM at the Free Library of Philadelphia, 1901 Vine Street, 19103 215-686-5322

Frans de Waal | The Bonobo and the Atheist: In Search of Humanism Among the Primates

Drawing on a wealth of pioneering research, esteemed primatologist Frans de Waal traces the biological roots of human morality to primate social emotions, including empathy, reciprocity, and fairness in The Bonobo and the Atheist. Named one of Time's 100 Most Influential People, he is the C. H. Candler Professor in Emory University's Psychology Department. His many works include *Our Inner Ape*, *Chimpanzee Politics: Power and Sex among Apes*, and *The Age of Empathy: Nature's Lessons for a Kinder Society*. Dr. de Waal is a member of the National Academy of Sciences and the Royal Dutch Academy of Sciences, and directs the Living Links at the Yerkes National Primate Research Center.

Cost: \$15 General Admission, \$7 Students

Buy tickets online <http://libwww.freelibrary.org/authorevents/>

Saturday, April 13, 2013 at 9:30-2:30 at the 1696 Thomas Massey House in Broomall, PA

Hands-on Colonial Cooking Workshop: Puddings! "Puddings - A Hands-on Workshop"

Make four different 18th-century puddings, including one boiled in a cloth and an isinglass flummery - and then eat them.

For information and to register, call Clarissa Dillon (610) 642-4269. Registration limited; COST: \$35.00

Sunday, April 14, 2013 at 1:00 pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

FOOTPRINTS of ANGELS at LAUREL HILL

Famed poet, Henry Wadsworth Longfellow once noted that "He spake well who said that graves are the footprints of angels." Laurel Hill Cemetery is filled not only with the symbolic footprints of these heavenly beings, but with their images as well. Amid Springtime's blossoming promise of life, this tour will feature some of the cemetery's most beautiful depictions of angels, sculpted in various materials throughout Laurel Hill's Central section, including Millionaire's Row.

The tour will take place on Sunday, April 14 at 1:00pm, departing from Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

Guide: Sonia Krutzke

Monday, April 15, 2013 at 6 p.m. at National Mechanics, 22 South Third St., Philadelphia 19106

Science on Tap - A Philadelphia Science Café -eat. drink. science.

Topic and Speaker TBA

Presented by the Mütter Museum of the College of Physicians of Philadelphia

Free and open to the Public.

Tuesday, April 16, 2013 at 12:00 to 1:00 p.m. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

Brown Bag Lecture: "Affinity and Self-Experiment: J. W. Ritter's Galvanic Poetics"

A talk by Carolina Malagon

Johann Wilhelm Ritter (1776–1810), German electrochemist and Romantic, subjected his body to a series of brutal self-experiments in what he thought of as a heroic quest to understand the nature of galvanism and thus of chemistry and physics, and of nature itself. His work is defined by the bizarre meeting of cutting-edge findings and alchemical explanations, of sophisticated Romantic poetic devices and baroque obfuscations. The stakes are particularly high in a work published shortly before his death, *The Fragments from the Estate of a Young Physicist* (1810). At once scientific and literary in nature, *Fragments* set into motion a poetic experiment that affects not only the selfhood of the author but ultimately also of the reader. The talk will explore these implications for a Romantic understanding of the scientific self in particular and for chemistry in general.

Carolina Malagon is currently a Ph.D. student in the Department of German at Princeton University. She received her master's degree in Berlin at the Humboldt-University and her B.A. degree from Yale. Her general area of interest is the 18th century, and she is particularly interested in the mutually constitutive relationship of literature and science around that time.

Free and Open to the Public.

Tuesday, April 16, 2013 at 8:00 p.m. till 10 p.m. at Chestnut Hill College, 9601 Germantown Avenue, Philadelphia, PA 19118

The Institute for Religion and Science hosted by Chestnut Hill College

<http://www.irands.org/index.html>

Open Dome Night - Astronomy

If skies are not clear on April 16, the Open Dome Night will be postponed till April 17. Check this page on April 16, for any updated information on postponements: http://www.irands.org/event_pages/open_dome_april2013.html

Please follow the staircase next to the blue elevator in St. Joseph's hall till you reach the top. Guides will be posted from there.

Free and Open to the Public.

Wednesday, April 17, 2013 at 12:00n – 1:00PM 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

Food & Thought: Organ Transplantation: Views From Both Sides of the Bed

Speaker: John Daly, MD, Harry C. Donahoo Professor of Surgery, Surgical Director, William Maul Measey Institute for Clinical Simulation and Patient Safety, Emeritus Dean, Temple University School of Medicine

Marked progress has occurred in our ability to transplant cells and whole organs when damage to native organs has occurred from a variety of causes. The processes are quite different as seen by the care-giver, the recipient and the donor family. Yet many wait in vain for the life-saving procedure. The presentation will describe the current status of transplantation, impediments to expansion and potential solutions.

Free and open to the public.

To register: <http://organtransplants.eventbrite.com/#>

Wednesday, April 17, 2013 • 5:00–6:30 pm at Rainey Auditorium, Penn Museum, 3260 South Street

Medicine at the Margins

<http://www.phf.upenn.edu/12-13/medicine.shtml>

What are the practical and ethical challenges of taking medical practices and technologies developed in metropolitan centers and extending them into remote communities where modern health care resources are scarce? Join us for a lively conversation featuring reports and reflections on recent field work in southern Africa by Harvey Friedman, director of the Botswana-UPenn Partnership, Steven Feierman, historian of African science and medicine, and Julie Livingston, African historian and ethnographer.

Speakers: Steven Feierman, Professor of History and History & Sociology of Science, University of Pennsylvania



Harvey Friedman, Chief of Infectious Diseases Division, Professor of Medicine, and Director, Botswana-Penn Partnership, Penn Medicine
Julie Livingston, Associate Professor of History, Rutgers University
Free and open to the Public.

Please register: <http://humanities.sas.upenn.edu/registration.shtml>

Friday, April 19, 2013 at 12:00PM at the Free Library of Philadelphia, Central Library, 1901 Vine Street, 19103
215-686-5322

Cass Sunstein | Simpler: The Future of Government

The Felix Frankfurter Professor of Law at Harvard Law School, Cass Sunstein is the author of more than 35 books and textbooks. From 2009 to 2012, he served as the Administrator of the White House Office of Information and Regulatory Affairs. The coauthor of the bestselling book, *Nudge*, Sunstein guided the administration toward simplifying regulations with his innovative methods of “nudging” corporate behavior while protecting citizens and maximizing freedom and business opportunity. In *Simpler*, Sunstein demonstrates how an understanding of human nature can inform and steer the behavior of businesses, citizens, and governments about issues ranging from health care and obesity to financial reform, national security, energy, and the environment.

Cost: FREE

No tickets required. For Info: 215-567-4341.

PhACT Event

Saturday, April 20, 2013 - at 11:AM PM

PhACT, in partnership with the Franklin Institute, will host The Amazing James Randi as part of The Philadelphia Science Festival

See page 1 for more details.

Saturday, April 20, 2013 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

LIBERTY or DEATH:

REVOLUTIONARY WAR HEROES of LAUREL HILL

This week in history, the American Revolution began with the first exchange of fire between British and American forces at Lexington on April 19. “Give me liberty or give me death!” is the now famous line often attributed to Patrick Henry and his 1775 speech. But what about the Founding Fathers and patriots who truly did give their lives for that freedom we hold so near and dear to our hearts? Join us as we hear their rousing stories of victory, tragedy and revolution from their final places of rest here at Laurel Hill.

The walking tour will take place on Saturday, April 20 at 1:00pm, departing from Laurel Hill Cemetery’s Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

Guide: Russ Dodge

Saturday, April 20, 2013 at 1:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

NATURE in the NECROPOLIS:

AN EARTH DAY EXPLORATION

The first official observance of Earth Day took place in 1970 as a day intended to inspire awareness and appreciation for the earth’s natural environment. Few sites have more appreciation for its “earth,” and all of the stories and secrets that lie beneath it than Laurel Hill. The resting place claims status as the first garden cemetery in the United States, boasting 78 acres of green space in the middle of the city. Start off your Earth Day properly at Laurel Hill, taking in its gorgeous river vistas, and learning of its history as a world-renowned arboretum. Participants will also aim to identify the many bird species, trees and horticultural specimens that still populate the site. Share your knowledge or just enjoy nature and the blooming springtime. Bring binoculars if you wish

The walking tour will take place on Saturday, April 20 at 1:00pm, departing from Laurel Hill Cemetery’s Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

Guides: Bob Berghaier and Steve Maurer

Saturday, April 20, 2013 at 11:00-4:00 at Colonial Pennsylvania Plantation, Ridley Creek State Park, Edgmont, PA.



Running a Household Still at the Colonial Pennsylvania Plantation

Historian Clarissa Dillon, PhD

A replica 18th-century still will produce peppermint water, a medicinal. There will be

a display of various products using 18th-century receipts for medicinal, cosmetic, and social uses. NO TASTES!

Sunday, April 21, 2013 - 2:00 - 5:30 PM at the Wagner Free Institute of Science, 1700 West Montgomery Avenue, Philadelphia, PA 19121

ph 215-763-6529 www.wagnerfreeinstitute.org

Skinned, Stuffed and Mounted: The History, Culture and How-to of Taxidermy

With over 100,000 specimens, many of which are skinned, stuffed and mounted, the Wagner Free Institute of Science is no stranger to taxidermy.

Visitors to the Victorian era museum are immediately drawn to the multitude of skeletons, skins, and fauna displayed behind glass for observation and study. In homage to the taxidermists who spent countless hours preserving the specimens in the Wagner collection,



you are invited to a program of taxidermy history and how-to. Rachel Poliquin, author of the book *The Breathless Zoo*, will discuss the history of taxidermy and its larger implications for the relationship between human and non-human animals. Beth Beverly, a local artist and taxidermist, will then demonstrate how to skin, stuff, mount and arrange a specimen. While not for the faint-of-heart, this fascinating demonstration is not to be missed! A small reception will follow the talk with light refreshments, Q&A, book signings and Jewelry and hat sales.

Rachel Poliquin...is a writer and curator dedicated to exploring all things orderly and disorderly in the natural world. Most recently, her work has focused on the cultural history of taxidermy. She is the author of *The*

Breathless Zoo: Taxidermy and the Cultures of Longing (Penn State Press, 2012) and ravishingbeasts.com. Her museum work includes "Ravishing Beasts: The Strangely Alluring World of Taxidermy" at the Museum of Vancouver and the permanent Vertebrate exhibits at the Beaty Biodiversity Museum. She is currently writing a book about beavers for the Reaktion Book's Animal series.

Beth Beverly...Philadelphia's premiere rogue taxidermist, Beth Beverly specializes in wearable taxidermy. Her hats have won awards at the Devon Horse Show, Brandywine Polo and Radnor Hunt Clubs. Her work has been featured in The New York Times and The Wall Street Journal, plus galleries such as La Luz de Jesus, Art in the Age, and Michael Vincent Gallery. In 2010 Beverly won "Best in Show" at the annual Carnivorous Nights competition in New York. Currently featured as an "Immortalizer" on AMC's series about competitive taxidermy, she relishes in being photographed wearing her work and defying common stereotypes of taxidermists.

Reservations required. Price: \$10

Reserve your tickets: <http://philsciencefestival.ticketleap.com/skinned-stuffed-and-mounted-the-history-culture-and-how-to-of-ta/t/wagner/>

Monday April 22, 2013 at 6:00 PM-8:00 PM at The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103
www.ansp.org/environmental/
215-299-1108 cep@ansp.org

The Imperative to Address Climate Change: Voices of Faith Speak Out

At this Urban Sustainability Forum, explore how major world religions are addressing climate and how communities of faith in southeastern Pennsylvania can make a difference.

Program - 6 pm

Reception - 7:30 pm

Free

Register: interfaithclimateimperative-eorg.eventbrite.com/

The former Pope Benedict XVI called on members of the international community for a response to climate change. Christian denominations across the world have taken steps to encourage environmental stewardship in their communities. In 2009, more than 200 Muslim leaders developed a seven-year action plan on climate change. The Big Green Jewish Website campaigns to raise awareness of environmental issues in the Jewish community. We'll discuss how to inspire environmental stewardship within communities of faith. In effect, we will begin a conversation on climate change that crosses the boundaries of partisanship, economics, and faith.

Panelists:

- (Moderator) Adam Garber, Field Director, PennEnvironment
- Joy Bergey, Federal Policy Director - Penn Future
- Mary Elizabeth Clark, Sisters of St. Joseph - Director, Earth Center; Special Assistant to the President of Chestnut Hill College for Sustainability
- Rabbi Mordechai Liebling, Director, Social Justice Organizing Program - Reconstructionist Rabbinical College
- Reverend Jesse Brown

Tuesday, April 23, 2013 at 12:00 to 1:00 PM. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

“Such a Sister Became Such a Brother”: Lady Ranelagh’s Influence on Robert Boyle”

A talk by Michelle DiMeo

Often regarded as the “father of chemistry,” Robert Boyle has always held a prominent place in popular and academic history of science. However, while his contemporaries widely acknowledged the influence of his older sister Katherine, later historiographies dropped her from the record. Boyle moved into his sister’s London home in 1668, and the two lived together for the rest of their lives, dying only one week apart in 1691. Though some historians have recently begun acknowledging that Lady

Ranelagh must have had an intellectual influence on Boyle, it has not been possible to identify the extent of this until the recent location of over 100 of her lost manuscripts. This is the story of a lifelong intellectual partnership, where brother and sister shared medical remedies, promoted each other’s scientific ideas, and edited each other’s manuscripts. It is also an introduction to one of the most formidable female intellectuals in 17th-century England: Katherine Jones, Lady Ranelagh.

Michelle DiMeo is S. Gordon Castigliano Director of Digital Library Initiatives at the Historical Medical Library of the College of Physicians of Philadelphia. She has published several essays and articles on early modern science and medicine, and with Sara Pennell she coedited Reading and Writing Recipe Books, 1550–1800 (Manchester University Press, 2013). Her current project is to complete an intellectual biography of Lady Ranelagh. She holds a Ph.D. from the University of Warwick.

Free and open to the public.

Wednesday April 24, 2013 at 7:15 PM

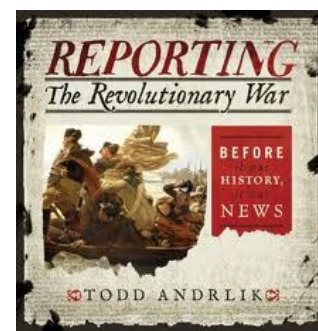
at Saint Peter's Lutheran Church, 3025 Church Road, Lafayette Hill, Pennsylvania, 19444. There is a large parking lot across the street.

American Revolution Round Table of Philadelphia,

<http://arrtop.com/>

Bruce Mowday on the Battles of Brandywine and Germantown from the new book *Reporting The American Revolution*

Free and open to the Public.



Thursday, April 25, 2013 at 7:30PM at the Free Library of Philadelphia, 1901 Vine Street, 19103

215-686-5322|

The Dispensable Nation: American Foreign Policy in Retreat
Vali Nasr

Former State Department advisor for Afghanistan and Pakistan and Bloomberg View columnist Vali Nasr offers a powerful reassessment of United States foreign policy. Dean of the Johns Hopkins University’s School of Advanced International Studies, Nasr is a senior fellow of the Brookings Institution and a member of the U.S. State Department’s Foreign Policy Advisory Board. He has advised presidents and vice presidents, senior cabinet secretaries of both the Republican and Democratic parties, congressional committees, and military leaders. In *The Dispensable Nation: American Foreign Policy in Retreat*, he reveals how fear of political backlash and the threat of terrorism have crippled the efforts of diplomatic leaders. His previous books, *The Shia Revival* and *Forces of Fortune*, both contributed to U.S. policy formulated in response to postwar sectarian violence in Iraq and the Arab Spring.

Cost: FREE

No tickets required. For Info: 215-567-4341.

Friday, April 26, 2013 at 10:00am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillcemetery.org>

MONTHLY FOURTH FRIDAY TOUR SERIES:

HOT SPOTS and STORIED PLOTS

Join Laurel Hill Cemetery for this informative overview of Laurel Hill’s long and colorful history, which will include many of the marble masterpieces, stunning views and legendary stories that afford the cemetery its WOW factor. This is the perfect tour for first-time visitors to Laurel Hill, and anyone else who enjoys beautiful art, scenic nature and fascinating history. BRAND NEW “Hot Spots and Storied Plots” will be presented monthly as part of Laurel Hill Cemetery’s Fourth Friday tour series, which take place on the fourth Friday of every month at 10:00am.

April’s walking tour will take place on Friday, April 26 at 10:00am, departing from Laurel Hill Cemetery’s Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

The cost is \$8/person general admission; \$5/members. Tickets can be



Calling All Astronomers! Rittenhouse Astronomical Society

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

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

www.rittenhouseastronomicalsociety.org/

purchased at the door, or in advance by phone (215) 228-8200 or online.
Guide: Jerry McCormick

Friday, April 26, 2013 at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

ASTRONOMY NIGHT: STARGAZING from the CEMETERY

Grab a blanket and take a tour of the cosmos with local astronomers. As part of the Philadelphia Science Festival over 20 venues in and around the city will play host to astronomy night star parties with amateur astronomers coming out en masse with their telescopes to show locals the wonders of the night sky. If you have your own telescope or binoculars, bring them along. Also, don't forget to bring your own blankets, beach chairs, beverages and/or snacks! Relaxing and stargazing from Philly's most ethereal site = a perfect way to end the week!



While the sun doesn't set until nearly 8:00pm on Astronomy Night, Laurel Hill's gates will open early at 6:00pm for an array of family-friendly activities, where children will learn how to "measure" the night sky with their hands, and to observe features on the moon. During these twilight hours, families are also welcome to bring picnics or explore the site before night-viewing activities kick off.

Astronomy Night at Laurel Hill Cemetery will take place on Friday, April 26. Gates open at 6:00pm. Visitors can enter through Laurel Hill's Gatehouse at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

Admission to the event is FREE and open to the public. For additional information, phone (215) 228-8200

Saturday, April 27, 2012 at 6:00pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

THE MORGUE, THE MERRIER: SCIENCE of the LIVING DEAD

Since entering the English language in the early 19th century, zombies have become a point of cultural fascination. From Night of the Living Dead to the Walking Dead, zombies occupy a special place in our consciousness both thrilling and terrifying us with the idea of "life" beyond the grave. More than just tales for the campfire at night, the subject of zombies allows us to explore complex questions about culture and nature, albeit in an entertaining way. But just what does it mean to be dead? And if there ever was a "zombie" virus, what would happen to our brains? How would we protect ourselves?

Join us as we explore these questions and more with Dr. Steven

Schlozman, Harvard University Professor and author of the *Zombie Autopsies: Secret Notebooks from the Apocalypse*, soon to be adapted to film by the Godfather of Zombies, George Romero. Explore a zombie outbreak from the point of view of a scientist with a fascinating talk by Dr. Schlozman, complete with a live zombie autopsy. Afterwards, discover how we've defined "dead" and "alive" throughout history with the Association of Women in Forensic Science; learn what pushing up daises literally has to do with living dead; and take part in a zombie body part scavenger hunt and a reanimation exercise with the Franklin Institute. At the end of the evening, join us for an after-party featuring signature cocktails, refreshments and an opportunity to learn the Thriller dance amongst other fun "undead" activities. There will be unique merchandise for sale and raffles for a zombie gift basket "to die for" so don't forget your wallets! Proceeds benefit the Friends of Laurel Hill Cemetery, a 501c3 nonprofit.

The program will take place on April 27, 2012 at 6:00pm, during the final weekend of the Philadelphia Science Festival at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse entrance.

The cost is \$25/person general admission and Advance Registration is Required. Tickets can be purchased by calling (215) 228-8200 or online at www.philasciencefestival.org. The program is not recommended for those under the age of 21.

Tuesday, April 30, 2013 at 12:00 to 1:00 p.m. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

A Talk by Ben Gross

"The Rise of the Digital Indicator: A Story in Seven Segments"

During the latter half of the 20th century analog gauges, meters, and timepieces gave way to digital devices, which promised to simplify measurement while simultaneously offering a greater degree of precision. This transition depended on the replacement of mechanical components with electronics, including the invention of new information-display techniques. Although reliant on a variety of electro-optic effects, the majority of these readouts shared a common form: the seven-segment numeric indicator. The simple appearance of this now familiar technology belies the complex research underlying its incorporation into wristwatches, calculators, and household appliances. This talk reconstructs the origins of the seven-segment indicator and how the discovery of new solid-state phenomena facilitated its proliferation. It will also address the social and economic factors that prompted corporations in the United States, Soviet Union, and Japan to embrace different forms of numeric indicator and the extent to which these devices have transformed popular conceptions of accuracy and expertise.

Benjamin Gross is the 2012–2013 Cain Postdoctoral Fellow. His research concentrates on corporate innovation and the history of the American electronics industry. His dissertation, which he is currently revising into a book, explored the development of the first liquid-crystal display devices by scientists at the Radio Corporation of America. He

Night Skies in the Observatory at the Franklin Institute Every second Thursday

About Night Skies in the Observatory

Hosted by Chief Astronomer at The Franklin Institute, Derrick Pitts, the



Joel N. Bloom Observatory is open late to the public and offers 5 different telescopes for you to view celestial objects in the sky, including stars, planets, nebulae, and if conditions are right, a galaxy or two. The evening includes a Fels Planetarium show and a lecture or presentation (appropriate for ages 5 and up) on an astronomical or space science topic. The Observatory is staffed with knowledgeable observers and free star maps are provided.

Meet some BIG STARS on the second Thursday of each month at The Franklin Institute! Admission is \$5.00. Members are free. Advance reservations are not needed. Tickets are sold on-site when you arrive.

<http://www2.fi.edu/exhibits/permanent/bloomobservatory.php>

previously served as the 2009–2010 Price Dissertation in Polymer History and the 2011–2012 Fellow for Sustainability in Innovation at CHF's Center for Contemporary History and Policy. He earned a Ph.D. in the history of science from Princeton University.

Free and open to the Public.

Wednesday, May 1, 2013 - doors open at 6:30, show at 7:30 at Frankford Hall, Frankford and Girard avenues.

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

Philadelphia Nerd Nite.

A Science Cafe. Great conversation, food and BEER!

Be There and Be Square!

\$5 cover



Wednesday, May 1, 2013 at 6:00 pm at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

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

"Great Battles"

Thermopylae: The Battle for Europe?

Dr. Jeremy McInerney, Professor of Classical Studies, examines the tactics and strategy of the Battle of Thermopylae (in present-day Greece) in 480 BCE. Why was the battle fought at this location and was it, as it is often portrayed, a turning point in the confrontation of East and West? This lecture puts the Battle of Thermopylae into the context of the Persian Wars, and examines the battle's significance for the Greeks as well as for Europeans in later periods, in art and poetry.

Admission with advance registration: \$5, general public; \$2, Penn Museum members; \$10 at the door based on availability.

To register, go to www.penn.museum/greatbattles

For more information, call 215.898.2680.

Saturday, May 4, 2013 at 1:00pm, at Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132.

<http://www.thelaurehillcemetery.org>

50TH ANNIVERSARY of CHANCELLORSVILLE:

ROBERT E. LEE'S GREATEST TRIUMPH

150 years ago, from April 30 to May 6, 1863, the Union's Army of the Potomac clashed with the Confederacy's Army of Northern Virginia near Chancellorsville, Virginia. Though Confederate forces were less than half the size of the Union army engaged in the bloody conflict, General Robert E. Lee achieved what is still considered his "perfect battle" and greatest military triumph. This walking tour will honor the Union veterans buried in Laurel Hill Cemetery who fought and died at Chancellorsville. We will not only learn their stories, but also examine how the battle itself set the stage for what was to come two months later in Gettysburg, Pennsylvania.

The tour will take place on Free parking is located in the lot across the street from the Gatehouse.

The cost is \$12/person; \$10/students and seniors; \$9/members. Tickets can be

purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Russ Dodge

Sunday, May 5, 2013 at 1:00pm, departing from Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

SOUTH of the BRIDGE:

EXPLORATIONS of the CEMETERY'S

SOUTHERNMOST SOD on CINCO de MAYO

Historic Laurel Hill Cemetery boasts 175 years of history. Much of that history is tangible: 78 acres of rolling landscape; 75,000 interments; an estimated 33,000 gravestones and monuments; and approximately 11,000

family lots! Such an abundance of features and spaces are difficult to cover in a single tour or program. As a result, Laurel Hill's most remote, southern portions – and the many notable stories, intricate stones and beautifully peaceful surroundings that comprise it – often go unexplored by the traditional visitor. In the spirit of Cinco de Mayo, tour-takers will have the opportunity to head south of the Cemetery's figurative border to explore the many hidden gems and little-known secrets of South Laurel Hill.

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

Guide: Jerry McCormick

Tuesday, May 7, 2013 at 12:00 to 1:00 p.m. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

"Guiding the Elect: A Textual History of Ottoman Alchemy in the 18th Century"

A talk by Tuna Artun

The physician and whirling dervish 'Omer Shifa'i of Bursa (d. 1742) is best known today as one of the key figures in the popularization of Paracelsian medicine among learned Ottomans. His most widely circulating work in the 18th century, however, was the Murshidu'l-mukhtar fi 'ilm al-asrar (Guide of the Elect for the Science of Secrets), a lengthy and at times inscrutable book on alchemy. Despite its fame the Murshidu'l mukhtar remained as a textual oddity in the 18th century: constituting a clear departure from the conventions of earlier Ottoman alchemical literature both in terms of its content and language, 'Omer Shifa'i's magnum opus was read by many but imitated by none. The talk serves as a short introduction to alchemy in its Ottoman context and the ways in which its practitioners engaged with Western sources of knowledge in the 18th century, primarily through a discussion of the Murshidu'l mukhtar and several other important alchemical books and treatises that were authored in the same period.

Tuna Artun is assistant professor of history at Rutgers University, New Brunswick. His Ph.D. dissertation, "Hearts of Gold and Silver: The Production of Alchemical Knowledge in the Early Modern Ottoman World" (Princeton University, 2013), studied the transmission and vernacularization of Arabic alchemy by Turkophone Ottomans in the long 17th century. In addition to his continuing manuscript research on late medieval and early modern alchemical poems, Artun's current research focuses on the practice of iatrochemistry in the world of Islam.

Free and open to the Public.

Thursday, May 9, 2013 at 6:30PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

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

Mothers of No Tomorrow Screening

Mothers of No Tomorrow is a documentary that provides an uncharted and unparalleled narrative about violence from the vantage point of those that are impacted most: mothers in the African-American community. This documentary boldly unmask the dire circumstances that are found throughout urban America. It intimately captures the range of emotions exhibited by three mothers who lost their sons to gun violence.

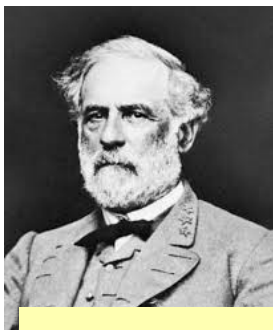
The screening of the film Mothers of No Tomorrow will be following by a panel of the mothers' discussion afterwards. There will also be the presentation of Memories, a multidimensional project currently under development by local high school students. The ultimate goal of the project is to address the issue of the high levels of gun violence in the City of Philadelphia. It connects Philadelphia youth, The College of Physicians of Philadelphia, MixPlace Studio at Slough, and MetaLab at Harvard University, and is funded, in part, by Teva Pharmaceuticals.

Sponsored by the Center for Education and Public Initiatives of The College of Physicians of Philadelphia

Free and open to the Public.

To register: <http://motherscpp.eventbrite.com/#>

Monday, May 13, 2013 at 6:00 p.m. at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106



**General Robert E. Lee
(1807-1870)**

Science on Tap

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and cold beer. Must be 21 or accompanied by parent.

Free and open to the Public.

<http://scienceontapphilly.com/>

Monday, May 13, 2013 @ 8:00 PM - 9:00 PM at Delaware County Institute of Science, 11 Veterans Square, Media, PA 19063

<http://delcoscience>.

Through the Eyepiece: the Life of Frances S. Keeley

A lecture by Eric Marsh, Technology Officer, DCIS

Lectures are FREE and presented upstairs in the Lecture Hall.

Doors open by 7:30 PM. Lectures begin at 8 PM.

Monday, May 13, 2013 at 7:30PM at the Free Library of Philadelphia, 1901 Vine Street, 19103

215-686-5322

Nathaniel Philbrick | Bunker Hill: A City, A Siege, A Revolution

The New York Times bestselling author of modern and authoritative historical narratives, Nathaniel Philbrick's works include the National Book Award-winning *In The Heart of the Sea* and Boston Globe Horn Book Award recipient *Revenge of the Whale*, which both recounted the mythically tragic 19th century sinking that inspired Melville's *Moby Dick*. Philbrick's other books include *Mayflower*, a Pulitzer Prize finalist; *Sea of Glory*, which circled the earth's oceans with the U.S. Exploring Expedition of the 1840s; and *The Last Stand*, a chronicle of the iconic clash at Little Bighorn in 1876 that gave birth to the legend of Custer's Last Stand. In *Bunker Hill*, Philbrick offers a fresh perspective on the first major battle of the American Revolution, closely examining the cataclysmic nature of how our country began.

Cost: \$15 General Admission, \$7 Students

Buy tickets online <http://libwww.freelibrary.org/authorevents/>

Horace W. Goldsmith Foundation Endowed Lecture

Wednesday, May 15, 2013 Lecture at 5:30 PM Followed by the Annual Members' Reception 7:00 - 8:00 PM at the Wagner Free Institute of Science, 1700 West Montgomery Avenue, Philadelphia, PA 19121

ph 215-763-6529 www.wagnerfreeinstitute.org

The History of Museums

An Illustrated Lecture by DR. DAVID BROWNLEE, University of Pennsylvania

From the opening of Charles Willson Peale's Museum in 1786 to the inauguration of the new home of the Barnes Foundation on the Parkway in 2012, Philadelphia has been a center of innovative museum design. Museums have been built or reshaped in every era of its history, expressing the encyclopedic curiosity of the Enlightenment, the mid-century "workshop of the world," and the post-industrial "City Beautiful." Dr. David Brownlee will explore the forces that made Philadelphia a city of museums.

David Brownlee is the Frances Shapiro-Weitzenhoffer Professor in the History of Art at the University of Pennsylvania. He is a historian of modern architecture and urbanism whose interests embrace a wide range of subjects from the late 18th century to the present. His work is widely published and he has received three major publication awards from the Society of Architectural Historians. His most recent book is *The Barnes Foundation: Two Buildings, One Mission* (2012).

Free and open to the Public.

Wednesday, May 15, 2013 at 6:00pm, departing from Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

OF BLESSED MEMORY:

JEWISH NOTABLES of LAUREL HILL CEMETERY

When Laurel Hill Cemetery was founded in 1836, its early popularity was, in part, tied to its support of democratic ideals: admission was free; personal expression was encouraged and, most importantly, religious

affiliation did not matter. Men and women of all faiths, or perhaps none at all, would choose to make Laurel Hill their final place of rest. This walking tour of the cemetery will specifically highlight the lives and careers of many of the Jewish notables who impacted the history of Philadelphia. Discover their stories and explore their nineteenth, twentieth and twenty-first century contributions to the city. The program will be followed by a light reception with wine and appetizers, and will mark Jewish American Heritage Month. By congressional resolution, May is the national month of recognition of the 350-year history of Jewish contributions to American culture, acknowledging the achievements of American Jews in fields ranging from sports, arts and entertainment to medicine, business, science, government and military service.

The cost is \$20/person; \$18/students and seniors; \$17/members. Reservations are suggested. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Carol R. Yaster

Wednesday, May 15, 2013 at 12:00n – 1:00PM 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

Food & Thought: Improving on Perfection: The Challenges of Curating Private Collections

Speaker: Derick Dreher, PhD, the John C. Haas Director of the Rosenbach Museum & Library in Philadelphia

When private collectors transfer their personal collection of art, rare books, or other objects to a public institution, they often transfer their personal values with it. This makes working with private collections a rewarding exercise that reveals all the quirks of the person(s) behind them. However, it can also be a major headache when private collections place stipulations on the use of the collection in the future. How can a public institution reconcile the private wishes of sometimes long-dead collectors with the need to grow and change?

Open to the public. Cost \$12.50 includes lunch.

Register at: <http://rosenbach.eventbrite.com/#>

Saturday, May 18, 2013 at 9:30-2:30 at the 1696 Thomas Massey House in Broomall, PA

Historian Clarissa Dillon, PhD

Hands-on Cooking Workshop: Preparing a mid-spring meal in the 18th Century manner.

For information and to register, call Clarissa Dillon (610) 642-4269

Sunday, May 19, 2013 at 1:00pm, departing from Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

ALWAYS on TAP:

A HISTORY of PHILADELPHIA'S WATER SYSTEM

Just as the Schuylkill River flows past Laurel Hill, the history of the Philadelphia water system also runs deep in the story of the cemetery. This walking tour of the site will pay homage to its permanent residents who invented the means by which the city receives its water today, and will cover even those early methods that weren't so successful. We will also explore how Philadelphia's growth hurt the water supply, and the colorful fights behind the making of a truly modern water system.

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

Guide: Michael Lewandowski, P.E.

Friday, May 17, 2013 at 8:00pm, departing from Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

LUNAR STROLL:

PHOTOGRAPHING LAUREL HILL AFTER HOURS

Photo enthusiasts: grab your cameras, tripods and flashlights, and capture the ethereal wonders of Laurel Hill Cemetery after the sun goes down.

During this guided stroll through the site's picturesque landscape, participants will visit some of its most photogenic spots and evocative statuary, while learning to paint with light using only a flashlight and ambient iridescence. You will be over the moon with excitement once you see your unique images! You will also have experiences to share from this rare and intimate exploration of the cemetery long after its gates close for the night. Photography experience is recommended, but not required. Lunar Strolls will occur on the third Friday of every month from May through August.

The cost is \$15/person general admission. Advance reservations are required. Tickets can be purchased at the door, or in advance by phone (215) 228-8200 or online.

Guide: Emma Stern

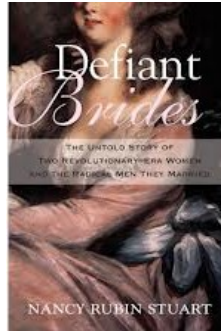
Wednesday May 22, 2013 at 7:15 PM at Saint Peter's Lutheran Church, 3025 Church Road, Lafayette Hill, Pennsylvania, 19444. There is a large parking lot across the street.

American Revolution Round Table of Philadelphia,

<http://arrtop.com/>

Nancy Rubin Stuart on her New book (April 2013) *Defiant Brides; The Untold Story of Two Revolutionary-Era Women and the Radical Men they Married.*

Free and open to the Public.



Friday, May 24, 2013 at 10:00am, departing from Laurel Hill Cemetery's Gatehouse entrance at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

**MONTHLY FOURTH FRIDAY TOUR SERIES:
HOT SPOTS and STORIED PLOTS**

Join Laurel Hill Cemetery for this informative overview of Laurel Hill's long and colorful history, which will include many of the marble masterpieces, stunning views and legendary stories that afford the cemetery its WOW factor. This is the perfect tour for first-time visitors to Laurel Hill, and anyone else who enjoys beautiful art, scenic nature and fascinating history. BRAND NEW "Hot Spots and Storied Plots" will be presented monthly as part of Laurel Hill Cemetery's Fourth Friday tour series, which take place on the fourth Friday of every month at 10:00am.

May's walking tour will take place on

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

Guide: Terri Greenberg

Sunday, May 26, 2013 at 12:00pm sharp. Visitors can enter through Laurel Hill's Gatehouse at 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot across the street from the Gatehouse.

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

MEMORIAL DAY PARADE, SERVICE and RECEPTION

The traditional Decoration Day service of the Grand Army Meade Post #1 will be recreated at historic Laurel Hill Cemetery, the site of the first Memorial Day Observance in Philadelphia in 1868. The entourage will gather at the resting place of General George Gordon Meade, hero of the Battle of Gettysburg, to perform the traditional service honoring all veterans who fell defending the nation. A wreath-laying, speeches and honor guards will enhance the ceremony. The event is co-sponsored by the General Meade Society of Philadelphia, the Friends of Laurel Hill Cemetery, American Legion Post #405, Post #1 Society, Union League, and Anna M. Ross Camp #1, Sons of Union Veterans. Complimentary beer and refreshments will be served after the service. Admission to the event is FREE and open to the public. For additional information, phone (215) 228-8200.

Master of Ceremonies: Andy Waskie, Ph.D.



**General George G.
Meade
(1815-1872)**

Monday, June 10, 2013 at 6:00 p.m.at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106

Science on Tap

A monthly gathering that features a brief, informal presentation by a scientist or other expert followed by lively conversation. Good food and beer. Must be 21 or accompanied by parent.

Free and open to the Public.

<http://scienceontapphilly.com/>

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Moby Dick - A teaching moment.

Cartoon by Gruhn gruhn@webdonuts.com
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Please donate. Small contributions are preferred and donations in excess of the 2013 goal will be applied to the 2014 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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