

“Philosophy is common sense with big words.”

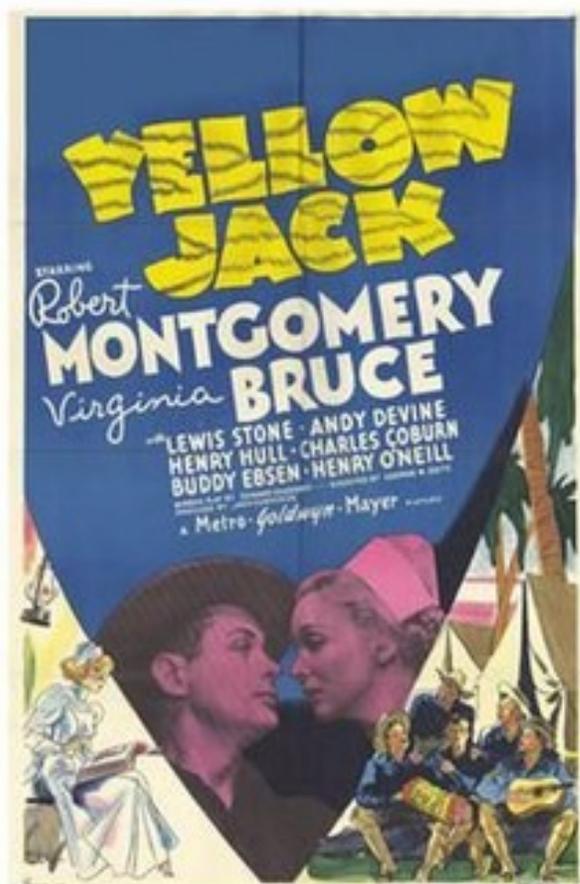
~ James Madison,
4th President of the
United States

Phactum

The Newsletter and Propaganda Organ
of the Philadelphia Association for
Critical Thinking
April/May/June 2018

editor: Ray Haupt email: phactpublicity@aol.com

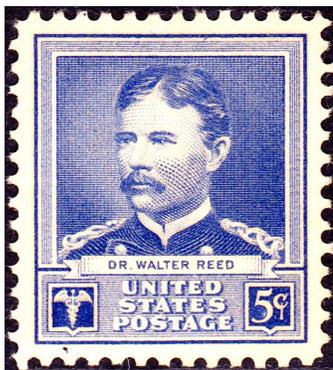
Webmaster: Wes Powers <http://phact.org/>



Yellow Jack was a play that opened in New York City in 1934 and lasted for 79 performances. The hero of the story was Spanish-American War Marine Sergeant John O'Hara portrayed by actor Jimmy Stewart in his stage debut, soon after to migrate to film. In 1938 this story was adapted to film and Stewart's role was reprised by actor Robert Montgomery. Other well known Hollywood personalities in the movie were Buddy Ebsen, Virginia Bruce, Lewis Stone, Andy Devine, and Charles Coburn.

The movie was hardly an unforgettable marvel of cinema but it did address a good story. Yellow Jack, you see, was a layman's term for Yellow Fever, also known as Black Vomit, Vomito Negro, and American Plague. This disease is scientifically known as *Coquillettidia fuscopennata* and one wonders if doctors can pronounce or even off-handedly spell the name. None the less, the story is about Yellow Fever.

During the Spanish-American War, American forces in Cuba suffered more fatalities from disease, especially Typhoid Fever and Yellow Jack, than suffered from combat wounds. The Army was highly concerned.



In 1896 Major Walter Reed, M.D. (1856-1902), a bacteriologist, had been stationed in Washington, DC. Yellow Fever was present in Washington at that time, but oddly among military personell was an infection of enlisted men, not the officers. The difference it seems was that the enlisted men used a forest trail at night through a swampy area but the officers did not. Reed proved at that time that Yellow fever was not transmitted by drinking the water of the Potomac River, but the vector remained unknown.

In 1898 Reed was in Cuba to investigate an epidemic of Typhoid Fever. Dr. Reed proved that fecal matter in the water or food that had been contaminated by flies had caused that epidemic. At the same time Yellow Jack was becoming a major health problem among the soldiers and inhabitants of Cuba.

Two years later, in 1900, Reed and colleagues were sent back to Cuba charged with investigation of tropical diseases, including Yellow Jack. They had heard of the work of a Cuban physician, Dr. Carlos Finlay, who in 1880 hypothesized that the Yellow Fever was a mosquito borne disease, most specifically from the bite of a female *aedes aegypti* mosquito. Finlay had made his theory known but it gained little traction in the scientific community. The narrative of the movie clearly suggests that Finlay was ridiculed but I found no other suggestion of that.

Dr. Reed was skeptical but did take Finlay seriously and went about the unsavory process of using humans as guinea pigs to test the theory. He called for volunteers from the military and eventually five men did volunteer for the experiment. Three men were to be confined for twenty days in a small building in appalling unsanitary conditions using the soiled bedding and clothing of Yellow Jack victims. The building was to be kept at high tempera-



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Phactum's Roster of I.R.E. (Infamous Rational Errors)

Phactum contributor Paul Schlueter III has accumulated over time a vocabulary listing of many of the egregious flaws of thinking, devious tactics of argument, and some pretty cool Latin phrases that might sound impressive used at a social gathering. This listing is nowhere near complete, but has been made into a pamphlet that is available free and only at PhACT Meetings.

Meeting attendees are invited to take one and are invited to participate in expanding the listing in the next edition as it is intended to be a collaborative project. Definitions and examples should be short and to the point and may be submitted to the *Phactum* editor at: phactpublicity@aol.com

New entry: **OUTRAGE GAMBIT, THE** - The use of an angered, outraged, or otherwise vehement response to attempt to lend credibility to one's argument (particularly used in making a denial), with or without actual threats. A tactic which relies on distracting an accuser. The opposite of the pleasance gambit. Neither pleasance or vehemence constitutes evidence; in fact, the greater the passion offered the less likely that the party's argument can be supported rationally.

ture, a condition thought to encourage infection. Two other men were to reside in a nearby building where conditions were very good, but one of those men was to have been deliberately exposed to infected mosquitos. After about 5 days the infected soldier did indeed display symptoms of Yellow Jack. He was quickly transferred to the hospital and he survived. The other soldier in that building was Sergeant O'Hara.

Dr. Reed and his colleagues were concerned that the experiment was incomplete in that it might just be possible that Sergeant O'Hara was naturally immune. They asked him to volunteer once again, this time to be exposed to infected *aedes aegypti*. O'Hara was understandably reluctant but he did finally volunteer. He developed symptoms after several days, became severely ill, and Dr. Reed had proven the hypothesis.

Happily the brave Sergeant survived. In the movie Sergeant O'Hara (Robert Montgomery) fell in love with the nurse (Virginia Bruce) after this deed of heroism. Some guys will do anything in the movies for romance, including contracting Yellow Fever, but that was not the way of things in real life where the nurse, Clara Maas, contracted Yellow Jack and died shortly thereafter.

After Dr. Reed's confirmation of Dr. Finlay's hypothesis public health officials took action by encouraging residents in Cuba and elsewhere to destroy breeding grounds of mosquitos such as containers of rainwater in the garden, puddles, rain barrels, and to generally improve sanitation practices. This tactic worked quickly to reduce Yellow Fever outbreaks. Unfortunately Dr. Reed's work did not include a cure for that disease and according to the Center for Disease Control (CDC) there is no specific cure to this day for Yellow Fever. Treatment consists of hospitalization and controlling symptoms with hydration, pain reduction drugs, and fever reduction. Yellow Fever is a viral infection so anti-biotics are not useful except to reduce dangers from secondary bacterial infection.

A few years before World War One the Rockefeller Foundation took interest in Yellow Fever and funded various researchers to devise treatment or a vaccine. There were several developments during the next few decades, some not at all useful, others useful but with complications. Finally, after many experiments, Dr. Max Theiler (1899-1972), a South African-American virologist, announced in 1937 an attenuated form of the Yellow Fever virus suitable to achieve large scale immunization with few

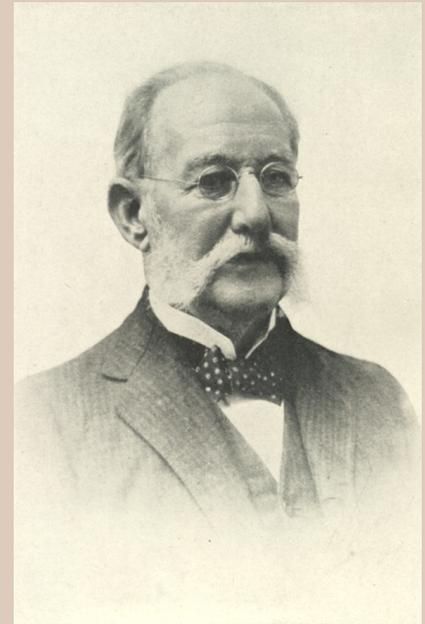


Dr. Max Theiler

adverse effects. This newly developed vaccine was heavily used during World War Two and the developed vaccine known as 17D or a variation of it is still in use today. For his efforts, Dr. Theiler received the Nobel Prize in Physiology or Medicine in 1951. The Rockefeller Foundation pressed on with Yellow Fever control and during the 1940's and 50's provided many millions of vaccine doses. Yellow Fever had been eradicated as a nation threatening plague although the disease still exists. The worldwide infection rate is now in the range of 200,000 severe cases resulting in 30,000 deaths annually.

Yellow Fever infection usually does not result in severe sickness and sometimes no sickness at all. Typical symptoms are fever, nausea, and weakness; not unlike many other diseases such as influenza or a common cold. Such cases typically last but a few days and the patient recovers with no long lasting detrimental effects. One benefit of getting Yellow Fever is that infection will cause lifelong immunity from repeat illness due to that cause. Unfortunately, there is a more virulent form of the disease that has the same symptoms plus others such as

Carlos Juan Finlay, (1833-1915), was the Cuban epidemiologist who discovered the Yellowfever vector was infected mosquitos.



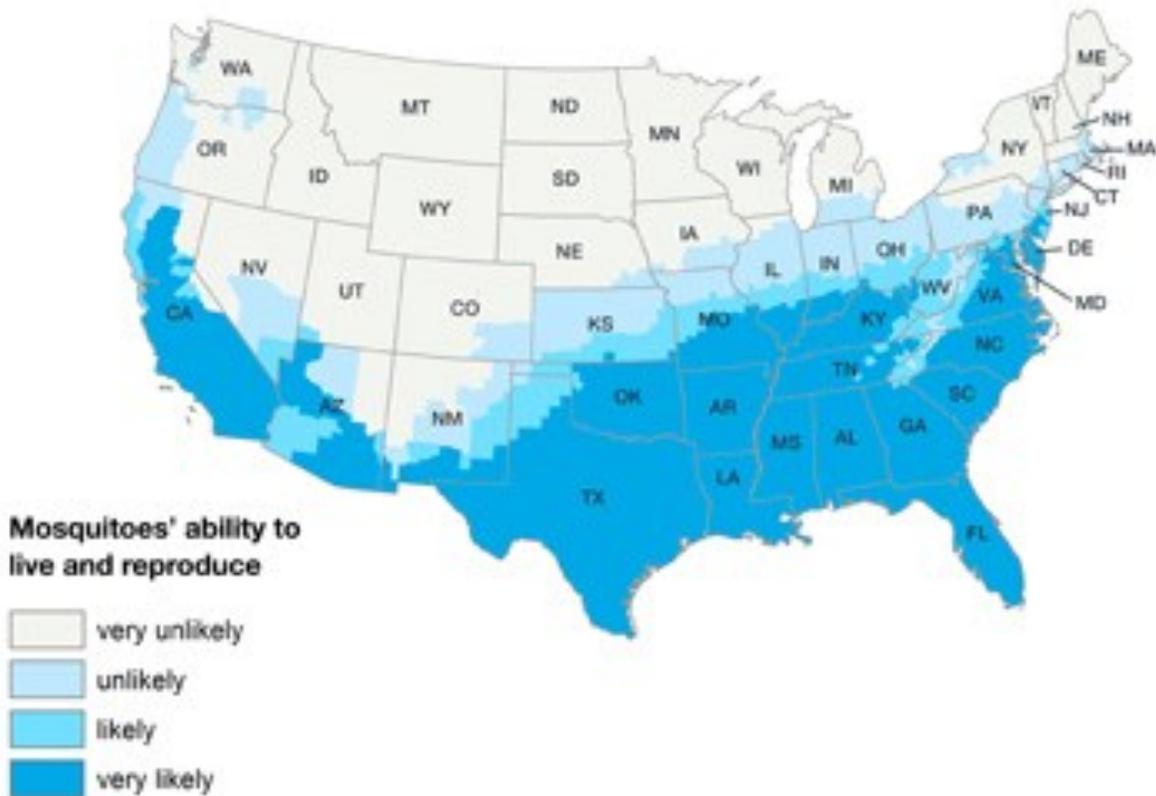
Dr. Finlay was a graduate of Jefferson Medical College, Philadelphia in 1855. He returned to Cuba where he practiced medicine in Matanzas and Havana. In 1879 Finlay was appointed by the Cuban government to studying the causes of Yellow Fever. In 1880 he attended the fifth International Sanitary Conference in Washington, D.C., as the Cuban delegate. At the conference, Finlay urged the study of Yellow Fever vectors, and soon afterward he stated that the carrier was the mosquito *Culex fasciatus*, now known as *Aedes aegypti*. After his death the Finlay Institute for Investigations in Tropical Medicine was created in his honor by the Cuban government.

damage to internal organs including the liver. In the severe form of Yellow Fever the death rates seem to vary from about 20 to 50 percent of those infected. In 1793 in Philadelphia, Yellow Fever killed 5,000 of the 50,000 residents of the city, ten percent of the population but a far higher percentage of those so stricken.

The map on this page, developed by the Center for Disease Control (CDC), shows the projected range in 2017 of *aedes aegypti*, the major vector for Yellow Fever. As you can see, Philadelphia is located in a very borderline position regarding the distribution of that species. The map was developed not to track potential for Yellow Fever outbreaks in the United States but to anticipate the possibilities for zika, another tropical viral disease spread by exposure to *aedes aegypti*. As if being the major vector for Yellow Fever and Zika re not enough *aedes aegypti* is also the primary vector for Dengue Fever and Chicagunya. Over a million people per day contract Zika, Chikungunya and Dengue Fever. Fortunately those disease, although dangerous, are less life threatening once contracted than Yellow Fever. Unfortunately this mosquito is developing resistance to insecticides and would be great material for a cheesy Hollywood disaster movie.



Estimated Potential Range of *Aedes aegypti* in the United States, 2017



For more information see: <https://www.cdc.gov/zika/vector/range.html>

UPCOMING PHACT EVENTS

Dr. David Cattell, Chairman of the Physics Department of Community College of Philadelphia hosts meetings of PhACT - at 2:00 PM on the third Saturday of most months at Community College of Philadelphia. Parking is easily available and costs \$4.00 for all day. Enter the college parking garage on 17th Street which is one way south bound. It opens at 1:00 PM and closes at 6:00 PM. This meeting site is handicap accessible. **PhACT Meetings are Free and open to the public unless otherwise noted.**



Lectures are generally at Community College of Philadelphia in Lecture Room C2-28 in the Center for Business and Industry at the corner of 18th and Callowhill Streets, at 2:00 PM, unless otherwise noted. **Please try to arrive a few minutes early as the College now requires that meeting attendees sign in for security reasons. ID must be shown.**

Saturday, April 21, 2018 at 2:00 PM. PhACT Lecture.
Our speaker will be Rob Brotherton. His topic will be:
“Hip Hop and the Illuminati”:

The Illuminati Want My Mind, Soul, And My Body: How an 18th Century secret society took over hip hop (allegedly)

Have you noticed how musicians have a habit of covering one eye when posing for photos? Or making some kind of triangle with their hands? Or both? And what's up with all the occult imagery in music videos like Jay Z's "On to the Next One" and Kanye West's "Power"? Is it just because it looks cool and mysterious? The conspiracy-minded say there's something more sinister to it. This is evidence, they say, of a vast, nefarious secret society—the Illuminati—and its plan to institute a New World Order. What is the Illuminati and how did it come to be associated with hip hop? In this talk Dr. Brotherton will explore the history and social psychology of one of pop culture's most successful

News Flash!

On April 23, 2018 just two days after the PhACT Meeting, the

World Will End!!!

<http://www.foxnews.com/science/2018/04/11/biblical-prophecy-claims-rapture-is->

conspiracy theories.

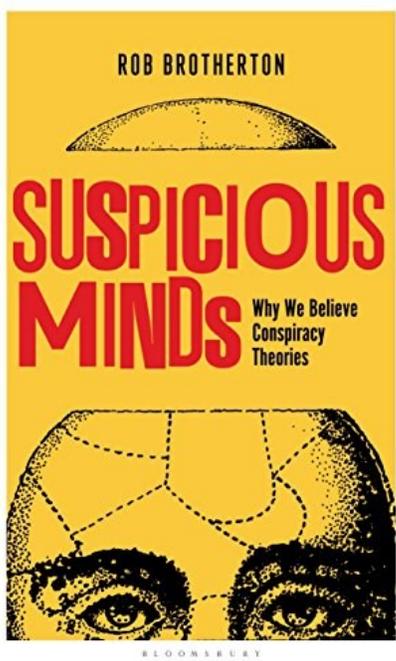
Rob Brotherton is an academic psychologist and author of *Suspicious Minds: Why We Believe Conspiracy Theories*. He is a former lecturer in psychology at Goldsmiths, University of London, is a leading expert on the psychology of conspiracy theory. He has written about conspiracy theories for periodicals such as *New Scientist* and the *Skeptic* magazine, and on his website, conspiracypsychology.com. He currently lives in New York City.

(Continued on page 6)

**“It is the things for which there
 is no evidence
 that are believed with passion.”**

Bertrand Russell (1872-1970)





Suspicious Minds: Why We Believe Conspiracy Theories By Rob Brotherton

Publisher: Bloomsbury USA **Publication date:** 01/03/2017
Paperback: 304 pages
ISBN-13: 9781472915634

We're all conspiracy theorists. Some of us just hide it better than others.

Conspiracy theorists do not wear tin-foil hats (for the most part). They are not just a few kooks lurking on the paranoid fringes of society with bizarre ideas about shape-shifting reptilian aliens running society in secret. They walk among us. They are us.

Everyone loves a good conspiracy. Yet conspiracy theories are not a recent invention. And they are not always a harmless curiosity. In *Suspicious Minds*, Rob Brotherton explores the history and consequences of conspiracism, and delves into the research that offers insights into why so many of us are drawn to implausible, unproven and unprovable

conspiracy theories. They resonate with some of our brain's built-in quirks and foibles, and tap into some of our deepest desires, fears, and assumptions about the world.

The fascinating and often surprising psychology of conspiracy theories tells us a lot – not just why we are drawn to theories about sinister schemes, but about how our minds are wired and, indeed, why we believe anything at all. Conspiracy theories are not some psychological aberration – they're a predictable product of how brains work. This book will tell you why, and what it means.

Of course, just because your brain's biased doesn't always mean you're wrong. Sometimes conspiracies are real. Sometimes, paranoia is prudent

**Saturday, May 19, 2018 At 2:00 PM PhACT Expedition.
At Laurel Hill Cemetery at 3822 Ridge Avenue in Philadelphia.**

In 1837 necessity drove John Jay Smith to create a new kind of cemetery in Philadelphia. Not that there weren't already cemeteries. There were more than seventy of them in what we now call Center City. They stood in the way of progress and they were absolutely sure to prove tiny and inadequate for the city's future population.

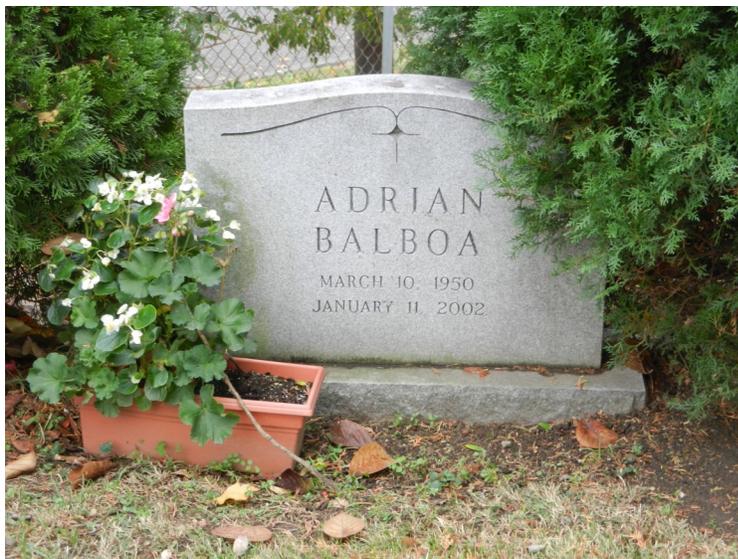
So Smith bought acres a few miles north of the city in an area that he expected to remain forever rural. He hired John Notman—later to be a famous architect but then just a young immigrant from Scotland—to lay out what the Victorians called a picturesque landscape. It would have gently curving paths,



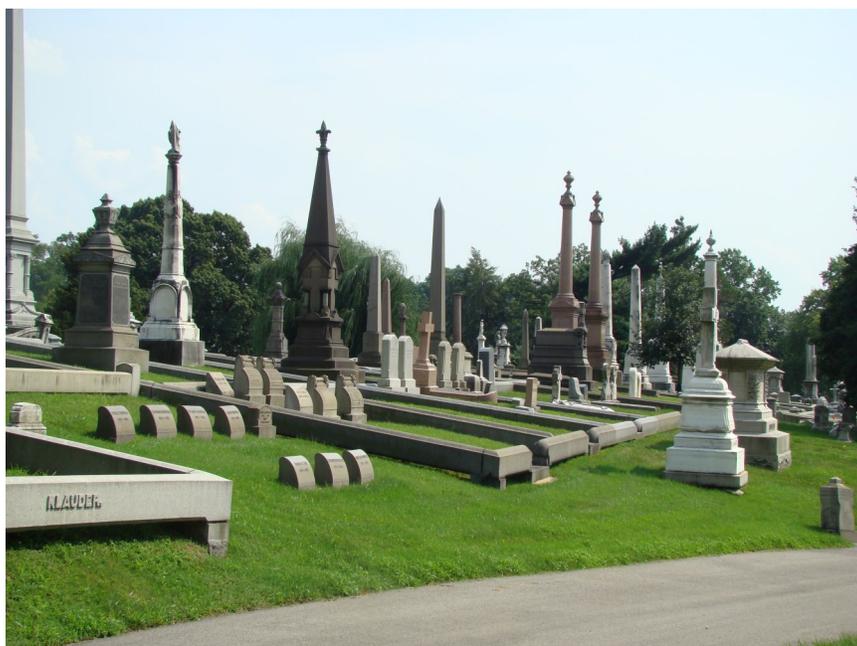
groves of trees, and splendid views of the Schuylkill. Later this rural cemetery would provide one of the important models for New York's Central Park.

A Quaker, Smith may not have realized that his beloved trees would soon be supplemented by elaborate monuments of stone. And I mean elaborate: a model of the doorway to Moyamensing Prison for a prominent prison reformer, a mausoleum carved into a rocky hillside for an Arctic explorer, and a mother with children in her arms for a woman who died in childbirth.

We will see Victorian monuments and we will see such striking modern ones as a huge candle to light the darkness and a giant microphone for a beloved sportscaster. And we will stop at the grave of the Philadelphia photographer who, way back in 1839, took the first selfie.



Our guide will be Michael Brooks who was a Professor of English at West Chester University specializing in Victorian Literature and in Literature dealing with cities. Professor Brooks is the author of two books: *John Ruskin and Victorian Architecture* and *Subway City: Riding the Trains, Reading New York*. Both published by Rutgers University Press (See pages 8 and 9 for description of Professor Brooks' books.). He has for many years led walking tours of the Soho neighborhood of New York City, and since the early 1980's has been leading walking tours at Laurel Hill Cemetery. He is passionate about the environment and is a "weed warrior" fighting invasive plants at John Heinz Wildlife Refuge, is a volunteer at Tylor Arboretum, and serves as Vice-President of the Delaware Valley Fern and Wildflower Society.



Meeting Point: The Gatehouse at 3822 Ridge Avenue

This event is free.

Public Transportation to Laurel Hill.: Board SEPTA bus route 61, the Ridge Avenue line, in Center City at any stop on 9th Street between Walnut and Arch, and get off at Clearfield Street across from the Cemetery Gatehouse. As an alternative, take any bus, subway or El line that crosses Allegheny Avenue and get the Allegheny bus, route 60, which ends at Ridge Avenue; the Cemetery Gatehouse is a one block walk southward.

Laurel Hill Cemetery

(Images of America)

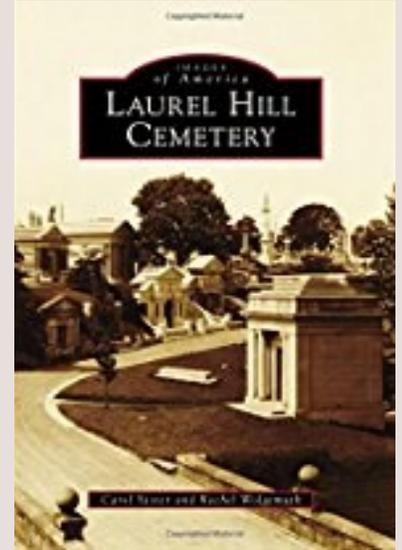
by Carol Yaster and Rachel Wolgemuth

Publisher: Arcadia Publishing (August 7, 2017)

Paperback: 128 pages

ISBN-10: 1467126551 **ISBN-13:** 978-1467126557

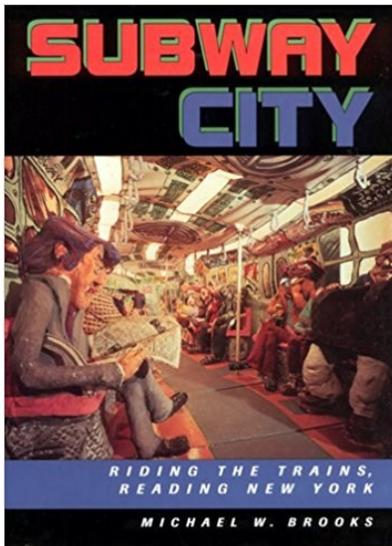
Established in 1836, Philadelphia's Laurel Hill Cemetery was one of the earliest rural cemeteries in America. The picturesque views and outstanding horticulture, along with sculptures and monuments designed by notable artists and architects—like Alexander Milne Calder, Alexander Stirling Calder, Harriet Frishmuth, John Notman, and Thomas Ustick Walter—attracted thousands of visitors. Laurel Hill became the desired place of burial for Philadelphia's elite and the final resting place for those with last names like Widener, Wharton, Meade, and Elkins. The cemetery's design was much admired and widely imitated, both locally and nationally. While the 20th century ushered in a steep decline for Laurel Hill, the establishment of a friends group in 1978 and the cemetery's designation as a National Historic Landmark in 1998 signaled a transformation for the cemetery. Laurel Hill entered a new century as a revitalized and relevant institution. Once again, the cemetery is regarded as an important part of the community, a worthy destination for visitors, and a place to share in the stories of the men and women whose lives shaped both Philadelphia and the nation



The authors: Carol Yaster is the president of the Friends of Laurel Hill Cemetery. Rachel Wolgemuth is an author and historian with a background in cemetery research.

Subway City: Riding the Trains, Reading New York

By Professor Michael Brooks



Hardcover: 272 pages

Publisher: Rutgers University Press; 1st edition (June 1, 1997)

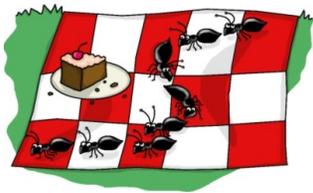
ISBN-10: 0813523966 **ISBN-13:** 978-0813523965

None of the world's great cities is as closely identified with its subway as New York. Its trains provide much more than just rapid transit. They give New Yorkers a powerful symbol of their metropolis, one that they use to express both their hopes and their fears for the urban future.

Subway City explores New York's transit system as both fact and metaphor. Brooks traces the development of the subway from its inception as the newest and most efficient public transportation system to its decline as an overcrowded and dangerous part of city life. The crowded cars gave Harold Lloyd material for comedy, fueled William Randolph Hearst's crusade against the Traction Trust, and convinced Lewis Mumford that the subway was a futile effort to solve the city's problems. Brooks explores films which have dramatized the dangers lurking below ground, and examines the infamous Bernhard Goetz shooting that made the subway a symbol of urban decay. More hopefully, he describes the Metropolitan Transportation Authority's station improvements and ambitious programs for Music Underground, Poetry in Transit, and Arts-in-Transit, as keys

Saturday, June 30, 2018 - PhACT Picnic

11:00 AM to 3:00 PM at Mondauk Common Park (our usual location)



We always have fun visiting, eating, and playing sports. PhACT will supply hotdogs, makings for s'mores, soft drinks, plastic ware, and napkins. If you desire other things bring them along, you can cook on the grill. And bring stuff to throw such as frisbees if you are so inclined. We have reserved the pavilion in the woods on the Southeast corner of Mondauk Common park in Upper Dublin. This is good fun for the whole family. We have negotiated with the park ants and they agree to not show up before 1:00 PM.



We have ne-

gotiated with the park ants and they agree to not show up before 1:00 PM. We will again have a book swap - it is a great free way to build up a science/skeptic book collection - or help someone else do so.

How to get there:

Broad street runs between Susquehanna and Limekiln roads. From the PA turnpike, go to the Fort Washington exit and take Rt 309 north, take the second exit and turn right onto Susquehanna. Make a left at the second light onto Broad Street, park in the second parking lot on the left, and follow the little sand path up to the pavilion.

For those with a GPS unit, program it for the intersection of Broad Street and Twin Pond Drive in Fort Washington, PA.

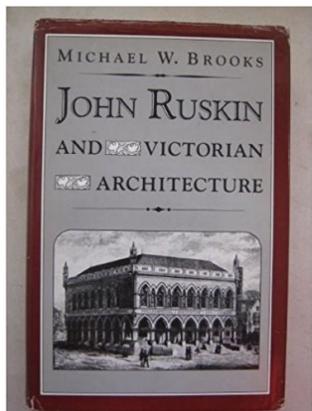


All are welcome. Free.

Saturday, September 16, 2017 - The PhACT Lecture Series begins for 2017/2018. Save the Date

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John Ruskin and Victorian Architecture By Professor Michael Brooks



Hardcover: 374 pages

Publisher: Rutgers University Press (April 1, 1987)

ISBN-10: 0813512050 ISBN-13: 978-0813512051

From the publication of *The Seven Lamps of Architecture* (1849) until nearly the end of the 19th century, John Ruskin was influential in determining the course of Victorian architecture. This scholarly work examines the impact of "Ruskinism" on his contemporaries, and is especially attentive to the controversies that raged in the British journals and on the lecture circuits.

Kristine O. Garrigan's *Ruskin on Architecture* (Univ. of Wisconsin Pr., 1973) and John Unrau's

Looking at Architecture with Ruskin (Univ. of Toronto Pr., 1978) are excellent on the complexities of Ruskin's views, but this book is distinguished by its attention to the evolution of his thought throughout his career. Well written, documented, and illustrated, this work is highly recommended.

Letters to the Editor

Letters and Rants to the Editor are encouraged.
Send to PhACTPublicity@aol.com

Editor: In his January 2018 *Phactum* letter to the editor, Paul Schlueter III commented on my October 2017 *Phactum* article on *The Curious Bind Runes of GR 1*. In this letter, he seems to confuse a binding spell, a magic spell which physically binds someone, with bind runes. The latter are commonly mentioned in scholarly works on runes. Alt-

hough Edred Thorsson, aka Stephen Flowers, is an “imaginative runologist” as opposed to a “sceptical runologist”, nonetheless, his description of bind runes is helpful. In *Futhark: A Handbook of Rune Magic* (1984), he noted “When used in writing, bind runes may connect two runes or a group of them. This is done to form a magical link between these two runes, to represent two or more words in a coded form, or to reduce the overall count of runes in the inscription.”

A good example of the use of bind runes appears on the Kragehul lance shaft which was illustrated in a *Handbook of the Old-Northern Runic Monuments of Scandinavia and England* (1884) by George Stephens (see below). The central part of the illustrated center section of the broken shaft shows three bind runes in succession, each of which combines X (g) and F (a) into a single character yielding the sequence ga ga ga (or perhaps ag ag ag). This runic gibberish is probably *vores magicae*!

Also, I think Schlueter failed to fully understand the component runic letters that make up the bind runes. For example, he posited a long-branch younger futhark ʝ (s) for the middle sections of three of the GR 1 bind runes, but based on the runic letters in the GR 1 text before the bind runes, I thought it was a medieval runic 1 (t). In fact, in this text ʝ is not even used for s while 1 is used for t. One should also keep in mind the reference made by R. I. Page in *An Introduction to English Runes*, Second Edition (1999) concerning “the first law of runic studies”, namely, that “for every inscription there shall be as many interpretations as there are runologists studying it.”

Don Nigroni
Glenolden, PA

-Ω Ω Ω

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DENMARK.

KRAGEHUL MOSS, FYN, DENMARK.

! DATE ABOUT A. D. 300—400.

No. 1. *Old-N. R. Mon. p. 317—319.*



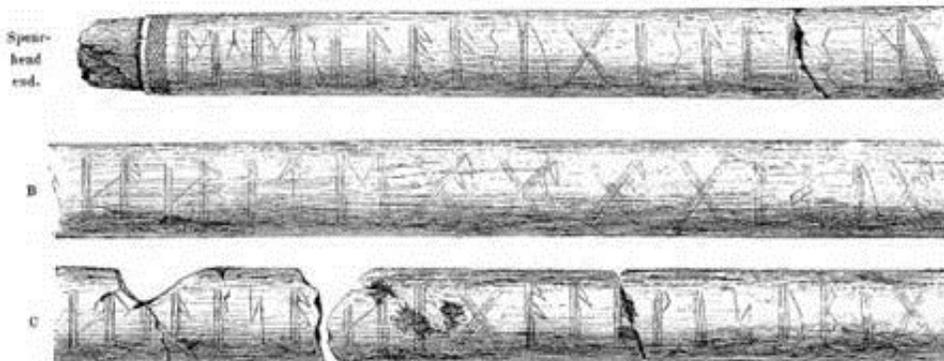
.....XEU (OF XEU)..
...UME BURE.

I do not pretend to translate these fragments. Full size. Of ash-wood. A knife-handle or small box or amulet or something such. Unearthed in 1865.

No. 2. A BONY-SNAKE, bearing O. N. Runes, lost. Found in 1750. See Vol. 1. p. 319.

No. 3. A WOODEN LID, bearing O. N. Runes, lost. Found in 1750. See Vol. 1. p. 319.

No. 4. *Old-N. R. Mon. Vol. 3, p. 133.*



Full size. Ashen Lance-shaft. Found in 1877. As I take it, in verse, the Ban on casting the war-spear over the enemy's border. See Bracteate No. 57. Permission to copy their clichés kindly given by the Roy. Soc. of North. Ant. The Lance-hurler's name was = EARL, JARL.

Various Ruminations of Woo Woo and Real Science and some Gossip

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

Chemical Heritage Foundation

Note: the venerable **Chemical Heritage Foundation** has been renamed to **Science History Institute**. The website is now:

<https://www.sciencehistory.org/event-calendar>

Dr. Stephen Barrett Reports in Consumer Health Digest

▶▶ Iowa AG hits herbal "Memory" pill (January 1, 2018)

Iowa's attorney general has secured an agreement under which the marketers of an herbal product claimed to "reduce memory loss" and "ignite your brain's true powers and po-

tential" paid \$35,000 to the State and must stop targeting Iowa residents. [Seller of Intellux barred from Iowa after falsely claiming that older users experienced "drastic" improvements in memory. Iowa Attorney General news release, Dec 22, 2017

<https://www.iowaattorneygeneral.gov/newsroom/seller-of-intellux-barred-from-iowa-after-falsely-claiming-that-older-users-experienced-drastic-im/>)] The agreement, secured through a consent judgment filed in Polk County District Court, bars JGG Enterprises Inc. and its owner, Joseph Gregory Grelock, from further marketing in Iowa of Intellux or any other dietary supplement that involves claims of health benefits that are not supported by "competent and reliable scientific evidence." The defendants, who deny liability, agreed to pay \$25,000 in refunds to more than 180 Iowa consumers and an additional \$10,000 to support future enforcement of Iowa's Consumer Fraud Act. This is the seventh dietary supplement case that the Iowa AG has pursued during the past five years. Although such cases are important, they rarely result in stopping sales in other states. Consumer protection would be greatly enhanced if state attorneys general were given the ability to obtain federal court orders that would apply nationwide. However, the U.S. Congress has been unwilling to legislate this.

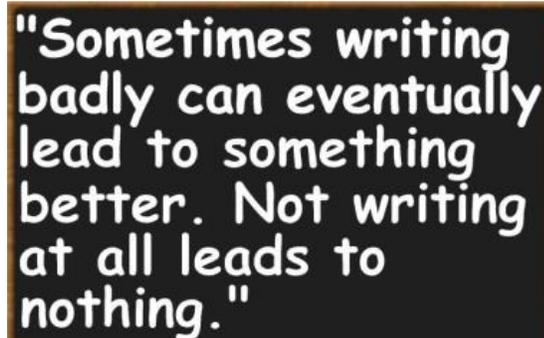
Letters to the Editor and Other Thoughtful Correspondences are Highly Desired

If you have thoughts on some matter why not write down those thoughts and share with other Phactum readers? You have "writer's block", you say? Or perhaps fear of being criticized for poor writing skills? PhACT is critical of bad science but we are very tolerant of amateur writing. Please, express your ideas in your own writing style. . To sit down and write is a great way to hone writing skills and to refine ones critical thinking skills. Give it a try, devise a letter or article on some matter that bugs you or some issue that might be of interest to fellow skeptics.

Articles, poetry, Letters and Rants to the Editor, suggestions to improve Phactum, items for the calendar, and other matters of interest are wanted. Feel free to denounce the Editor

Almost all topics are welcome - no partisan politics please.

Send submissions to the Editor at phactpublicity@aol.com.



"Sometimes writing badly can eventually lead to something better. Not writing at all leads to nothing."

▶▶ 2017 JREF Award announced (January 15, 2018)

Susan Gerbic and the team of editors she has enlisted for her Guerilla Skeptics on Wikipedia (GSoW) project have received the 2017 award from the The James Randi Educational Foundation. The award is given to the person or organization that best represents the spirit of the foundation by encouraging critical questions and seeking unbiased, fact-based answers. In January 2018, Gerbic told Dr. William London that her team had created or rewritten more than 500 Wikipedia pages in multiple languages that have received nearly 22 million views. In 2015, JREF announced that it would convert into a grant-making foundation that expected to make a small number of annual awards to non-profit groups that promote "activities that encourage critical thinking and a fact-based world view." No dollar amount was announced for the 2017 award.

Editor's note: See more about GSoW on the next page.

▶▶ Homeopathic autism treatment scrutinized (January 25, 2018)

Respen-A™ is promoted on the Web site of MedDEV-OTC, Inc. of Stanwood, Washington as a "homeopathic topical treatment for the core symptoms of autism." According to the product's Web site, it is currently available only as a compounded prescription medication from three pharmacies and has been prescribed by more than 130 doctors to more than 900 patients with autism spectrum disorders. After examining the evidence cited to support the product's effectiveness and considering that the product is so diluted that it is unlikely to contain any of the key ingredient (reserpine) highlighted in its marketing, Dr. Stephen Barrett has found no reason to believe the product is effective against symptoms of autism. In January 2018, the company's chief executive officer, Elane DeLack, R.N. launched a crowd-funding campaign on the Indiegogo site to enable the product to be "manufactured and marketed as an over the counter treatment that is easily accessible to millions of children and families worldwide who are suffering the effects of autism!" But, in response to a complaint, the site shut down the campaign for violating the site's terms of use. [Barrett S. A skeptical look at Respen-A and its promoters. Autism Watch, Feb. 1, 2018] <https://www.autism-watch.org/reports/respen-a/overview.shtml>

▶▶ Recommendations from "The Dr. Oz Show" and "The Doctors" criticized (February 25, 2018)

Georgetown University School of Medicine students identified more than 300 recommendations made during the *The Doctors* and *The Dr. Oz Show* that aired during a full month. Then they analyzed a randomly selected subset and reviewed advertising on the shows to assess conflicts of interest. The team found:

- The average number of health recommendations per

show averaged 6.91 on the Oz Show and 9.55 on *The Doctors*.

- Discussion of potential harms or risks were noted in only 8.6% of Dr. Oz's recommendations and in 13.1% of *The Doctors'* recommendations.
- Close to 80% of the recommendations on both shows did not align with evidence-based medical guidelines, society recommendations, or authority statements.
- The cost of the various recommended interventions was mentioned 23.7% of the time on the Oz Show, and 3.1% of the time for *The Doctors*.
- In the Oz Show, 13 out of 19 (68.4%) had ads related to general show content, 11/19 (57.9%) had specific products mentioned by the host using their commercial name, and 4/11 (36.3%) shows mentioning products by name named more than one product.
- In *The Doctors*, 12 out of 18 (66.7%) shows had ads related to general show content, 13 /18 (68.4%) had specific products mentioned by the host using their commercial name and 11/13 (84.6%) shows mentioning products by name named more than one product.
- For both shows, about half of the literature used to support claims was statistically insignificant or required extensive extrapolation. No literature support could be found for about a third of the claims. Of the supporting evidence the investigators could find, about a third had Oxford EBM (Evidence-Based Medicine) classification 3b or lower (the lower end of what's considered good quality evidence).

[Mishori R. Pulling back the curtain on 'The Doctors' and 'The Dr. Oz Show': What our analysis revealed. HealthNewsReview.org, Feb 22, 2018]

<https://www.healthnewsreview.org/2018/02/pulling-back-the-curtain-on-the-doctors-and-the-dr-oz-show-what-our-analysis-reveals/>

▶▶ Patient killed by bee sting therapy (March 18, 2018)

Apitherapy is the use of substances from honeybees (honey, propolis, royal jelly, or venom) to address various medical conditions. One type is "live bee acupuncture," in which a bee's head is squeezed until its stinger comes out and is inserted into the patient. In sensitized persons, venom can cause allergic reactions that range from mild, local swelling to severe systemic reactions, anaphylactic shock, or even death. The allergy division of Ramon y Cajal University Hospital in Madrid, Spain has reported that a 55-year old woman who had been receiving live bee stings every four weeks for two years to treat muscular contractures developed wheezing, difficulty in breathing, and sudden loss of consciousness immediately after treatment at an apitherapy clinic where adrenalin was not available. The woman was taken to the hospital by ambulance, but died several weeks later. During the anaphylactic attack, her blood pressure dropped

very low, which caused a stroke with permanent coma and multi-organ impairment. This appears to be the first published report of death from anaphylaxis in a patient who had previously been tolerant to bee venom. The authors warn that (a) previous tolerance to bee stings does not prevent hypersensitivity reactions, (b) repeated exposure increases the risk, and (c) the risks of apitherapy exceed the alleged benefits [Vazquez-Revuelta P, Madrigal-Burgaleta R. Death due to live bee acupuncture apitherapy. *Journal of Investigative Allergology and Clinical Immunology* 28:45-46, 2018]

http://www.jiaci.org/revistas/vol28issue1_6-2.pdf

In a 2016 interview about her beauty regime, actress Gwyneth Paltrow described her own experience receiving bee stings as therapy. She said that she was "generally open to anything" and "I'm always the guinea pig to try everything. I've got to try them all. I love acupuncture." [Gwyneth Paltrow lets bees sting her for ancient health treatment. *The Telegraph*, Apr. 5, 2016] <https://www.telegraph.co.uk/news/2016/04/05/gwyneth-paltrow-lets-bees-sting-her-for-ancient-health-treatment/>

Dr. Barrett's weekly newsletter, *Consumer Health Digest*, is free and available to all who wish to subscribe. To subscribe send a blank email to send a blank message to

chd-subscribe@lists.quackwatch.org

Dr. Barrett's main website is: www.quackwatch.org

Guerrilla Skeptics

Guerrilla Skeptics??? What in the world could that possibly be? I for one had never heard of such a thing ... until now.

Recently I was contacted by Rob Palmer who is an avid member of Guerrilla Skeptics, more correctly known as Guerrilla Skeptics on Wikipedia (GSoW). This group does not ride horses like the Cisco Kid or run in a jungle like the Phantom righting wrongs by evildoers. They are quite different from those heroes, basically being a bunch of Nerds who like science and wish to correct misstated "facts" and outright fabrications by various interests who have posted information on Wikipedia. Common culprits and targets of GSoW are anti-vaccination enthusiasts, mediums and clairvoyants, free-energy hucksters, and all manner of alternative medicine providers such as naturopaths, homeopaths, acupuncturists, etc.

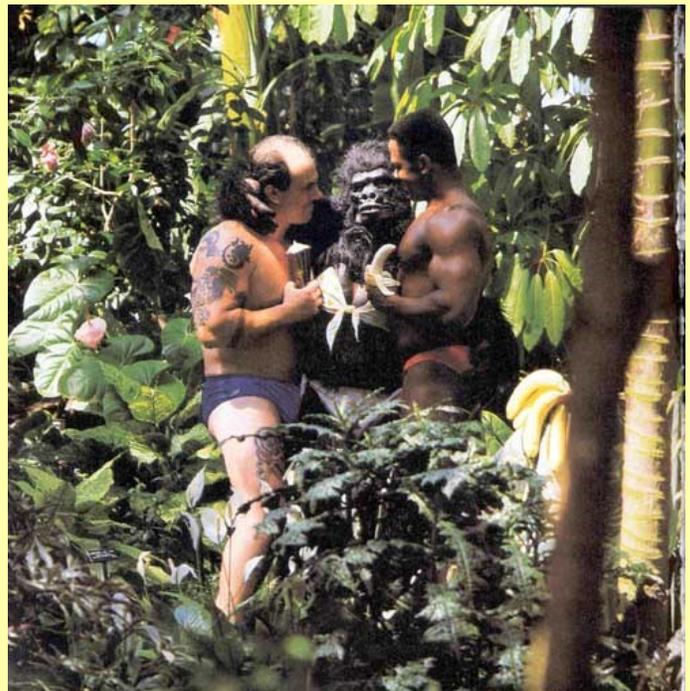
It seems that the only alternative medicine providers who are not scrutinized by GSoW is CAWD, the Canadian Association of Witch Doctors, who do not diagnose, treat, advise, prescribe medication, or charge for services because they admit up front that their cures do not work.

GSoW is highly unpopular in the various pseudo science and mystical circles that are examined. The unpopularity has simmered and then boiled to the point that the watchdog group has been labeled as a branch of Ku Klux Klan. Many scientists and skeptics are harshly attacked, among them our frequent speaker, Dr. Paul Offit who is an interna-

tionally known vaccine expert, vaccine developer, and proponent of science based medicine. James Randi, who has been a PhACT speaker and may well be considered by some, including the humble editor of this newsletter, to be the dean of the skeptical movement in the United States, has also been harshly criticized by the same factions for the sin of recognizing Guerrilla Skeptics.

Rob Palmer has kindly written a short essay (on Page 24) to introduce GSoW to PhACT and Phactum readers. He provides some references to web sites that further explain GSoW and some web sites that are on the attack. It is inter-

Guerrilla Skeptics at planning meeting



esting reading. A search engine scan for "guerrilla skeptics" can yield an abundance of information.

And Speaking of Editing Wikipedia

It so happens that at the Chemical Heritage Foundation now known as the Science History Institute of there is a free "WikiSalon" on the second Saturday of each month meeting from 1:00-3:00 PM at Science History Institute, 315 Chestnut Street, Philadelphia, PA 19106.

WikiSalon is free, open to everyone, Wikipedia novices are encouraged to attend, no advanced registration is required, and coffee and tea is provided.

It is a great way to learn how to create/edit Wikipedia according to the rules. Upcoming WikiSalon dates are April 14, May 12, June 9, and July 14. There will be no event in August.

For more information see:

<https://www.sciencehistory.org/wikisalons>

KNOWLEDGE SOURCE REVERSAL - The false proposition that untutored amateurs know more (and are more trustworthy) than professional scholars, particularly applicable in populist thinking and pseudoscientific endeavors. Perhaps rooted in the audience's greater identification with others who are similarly undereducated, in social/class opposition to those who have pursued formal higher education (and been "corrupted and indoctrinated" thereby). (Per Brian Regal, SI vol. 42, iss. 2, p. 61) Compare w/ idea that "street learning/1st- hand experience" is intrinsically superior to "book learning."



THESE so-called 'environmentally friendly' wind turbines are all well and good, but surely statistically 50% of the time the wind is blowing the other way? This will make them spin in the opposite direction, sucking power from the grid instead. I'm only a butcher and I figured that out, so what we pay boffins like Professor Brian Cox fat research grants for is anybody's guess.

Adrian Newth, Stratford upon Avon

Emunctorology ... Bet You Never Heard of This!

Emunctorology is a branch of alternative medicine that is new to me and I suspect is new to most if not all readers of Phactum. It is certainly new to Dr. Edzard Ernst, a leading observer of various new age and alternative therapies.

Emunctorology deals with those organs of the body that support the process of detoxification. Such organs are called "emunctories" and include the liver, lungs, gastrointestinal tract – small and large intestine, kidneys / urinary tract, and skin.

The term "emunctorology" seems to have been devised by some clever alternative medicine practitioner and it appears the main thrust of the therapy is "detoxification".

Doctor Ernst describes emunctorology at his website:

<http://edzardernst.com/2018/02/emunctorology-no-its-not-a-spelling-mistake-its-an-alternative-therapy/>

More about emunctorology can be found here:

<http://ayurvedanextdoor.com/tag/emunctorology/>

and here:

<https://www.naturopathic.org/Files/Committees/Board/August%202010%20BOD%20Meeting/FNM%20-%20Annual%20Report%202010.pdf>

and here:

<https://www.drashliehempsteadnd.com/herbalism>

Dr. Edzard Ernst is an ardent critic of non-scientific medical therapies and rest assured does not endorse "emunctorology" and clearly disapproves of so called detoxification schemes. His website is: <http://edzardernst.com/>

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Gambling Addiction Notes

♠♣♥♦ **USA** - Science has a gambling problem - Editorial

Pathological gambling is thought to affect as many people as autism and schizophrenia. It disrupts employment, relationships and health, and places an enormous burden on the state. It is the only behavioural addiction formally recognized by the American Psychiatric Association, appearing in the fifth edition of the organization's Diagnostic and Statistical Manual of Mental Disorders (DSM-5) in 2013. And what is the contribution of science to this pressing debate? A review last year of all research literature looked for well-designed studies conducted in real gambling environments with real gamblers (R. Ladouceur et al. *Addiction Res. Theory* 25, 225-235; 2017). It found just 29. In total. The world of gambling research is too small and underfunded

Read Article:

<https://www.nature.com/articles/d41586-018-01051-z>

♠♣♥♦ **UK** - Sportsmen twice as likely to be addicted to gambling

The PFA says that it has boosted its services to help players with gambling problems and that professional sportsmen may be twice as likely to have betting addictions as the general public. An investigation by The Times revealed that former players believe between a third and a half of active professionals bet on football, against FA rules. Simon Barker, the assistant chief executive of the PFA, said that research by players' unions had shown that sportsmen such as footballers, cricketers and rugby players could be more prone to gambling problems.

Read article:

<https://www.thetimes.co.uk/article/sportsmen-twice-as->

likely-to-be-addicted-to-gambling-cp50j8v8v

♠♣♥♦ UK - Wales 'Gambling turned me into a zombie' says man who lost £30,000

After losing more than £30,000 from gambling, a Cardiff man said he became a "zombie" and cut himself off from family and friends. Dave took out payday loans and lost his job because of the addiction. In his second annual report, *Gambling with our Health*, chief medical officer Dr Frank Atherton said gambling is an emerging public health issue which can have "devastating effects". He said financial difficulty could lead to depression and alcohol misuse. Dave (not his real name), who started using fixed odds betting machines at 23, said the impact of gambling had a toxic effect on his relationship with his partner and his young son.

Read article:

<http://www.bbc.com/news/uk-wales-42877450>

♠♣♥♦ UK - The invisible addiction

You think your child's just playing a computer game, but soon they're neglecting their school work - and stealing your money to fund an online gambling habit. Like these parents, you won't have a clue. As a psychotherapist, Jane knows all about the addictive nature of online gaming. 'Online games are like sugar: you're never satisfied and you've never had enough,' she says. 'It's all very easy - and empty.' But it's what these seemingly harmless games can lead to that really concerns her. Recent reports show 25,000

British children are problem gamblers. People who've witnessed it first hand shared their experiences

Read article:

<http://www.dailymail.co.uk/femail/article-5336601/The-invisible-addiction-online-gambling-habit.html>

USA - Massachussets Gambling might be a problem

Historically, opinions about gambling have tended to mirror the social and moral climate of the day. Gambling problems aren't anything new; there were scientific papers written about excessive gambling as far back as 1798 and, reaching even further back into history, there are cave drawings depicting gambling-related behaviors. However, the concept that problem gambling is not a moral defect but instead a disorder is relatively new. Most experts and clinicians now consider gambling addiction as a legitimate biological, cognitive, and behavioral disorder. Further, although mental disorders can lead to problem gambling, gambling to excess also can lead to other problems. Gambling problems have many potential causes: genetics, erroneous thought patterns, impulse control disorders, poverty, and personal experiences. Understanding how gambling works for you is a worthwhile exercise, even if you choose to continue gambling.

Read article:

<https://www.health.harvard.edu/blog/when-gambling-might-be-a-problem-2018020113202>



Delaware Valley Opera Company 2018 Summer Festival

L'Elisir d'Amore - June 9th, 13th, and 17th

Il Tabarro & Suor Angelica - July 7th, 11th, and 15th

Faust - August 4th, 8th, and 12th

Venice Island Performing Arts Center
7 Lock Street, Philadelphia, PA 19127

From Main Street, Manayunk, Turn on Cotton to the
Venice Island Parking Lot
See dvopera.org for more information



USA – West Virginia- Greyhound racing must accept reforms

Last year, West Virginia lawmakers voted to end millions of dollars in state subsidies for greyhound racing, a cruel gambling industry that is dying. The legislation also eliminated the state dog racing mandate, a bizarre fiat that forces casinos to hold money-losing races in order to offer other types of gambling. It appeared that the gentle greyhounds would finally get to be simply dogs again. Unfortunately, Gov. Jim Justice stepped in at the eleventh hour and vetoed this humane legislation, preserving the moribund greyhound industry for a while longer.

In the coming weeks the industry will have a chance to prove that it's willing to change, by supporting House Bill 4293 by Delegate Cindy Frich and others. This smart bill cracks down on the use of drugs in the greyhound racing industry.

Read article:

https://www.wvgazette.com/opinion/daily_mail_opinion/commentary/carey-thiel-greyhound-racing-must-accept-reforms-daily-mail/article_3b798c16-5944-5e5e-8751-1fbd3127ef1f.html

Homeopathy and Yellow Fever

On page one of this Phactum we discuss the movie Yellow Jack and then got into some history and facts about Yellow Fever. This being a skeptics publication it was hard

Save this Date! !

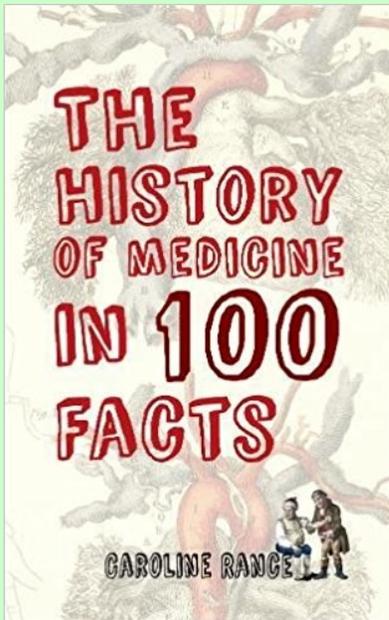
Friday, June 1, 2018
5:30 - 8:30 PM

at the
Wagner Free Institute of Science

A Sip of Science
The Wagner's Benefit Cocktail Party
in honor of

Dr. Paul Offit,
CHOP, pediatrician, public health advocate, and vaccine expert

www.wagnerfreeinstitute.org
215-763-6529



The History of Medicine in 100 Facts by Caroline Rance

Publisher: Amberley Publishing; 1 edition (December 15, 2015)

Paperback: 192 pages

ISBN-10: 1445650037 ISBN-13: 978-1445650036

The history of medicine is a vast subject, encompassing the whole of humanity in every region of the globe. For millennia, our ancestors have sought to combat disease, relieve pain and postpone the Grim Reaper's inevitable victory, doing so with a fortitude and humour that makes their experiences resonate with us today. In this book packed full of facts from medicine's long and often shocking past, Caroline Rance gives concise introductions to some of the more well-known (and not-so-well-known) episodes, dispelling a few myths and celebrating a few neglected figures along the way.

About the Author: Caroline Rance runs the popular history of medicine website www.thequackdoctor.com and has an MA in Medicine, Science and Society. She has written a historical novel, Kill-Grief, and a non-fiction book on Victorian proprietary medicines, The Quack Doctor: Historical Remedies For All Your Ills. She has also compiled a pocket trivia gift book, What the Apothecary Ordered, for Old House Books.

to resist scanning the internet for information about homeopathy and how that alternative medicine discipline approaches Yellow Fever. There are plenty of homeopathy websites that do address the topic, none satisfactorily. Here is one such website: http://s-scrutton.co.uk/Why_Homeopathy/illness-s-z/yellow-fever.html?link_list=3072369

The website does seem to describe the disease pretty well, but never mentions the vector, primarily the *aedes aegypti* mosquito. Continuing on, conventional medical treatment is described and the article states *"Because there is no cure for the viral infection itself, medical treatment of Yellow Fever focuses on easing symptoms such as fever, muscle pain, and dehydration."* Conventional Medicine uses the Yellow Fever vaccine as a preventative. However, the NHS (National Health Service - the homeopathy website is based in the United Kingdom) warns that it does have some minor side effects, such as a headache, muscle pain, a mild fever and soreness at the injection site. A long list of other adverse reactions induced by the Yellow Fever vaccine is listed making the vaccine seem nearly as deadly as the disease itself.

Conventional medicine admits that it has no treatment, and its preventative vaccine comes with the prospect of a wide variety of serious and painful side effects.

But not to worry: Homeopathy can help with prevention and treatment. *"homeopathy has discovered that substances that cause symptoms of illness can also cure those same symptoms of illness....This is the principle of "Like cures Like" on which all homeopathy is based."*

"The task of the homeopath is to find a remedy whose symptom picture matches the symptoms of a person's illness. These remedy symptom pictures have been developed over the last 220 years."

Prevention is better than cure and to that end homeopathy *"Susan Curtis, in her 'Handbook of Homeopathic Alternatives to Immunisations', says that homeopathic prophylaxis for Yellow Fever is the 'Yellow Fever' nosode (a remedy made from the virus), to be taken once a week whilst travel-*

ling in endemic regions, or one dose three times a week during an epidemic. This is available from homeopathic pharmacies for a fraction of the cost of the Yellow Fever vaccines. "

But if Prevention has failed Homeopathy has a list of remedies claimed to be effective for Yellow Fever. These remedies include: Aconite, Gelsemium, rsenicum, Lachesis, Sulphuric acid, Argentum nitricum, Phosphorous, Crotalus, and Carbo vegetabilis. All likely poisons and all are said to be safe and I suppose they are safe in homeopathic dilutions,

but are they useful? Sulphuric Acid is a very powerful chemical that would cause burns if not highly diluted, but homeopaths claim it *"Is a useful remedy for haemorrhages of black blood, profuse sweat with exhaustion, foetid stools and diminished secretion of urine."*

Get a load of this at the end of the web page!!

"Scientific Evidence Supporting

Homeopathy

There is a significant and growing amount of scientific evidence confirming that homeopathy is a safe and effective medical therapy. However, this evidence remains only the third most important proof of this.

The most important proof for the safety and effectiveness of homeopathy is clinical experience, that is the many millions of patients who, having suffered serious illness, have been treated successfully with homeopathy. This is going on throughout the world, and been doing so for over 200 years.

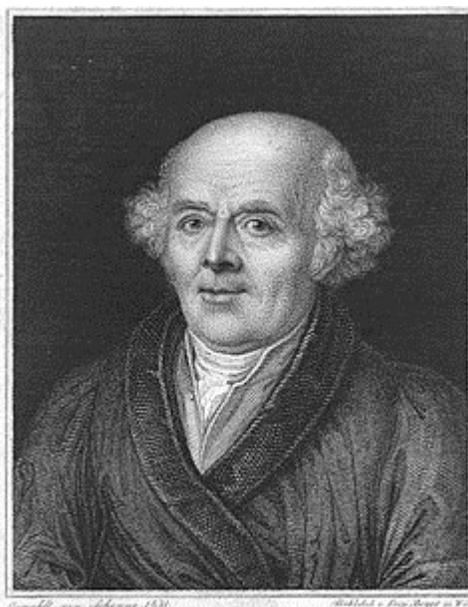
Homeopathy has also developed a voluminous materia medica. This contains the intricate details of the healing properties of several thousand substances used to make homeopathic remedies. The short remedy pictures above are just a

tiny part of this knowledge.

I am not aware of any scientific testing of homeopathic treatment on Yellow Fever."

No scientific testing indeed.

Christian Friedrich Samuel Hahnemann 10 April 1755[1] – 2 July 1843)



The founder of Homeopathy, Samuel Hahnemann, was quite talented having mastered several languages including English, French, Italian, Greek and Latin. He made a living as a translator and teacher of languages, gaining further proficiency in Arabic, Syriac, Chaldaic and Hebrew. Hahnemann was dissatisfied with the state of medicine in his time, and particularly objected to practices such as bloodletting. He claimed that the medicine he had been taught to practice sometimes did the patient more harm than good. He eventually went on to formulate his theories of a new medical discipline that he called "Homeopathy":

Meeting Reports - Jan/Feb/Mar 2018

Reported by Peter Lennihan and Natira Yefchak: Physics students of Dr. David Cattell at Community College of Philadelphia.

**Paul Halpern, Ph.D., a physicist and cosmologist,
discussed his new book:**

***The Quantum Labyrinth: How Richard Feynman and John
Wheeler Revolutionized Time and Reality*
Saturday, January 20, 2018**

Reported by Peter Lennihan

On Saturday, January 20, 2018 I attended Dr. Paul Halpern's presentation for his new novel "The Quantum Labyrinth." Dr. Halpern was energetic and excited, as he should, for he was delivering his PowerPoint synopsis of his book covering his idols John Wheeler and Richard Feynman. Dr. Halpern described both world renowned physicists as being the "Two best American theoretical physicists of all time."

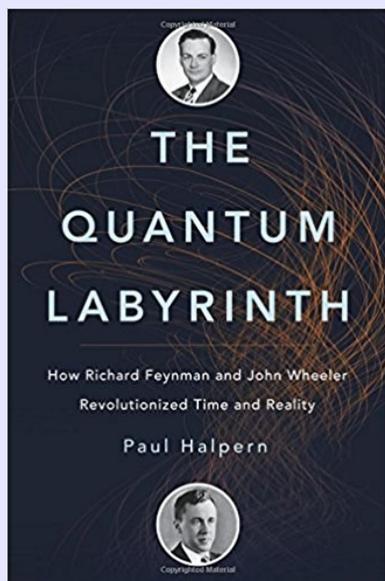
After the introductions he started with a breakdown of the each physicist, and the first one was Richard Feynman. Highlights regarding Feynman was that he was placed in charge of the Challenger Disaster Commission, shared his 1965 Nobel Prize in Physics, and that Feynman was given to wild antics and an unconventional personality. Other activities Feynman was involved in was playing the drums, acting, and attending Copley parties of that time period. Remarks pertaining about Wheeler was that he was more conventional in his personality, but his physics was more abstract and unconventional. Wheeler had a clever mind and came up with the ideas of wormholes, black holes, and concepts of the universe that connected with consciousness. Wheeler wrote all his ideas of the universe in a series of notebooks that are held at for viewing in a local museum.

The presentation also covered John Wheeler and Richard Feynman's friendship. It began in 1939 at Princeton University. Feynman was a teacher's assistant. They became friends and were able to relate based on their love for physics and humor. They connected in humor when Feynman imitated Wheeler in a meeting. Afterwards they worked on the "Wheeler-Feynman Absorber Theory" where electrons interact directly via signals sent both forwards and backwards in time. The idea was later transformed by Feynman into "what if all electrons in the universe were the same particle moving forward or backward in time." The term they used is "positron, where electrons are going back in time."

After Feynman worked on his representation of particle theory and positrons he began getting more and more into art and started putting out what he called the Feynman diagrams. He was so proud of them he posted them on his van, and people would ask him about them while he was at the beach. At that time in the late 1930's Wheeler put out a novel idea of his own dubbed 'sum over histories,' which covered how electrons interact in many different ways, simultaneously.

Later on, between 1942 and 1945, Wheeler and Feynman both worked on the Manhattan project, which Feynman later regretted after the atomic bomb was dropped on Hiroshima and Nagasaki. Wheeler wished the bomb was invented earlier and dropped sooner, primarily because his brother was killed in WWII. Wheeler was involved in the development of the H-Bomb and found a key paper written by Oppenheimer which led to him identifying what and how a black hole functions.

Both went on to have more successful careers that have inspired the generations of today and onwards. Both men passed away, Feynman 1988, Wheeler 2008, but their legacy has inspired the physicist today to search for the answers of the universe.



The Quantum Labyrinth: How Richard Feynman and John Wheeler Revolutionized Time and Reality By Paul Halpern, Ph.D.

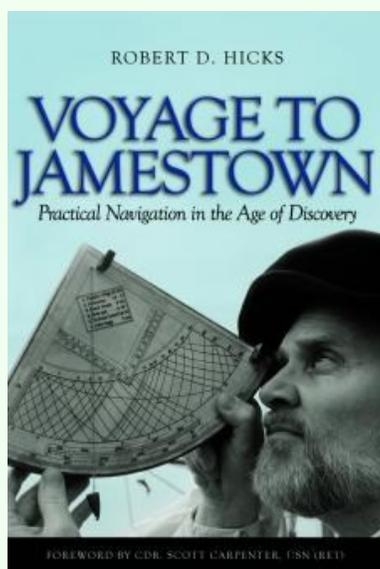
Publisher: Basic Books; 1 edition (October 17, 2017)

Hardcover: 336 pages

ISBN-10: 0465097588 ISBN-13: 978-0465097586

The story of the unlikely friendship between the two physicists who fundamentally recast the notion of time and history

In 1939, Richard Feynman, a brilliant graduate of MIT, arrived in John Wheeler's Princeton office to report for duty as his teaching assistant. A lifelong friendship and enormously productive collaboration was born, despite sharp differences in personality. The soft-spoken Wheeler, though conservative in appearance, was a raging nonconformist full of wild ideas about the universe. The boisterous Feynman was a cautious physicist who believed only what could be tested. Yet they were complementary spirits. Their collaboration led to a complete rethinking of the nature of time and reality. It enabled Feynman to show how quantum reality is a combination of alternative, contradictory possibilities, and inspired Wheeler to develop his landmark concept of wormholes, portals to the future and past. Together, Feynman and Wheeler made sure that quantum physics would never be the same again.



VOYAGE TO JAMESTOWN **Practical Navigation in the Age of Discovery** By Robert D. Hicks, Foreword by CDR Scott Carpenter, USN (Ret.)

ISBN/SKU: 9781591143765 Hardcover 256 pages

Published: October 2011

Voyage to Jamestown explores how sea navigation was accomplished during the era of discovery. Navigational methods and tools are presented within the setting of their use during a sea voyage of the period. While this voyage features a fictional crew and ship, it is carefully reconstructed from actual events, circumstances, narratives, and historical figures, which demonstrates the challenges of marine navigation within the cultural experience of people who actually traveled the oceans centuries ago. The fictional voyage follows the merchant galleon Guyft from Bristol, England, to Virginia in 1611, captained by Tristram Hame. With this narrative technique, the reader can absorb seafaring and navigation as practiced in the seventeenth century as if they were on board the ship.

Navigational theory, methods, and instrumentation of the era are all engagingly presented within economic, political, scientific, and religious contexts to portray how the early navigator experienced his world.

Robert D. Hicks is currently Director, Mütter Museum/Historical Medical Library in Philadelphia, PA. He was PhACT's speaker October 2011.

**Robert D. Hicks, Ph.D., curator of the Mutter Museum at the
College of Physicians of Philadelphia, discussed:
*Vaccination Pure and Spurious:
The Confederate Vaccination Crisis of the Civil War*
Saturday, February 17, 2018**

Reported by Peter Lennihan

Dr. Robert D Hicks provided a talk on February 17, 2018 called ‘Vaccination Pure and Spurious.’ Dr. Hicks is the director of the Mutter Museum, Historical Medical Library, and the William Maul Mersey Chair for the History of Medicine. He also works for the College of Physicians of Philadelphia. He discussed that the Mutter Museum is the birthplace of American Medicine, and is a national historic landmark. His discussion started with stating that spit spreads death.

His Power Point slide stated that the Battle of Antietam, which took place in Maryland in 1862 was the bloodiest day in America, especially considering the travesty in dealing with its soldiers who also had the sickening disease – small pox. From the disease spreading down further south to Richmond, Virginia in the year 1863. From the disease spreading at a rapid rate they created a vaccination. From that they identified that if they used children that had smallpox, it was far safer due to the fact that they would not have other diseases like syphilis.

The confederate states had a high mortality rate due to small pox. There was 1 death for every 3 people who were infected with small pox. The spread of another disease created a disorder that helped keep track of the illness that continued. This disease was called “cow pox.” From the devastating numbers of people being infected with small pox and cow pox another two doctors stepped up and helped make a transition in not only American medical history, but world medical history, Dr. Samuel Preston Moore and Robert Worthington. Dr. Moore who was the surgeon general, and worked initially for the confederates, and was great at organizing his thoughts and putting everything into a Journal. The other Doctor was Surgeon Worthington who helped create a vaccination that became a cultural ritual.

Philadelphia was the first location to develop pharmaceutical products to keep outside corporations and foreign entities who were charging both the union and the confederates more money for drugs than were needed. With this complete, Merck who was the initial corporation, allowed them to have control over supply and process mandatory immunizations. It also allowed for military intrusions into the civilian sphere.

Children were the key to acquiring better vaccines. What also changed the way people would visualize racism was that they found out that black children in the south were conjured up around farms and agricultural locations, and their small pox vaccinations were used on white soldiers. On the alternate side soldiers were sold vaccinations from white children for a higher price.

Vaccinations helped the military have more control over civilian life, and allowed appropriate measures to be taken for vaccinations that would help out society.

**Massimo Pigliucci, a Professor of Philosophy, discussed ideas
presented in his new book, *Science Unlimited*
Saturday, March 17, 2018**

Reported by Natira Yefchak

This month’s PhACT meeting was held on Saturday, March 17, 2018. The guest speaker was Massimo Pigliucci, a professor of philosophy at City University of New York. Mr. Pigliucci spoke about “the variety of scientisms and the limits of science,” which are ideas presented in his latest book, “Science Unlimited.”

Pigliucci’s main point was there is too often “an exaggerated trust in efficacy of methods of natural science applied to all areas of investigation (as in philosophy, the social sciences, and humanities).” Using ideas previously presented by Susan Haack, he argued that “scientism” engages in the following problematic methods: 1. Using words like “science” and “scientific” as honorary terms; 2. Adopting manners and terminology of science regardless of usefulness; 3. An obsession with

demarcating science from pseudoscience; 4. A preoccupation with identifying a scientific method; 5. An attitude that seeks to deploy science to answer questions beyond its scope; and 6. Denying or denigrating the usefulness of non-scientific activities, particularly within the humanities.

Regarding the first point – giving words like “science” and “scientific” an honorary standing - Pigliucci offered the examples of questionable advertising practices. A statement such as, “Nine out of ten doctors recommend. . .” can be harmful to the public. The mere fact that doctors are vouching for a particular product does not actually educate people on the usefulness or effectiveness of that product.

Regarding the second and fifth points, Pigliucci argued that adopting manners and terminology of science regardless of usefulness is dangerous because numbers and facts need to be interpreted. He argued that applying measurement to something intangible, like emotions, is nonsensical. In a similar vein, possessing an attitude that seeks to deploy science to answer questions beyond its scope can also be dangerous, or at the very least illogical. His primary examples involved questions of ethics and philosophy.

For the third point – an obsession with demarcating science from pseudoscience – Pigliucci claimed that there is no clear line between science and pseudoscience. He supports this claim by stating the missing element is time: many theories that were once accepted as fact have been debunked over time, and these now-debunked theories are labeled as pseudoscience.

Pigliucci explains the fourth point – a preoccupation with identifying a scientific method – by first asking how exactly is the scientific method supposed to be applied: through inductivism, deductivism, etc.? Pigliucci states that if a scientific method exists, it certainly would vary across disciplines.

Pigliucci devoted much of the presentation to discussion of the fifth and the sixth point, the denial and denigration of the usefulness of non-scientific activities, especially within the humanities. Defending his profession, he stated that, “Saying. . . philosophy is ‘useless’ because it doesn’t contribute to solving scientific problems betrays a fundamental misunderstanding (and ignorance) of what philosophy is.”

Pigliucci goes on to admit that the existence of the various disciplines can be a rather nebulous one, with many sciences grading into and influencing the others. I believe his main takeaway was we should be careful in how, why, when, and where we apply “science,” and we should also understand that there are many areas where science need not be applied. He emphasized that engaging in scientism “is harmful to public intellectual discourse.”

Pigliucci concluded his presentation with a modified quote from A. Sokal: “When one analyzes ‘scientific’ writings ‘on knowledge,’ one finds radical-sounding assertions whose meanings are ambiguous and that can be given two alternative readings: one as interesting, radical, and grossly false; the other boring and trivially true.”

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Science Unlimited?: The Challenges of Scientism

By Massimo Pigliucci

Publisher: University of Chicago Press; 1 edition (January 12, 2018) 320 pages
ISBN-13: 978-0226498140 ISBN-10: 022649814X



All too often in contemporary discourse, we hear about science overstepping its proper limits—about its brazenness, arrogance, and intellectual imperialism. The problem, critics say, is scientism: the privileging of science over all other ways of knowing. Science, they warn, cannot do or explain everything, no matter what some enthusiasts believe. In *Science Unlimited?*, noted philosophers of science Maarten Boudry and Massimo Pigliucci gather a diverse group of scientists, science communicators, and philosophers of science to explore the limits of science and this alleged threat of scientism.

In this wide-ranging collection, contributors ask whether the term scientism in fact (or in belief) captures an interesting and important intellectual stance, and whether it is something that should alarm us. Is scientism a well-developed position about the superiority of science over all other modes of human inquiry? Or is it more a form of excessive confidence, an uncritical attitude of glowing admiration? What, if any, are its dangers? Are fears that science will marginalize the humanities and eradicate the human subject—that it will explain away emotion, free will, consciousness, and the mystery of existence—justified? Does science need to be reined in before it drives out all other disciplines and ways of knowing? Both rigorous and balanced, *Science Unlimited?* interrogates our use of a term that is now all but ubiquitous in a wide variety of contexts and debates. Bringing together scientists and philosophers, both friends and foes of scientism, it is a conversation long overdue.



PhACT Participates in 2018 School Science Fairs



We are pleased to announce that PhACT in 2018 has once again participated in two countywide science fairs, the George Washington Carver Fair in Philadelphia County and the Bucks County Science Fair. We participated in middle school divisions with judges looking for students whose work displayed good critical thinking skills. We awarded fourteen cash prizes of \$50 each along with a beautiful and quite heavy metal medallion to each winning student.



Special Thanks to Al Erpel who designed, manufactured and donated the medallions.

Carver Science Fair - Philadelphia County

Board members Doreva Belfiore, Dave Langdon,

Becky Strickland and member Mike LeWitt judged the 39th Carver Science Fair at Temple University on March 6th. The Fair, which has been operating yearly since 1979, is open to all students attending school or homeschooled in Philadelphia County.

<https://www.carversciencefair.org>

This year's fair showcased over 600 exhibits from grades 7 through 12, in 14 scientific disciplines. PhACT prizes are given to 7th & 8th graders for excellence in critical thinking. Specifically, we look at projects that were manipulating a variable and followed proper scientific procedure. 12 exhibits were initially selected, then after speaking with each student, eight equal prizes of \$50 and a custom designed medallion were awarded to:

Christopher Gallelli of St Peter's School for *Do the Materials Used in a Phone Charger Affect the Speed of the Charge?*

Harry Murphy of St Mary's Interparochial School for *What Applications Use the Most iPhone Battery?*

Fiona Fuller of Penn Alexander School for *Sugar Rush*

Rakiya Alston of CCA Baldi Middle School for *Store Bought Insecticide vs Black Walnut Extract*

Dominic DiFrancesco of Philadelphia Academy Charter for *Do pH levels have an effect on Plant Health*

Vorith Tadjibaev of CCA Baldi Middle School for *Storm Surge Wall*

Isaac Shapiro of Springside Chestnut Hill Academy for *Flu- To Vaccinate or to not Vaccinate: That is the Question*

Jeremy Mukadiyil of Greenberg School for *The Effects of Water pH on Seed Germination and Plant Growth.*

Congratulations to our winners and many thanks to those who contributed money for prizes.

Bucks County Science Fair

PhACT Vice-president Eric Krieg was a judge at the Bucks County Science Fair held at Delaware Valle College in Doylestown. Eric presented six medallions and cash prizes of \$50 to middle school students from Bucks County who displayed strong critical thinking skills.

Students explored a wide variety of topics and displayed appropriate understanding of science.

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At the Wagner Free Institute of Science

1700 W. Montgomery Ave., Philadelphia, PA 19121 215-763-6529 Tuesday-Friday 9am-4pm
<http://www.wagnerfreeinstitute.org>

Lectures and Other Events at the Wagner

Thursday, April 5, 2018 at 6:00 PM – 7:30 PM

**An illustrated Weeknights at the Wagner lecture:
Expedition to the End of the Earth: The Antarctic Peninsula Paleontology Project**

By Kerin Claeson, Philadelphia College of Osteopathic Medicine

Museum open until the talk begins at 6pm.

During the Cretaceous period, Antarctica was teeming with dinosaurs, reptiles, mammals, fish, and plants. That changed suddenly when, 65 million years ago, a mass extinction wiped out more than half of the world's species and set Antarctica on a course to being the icy, inhospitable environment we know today. In 2016, a group of intrepid researchers travelled to the continent to collect fossils of these by-gone creatures—fossils that have unlocked new information about life, species dispersal, and evolution before and after the extinction. Expedition member Kerin Claeson, an Anatomy Professor at the Philadelphia College of Osteopathic Medicine, joins us to share her adventures fossil hunting in Antarctica and her exciting research into the fossils collected.

About the speaker

Dr. Kerin Claeson is an Associate Professor of Anatomy in the Department of Biomedical Sciences at the Philadelphia College of Osteopathic Medicine. She received her Ph.D. in Vertebrate Paleontology from The University of Texas at Austin. Her research focuses on comparative vertebrate anatomy, human anatomical variations, and evolutionary biology.

Free and Open to the Public

SUNDAY, APRIL 22, 2018 at NOON - 4:00 PM

Be a Geologist for a Day!

Dig deep under the Earth and learn about rocks and the Earth beneath us as you participate in hands-on and interactive activities about rocks and minerals.

Don't be afraid to bring your own rock collections—we'll identify them together!

Part of the 2018 Philadelphia Science Festival Program.

**Thursday, May 17, 2018 at 6:00 Tiny Mysteries: Decoding the Wagner's 19th-Century Microphotographs
An Illustrated Lecture by DR. BYRON WOLFE, Temple University**

Free and Open to the Public

Friday June 1, 2018 at 5:30 - 8:00 PM

Annual Benefit - A Sip of Science 2018

Honoring Dr. Paul Offit, Children's Hospital of Philadelphia and University of Pennsylvania

Friday, June 1st, 5:30-8:30 PM

Adult Education

Current Course Schedule - 2018 Spring

Splendor in the Grasses: A Natural History of the Plant Family Poaceae,

Professor Jordan Teisher

6 Tuesdays, March 27 - May 1, 2018, 6:30 - 7:30 PM. Pennsylvania Horticultural Society, 100 N. 20th St. (20th and Arch Sts.)

The grass family, Poaceae, contains over 11,000 species distributed across the globe in virtually all habitats. It is arguably the most valuable plant family to humans, providing over half of the daily caloric intake of the world's people. This course is a broad survey of some of the basic biology of grasses including taxonomy, morphology, ecology, evolution, and domestication.

This course requires preregistration. See website or call 215-763-6529 x23.

Sex in the Wild: Strategies of Sexual Reproduction in the Animal Kingdom,

Professor Patrick Slavin

6 Wednesdays, March 28 - May 9, 2018, 6:15 - 7:30 PM., Independence Branch of the Free Library, 18 S. 7th Street (between Market and Chestnut)

This course explores the myriad ways that animal evolution has devised to reproduce sexually from meiosis to fertilization.

No preregistration necessary. Register by attending the first class.

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Wagner lectures and courses are FREE and open to the general public.

Contributions are gratefully received.

Courses are taught at introductory college level.



Guerrilla Skepticism on Wikipedia: An Introduction

By Rob Palmer

I am often asked to describe what the Guerrilla Skepticism on Wikipedia (GSoW) project is all about. One way to do this is to reveal and examine what outsiders say about us. So, let me start with that approach for Phactum readers. According to the “Guerrilla Skepticism on Wikipedia” article from RationalWiki:

GSoW is a group that edits Wikipedia articles to improve skeptical content... GSoW have written or improved a number of Wikipedia pages about skeptics, science educators, and science-based medicine proponents who push back against pseudoscience and the paranormal in the media... They also try to make sure all claims on paranormal themed pages are balanced and have citations to notable secondary sources.

GSoW is very unpopular among the many supporters of paranormal, pseudoscience, and fringe science theories who would argue that their cranky views are the least bit plausible, or even of any noteworthy relevance to the scientific consensus view on any given topic. [They] frequently accuse GSoW of devising an organized effort to prevent fringe lunacy from permeating Wikipedia thereby bolstering the scientific quality and skeptical tone of the articles. This, of course, cannot stand, and so resistance needs to be mounted. [1]

Having spent several years as a member of the Guerrilla Skeptics team, I must say I couldn't have said it much better myself. (And no, I didn't add that material to RationalWiki.) But let me add a few more items: We, the members of the Guerrilla Skeptics team, are an international group of 100 or so volunteer “editors”. (If you contribute to Wikipedia in any way, from fixing a typo to authoring an entire 10,000-word article, you are called an editor.) We do indeed work as a team to improve the science and Skeptical content of Wikipedia in many languages. Most importantly, we do this by following the encyclopedia's strict rules and guidelines, and by working within the ‘corporate culture’ of Wikipedia which is collaborative, and most happily, **very** pro-science.

Don't take my word for that last point. According to the “Wikipedia Arbitration Committee Decisions on Pseudoscience” proclamation:

The Arbitration Committee has issued several principles which may be helpful to editors... when dealing with subjects and categories related to pseudoscience."

Scientific focus: Wikipedia is an encyclopedia and its content on scientific and quasi-scientific topics will primarily reflect current mainstream scientific consensus.

Neutral point of view as applied to science: "Wikipedia: Neutral point of view", a fundamental policy, requires fair representation of significant alternatives to scientific orthodoxy. Significant alternatives, in this case, refers to legitimate scientific disagreement, as opposed to pseudoscience. [2]

For those not in-the-know on this subject, let me make it clear why the quality of the information on Wikipedia is important in the first place. According to Alexa, Wikipedia is the 4th most visited English site in the world, only behind the powerhouses Google, YouTube and FaceBook. [3] And once you consider that Google as well as (very recently) YouTube direct their users to Wikipedia for what they assume will be valid information, the importance of getting the important details correct (i.e., not news about the Kardashians) is vital. OK, so getting back to GSoW...

While RationalWiki got it right, some others - those who would like GSoW and anyone else in their way to just disappear - routinely get everything wrong about how Wikipedia operates and how GSoW contributes to the encyclopedia.

According to parapsychologist Rupert (dogs have ESP) Sheldrake:

The Guerrilla Skeptics are well trained, highly motivated, have an ideological agenda, and operate in teams, contrary to Wikipedia rules. The mastermind behind this organization is Susan Gerbic [sic] ... Their aim is to "control information," and Ms Gerbic [sic] glories in the power that she and her warriors wield. They have already seized control of many Wikipedia pages, deleted entries on subjects they disapprove of, and boosted the biographies of atheists. [4]

Well we **are** well trained and motivated, thanks to **Susan Gerbic**. But to believe that our team of roughly 100 can delete content and even entire articles, by "seizing control" of anything amongst an army of tens of thousands of involved, registered editors, in a system where everyone needs to collaboratively play by established rules, is either naive or extremely misinformed. Pretty much the only other substantive thing correct about Sheldrake's diatribe is the part about the GSoW founder and leader CSI Fellow Susan Gerbic glorying in her ultimate power. (Can one use LOL in a PhACT article?) Sorry Susan, I couldn't resist.

As I understand it, Sheldrake wrote this out of frustration when he or his supporters were unable to overcome the science-biased rules on Wikipedia and tried to inject woo into his biography. For the record, GSoW was not involved at all. We didn't have to be. Whatever Sheldrake didn't like about what was happening on Wikipedia to his bio, was being done by plain old vanilla non-GSoW editors following the clearly established Wikipedia rules regarding pseudoscience. (This was all documented in the Skeptical blogosphere at the time. Google it!) [5] I think Sheldrake clearly committed the jumping-to-conclusions fallacy.

Moving on to another detractor, the astrology website Astrology.co.uk has this to say about GSoW:

Wikipedia is a utopian ideal - founded on a belief that the world can collaborate to create an Encyclopedia. The fact that most of the content is superior to equivalent websites is testimony to this vision and the dedication of thousands of editors... However, anyone interested in pages on what Wikipedia term 'fringe' topics: those relating to astrology, the paranormal, metaphysics, faith/spirituality or alternative medicine or on atheism or [skepticism] will find editing is a closed shop controlled by a small group of editors. What is the ideology that they promote? ... Most refer to themselves as 'rational sceptics' or rationalists. However, I have not found that they are particularly rational or interested in evidence or practice critical thinking in the manner of genuine sceptics... Their avid faith in science as the only source of truth is known as scientism. So, anything that cannot be accounted for within the limitations of current scientific knowledge is illusory and deserves zero tolerance... Since most of their knowledge of fringe subjects is acquired from the biased perspective of sceptical publications like the Skeptical Inquirer, conferences and books, subjects like the paranormal, religious belief, astrology and alternative medicine appear objectionable. Scientific evidence supporting fringe subjects is not welcomed in the manner of a good scientist... Gerbic is clearly very proud that her team changed the homeopathy page "drastically" and managed to insert the word 'quackery' into the lead section on the main homeopathy article... apparently this was with a nod from [Wikipedia founder] Jimmy Wales... Though I am not a follower of homeopathy, this seemed an unnecessary insult to a well-established therapy used by many medical doctors. Even if it is a placebo as some tests claim (and others do not), it is therapeutic in a way that does not require invasive surgery or drugs with harmful side-effects. Who are we to judge? [6]

Who are we to judge? Really? To all that malarkey I have only this to say: go facts... **go scientism**. To the chagrin of the pro-woo, anti-science contingent, and to the benefit of anyone relying on Wikipedia to find the facts, that fortunately also is Wikipedia's official stance on the subject. On Wikipedia, facts matter. Science matters.

So now you know what GSoW is all about. But you may ask “why do we do it?” Why do we all volunteer our free time to improve Wikipedia? Well, writing only for myself here, I hope I am contributing to making the world a slightly more informed and *hopefully* slightly more rational place. Plus, and this is important: my former utter frustration in arguing fruitlessly with woo-loving friends and family on social media has been largely supplanted by a sense of accomplishment. Since joining the GSoW team in August 2016, the sixteen articles I have created or largely rewritten so far - to add science and fight pseudoscience - have over 800,000 pageviews. That’s not an order-of-magnitude typo. I am approaching a million pageviews. Yes, there are over 2,200 people a day (and growing) reading my work. Every day. Every single day. How’s that for getting the word out? That doesn’t even count the impact of the many other articles I have made smaller but significant, skeptically-oriented changes to. How amazing is that! And all that is due to just one relatively new member of the team who, a little while ago, was frustrated by his inability to fight alt-med and pseudoscience - and did not know how to change that.

Now let me give the current, cumulative team stats: In the roughly eight years since GSoW was founded, our membership has grown to roughly a hundred active editors, and the 576 articles so far (in numerous languages) that GSoW has written from scratch, largely expanded, or fundamentally altered have collectively garnered 25 million pageviews to date. Amazingly, that tally is now growing at a rate approaching one million per month. Again, these numbers do not even take into account the much larger number of articles to which GSoW has made smaller, but very critical, science and skepticism improvements. So, while we are a little fish in the huge ocean that is Wikipedia, we do indeed matter.

While my individual stats are big, and the collective team stats are absolutely huge, with all the woo in the world we can never do enough. But we can try! The larger the team gets, the more we can do; the more we will be able to promote science and push back the forces of irrationality using one of the most powerful communication tools in the world today. So, now that you understand our little project, if you think you might like to help the cause by participating, please don’t hesitate to contact us at GSoWTeam@gmail.com. And, if you want to hear our official promo, with yours-truly getting the word out on The Skeptic Zone podcast, simply search for “Guerrilla Skeptics Promo” on YouTube.

References

1 RationalWiki article on GSoW

https://rationalwiki.org/w/index.php?title=Guerrilla_Skepticism_on_Wikipedia&oldid=1935638

2 Wikipedia’s Arbitration Committee Decisions on Pseudoscience

<http://archive.is/8SgCF>

3. Websites ranked by popularity

<http://archive.is/fARt3>

4. Sheldrake’s take on GSoW

<http://archive.is/Rtaqt>

5. Article discussing Sheldrake’s GSoW accusations

<https://newrepublic.com/article/115533/rupert-sheldrake-fools-bbc-deepak-chopra>

6. Astrology.co.uk article about GSoW

<http://archive.is/umlsl>



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Rob Palmer is a Mechanical Aerospace Engineer, turned Software Engineer, turned Systems Engineer. Nearing retirement, he finally found his TRUE calling as a Skeptical activist with the Guerrilla Skeptics team. When not improving Wikipedia, he may be found Country-Western or Square Dancing with his wife, who tolerates his activism due to his (barely adequate) dancing skills.

What Makes A Claim "Credible?"

by Paul Schlueter III

Whether or not you "like" President Donald Trump, you have to admit that he's at the center of what is called "the epistemological crisis." Epistemology is the branch of philosophy which considers the manner in which we reach determinations about "what we know," or how we define that thing which is named "knowledge." Our society today is caught up in an argument about "fake news," a phrase popularized by the President, implying that a news report (coming, as it does, from what he calls "the lying media") lacks credibility (believability) simply because the story's reporter(s) don't share his political opinion(s). Not only is "fake news" becoming the political cry of foul, but it has



increasingly been adopted by authorities in other nations around the world; any accusation of official injustice or wrongdoing can simply be answered by proclaiming it "fake news," and one's dutiful subjects are expected to ignore the charge thereafter.

Here at home, on the so-called "opposite end of the political spectrum," the "liberal" news media has universally adopted a curious phrase, specifically with regard to the recent swarm of accusations of sexual impropriety levelled against men in positions of power. Rather than simply re-

porting that an accusation has been made, the liberal end of the media spectrum has adopted the phrase "credible accusations." Adding the adjective (credible) is necessary for two reasons. First, it implies that the media supports those liberal parties who have declared that ALL victims of sexual abuse are telling the truth and must be believed without question or doubt (a condition of faith that raises the hackles of any self-respecting skeptic!).

Second, the addition of the adjective bolsters the media's self-appointed role in subjecting a claim to the court of public opinion. We, as a society, look to the media as our source of information. Whether or not that information is reliable has lately become a matter of one's political stance, and it has been observed that we now tend to listen only to that "side" of the media which aligns with our own political views. "Truth" and "knowledge" have effectively lost their meaning if they are entirely subject to one's chosen affiliation; thus, epistemology is now in crisis.

The desire of any epistemologist would normally be to try to determine which characteristics of a claim show it to be true or false. We skeptics frequently cite the dictum "Extraordinary claims require extraordinary evidence." That dictum, at its heart, is epistemological. The trouble with our dictum is that its twin adjectives (extraordinary) are extreme, and thus might only apply to the MOST extraordinary of circumstances, not to lesser, everyday claims.

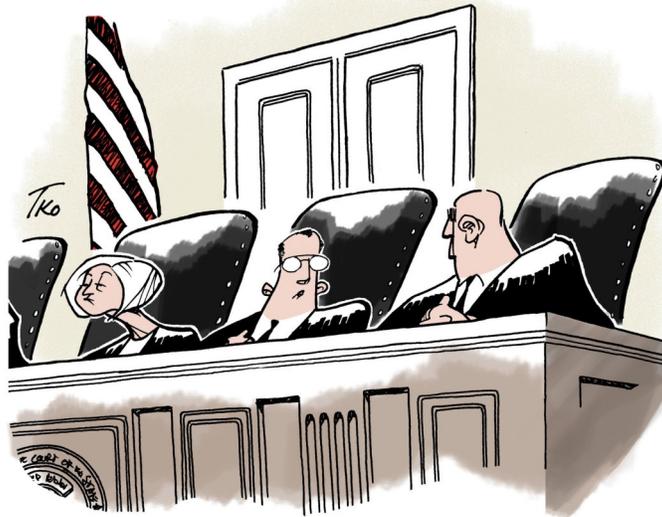
The sexual misbehavior accusations make the point more clearly. To make a claim of sexual harassment (as people in subordinate positions have done for ages), one has to challenge a powerful harasser from a position of relative weakness. The "he says, she says" defense implies that there is no objective way to evaluate the credibility of the accuser or of the defendant, other than hearing their contradictory statements. By implying that there is no way to know what really happened during a private moment, the presumption of innocence takes over (primarily because it works to the benefit of the more powerful party), and the accuser is sent away in shame. This routine procedure for handling such claims has led to a (primarily liberal) social upheaval in support of the underdog. As a result, those reporting such claims have taken to enhancing them with an adjective

(credible) intended to forestall the "he said, she said" defense and the application of the presumption of innocence.

If the accusations were being made in a court of law, "due process" (not just something one is free to cite willy-nilly, but a very specific legal phrase having deep, and still arguable, meaning) requires that the accusation be subjected to any number of critical thinking "filters" which help to weed out false accusations and protect those important rights of the innocent.

Don't pooh-pooh the rights of the innocent (as the authorities are often wont to do, when a less-empowered suspect does not admit guilt); one needs only to face a single false accusation to appreciate their crucial importance! Being a law-abiding citizen does not make one immune from false accusation. One's political, social, or racial position SHOULD have no bearing on one's vulnerability to false accusation, but can anyone deny that any of those conditions does exactly that? One's wealth (and the socio-political power that attends wealth) is truly the primary defense against ANY accusation (true or false), supplemented by legal due process to the degree that one is able to retain useful legal representation of counsel (a lawyer).

The trouble is, "due process" implies all that arcane stuff that goes along with a well-developed legal system (such as Americans have, for better or for worse). If my lawyer is better than your lawyer, if I have the wealth to literally buy the favorable opinion testimony of "experts," and if (crucially) I am able to afford whatever bail the court has set and obtain my release to assist in my defense, then PERHAPS I will succeed in overcoming the considerable power and resources of the Prosecutor, and I just might be able to (literally) cash in on my presumption of innocence. If I don't have such wealth, I get a court-appointed lawyer (who, under due process, is carefully defined so as to NOT require "great" representation, merely "adequate protection of my rights"), and if I'm lucky I'll be allowed to plea to a lesser offense and "only" serve "a little" time in prison or on probation. Conversely, if I stand on my "right" of presumed innocence and take the accuser to court for trial by a jury of my "peers" (those 12 people least able to dodge jury duty), then I'll quite likely be convicted, and receive the booby prize of extended incarceration with the "insubordination enhancement" (the extra sentence the court imposes - without actually admitting so - against those who don't simply submit to the Prosecutor's gracious plea offer).



"Don't spread it around, but on the really tough ones, I just go with 'eenie, meenie, minie, moe.'"

CartoonStock.com

Among the various "hoops" through which prosecutors must jump to ensure "due process" is the statutory limit. In all crimes except murder (and other rare exceptions made by legislature), one has a specific time within which to bring forward a claim of injury or crime. For most civil cases, the limit is two years (from the time one, using due diligence, may reasonably be expected to know that a tort has taken place); for most criminal cases, the limit is seven years (from the time the crime was committed).

If, as in many sexual misbehavior cases, the victim does not report the offense to Police, those seven years can pass surprisingly quickly. Instead, victims come forward with their accusations WHEN THEY FEEL THAT CIRCUMSTANCES ARE LIKELY TO LEND THEM CREDIBILITY, such as when someone else has made a similar accusation ("#metoo"), or when the alleged offender puts himself (or herself) forward for some elected office. Late accusations ignore "due process," so the claims cannot be brought in a court of law. They CAN, however, be brought if there is a willing court of media attention.

We clearly recognize the unfortunate realities of the sex offense victim's position. They wrongfully (or perhaps not so much) blame themselves for "leading on" their offender. They are embarrassed to have to admit to the personal, private nature of sexuality (whether as a willing participant or as a victim, nobody wants their sexuality made public). They anticipate (rightly or wrongly) a terrifying cross-examination by the offender's attorney. They dread (rightly or wrongly) even having to answer the questions of medical personnel, police investigators, and a Prosecutor (who must evaluate the relative strengths of a claim before taking on a prosecution). The truth of human nature (which sexual offenders readily exploit) is that it's usually "easier" to simply put one's experience in the past and get on with life, as opposed to coming forward with an accusation.

Until now. President Trump was elected, even in the well-examined face of sexual harassment claims; it would appear, in his case, that the politics of power won the day. But then a Hollywood mogul, Harvey Weinstein, was accused of numerous offenses, and the accusers were some of the most famous, most admired women in the acting business. We implicitly trust those particular women (if for no reason other than that we recognize and like them). Because we would likely buy a home from one of them without questioning its condition or value (one of the most common ex-

amples used to define "beyond a reasonable doubt"), WE, THE PEOPLE, have found their claims to be credible. We held court in our own daily conversations, and we convicted Harvey of heinous acts we couldn't even specify, simply because he was accused by hotties we admire. Don't take offense; that's what happened, and we all know it.

Suddenly, there was a small hole in the dam of legal due process. There was a way for the downtrodden victims of abuse to step forward and be heard. Among the hue and cry, the addition of the adjective "credible" to any accusation (particularly when done by media reporters or political activists whom we suddenly believe in again) lends to each accuser the "authority" of UNdue process. The dam has burst asunder, and due process has been swept away like so much debris.

In a court of law, each juror has the right (carefully explained by the Judge) to determine whether or not they find a witness's testimony credible. The juror may accept as true any part of the testimony, all of it, or none of it. There are a few rules (the juror may not base his or her credibility finding on a witness's race, nationality, or religion, for example), but generally speaking, our "peer" juror is THE arbiter of truth. There's a technicality: the verdict must be supportable by "some interpretation of" the evidence presented in court, but in the age of "fake news," "alternative facts," and the (unlawful) presumption that the police and the Prosecutor

wouldn't EVER bring an innocent person into the courtroom (so they MUST BE guilty!), jurors can "support" nearly any conviction by merely adopting the Prosecutor's carefully-spun version of events. "Fact" is only what they're told to believe.

In the case of a formal trial in court, the Judge is responsible for ensuring that "the Law" is observed and applied, and that "due process" takes place. Whether or not it would please the careful review of epistemologists, a legally binding finding is made regarding whether or not the accuser's claims are "credible," with that finding determining whether the suspect is convicted or acquitted.

Credibility of witnesses is very clearly the juror's call. The juror, in this capacity, is legally referred to as "the factfinder." In cases where the defense waives the jury (or the trial), the "factfinder" becomes the Judge, and the party in robes on the bench determines what s/he believes the facts to be; since such waivers are generally part of a plea bargain, the Prosecution's "version" of any factual question is adopted by the Court. Appeals courts will not reconsider "findings of fact" on appeal; the factfinder is presumed to have performed his or her role flawlessly (absent some disqualifying technicality which could itself be argued upon appeal).

In the case of Harvey Weinstein, or any of the subsequent numerous powerful men who have been accused and tried solely in the media court, the "factfinder" who deter-



"Well, it was very dark but I'm fairly certain it was number four that abducted my husband ... "

mined "credibility" has been the reporter. There was no "due process," no carefully codified set of rules for determining credibility. There was certainly no formal epistemology, and probably none was informally performed, either. Those reporters who supported the accused declared the accusation incredible. Those who supported the accusers declared their claims "credible accusations." On that basis alone, careers are now torn asunder (or not), according to who gets to vote. In the case of a southern jurist running for the U.S. Senate, the voters of his highly-conservative state got to vote, and he lost. In the case of many men who represent companies that depend upon the votes of customer dollars, it seems that formal resignation (with or without apology) has become the most common self-imposed plea bargain. In politics, at least one Senator was "told to resign" by his fellow Democratic Senators, so that they could go ahead and accuse Republicans of similar misbehavior without appearing to be hypocrites (a former President, similarly accused, has not been punished retroactively, so he will remain their hypocritical dark horse for the indefinite future). The rights of sexual offense victims are now in a state of reevaluation. Our own government officials are reaching extra-judicial findings of guilt against the accused, based (apparently) upon little more than the presumption that "no sexual assault victim would lie."

I recall a time when our society similarly took every child's word for fact, in the infamous (and thoroughly rebutted) cases of "recovered memory syndrome." A certain portion of the social caregiver culture made the unfounded, unsupported declaration that "no child would lie about such accusations" under hypnotic influence from "specialists" motivated to find wrongdoing on behalf of their sympathetic patients. Now, any journalism student (and/or his/her editorial supervision team) is "qualified" and "entitled" to make the exact same judgment, and report his findings in the media.

After all, it's better that a hundred powerful men suffer humiliation (regardless of actual fact) than that a single victim of abuse should be doubted. You know... "progress." Never mind that some 3% of sexual misconduct accusations are PROVEN false.

I'm going to ask the "slippery slope" question: Where does all this end? It is apparently now acceptable for a sexual assault victim to come forward, well outside the statute of limitations, and bring a claim in the court of public opinion whenever it is most likely to do her (alleged) offender the most harm and bad publicity. As a society, we are expected to believe her without question, or we're implicitly as bad as the offender himself.

Does the same blind belief in accusers apply to mistaken eyewitness identifications, now? Studies of the underlying cause of wrongful convictions (as defined by DNA evidence that the convict was not the perpetrator) have discovered that the most frequent source of misidentification is the eyewitness. Some are "encouraged" to identify the favored suspect by investigating authorities. Others are tricked by devious "lineup" techniques. Still others have difficulty identifying

persons of a race different than their own. No matter the cause, eyewitness identification is becoming the weakest aspect of the trial process!

I have intimate documentary knowledge of a real case in which the convict was accused of rape by his pregnant teen daughter, because SHE was angry about his berating her for her interracial affair with a much older man. The girl had her girlfriends (who were "sleeping over" when the alleged rape was said to happen) back up her story, which they did (grrrrl power, and all that). The girl's mother, antagonistic toward her ex (the accused), brought the teen to Child Protective Services, who involved the Police. The accused wanted the teen's family doctor to be called to rebut further allegations of "a history of repeated genital bruising," but a Public Defender was afraid to challenge the Prosecutor's "hired gun" forensic expert, and refused to call the doctor as a witness. Once offered a mere 11 months as a sentence in exchange for a desired guilty plea, the accused lost at trial, and was sentenced to 22 years for having insisted on his right to a jury trial. Over 18 years of appeals, the "victim" recanted her claim, recanted her recantation, signed a written restatement of her recantation, recanted the signed statement, lied about court proceedings, committed later crimes of her own, and generally displayed the character of a witness lacking credibility, yet the Court eventually determined that none of the victim's multiple recantations were as "credible" as her initial accusation and trial testimony, so the wrongful conviction has been upheld. A former Pennsylvania Attorney General is infamous for his proclamation that "There are no innocent people in PA prisons. They have all been duly convicted in a Court of Law." As Arlo Guthrie might have rebutted, "It was a typical case of American blind justice." The convict will be required to complete his maximum (full) sentence, as he will not be paroled unless he (falsely) accepts and confirms his "guilt" and takes sex offender programs. After release at the end of his sentence, he will still have to register under "Megan's Law" as a "sex offender" for the remainder of his life. You don't believe such things happen? Guess again!

Can just ANY crime victim now step forward and accuse someone, relying on their automatic credibility to protect them from cross-examination? If so, how long do you think it will take somebody to use the new power of "credible accusation" to come along and get you fired, just because you got the promotion/raise she wanted, five years back? Will society's oppressed classes finally get their revenge against their oppressors, simply by concocting false claims of sex offense?

Now that the media reporters seem to be in charge of determining who is or isn't credible, will there be a war of accusations between the liberal and the conservative Press Corps? If Clark Kent wants to finally reach the Editor's Desk at the Daily Planet, must we rely on his Kryptonian super-morality to prevent him from finding someone (anyone will do, as long as the "source" cannot be questioned or debunked) to dish dirt against me, you, or the local City Councilman?

And why stop with the Press? I'm certain that my elected District Attorney would just love to be able to prosecute anybody he wishes, for any crime alleged by some heroine junkie who wants to avoid his current possession rap (oh wait... that has already been going on for decades, hasn't it?) The Courts also already rely on "the testimony of jailhouse snitches" who will happily claim that a suspect confessed, even bragged, to them inside the prison cell. How have courts overcome the credibility problem of "crimen falsi" testimony (that which comes from witnesses already convicted of crimes of falsehood)? Well, the D.A. explains, if we had to wait for honest men to come forward as witnesses, we'd never get ANY crimes solved! True, that! But is it truly in society's benefit to place wrongful (or even just questionable) convictions so high on a pedestal that "any shabby ol' testimony" will be sufficient? While we're at it, let's just get rid of that pesky right to confront one's accuser on cross-examination - as long as there's someone willing to accuse, why question his statements at all? If we're going to be primarily concerned over hurting the accuser's feelings with anything less than total credulity, NO accuser should ever suffer such indignity!

Even Moses understood that "bear[ing] false witness against another" was so prevalent it called for a Ten Commandments ban. People lie about one another all the time. They lie about their enemies, their bosses, their political opponents, their competitors, and their neighbors. People lie about their friends, their spouses, their teammates, and their customers. Some people even lie about themselves, just for some attention.

Your friendly neighborhood thug would like to shut up all potential witnesses and victims; somehow we have accepted "Snitches get stitches!" as a motto just as compelling as the Golden Rule! Except for sex crimes; everybody knows that criminals hate sex offenders the most, and that even the vaguest hint of such a charge can make life inside prison risky. Inmates don't question their sources about sex offense accusations, so eager credulity MUST be good general policy for society at large, as well! Whose sense of justice and fairness can we respect more?

As skeptics, don't we realize that we MUST be allowed to question claims, to demand verification, to review the physical evidence, and to rebut falsehood whenever the evidence reveals it? If you disagree, please turn in your membership card as you leave - the rest of us don't want you back. We refuse to be required to "accept without question" the alien abduction story, the bigfoot sighting, the ghost encounter, and the obviously staged photo of fairies mounted on wires poked into the ground! Let's maintain that same level of critical thinking when ANYONE expects to be believed without challenge!

My suggestion is that we turn our scornful spotlight on ALL persons who refuse to be bothered with backing up their claims. We NEED those dull, boring, unglamorous procedures and inquests, those expert analyses, those scientific studies, and those cross-examinations of accusers.

What makes a claim credible is the evidence supporting that claim, the plausibility of the story, and the past proven histories of both the accused and the accuser. The more skeptical people who question and closely examine a claim, the better our chance of eventually learning what is true AND what is false about the claim. Still, every responsible adult has the obligation to learn a great deal about distinguishing objective fact from convenient fiction. We have a social obligation to apply epistemology to the best of our ability, despite political, religious, social, or nationalistic bias.

Come on, world... do you REALLY not understand, or is it more important to follow the lemmings over the cliff so you can be "part of the gang?"

Rhetorical Question of the Day: Did Judge Roy Bean stalk an actress, the lovely Lily Langtry? If you believe the Paul Newman film, he did make an obsessive pilgrimage attempting to visit her. Who can say what his intentions might have been, had he been successful trying to meet her backstage? Or, since he was the sole Law West of the Pecos (thus, "the leading law enforcement officer") at the time, would he have been simply immune from prosecution? Ah, "the good ol' days," when such moral quandaries were so much more clear!

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“The clearest way to show what the rule of law means to us in everyday life is to recall what has happened when there is no rule of law.”

~ Dwight D. Eisenhower, 34th President of the United States, 1953-1961





Love and Prayers

by Paul Schlueter III

We live in a country in which the religious masses believe in something known as prayer. Difficult to define clearly, prayer is essentially thought to be a form of telepathy from the believer to the deity, a one-way message system to be used for either praise and admiration, or for making requests for something the deity might provide. Though it has been the subject of countless scientific inquiries over the centuries, prayer has never been scientifically confirmed to communicate with any deity. Instead, believers come up with a never-ending list of clever arguments that pose the question in such a way that a lack of evidence can be assumed to be evidence of prayer's value.

One of the clever arguments is a comparison of prayer with love. How, the believer asks, can prayer be proven to have effect? Well, how can you prove that you love someone? Can you prove that you love your father? Can you prove that, as a father yourself, you love your child? Well, God loves you. Because He loves you, there is no need to seek proof that prayer works.

By diverting the initial subject to some other subject for questioning, the believer has shifted the burden of proof back onto the questioner. You asked me to prove that prayer works. Instead, I'm asking you to prove that love exists, throwing off your concentration and focus, and leaving you defensive.

In fact, love CAN be demonstrated and proven. The proof of love, by its usual definition, is that one places another in higher regard than oneself. Simply, you prove love by sacrificing something which you value, to that other party's benefit. The thing of value may be as simple as your time and attentiveness, or it may be as extravagant as the gift of a car, home, or college tuition check. Proof of love may take the form of putting off your own career development until your partner or offspring has achieved some milestone in life, and instead providing that party with homemaking service, tutoring, or physical bodyguarding. Accepting payment for your loving act diminishes its sacrificial value. So does the expectation of repayment at some future time. We're all human, so we do expect a little appreciation in return for our sacrifice, but where there's truly a loving sacrifice, even the

smallest token of appreciation is sufficient, and inspires even deeper love!

Apply this to prayer. If one asks the deity for something, then that prayer is not an act of love. If the prayer is purely a thought of respect, gratitude, admiration, and obedience, then perhaps it will qualify as loving prayer, but it must have no intention of later benefit; to be truly loving, it must be an act of sacrifice, without hope for reward. How many prayers would you guess qualify under that standard? If you pray to show your devotion, but expect your devotion to grant you entry into Heaven when you die, the expected reward negates the sacrifice of your devotion, doesn't it?

Let's look at the modern trend of "praying for" another person. When someone is injured, our society expects believers to automatically pray for them. The devout pray for injury to heal, for the victim's spirit to forgive the transgression, and for the perpetrator to confess his sin and perform acts of compensation. When I tell you "You'll be in my prayers," does that give you any real help or benefit? It might make you feel like I care, but probably I'm simply trying to skip out on any expectation of actually doing something to help you out (feeding your pets, comforting your family, paying your bills, etc.)



Evangelist Joel Osteen leading prayer.

Prayer can be helpful to the emotional state of the one who prays. Much like meditation (or the similar practice of self-hypnosis), the physical act of praying can calm the emotions, reduce the heart rate, focus the attention, and mediate self-conflict. That these benefits are attributed to the deity's "response" is almost axiomatic. However, if God loves you, why does he expect prayer from you before he'll grant you these benefits? A sex worker can relieve emotional tensions, for a fee; if God charges a fee (your prayerful devotions) for similar relief, does He love you any more than the sex worker? One of the Gospels WAS authored by "John."

A politician might respond to a public catastrophe by proclaiming that its victims will be in "our" prayers. How long will the victim enjoy that benefit? And what actual benefit will follow? Do the good Senator's prayers remediate the flood damage, the shooting deaths, or the acreage of wildfire devastation? He'd like you to think so, but one of the things about prayer is that it's very tough to run a controlled experiment on its efficacy. It's also extremely difficult to demonstrate exactly WHOSE prayers were answered. There are always many whose prayers were answered with a silent "No." If the answer is actually "heard" by any human, it always seems to be a human who is suffering from mental disturbances (which begs the question, Why doesn't God answer prayers through the ordinary believers?)

There has been a long and controversial history of trying to test prayer. A scientist might have devout believers pray for the sick on Ward A at the local hospital, but not for the sick on Ward B. Ward B would theoretically be the "control group," left out of the benefits of prayer so Ward A's results have a yardstick to be measured against. However, illness runs different courses in individual patients, making any precise measurement of the difference in outcomes quite difficult.

Studies of physical medical treatments have similar difficulties. The experimenter must still account for deviations between individual patients' response, and complex statistical formulas help with this. One thing gives a medical researcher help in determining causation: plausible means of action. For

a chemical medicine, the experimenter knows that the medicine reduces or increases some cellular activity in lab tests. He then tests the same medicine in live subjects to determine whether a similar observable (and measurable) reduction or increase occurs. In separate tests, he'll test for identifiable toxicity of the medicine. In still other tests, he'll compare the effectiveness of various dosages of the substance. These tests are generally done in animals before people are used as Guinea pigs. He'll carefully follow standards of experimentation that have been developed (through trial and error) over generations of medical practice, specifically to prevent various biases and confusing factors from affecting the outcome (this is why placebos and double-blind studies have value).

In testing the efficacy of prayer, investigators have often failed to use such methods of determining the best time to pray, the best way to pray, the correct deity to pray to, and the best mental state for the praying party to maintain while praying. How should one hold one's hands while praying? Should one's eyes be open or closed? More importantly, what plausible effect could any of these several conditions have upon efficacy?

Does closing the eyes and holding your hands open, with palms facing upward, concentrate your attention and reflect your prayers Heavenward? How can such suppositions be measured? A measurable effect must be confirmed, because it isn't enough to simply presume the reflectivity of the palms as a means of action. Sadly, the practices of prayer are almost invariably determined by the religious training a believer receives from his spiritual advisor (minister, parent, study companion, etc.) "We do it this way." In fact, schisms between religious denominations have been known to occur over just such matters, when some group decides to kneel while praying, and others presume that sitting in a chair "as they've always done" is the best way.

I'm also going to question the relative efficacy of praying before the media vs. praying in private. Does praying



Evangelist Jimmy Swaggart at prayer.



Prayerful Pat Robertson doing his thing.

aloud on CNN benefit the hurricane victims more than silently praying in a small, private alcove of some religious building? Does the broadcast of prayer over TV broadcasting waves (radio) somehow amplify the prayer's strength? Does the prayer shoot toward the deity from the broadcast antenna? If so, wouldn't a dish aimed at Heaven focus and amplify the prayer even better? Or, is there something about the prayer being turned back into audio (sound waves) to come out of ten million TV speakers across the country that amplifies its effect?

Would I be cynical if I propose that the benefit of broadcasting prayer over the media is directly related to election day support from devout viewers? If I show everyone that I'm praying for the capture of the latest serial killer, will that lead to a quicker capture, or just give viewers the comfort of seeing that I believe (as do they) in the supernatural power of mystical telepathy to God? Since broadcasts are usually financed by advertisers, consumers also make a sort of voter.

(Have you ever wondered why some television preachers scrunch up their brows while praying? Does the facial expression strengthen the force of the prayer transmission, or is it just more impressive to viewers who are expected to donate funds?)

Every signal science knows of diminishes in strength as distance from the source increases. The usual rate of dwindling is known as "the Inverse Square Law." Radiated power per unit area diminishes as the square of the increase in distance. Twice as far away equals one quarter power. Four times the distance equals one-sixteenth the power. Unless some other (definable, measureable) factor intercedes (such as passing a light beam through a focusing lens), signal strength diminishes MUCH faster than distance from the signal increases. This is an easily demonstrable fact of Physics.



Peter Popoff the Evangelist in full eyebrow scrunch mode.

Given the physics described above, why isn't the strength of prayer affected by distance? If the President prays from Japan, it is presumed to have just as much effect to the benefit of Texas shooting victims as if he actually knelt in the church where they were shot. That's a good thing, because otherwise the President couldn't show full love for the victims without hopping on a plane and racing to the crime scene to pray! I did notice that one Senator made the trip to visit the shooting site; perhaps he was covering all bets?

I'm not even going to ask how church-goers can become shooting victims in the first place, while engaged in worship! I will point out that I've never heard a preacher pray that the congregants not be shot today - perhaps that oversight should be corrected?

I was raised to pray in thanks for the food on the table, before beginning each meal. My dear mother might correct me, but I was never aware of the deity filling Mom's shopping cart, or paying for the food, or cooking it for her. Yes, we were "blessed" to live in a country in which we seldom found ourselves without food to eat (as opposed to countries where the kids have to fend for themselves by foraging for bugs and berries in the woods). Was this because my forebears prayed? Or was it because of a lot of good cultural luck, some handy social entitlement, and appropriate budgeting practices? I have no doubt that Mom loved us, because she certainly could have lived a much more comfortable life by abandoning her family and taking up with some wealthy horndog in Hollywood. Like most moms, she instead took great pains to ensure an equitable division of family resources for all of us, even when that meant she couldn't buy a designer handbag for herself.



Evangelist Jim Bakker pinches his nose as he scrunches.

Later, I returned Mom's love by declaring her religion a farce in my adolescence, and refusing to participate further in it. Despite my apostasy, Mom still loved me (I'm sure that millions of others around the world would have been turned over to religious authorities and "handled," for the sake of the family, under God).

When invited, I still decline to pray. I don't disrupt others when they wish to pray, and I don't antagonize them or try to "rescue" them from their folly. On the other hand, if someone asks why I'm patiently waiting (with eyes open, hands unfolded) for prayers to end, I'll offer to explain myself at some appropriate point. Not many take me up on the offer, and those who do are often eager to try to out-argue my arguments against prayer. Sometimes, it can be an interesting way to pass a couple hours. It rarely results in anybody changing their mind. Much like prayer, argument (or

"debate") has a very low efficacy quotient.

But whenever possible, I still express my love for family and friends, not by praying for them, but by doing things or saying things that please them or serve their interests and needs. I'm not the greatest at such things, or even at remembering all the occasions when such demonstrations are considered obligatory, but I try. I give the love I can, and I appreciate the love I'm given. Sometimes that means NOT making a point of the fact that I don't believe the same things my loved ones believe. Keeping the peace is another way to show love. World leaders, please take note.

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Cartoon by Benoît Leblanc
<http://peopleinwhitecoats.blogspot.ca/>
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PHACT CALENDAR

Upcoming PhACT Events



Dr. David Cattell, Chairman of the Physics Department of Community College of Philadelphia hosts meetings of **PhACT** - at 2:00 PM on the third Saturday of most months at Community College of Philadelphia., Parking is easily available on the free parking garage on 17th street on the left hand side before Callowhill Street. It opens at 1:00 PM and closes at 6:00 PM. 17th Street is one way south bound. This meeting site is handicap accessible. **PhACT Meetings are Free and open to the public unless otherwise noted. Please try to arrive a few minutes early as the College now requires that meeting attendees sign in for security reasons. ID must be shown.**

Saturday, April 21, 2018 at 2:00 PM. PhACT Lecture. **Rob Brotherton, PhD.** Will discuss “Hip Hop and the Illuminati”.

In Lecture Room C2-28 in the Center for Business and Industry at the corner of 18th and Callowhill Streets.. See page 5 for more details.

Saturday, May 19, 2018 PhACT Expedition. At 2:00 PM at Laurel Hill Cemetery at 3822 Ridge Avenue in Philadelphia. This event is free. . See page 6 for more details.

Saturday, June 30, 2018. PhACT Picnic. At 11:00 AM to 3:00 PM at Mondauk Common Park in Ambler, PA. This event is free and all are welcome. See page 9 for more details.

Saturday, September 15, 2018 The PhACT 2018/2019 Lecture Season begins. Save the date.

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>

Lectures and Other Events of Interest for Skeptics Around Philadelphia

Thursday, April 5, 2018 at 6:00 PM – 7:30 PM at the **Wagner Free Institute of Science**, 1700 West Montgomery Avenue, Philadelphia, PA 19121

www.wagnerfreeinstitute.org

An illustrated Weeknights at the Wagner lecture:

Expedition to the End of the Earth: The Antarctic Peninsula Paleontology Project

By Kerin Claeson, Philadelphia College of Osteopathic Medicine

Museum open until the talk begins at 6pm.

During the Cretaceous period, Antarctica was teeming with dinosaurs, reptiles, mammals, fish, and plants. That changed suddenly when, 65 million years ago, a mass extinction wiped out more than half of the world's species and set Antarctica on a course to being the icy, inhospitable environment we know today. In 2016, a group of intrepid researchers travelled to the continent to collect fossils of these bygone creatures—fossils that have unlocked new information about life, species dispersal, and evolution before and after the extinction. Expedition member Kerin Claeson, an Anatomy Professor at the Philadelphia College of Osteopathic Medicine, joins us to share her adventures fossil hunting in Antarctica and her exciting research into the fossils collected.

About the speaker: Dr. Kerin Claeson is an Associate Professor of Anatomy in the Department of Biomedical Sciences at the Philadelphia College of Osteopathic Medicine. She received her Ph.D. in Vertebrate Paleontology from The University of Texas at Austin. Her research focuses on comparative vertebrate anatomy, human anatomical variations, and evolutionary biology.

Free and Open to the Public

Saturday, April 7, 2018 at 2:30 p.m. at 112 Woodland Building at 1600 Woodland Rd | Abington, PA 19001

<http://abington.psu.edu/cultural-community-events>

Penn State Filmmaker Premieres Rough Cut of Holocaust Documentary

And you provide input into the final cut!

Award-winning documentary filmmaker Boaz Dvir, a Penn State faculty member, offers the public a rare opportunity to preview and respond to his powerful work in progress, "Cojot."

The suspenseful character study tells the little-known story of Michel Cojot, a Holocaust survivor who set out to kill his father's notorious Nazi executioner and wound up playing a pivotal role in one of history's most daring hostage rescue operations.

Cojot's son, Olivier Cojot-Goldberg will partici-

pate in a post-screening Q&A. Audiences will give Dvir feedback in person and via an anonymous survey.

Free admission.

Saturday, April 14, 2018 at 1:00 p.m.–3:00 p.m. at Science History Institute, 315 Chestnut Street, Philadelphia www.Sciencehistory.org **WikiSalon**

A casual gathering of Wikipedia enthusiasts and those interested in learning more. Participants can edit articles of their own choice and suggest articles needing improvement to the group.

Free and Open to the Public.

Novices are encouraged to attend.

Sunday, April 15 at 1pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurelhillemetery.org>

Unsinkable to Unthinkable: Titanic Victims and Other Watery Deaths

This April 15 marks the 106th anniversary of one of the most famous tragedies in modern history: the sinking of the R.M.S. Titanic. Taking nearly two years to build, the ship was the largest of its kind and outfitted with the latest technologies, thus earning its reputation as the "unsinkable" ship. This walking tour will feature the stories of six passengers from the Philadelphia area who were aboard the liner as she sunk to the bottom of the sea. While some of them survived and others were never recovered, all six are forever memorialized at Laurel Hill. Along the way, the tour will pause at the graves of other Laurel Hill residents whose fates were similarly sealed by the sea.

The cost is \$15/person; \$13/students and seniors; or \$12/members. Tickets can be purchased at the door or online.

Tour Guide: **Lora Lewis**

Sunday, April 15, 2018 at 2:30 p.m. at 112 Woodland Building, 1600 Woodland Rd | Abington, PA 19001

<http://abington.psu.edu/cultural-community-events>

Opera Lecture – Carmen

Filled with drama, passion, and soaring melodies, Bizet's Carmen is considered one of the top three operas of all-time. Hot-blooded Carmen, the cigarette factory girl, becomes the mistress of a highly acclaimed toreador and places herself in mortal danger.

Light refreshments served. Admission: \$15.

Moderator: Dr. Mills

Monday, April 16, 2018 at 12:00 p.m.–1:00 p.m. at the **Science History Institute**, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.sciencehistory.org>

Brown Bag Lecture: Defining Artifice: Arthur D. Little, Rayon, and the Origins of a Synthetic Textiles Industry

Join us for a Brown Bag Lecture by Spring Greeney, Visiting Dissertation Fellow at the Science History Institute.

Today more than half of the clothing sold in the United States is made from petroleum or petrochemical products. How did chemical derivatives come to replace the cotton, wool, silk, and flax fibers at the heart of the 19th-century American textile industry? In this talk I trace the origins of the first synthetic textile, rayon. From its start in 1880s French laboratories to its popularization in the 1920s United States, I argue that it was rayon's placelessness—its distinction from competitors that were grown in only one region, such as Shetland wool, Tibetan cashmere, and Indian silk—that American producers learned to enlist as a positive attribute rather than a defect of the product.

About the Speaker

Spring Greeney is a doctoral candidate at the University of Wisconsin, Madison, and a Visiting Dissertation Fellow at the Science History Institute. As an environmental historian of primarily the 20th-century United States, her research explores how commercial chemistry remade the types of nature that American consumers saw, smelled, and interacted with in the ostensibly domesticated household. She is also a competitive long-distance runner.

Free and Open to the Public

Monday, April 16, 2018 @ 7:00 pm - 9:00 pm at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Philadelphia, PA 19118

The Institute for Science and Religion

<http://www.irands.org>

Darwin and Divinity – Nelson Rivera, PhD

Nelson Rivera is Associate Professor of Theology at Moravian Theological Seminary in Bethlehem, Pa. He has a PhD in Religion from Temple University, and is an ordained minister of the Evangelical Lutheran Church in America. Dr. Rivera's main area of teaching and research is Doctrinal Theology, with pronounced interest on the evolution of Christian doctrine, the use of theological language, and how these disciplines inform the practice of ministry. His published work covers



confessional statements of faith, as well as the application of an evolutionary epistemology in theology and the sciences, the latter found primarily in his book *The Earth is Our Home* (Imprint Academic, 2010).

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

Tuesday, April 17, 2018 at 7:15 PM at the Fels Planetarium, The Franklin Institute, 222 North 20th Street, Philadelphia, PA 19103

The Rittenhouse Astronomical Society

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

www.rittenhouseastronomicalsociety.org/

Friday, April 20 at 7:30PM at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurelhillemetery.org>

Citywide Star Party (A Philadelphia Science Festival Event)

Bring a picnic blanket and take a tour of the cosmos with local astronomers. As part of the Philadelphia Science Festival, 23 venues around the city will host star parties with amateur astronomers coming out en masse with their telescopes to show locals the wonders of the night sky. Relaxing and stargazing from Philly's most ethereal site = a perfect way to end the week. If you have your own telescope or binoculars, bring them along. Don't forget to bring your own blankets, beach chairs, beverages and/or snacks!

The Citywide Star Party at Laurel Hill Cemetery will take place on Friday, April 20, weather permitting. Gates open at 7:30pm. 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.

Saturday, April 21, 2018 at 2:00 PM.

PhACT Lecture.
2018 - Hip Hop and the Illuminati
Speaker: Rob Brotherton

Sunday, April 22 at 10am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurelhillemetery.org>

Nature in the Necropolis (An Earth Day Event)

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 second garden cemetery in the United States, boasting 78 acres of green space in the middle of the city. Spend Earth Day 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 populate the site. Bring binoculars if you wish.

The cost is \$15/person general admis-

sion; \$13/students and seniors or \$12/members. Tickets can be purchased at the door or online.

Tour Guide: **Steve Maurer**



Monday, April 23, 2018 at 12:00 p.m.–1:00 p.m. at the **Science History Institute**, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.sciencehistory.org>

Brown Bag Lecture: Ways of Seeing: Gray's Anatomy and the Making of a Modern Text-book

Join us for a Brown Bag Lecture by **Carin Berkowitz**, director of the Center for Historical Research, Science History Institute.

How did doctors learn to see bodies? This talk attempts to answer that fundamental question by examining anatomy texts across the 19th century, comparing the myriad styles of illustration in pedagogical texts of the first half of the century to the later ubiquitousness of Gray's *Anatomy* and its synthetic illustrative mode.

About the Speaker

Carin Berkowitz is the director of the Center for Historical Research, Science History Institute; the author of *Charles Bell and the Anatomy of Reform* (University of Chicago Press, 2015); and the editor, along with Bernard Lightman, of the collection *Science Museums in Transition* (University of Pittsburgh Press, 2017).

Free and Open to the Public

Tuesday, April 24, 2018 at 6:00 PM at **World Cafe Live**, 3025 Walnut Street, Philadelphia

<http://www.upenn.edu/pennnews/science>

PENN LIGHTBULB CAFÉ

Renata Holod, College for Women Class of

1963 Term Professor in the Humanities, professor of history of art and curator of the Near East Section at the Penn Museum

TOPIC: To Be Announced

Renata Holod has done archaeological and architectural fieldwork in Syria, Iran, Morocco, Central Asia and Turkey and on the island of Jerba, Tunisia. Her most recent project is a collaborative study of the grave goods of a Qipchaq kurgan in the Black Sea steppe of the 13th century. She has co-authored several books on art and architecture in the Islamic world, the focus of many of the courses she teaches at Penn.

Free and Open to the Public

Wednesday April 25, 2018 at 5:00PM - 6:30PM at **University of Pennsylvania Museum**, 3260 South Street, Philadelphia, PA 19104

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

WOLF HUMANITIES FORUM: DEATH, BURIAL, AND THE AFTERLIFE IN EARLY MESOPOTAMIA

The intact burial ground of Queen Puabi, which dates back more than 4,000 years, and a lavish mass burial which was described by its excavator as the "Great Death Pit," provide a uniquely illuminating view into the beliefs of ancient Sumerians. In the closing lecture of the Wolf Humanities Center's 2017-18 Forum on Afterlives, Dr. Holly Pittman, Curator, Near East Section; Penn's Bok Family Professor in the Humanities; and a curator of the new Middle East Galleries, describes the Queen's tomb, how it reflects the elaborate and expensive rituals associated with the passing of members of elite society from this world to the next, and what this tells us about notions of life after death in early Mesopotamia.

Before the lecture, guests are invited to tour Penn Museum's new Middle East Galleries. 3:00-4:00pm: Curator-led Tours (pre-registration required); 4:00-5:00: Open Gallery. .

Free Admission. Registration required: wolfhumanities.upenn.edu.

Friday, April 27 at 10am at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurelhillemetery.org>

The Hot Spots and Storied Plots

In life and in death, we all have stories to tell and what better place to hear tales of wonder than

at Eastern State Penitentiary, 2027 Fairmount Avenue Philadelphia, PA 19130

Phone: (215) 236-3300

The Searchlight Series: Conversations About Crime, Justice, and the American Prison System

Eastern State Penitentiary Historic Site partners with nationally recognized penologists and educators to present an ongoing discussion series about crime, justice, and the American prison system. The Searchlight Series discussions take place the first Tuesday of every month, free and open to the public. No reservations required. See website at:

<http://www.easternstate.org/searchlight-series>



Philadelphia's most famous home of the dead? Join Laurel Hill Cemetery for an informative overview of Laurel Hill's long and colorful history, which will include many of the marble masterpieces, stunning views and legendary stories that afford the cemetery its WOW factor. The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Susan Miller**

Friday, April 27, 2018 at 7:30 p.m. at 112 Woodland Building at 1600 Woodland Rd | Abington, PA 19001

<http://abington.psu.edu/cultural-community-events>

Friday Night Film: The Edge of Heaven

This Turkish/German production focuses on how humans are connected across time and space in very surprising ways. Follow the destinies of the leading characters on their search for personal fulfillment.

Admission: \$10

Moderator: Dr. Mills

Sunday, April 29 at 1pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurelhillemetery.org>

Cryptic Crypts: Egyptian Symbolism at Laurel Hill

Discover ancient symbols and architectural styles that have survived since the time of the pharaohs on this walking tour through Laurel Hill's historic tombs. Along the way, meet the individuals who revered such symbols enough to eternally memorialize them: like a former defamed Egyptologist, the founder of the Penn Museum of Archaeology, and even Indiana Jones. Afterwards, sip on the drink of the Gods and enjoy Mediterranean-inspired fare in the Cemetery's historic Gatehouse.

The cost is \$15/person; \$13/students and seniors; or \$12/members. Tickets can be purchased at the door or online.

Tour Guide: **Beth Savastana**

Monday, April 30, 2018 at 12:00 p.m.–1:00 p.m. at the Science History Institute, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.sciencehistory.org>

Brown Bag Lecture: Binding the Wounds of War: The Paradoxes of International Science after World War I

Join us for a Brown Bag Lecture by Robert Fox, Presidential Fellow at the Science History Institute.

Free and Open to the Public

Monday, April 30, 2018 at 7:00 PM at Scoogi's Italian Kitchen & Bar

738 Bethlehem Pike Flourtown, PA 19031

American Revolution Round Table of Philadelphia, <http://arrtop.org/>

General Daniel Morgan

Robert E. Sheridan is a marine geophysicist and marine geologist who studied the North American Atlantic continental margin for over fifty years. He has a bachelor's degree in geology from Rutgers University and a master's and Ph.D. degrees

in marine geophysics from Columbia University. He was an associate professor at the University of Delaware when he was part of the team that discovered the USS Monitor wreck off Cape Hatteras. As a descendant of a Union Army veteran with an interest in Civil War history, his work on the discovery and recovery of the USS Monitor allowed him to combine his vocation with his avocation, the love of history.

Join us on Monday, April 30, 2018 as we welcome **Robert E. Sheridan** who will be presenting a program on his research on General Daniel Morgan.

Free and Open to the Public.

Tuesday, May 1, 2018 at 7:00 PM at Washington Memorial Chapel, on Route 23 in Valley Forge.

Friends of Valley Forge Park

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

Baron Steuben

interpreted by Bill Troppman, Valley Forge NHP Ranger

An evening with Baron Steuben, the brash, brilliant, determined foreigner who transformed the Continental Army.

Open to the Public. Free but a \$10.00 donation is suggested.. Reception follows the lecture.

Tuesday, May 1, 2018 - 6:00pm - 7:00pm at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130 phone: (215) 236-3300

<http://www.easternstate.org/home>

Free. A reception follows the lecture.

The Searchlight Series: Discussion Topic TBA

Wednesday, May 2, 2018 at 7:30 p.m at the Free Library of Philadelphia, 1901 Vine Street, 19103

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

Alan Stern and David Grinspoon | Chasing New Horizons: Inside the Epic First Mission to Pluto

The principal investigator of the New Horizons mission to Pluto, a planetary scientist, and an aerospace executive and consultant, Dr. Alan Stern has participated in a mind-blowing 29 space missions and has served in the loftiest strata of contemporary American space exploration. The chair of astrobiology at the U.S. Library of Congress, Dr. David Grinspoon studies climate evolution, the conditions for life elsewhere in the cosmos, and space-exploration strategy. He has consulted on interplanetary missions for several international space agencies and is on the team for NASA's Curiosity Mars Rover. He is the author of Earth in Human Hands, a "remarkable synthesis of natural history, planetary science, extinction histories ... and the human effect on the world" (Forbes). In Chasing New Horizons, Stern and Grinspoon go inside and then beyond the



science, politics, and egos of the 3 billion-mile trip to the edge of our solar system for the once-in-a-lifetime 32,000-miles-per-hour flyby of Pluto. Cost: FREE

Thursday, May 3 at 11am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA
<http://www.thelaurelhillemetery.org>
From Cradle to Graveyard: A Kid-Friendly Stroll and Roll

Laurel Hill's stunning grounds and stroller-friendly pathways are perfect for parents and caregivers looking to spend time outdoors while learning about local history with their baby in tow. This informal stroll will highlight some of the cemetery's beautiful architecture, fascinating history and scenic vistas while providing an opportunity to connect with others who have small children. Happy, sleepy, fussy or grumpy; our permanent residents won't be disturbed regardless of your little one's mood during the tour. This program is recommended for new parents or anyone with children under the age of five. Light refreshments to follow in the Gatehouse.

The walking tour will take place on Thursday, May 3 at 11:00am, 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 \$10/adult or \$7/members. Children are free. Tickets can be purchased at the door or online.

Friday, May 4 at 8pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurelhillemetery.org>

Ghosts Among Our Graves (Presented by Free Spirit Paranormal Investigators)

Is there anything on the other side? What becomes of our life energy after we die? Professional ghost hunters, Free Spirit Paranormal Investigators, have conducted numerous investigations of historic Laurel Hill Cemetery in search of answers to these questions. Join FSPI for this unique event, as they cover some of the basics in the field of ghost hunting. Participants will then have the opportunity to experiment firsthand with ghost hunting equipment, while joining FSPI team leaders on group investigations of some of the cemetery's most reportedly active sections. After the hunt, refuel with complimentary snacks and refreshments.

The program will take place on Friday, May 4 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.

The cost is \$40/person general admission. Advance reservations are requested, as space is limited. Tickets can be purchased online. Visit Free Spirit Paranormal Investigators online at <http://www.freespiritpi.com>.

Saturday, May 5 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurelhillemetery.org>

Yoga in the Cemetery

Find inner tranquility and balance during a one-

hour yoga session in the peaceful backdrop of Laurel Hill Cemetery, overlooking the Schuylkill River. Sessions will be led by experienced yoga instructor, Emily Tara Sabalbaro. Emily teaches an all-levels slow flow class that enhances alignment, strength and balance. Students are encouraged to honor the energy that surrounds them as they form a deeper connection with their minds and bodies throughout the meditative practice. Emily has been practicing yoga since 2004 and teaching since 2011 at sites throughout the city. She currently teaches weekly at OpenBox Athletics, Mindful Elephant Yoga, and Philly Dance Fitness. To see her full teaching schedule, visit www.inspirejoy.com. Please bring your own mat and water. Sessions will be held outdoors on the pavement, along Millionaires' Row. All levels of experience are welcome.

The cost is \$15 per person. Advanced registration is suggested, as space is limited. Reservations can be made online. Walk-ins are also welcome.

Saturday, May 5 at 6pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurelhillemetery.org>

Swinging in the Cemetery (Presented by Chelsea Reed and the Fair Weather Five)

Vocalist Chelsea Reed and her band the Fair Weather Five have been bringing the sounds of early jazz music to swing dances, jazz clubs and concert halls throughout the region and country since 2012. A featured artist on WXPB's The Key Studio Sessions, the group "digs into standards and classics from the early 20th century and recasts this century-old music for today's ears," according to The Key's John Vettese. Drawing upon the intensity of powerhouse vocalists, the ingenuity of 20th century composers, and the soul of the dance floor, Chelsea Reed and the Fair Weather Five honor the heritage of jazz with fresh arrangements and original songs. Step back into a former era and remember to bring your dance partner along, as this spring concert under the stars will surely inspire you to jump, jive and wail. Bring your own blankets, beach chairs and picnics.

The concert will take place on Saturday, May 5 from 6:00pm to 9:00pm. Enter at 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 and within the cemetery. The cost is \$15/person; \$12/students and members in advance, or \$20/person; \$17/students and members at the door. Tickets can be purchased at the door or online.

Sunday, May 6 at 1pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurelhillemetery.org>

Behind the Name: Philadelphia Schools

By the start of the 1900's, the practice of naming Philadelphia public schools after well-known civic leaders, industrialists and military figures was commonplace. From the victor of Gettysburg and a Philadelphia mayor; to an abolitionist and an educational reformer; this walking tour will visit the graves of some of Philadelphia's most promi-

nent figures for whom our city's schools are named after. In honor of Teacher Appreciation Week, teachers will receive a discounted ticket price.

Free parking is located in the lot across the street from the Gatehouse. The cost is \$15/person; \$14/students and seniors; or \$13/members. Teachers receive \$5 off. Tickets can be purchased at the door or online.

Tour Guide: **Jim Hence**

Monday, May 7, 2018 at 12:00 p.m.–1:00 p.m. at the Science History Institute, 315 Chestnut Street, Philadelphia, PA 19106

<http://www.sciencehistory.org>

Brown Bag Lecture: Aero-Chemical Statecraft in Colombia (1978–2015)

Between 1978 and 2015 Colombia was the only state in the world to sponsor a systematic program of aerial herbicide spraying with the aim of eradicating illicit plants within the context of the global "war on drugs." The image of low-flying crop dusters spraying glyphosate on coca fields became iconic of the way in which the "war on drugs" was waged in its Colombian "front." In this talk I will examine the history of this program, which was carried out with the political and economic support of the United States. I will draw from ethnographic, historical, and archival materials collected during more than three years of fieldwork to conceptualize this program as a novel regulatory and technical form of aero-chemical statecraft. The term aero-chemical statecraft refers to both the systematic deployment of herbicides with the aim of destroying illicit plants and the configuration of a margin of uncertainty for the disputed attribution and potential distribution of harms among the exposed landscapes, legal crops, and human communities that surround the targeted plants. In the talk I will highlight some of the ways in which, within this margin of uncertainty, targeted poor rural communities perceive, experience, debate, and contest the presence of unwanted herbicides in their lives.

About the Speaker

Juan Felipe Moreno is the Cain Postdoctoral Fellow at the Science History Institute. His current project, entitled "Living in Times of Fumigation: The Aero-Chemical State in Southwestern Colombia," is an ethnographic and historical study of the use of synthetic chemicals for the eradication of illicit crops in Colombia's war against drugs. Juan Felipe recently obtained his PhD in sociocultural anthropology from Johns Hopkins University. His research has been supported by the Social Science Research Council International Dissertation Research and Drugs, Security, and Democracy fellowship programs.

Wednesday, May 9, 2018 at Noon to 1:00 PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103,

www.collegeofphysicians.org/prog_calendar.htm

Senior Health Forum: Vaccinations for Older Adults

Current vaccine guidelines and recommendations will be reviewed with a focus on older adults' needs and plenty of time for Q&A.

Calling All Astronomers! Rittenhouse Astronomical Society

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

The Rittenhouse Astronomical Society the third



Tuesday 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/

Dr. Heather Clauss was born in Allentown PA, and received her Bachelor of Science degree from Muhlenberg College. She attended Drexel University for medical school and pursued her Internal Medicine residency, chief residency, and Infectious Diseases fellowship at Temple University. She has been on faculty at Temple University since 2008, serving as the Director of Transplant Infectious Diseases and the ID Fellowship Program Director. She was honored to win a Golden Apple Award from the Temple medical students in 2015.

Please reserve your lecture ticket through this webpage to ensure a seat at the event. You may purchase a ticket that includes a deluxe boxed lunch (sandwich, salad, homemade chips, and cookie with coffee, tea, and water) for \$15, or you may purchase a ticket for the lecture only for \$5. Lunch tickets must be reserved/paid for by Thursday May 3rd at 9AM.

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

Friday, May 11, 2018 at 5:30PM - 6:30PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

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

ANCIENT TUBERCULOSIS AND LEPROSY: PRE-COLOMBIAN PRESENCE IN THE NEW WORLD

Jane Buikstra, Regents' Professor of Bioarchaeology and Founding Director, Center for Bioarchaeological Research in the School of Human

Evolution and Social Change at Arizona State University, is renowned for her groundbreaking international research in bioarchaeology, paleopathology, forensic anthropology, and paleodemography. In this talk, Dr. Buikstra focuses on tuberculosis and leprosy, closely related mycobacterial diseases that continue to challenge medical science today. Both are commonly considered Old World diseases, based upon evidence from texts, portable art, murals, and human remains. Focusing upon archaeological and biomolecular approaches, she considers new evidence for the antiquity of these mycobacterial diseases in the Americas. Pre-registration recommended. .
Free Admission.

Saturday, May 12 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurelhillemetery.org>

The Hot Spots and Storied Plots

The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tours take place on the Second Saturday and Fourth Friday of each month; and every Friday at 10am during the summer months (June through August).

Tour Guide: **Mike Lewandowski**

Saturday, May 12, 2018 at 1:00 p.m.–3:00 p.m. at Science History Institute, 315 Chestnut Street, Philadelphia

www.sciencehistory.org

WikiSalon

A casual gathering of Wikipedia enthusiasts and those interested in learning more. Participants can edit articles of their own choice and suggest articles needing improvement to the group.

Free and Open to the Public.

Novices are encouraged to attend.

Monday, May 14, 2018 at 6:00 PM 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://scienceontaphilly.com/>

Tuesday, May 15, 2018 at 7:15 PM at the Fels Planetarium, The Franklin Institute, 222 North 20th Street, Philadelphia, PA 19103

The Rittenhouse Astronomical Society

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

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

Thursday, May 17 at 6pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurelhillemetery.org>

An Evening with Edgar Allan Poe: Picnic and Tour

Details forthcoming...

The program will take place on Thursday, May 17 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. The cost is \$25/person or \$21/members. Reservations are required. Tickets can be purchased online.

Thursday, May 17, 2018 at 6:00 PM at the **Wagner Free Institute of Science**, 1700 West Montgomery Avenue, Philadelphia, PA 19121

www.wagnerfreeinstitute.org

Tiny Mysteries: Decoding the Wagner's 19th-Century Microphotographs

An Illustrated Lecture by DR. BYRON WOLFE, Temple University

Lecture at 6:00 PM

Free and Open to the Public

Saturday, May 19, 2018

PhACT Expedition.

At 2 PM

at Laurel Hill Cemetery •

Saturday, May 19, 2018 at 3:30PM - 4:40PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

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

PRIVATE COFFINS FROM THE AMARNA PERIOD

Dr. Anders Bettum, Senior curator at the Oslo Museum and Director of the Amarna Coffin Project, will discuss private coffins from the Amarna Period. The Amarna period has long been a black hole in the typology of New Kingdom private coffins. Given Akhenaten's religious revolution, one would expect that a new decorative program for private coffins would have been developed, but until now, no such coffins were identified with certainty or were available for study. Recent excavations in the South Tombs Cemetery at Tell el-Amarna changed this situation. Twenty-one decorated coffins were found. These coffins demonstrate both an unexpected variety in coffin decoration during the reign of Akhenaten, and a development towards a new "Athenist" type of coffin decoration, which is devoid of references to the traditional Osirian afterlife. This program is sponsored by the American Research Center in Egypt - Pennsylvania Chapter. Anthropology Department Room 345.

Admission: \$10 for the general public; \$7 for Penn Museum members, Penn faculty and staff; \$5 for students with ID; and FREE for ARCE-PA members and children under 12.

Sunday, May 20 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurelhillemetery.org>

Volunteer Flag Placement

The General Meade Society of Philadelphia, in conjunction with the Friends of Laurel Hill Cemetery, call all volunteers to assist in preparing for

the nation's Memorial Day commemoration. Those assembled will be assigned to place American flags on the gravesites of Veterans that served in all of our nation's wars. As time and manpower permit, in addition to Laurel Hill, cemeteries covered may include Mount Moriah, Mount Peace and St. James the Less. Free refreshments will be provided to all.

The flag placement will take place on Sunday, May 20 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. This event is FREE and open to the public. Your RSVP is requested.

Monday, May 21, 2018 at 7:00 PM at Scoogi's Italian Kitchen & Bar

738 Bethlehem Pike Flourtown, PA 19031

American Revolution Round Table of Philadelphia,

<http://arrtop.org/>

Lancaster Road and the American Revolution Presented by Thomas McGuire

Free and Open to the Public.

Tuesday, May 22, 2018 -7:00 pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

NIGHT SKIES AT THE JOEL M. BLOOM OBSERVATORY

Join us for an evening of 'out of this world' astronomy activities hosted by Franklin Institute Chief Astronomer Derrick Pitts. See website to purchase tickets.

Wednesday, May 23, 2018 at 7:00 PM at the Ludington Library located at 5 South Bryn Mawr Avenue, Bryn Mawr, Pennsylvania. The Free-thought Society will host **Dr. Ted Daeschler**, the Curator of Vertebrate Zoology at the Drexel University's Academy of Natural Sciences.. Daeschler's presentation "Cold,

Hard Science: The 2016-2017 Antarctic Paleontological Expedition" will highlight how the Devonian Period (420-360 million years ago) witnessed profound diversification of the form and function of aquatic vertebrates, including the origin of limbed forms. Previous discoveries from fossil sites in the northern hemisphere motivated questions about biotic evolution within the southern landmasses from the same timeframe. Daeschler worked in the Transantarctic Mountains of Southern Victoria Land, Antarctica. These areas have had little paleontological exploration and this fieldwork revealed productive Middle Devonian sites with a wide variety of fossil vertebrates from ancient freshwater ecosystems.

Free and open to the public.



Friday, May 25 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tours take place on the Second Saturday and Fourth Friday of each month; and every Friday at 10am during the summer months (June through August).

Tour Guide: **Michael Brooks**

Sunday, May 27 at 12pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Memorial Day Parade, Service & 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 in part by the General Meade Society of Philadelphia and the Friends of Laurel Hill Cemetery. Complimentary beer and refreshments courtesy of the Kearney Kommissary will be served after the service.

The event will take place on Sunday, May 27 at 12pm, 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.

Admission to the event is FREE and open to the public; a \$5 donation at the door in support of Laurel Hill Cemetery's work and preservation is suggested and would be much appreciated. Your RSVP is requested.

Tuesday, May 29, 2018 at 6:30 PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

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

Ludwig van Beethoven: Innovation with ATTITUDE!

Late in his career, Ludwig (my friends call me "Louis") van Beethoven coined a phrase that had been his creative maxim since the beginning of his career:

"Art demands that we never stand still."

And stand still he did not. Beethoven's views on creativity and personal expression were revolutionary, even heretical for his day. At a time when most composers were happy to turn out works in a shared (or "period") style, Beethoven insisted that each new work be different from what came before it and that his music should sound like his music and his music only. In this, Beethoven was the first truly modern composer. But his innovations were not made in a vacuum. He lived at a dangerous time of societal change and was haunted by his dysfunctional upbringing and the progressive hearing loss he experienced as an adult. Beethoven's compositional innovations were thus

adaptations to a changing and perilous time, and have much to tell us about creativity and adaption in our own time of rapid and discontinuous change.

This presentation will focus on Beethoven's life and times and his extraordinary compositional innovations, innovations which we will observe through the lens of the first movement of his Symphony No. 5 of 1808.

About the Speaker:

Robert Greenberg was born in Brooklyn, New York in 1954, and has lived in the San Francisco Bay Area since 1978. Greenberg received a BA in music, magna cum laude, from Princeton University in 1976. His principal teachers at Princeton were Edward Cone, Daniel Werts, and Carlton Gamer in composition, Claudio Spies and Paul Lansky in analysis, and Jerry Kuderna in piano. In 1984, Greenberg received a Ph.D. in music composition, With Distinction, from the University of California, Berkeley, where his principal teachers were Andrew Imbrie and Olly Wilson in composition and Richard Felciano in analysis.

Light refreshments provided.

This event is open to all ages. 21+ to drink.

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

Thursday, May 31 at 6pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

You Can't Make This Stuff Up: Peculiar Stories

This springtime twilight tour will reveal some of



Laurel Hill's more peculiar secrets and prove that truth is indeed stranger than fiction. Hear a sampling of incredible—but true—stories of the cemetery's permanent residents including the heiress whose grave required a 24/7 police presence, the physician who took a post-mortem stroll, and the wife who became a widow during a performance of "The Merry Widow." This collection of odd tales will surely leave you feeling amazed, amused and enlightened.

Free parking is located in the lot across the street from the Gatehouse. The cost is \$20/person or \$17/members. Tickets can be purchased at the door or online.

Tour Guides: **Tom and Pattye Stringer**

Thursday, May 31, 2018 at 5:00 PM at the American Philosophical Society, Benjamin Franklin Hall, 427 Chestnut Street, Philadelphia

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

Magic and Lightning: Into the Mind of Nikola Tesla

In honor of the American Philosophical Society's 275th anniversary, the Society's 2018 lecture series will feature talks inspired by the APS's history and the work of its Members. Nikola Tesla was elected to the Society in 1896.

This public program is a one-man play from actor and writer Ian Ruskin. He performed *To Begin the World Over Again: the Life of Thomas Paine* at the APS in 2012.

In this play, Ruskin endeavors to capture some fundamental understanding of Tesla's ideas about electromagnetism and gravitational waves while providing a glimpse into his character. Perhaps Tesla saw a slightly wider range of the electro-magnetic spectrum, perhaps he heard the gravitation hum of the universe, perhaps he was simply a man born ahead of his time. But as Einstein said, when asked how it felt to be smartest man in the world, "I don't know, you'll have to ask Nikola Tesla."

Ian Ruskin is a graduate of the Royal Academy of Dramatic Art. He founded The Harry Bridges Project in 2000 and has written, performed and produced many plays and radio and film documentaries, including *From Wharf Rats to Lords of the Docks* about labor leader Harry Bridges. He has performed the play over 250 times to approximately 50,000 people, including the Houses of Parliament and the Scottish Parliament. The film version, directed and shot by multi-Academy Award winner Haskell Wexler, aired nationwide on PBS for 4 years, making the film available to 150 million Americans.

Free and open to the public. See website to register.

Friday, June 1 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

In life and in death, we all have stories to tell and what better place to hear tales of wonder than Philadelphia's most famous home of the dead? The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Steve Maurer**

Friday June 1, 2018 at 5:30 - 8:00 PM at Wagner Free Institute of Science

Annual Benefit - A Sip of Science 2018

Honoring Dr. Paul Offit, Children's Hospital of Philadelphia and University of Pennsylvania

Saturday, June 2 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Yoga in the Cemetery

Find inner tranquility and balance during a one-hour yoga session in the peaceful backdrop of Laurel Hill Cemetery, overlooking the Schuylkill River. Sessions will be led by experienced yoga instructor, Emily Tara Sabalbaro. Emily teaches an all-levels slow flow class that enhances alignment, strength and balance. Students are encouraged to honor the energy that surrounds them as they form a deeper connection with their minds and bodies throughout the meditative practice. Emily has been practicing yoga since 2004 and teaching since 2011 at sites throughout the city.

She currently teaches weekly at OpenBox Athletics, Mindful Elephant Yoga, and Philly Dance Fitness. To see her full teaching schedule, visit www.inspirejoy.com. Please bring your own mat and water. Sessions will be held outdoors on the pavement, along Millionaires' Row. All levels of experience are welcome.

Yoga in the Cemetery will be held on the first Saturday of every month at 10:00am, May through September (May 5, June 2, July 7, August 4 and September 1). The cost is \$15 per person. Advanced registration is suggested, as space is limited. Reservations can be made online. Walk-ins are also welcome.

Saturday, June 2 at 6pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Music for the Hearing Eye (Presented by Divine Hand Ensemble)

This summer the Divine Hand Ensemble returns to Laurel Hill for their annual performance atop the crypts. Witness Mano Divina, leader of the Ensemble, harness electricity with his fingertips and draw music out of the air as master of the Themin, an early electronic musical instrument controlled without discernible physical contact from the player. In addition to this rare instrument, the Ensemble includes a string quartet, classical guitar, two harps, a glockenspiel, a soprano and a tenor, together rendering an unforgettable listening experience. Bring your own blankets or beach chairs, picnics, and/or beverages.

The Ensemble has performed at venues throughout the region including Sellersville Theater, PhilaMoca, The Franklin Institute and a special concert for Pope Francis during the World Meeting of Families in 2015. Their music has been described as hypnotic, breathtaking and mesmerizing, an "amalgamation of magic, science and music." There are thus few more appropriately ethereal settings to take in the power of this performance than historic Laurel Hill Cemetery, where the Ensemble will be performing a selection of contemporary and classical compositions for the twenty-first century audience.

This twilight concert will take place on Saturday, June 2 at 6:00pm, (with a prescheduled rain date of Sunday, June 3 at 6:00pm.) Gates open at 5:00pm. Ticket holders can check in at Laurel Hill Cemetery's Gatehouse entrance, 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot directly across the street from the Gatehouse. The cost is \$20/person general admission. Advance reservations are requested. Tickets can be purchased at the door or online.

Sunday, June 3 at 1pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Northside Ramble; Laurel Hill's Original Section

Located far from the cemetery's stunning South Section or its well-traveled Millionaires' Row, North Laurel Hill was established in 1836 and undoubtedly holds some of Laurel Hill's most fascinating stories. An exhumed tobacco heiress, a Civil War hero whose finger was bitten off in

combat, and a former congressman that Edgar Allan Poe dedicated a book to are just a few of the tales that will be explored on this leisurely tour of Laurel Hill's original section.

The cost is \$15/person; \$14/students and seniors; or \$13/members. Tickets can be purchased at the door or online.

Tuesday, June 5, 2018 - 6:00pm - 7:00pm at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130

<http://www.easternstate.org/home>

Free. A reception follows the lecture.

The Searchlight Series: Discussion Topic TBA.

Friday, June 8 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Susan Miller**

Friday, June 8 at 8pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurehillcemetery.org>

Cinema in the Cemetery

Hosted with the Philadelphia Film Society. DETAILS FORTHCOMING...

The screening will take place on Friday, June 8 at 8:00pm (with a prescheduled rain date of Saturday, June 9 at 8:00pm). The cemetery gates open at 7:00pm. Ticket holders can check in at Laurel Hill Cemetery's Gatehouse entrance, 3822 Ridge Avenue, Philadelphia, PA 19132. Free parking is located in the lot directly across the street from the Gatehouse. T

The cost is \$12/person general admission. Purchasing advance tickets is suggested. Tickets can be purchased at the door or online.

Saturday, June 9 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Rich Wilhelm**

Saturday, June 9, 2018 at 1:00 p.m.-3:00 p.m. at Science History Institute, 315 Chestnut Street, Philadelphia

www.sciencehistory.org

WikiSalon

A casual gathering of Wikipedia enthusiasts and those interested in learning more. Participants can edit articles of their own choice and suggest articles needing improvement to the group.

Free and Open to the Public.

Novices are encouraged to attend.

June 9th, 13th, and 17th, 2018 at Venice Island Performing Arts Center

7 Lock Street, Philadelphia, PA 19127 From Main Street, Manayunk, Turn on Cotton to the Venice Island Parking Lot

Delaware Valley Opera Company 2018 Summer Festival

L'Elisir d'Amore - In Italian with English Super-titles

By Gaetano Donizetti

See dvoopera.org for more information



Sunday, June 10 at 1pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Patriots, Politicians and Playwrights: Philadelphia Lawyers

For over 200 years, the term "Philadelphia lawyer" has been an iconic description of an attorney who goes the extra mile, maintains the highest ethical standards and, like Rocky Balboa stepping up to Apollo Creed; takes on challenges that lesser lawyers stay away from. Laurel Hill is home to a number of the first "Philadelphia lawyers" as well as others whose courtroom skills and colorful personalities made them among the most talked-about attorneys of their day. Meet the man who investigated Benedict Arnold before he turned traitor, the attorney who was involved in the Court's first argument concerning slave rebellions, and the prosecutors who found second lives as novelists and poets. They may have made their final arguments, but you can ensure their stories live on during this spirited walking tour of their final place of rest.

The cost is \$15/person; \$13/students and seniors or \$12/members. Tickets can be purchased at the door or online.

Tour Guide: **Steve Chawaga**

Monday, June 11, 2018 at 6:00 PM 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/>

Tuesday, June 12, 2018 at 6:00 PM at World Cafe Live, 3025 Walnut Street, Philadelphia

<http://www.upenn.edu/pennnews/science>

PENN SCIENCE CAFÉ

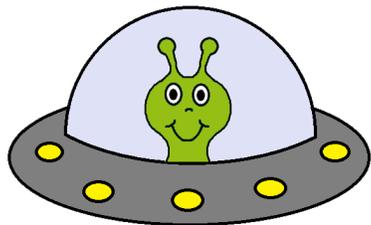
Projit Mukharji, associate professor of history and the sociology of science, School of Arts and Sciences

“Who Do You Think You Are? Modern Identities Between Genes and Rebirths, India c. 1950s-1980s”

What makes us who we are? Is it our genes? Or is it in fact our memories? Projit Bihari Mukharji will discuss how, in newly-independent India two new sciences, genetics and parapsychology, both tried to answer this question in their distinctive ways. At the time both the disciplines were themselves also struggling to define their identities. Even as the quests for disciplinary identities were interlaced with the quest to define human identities scientifically, their political resonances with identity politics and nation-building were too obvious to ignore. As scientists, their methods and their questions moved between these various levels; scientific questions about human identity also became questions about the identity of science itself.

Tuesday, June 12, 2018 -7:00 pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

NIGHT SKIES AT THE JOEL M. BLOOM OBSERVATORY

Join us for an evening of ‘out of this world’ astronomy activities hosted by Franklin Institute Chief Astronomer Derrick Pitts. See website to purchase tickets.

Friday, June 15 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

Free parking is located in the lot across the street from the Gatehouse. The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online. Tour Guide: **Jessica Heichel**

Saturday, June 16 at 1pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

To Set Them Free: Abolitionism and Laurel Hill

Philadelphia played a central and indelible part in the struggle to end the evil that was slavery, even as the city itself was sharply and fiercely divided on the issue. Many Philadelphians who made it their purpose to crusade against the institutionalized bondage of African-Americans did so against great opposition and often, great personal danger. Yet, they fought unflinchingly, eventually leading

to the Emancipation Proclamation issued on January 1, 1863. On this tour, hear the tales of their struggles and courage as we remember those who fought the good fight against that terrible scourge.

The cost is \$15/person; \$13/students and seniors or \$12/members. Tickets can be purchased at the door or online.

Tour Guide: **Russ Dodge**

Tuesday, June 19, 2018 at 7:15 PM at the Fels Planetarium, The Franklin Institute, 222 North 20th Street, Philadelphia, PA 19103

The Rittenhouse Astronomical Society

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

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

Friday, June 22 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

Free parking is located in the lot across the street from the Gatehouse. The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Ellen Silverberg-Brennan**

Saturday, June 23 at 7pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Soulstice (a Young Friends Event)**Details Forthcoming...**

All funds raised from the event support the preservation of Laurel Hill Cemetery, a National Historic Landmark. Since its founding in 1836, Laurel Hill Cemetery has been a place for the living as well as for the dead. Its 78-acres provide green space for the surrounding community and a place of respite and recreation for the citizens of Philadelphia.

Ticket-holders may check in at Laurel Hill Cemetery’s main entrance, located at 3822 Ridge Avenue, Philadelphia PA. Free parking is located in the lot across the street from the Gatehouse. Tickets for the event are \$35 general admission. Advance reservations are requested. Tickets may be purchased online or at the door. Cocktail attire is suggested, along with sensible footwear.

Monday, June 25, 2018 at 7:00 PM at Scoogi’s Italian Kitchen & Bar

738 Bethlehem Pike Flourtown, PA 19031

American Revolution Round Table of Philadelphia

<http://arrtop.org/>

Renegade Revolutionary: The Life of General Charles Lee

In November 1774, a pamphlet to the “People of America” was published in Philadelphia and London. It forcefully articulated American rights and liberties and argued that the Americans needed to declare their independence from Britain. The author of this pamphlet was Charles Lee, a former British army officer turned revolutionary, who was one of the earliest advocates for American independence. Lee fought on and off the battlefield for expanded democracy, freedom of conscience, individual liberties, human rights, and for

the formal education of women.

Join us on Monday, June 25, 2018 as we welcome Phillip Papas as he talks about his book “Renegade Revolutionary: The Life of General Charles Lee”. Our meeting place is now Scoogi’s Italian Restaurant at 738 Bethlehem Pike in Flourtown. Feel free to arrive early and eat in the back room where our meetings are held. A short business meeting will start around 7:15pm. The presentation will start at 7:30pm. We encourage you to join our membership for the very small and reasonable tax deductible amount of \$25.

Renegade Revolutionary: The Life of General Charles Lee is a vivid new portrait of one of the most complex and controversial of the American revolutionaries. Lee’s erratic behavior and comportment, his capture and more than one year imprisonment by the British, and his court martial after the battle of Monmouth in 1778 have dominated his place in the historiography of the American Revolution. This book retells the story of a man who had been dismissed by contemporaries and by history. Few American revolutionaries shared his radical political outlook, his cross-cultural experiences, his cosmopolitanism, and his confidence that the American Revolution could be won primarily by the militia (or irregulars) rather than a centralized regular army. By studying Lee’s life, his political and military ideas, and his style of leadership, we gain new insights into the way the American revolutionaries fought and won their independence from Britain.

Charles Lee probably had the most remarkable personality of any military or civilian leader on either side of the Revolutionary War. Born in England, he was ignored by his mother; his father, colonel of a British regiment, at least made sure that his son was trained to be an army officer. During the French and Indian War in America, Lee showed courage in battle, but also a penchant for getting into disputes with his fellow officers and writing bitterly sarcastic invectives against his superiors. He called Major General James Abercrombie, for example, a “stupid blunderer” and “our booby in chief.” The most widely read of the American army’s officers, Lee commanded a spectacularly successful raid in Spain in 1762 and received even more military training during his years as a soldier of fortune in Poland and other parts of Eastern Europe.

Phillip Papas is Senior Professor of History at Union County College in Cranford, New Jersey. He is the author of *That Ever Loyal Island: Staten Island and the American Revolution* (NYU Press, 2007) and *Renegade Revolutionary: The Life of General Charles Lee* (NYU Press, 2014), which earned Honorable Mention for the 2015 Fraunces Tavern Museum Book Award and Honorable Mention for the 2015 Book Award from the American Revolution Round Table of Richmond.

Free and Open to the Public.

Tuesday, June 26, 2018 at 7:00 pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

SCIENCE AFTER HOURS

8-Bit

Enter the pixelated landscapes that once inhabited the cabinets of your local arcade. Explore the worlds of your favorite video games and discover how current games are bridging the gap between science and education.

This event is 21+.

Due to the popularity of this event, we strongly recommend that you purchase tickets in advance as capacity is limited and may sell out.

Friday, June 29 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

In life and in death, we all have stories to tell and what better place to hear tales of wonder than Philadelphia's most famous home of the dead? The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Colleen Rumpf**

**Saturday, June 30, 2018
at 11:00 to 3:00 PM.**

PhACT Picnic.

FREE and everyone welcome

Saturday, June 30 at 1 PM at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Sacred Stonework: Laurel Hill as a Sculpture Garden

Details Forthcoming...

The tour will take place on Saturday, June 30 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 \$15/person; \$14/students and seniors; or \$13/members. Tickets can be purchased at the door or online.

Tour Guide: **MaryEllen Moran**

Tuesday, July 3, 2018 - 6:00pm - 7:00pm at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130 phone: (215) 236-3300

<http://www.easternstate.org/home>

Free. A reception follows the lecture.

The Searchlight Series: Discussion Topic TBA.

Friday, July 6 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Sarah Hamill**

Saturday, July 7 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Gettysburg and Beyond: Laurel Hill's Ultimate Civil War Tour

The most bloody and pivotal moment in the history of the American Civil War was the decisive Battle of Gettysburg, fought from July 1st through the 3rd of 1863, only 120 miles away from the home front of Philadelphia. Many prominent Philadelphians were engaged at Gettysburg, some losing their lives for the nation. The Union commander at the battle, General Meade, Division Commander General Crawford, Confederates, and many other officers and enlisted men who participated now rest at Laurel Hill. The tour will also highlight the important roles played by volunteer nurses, surgeons, civilians and supporters of the war effort, whom likewise lie under Laurel Hill's perpetual care.

The cost is \$15/person; \$14/students and seniors; or \$12/members. Tickets can be purchased at the door or online.

Tour Guide: **Andy Waskie**

July 7th, 11th, and 15th, 2018 at Venice Island Performing Arts Center

7 Lock Street, Philadelphia, PA 1912.7 From Main Street, Manayunk, Turn on Cotton to the Venice Island Parking Lot

Delaware Valley Opera Company 2018 Summer Festival

Il Tabarro & Suor Angelica - In English with English Supertitles

by Giacomo Puccini

See dvopera.org for more information



Tuesday, July 10, 2018 -7:00 pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

NIGHT SKIES AT THE JOEL M. BLOOM OBSERVATORY

Join us for an evening of 'out of this world' astronomy activities hosted by Franklin Institute Chief Astronomer Derrick Pitts. See website to purchase tickets.

Friday, July 13 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

In life and in death, we all have stories to tell and what better place to hear tales of wonder than Philadelphia's most famous home of the dead? The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Peter Howell**

Friday, July 14 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

Tour Guide: **Linda Blowney**

Sunday, July 15 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Forever Young: Died Before Their Time

Within its boundaries Laurel Hill Cemetery contains the remains of thousands of souls, all of whom have their own stories to tell. Perhaps the most poignant of these tales are those of the children long buried here. Early death was ever present for the most vulnerable, whether from stillbirth, disease, accident or even murder. Living past your 12th birthday in 19th and early 20th century Philadelphia was very often a challenge. This tour will look at some of the children who, for one reason or another, failed to meet that challenge and how their parents chose to remember them.

The cost is \$15/person; \$13/students and seniors; or \$12/members. Tickets can be purchased at the door or online.

Tour Guide: **Rich Boardman**

Saturday, July 14, 2018 at 1:00 p.m.–3:00 p.m. at Science History Institute, 315 Chestnut Street, Philadelphia

www.Sciencehistory.org

WikiSalon

A casual gathering of Wikipedia enthusiasts and those interested in learning more. Participants can edit articles of their own choice and suggest articles needing improvement to the group.

Free and Open to the Public.

Novices are encouraged to attend.

Friday, July 20 & Saturday, July 21 at 7pm at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurehillcemetery.org>

Shakespeare in the Cemetery: A Midsummer Night's Dream

Fairies, lovers, and fools are loose at Laurel Hill Cemetery! When a group of love-mad youths and wannabe actors wander into the forest outside Athens, all (or at least most) think they have a plan. But the woods are full of weirdness and the local sprite population isn't going to let this opportunity pass. See what happens when you venture outside of your city's walls in a comedy that could have just as easily been a tragedy! As part of Laurel Hill's annual Shakespeare in the Cemetery series, The Mechanical Theater will present one of Shakespeare's most popular works, A Midsummer Night's Dream. Directed by Loretta Vasile. Bring your own blankets, beach chairs, picnics, and/or beverages.

Two weekends of performances will take place on Friday, July 20; Saturday, July 21; Friday, July 27; and Saturday July 28. All performances begin at 7:00pm (with prescheduled rain dates of Sunday, July 22, or Sunday July 29). Gates opening at 6:30pm and check-in takes place at 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 \$20/person; or \$17/members. Advanced tickets are strongly suggested. Tickets can be purchased at the door or online.

Friday, July 20 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Joy Massey**

Saturday, July 21 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Heavenly Intonations: Laurel Hill's Musical Legacy

Whether we can hear it or not, music hangs in the air at Laurel Hill Cemetery—heavenly intonations of the singers, musicians, lyricists and composers buried within. Visit the gravesites of those who contributed in some way to the musical legacy of America. In some cases, we'll even hear their work. This includes the composer who created the first serious American symphonic work and was also the first music critic in the United States; the woman who wrote the first words that Thomas Edison uttered into his recently invented phonograph; and the “Bruce Springsteen of Early 20th Century American Opera,” who riled up audiences everywhere from Philadelphia's Academy of Music to Teddy Roosevelt's White House to the opera houses of Australia circa 1913.

The cost is \$15/person; \$13/students and seniors; or \$12/members. Tickets can be purchased at the door or online.

Tour Guide: **Rich Wilhelm**

Tuesday, July 24, 2018 at 7:00 pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

SCIENCE AFTER HOURS

Clue

Forensic science meets the classic mystery game in this evening of whodunit, with what, and where? The clues will run deep and the theatrics will be over the top—a night no ‘Boddy’ should miss.

This event is 21+.

Due to the popularity of this event, we strongly recommend that you purchase tickets in advance as capacity is limited and may sell out.

Friday, July 27 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **Marty Foley**

Friday, July 27 & Saturday, July 28 at 7pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA

<http://www.thelaurehillcemetery.org>

Shakespeare in the Cemetery: A Midsummer Night's Dream

Fairies, lovers, and fools are loose at Laurel Hill Cemetery! When a group of love-mad youths and

wannabe actors wander into the forest outside Athens, all (or at least most) think they have a plan. But the woods are full of weirdness and the local sprite population isn't going to let this opportunity pass. See what happens when you venture outside of your city's walls in a comedy that could have just as easily been a tragedy! As part of Laurel Hill's annual Shakespeare in the Cemetery series, The Mechanical Theater will present one of Shakespeare's most popular works, A Midsummer Night's Dream. Directed by Loretta Vasilie. Bring your own blankets, beach chairs, picnics, and/or beverages.

Two weekends of performances will take place on Friday, July 20; Saturday, July 21; Friday, July 27; and Saturday July 28. All performances begin at at 7:00pm (with prescheduled rain dates of Sunday, July 22, or Sunday July 29). Gates opening at 6:30pm and check-in takes place at 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 \$20/person; or \$17/members. Advanced tickets are strongly suggested. Tickets can be purchased at the door or online.

Thursday, August 2 at 6m at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

Drip Drop, You're Dead: Water As Witness

Whether it be frozen on mountaintops, liquid in the ocean, forming into rivers and streams, flowing through underground piping, bubbling up from deep wells or exiting via faucets and into bathtubs, water can be a constant in our lives – and a silent witness to our deaths, or even an unwelcome visitor after we are long gone. This tour reveals a water connection to a wide range of Laurel Hill denizens. Stops will include the graves of passengers in the worst maritime disasters of the 19th and 20th centuries, students succumbing to death at a prestigious boarding school, medical martyrs of a devastating epidemic and a family seemingly haunted by a water curse. And then there is always that evening dip in the ocean, or a rude awakening by the water department.

So grab your favorite bottle of water and hydrate yourself for a unique summer evening's stroll high above the banks of the Schuylkill River while exercising your brain waves. After this tour you might never look at water the same way again because it might just bear witness to you!

The cost is \$20/person; \$18/students and seniors and \$17/members. Tickets can be purchased at the door or online.

Tour Guide: **Nancy W. Wright**

Friday, August 3 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA.

<http://www.thelaurehillcemetery.org>

The Hot Spots and Storied Plots

The cost is \$12/person; \$10/students and seniors; or \$9/members. Tickets can be purchased at the door or online.

Tour Guide: **MaryEllen Moran**

Saturday, August 4, 10am-4pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132

<http://www.thelaurehillcemetery.org>

10th Annual Car & Hearse Show (With Mohnton Pro Car Club)

Mohnton Professional Car Club (MPCC) welcomes owners of any and all hearses, ambulances, flower cars, limousines and other service vehicles to participate in its 10th Annual Service Car and Hearse Show, appropriately taking place on the grounds of Laurel Hill Cemetery. Punk/hardcore bands High Heels and Sniper Caprice will provide festive entertainment throughout the afternoon, and attendees will have the chance to vote on their favorite vehicle. A raffle of unique items donated by MPCC club members and benefiting Laurel Hill will be available—so remember to bring cash! You'll also want to bring a camera, as this car show is unlike any other.

MPCC's 9th Annual Hearse and Professional Vehicle Show will take place on Saturday, August 4 at 10:00am, rain or shine. Vehicles will be on display until 4:00pm. Refreshments will be available for purchase. 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 or visit the MPCC Facebook page.

If you are the owner of a professional car and would like to participate, contact Shawn Koenig, MPCC President to register your vehicle.

August 4th, 8th, and 12th at Venice Island Performing Arts Center

7 Lock Street, Philadelphia, PA 19127. From Main Street, Manayunk, Turn on Cotton to the Venice Island Parking Lot

Delaware Valley Opera Company 2018 Summer Festival

Faust - In French with English Supertitles

By Charles Gounod

See dvopera.org for more information



Tuesday, August 7, 2018 - 6:00pm - 7:00pm at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130 phone: (215) 236-3300

<http://www.easternstate.org/home>

Free. A reception follows the lecture.

The Searchlight Series: Discussion Topic TBA.

Tuesday, August 14, 2018 -7:00 pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at the intersection of 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

NIGHT SKIES AT THE JOEL M. BLOOM OBSERVATORY

Join us for an evening of ‘out of this world’ astronomy activities hosted by Franklin Institute Chief Astronomer Derrick Pitts

Philadelphia Area Lecture Host Websites

This listing is likely incomplete. If there is a site you wish listed or a link is erroneous then please email the Phactum editor at phactpublicity@aol.com

Academy of Natural Sciences

Monday, January 13, 2013 at 6:00 PM-8:00 PM at The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia 19103

www.ansp.org

American Philosophical Society

, Benjamin Franklin Hall, 427 Chestnut Street, Philadelphia

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

Free and Open to the Public

American Revolution Roundtable of Philadelphia (ARRTOP)

at MaGerks Pub and Grill, 582 South Bethlehem Pike, Fort Washington, Pennsylvania

<http://arrtop.com/>

Last Monday of most months.

Free and Open to the Public

College of Physicians of Philadelphia

19 South Twenty-Second Street, Philadelphia, PA

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

Delaware County Institute of Science

11 Veterans Square, Media, PA 19063

<http://delcoscience.org>

Delaware Valley Opera Company at the Venice Island Performing Arts Center, located in the Manayunk section of Philadelphia. Turn onto Cotton Street from Main Street and use the Venice Island public parking lot.

www.dvopera.org
2017 Summer Opera Festival

Delaware Valley Amateur Astronomers

in the Radnor Township Municipal Building, 301 Iven Ave, Radnor, Pennsylvania 19087

<https://dvaa9.wildapricot.org>

Free and Open to the Public.

Eastern State Penitentiary

2027 Fairmount Avenue, Philadelphia, PA
First Tuesday of every month.

<http://www.easternstate.org/home>

Franklin Institute -

<http://www.fi.edu>

Free Library of Philadelphia (FLOP)

1901 Vine Street, 19103

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

Freethought Society

<https://www.ftociety.org/>

Friends of Valley Forge - first Tuesday of the month

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

Free and Open to the Public.



Humanist Association of Greater Philadelphia (HAGP)

www.HAGP.org

Institute for Science and Religion

<http://www.irands.org>

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

Laboratory for Research on the Structure of Matter - Science Cafe

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

Laurel Hill Cemetery

3822 Ridge Avenue, Philadelphia,

<http://www.thelaurelhillcemetery.org>

Nerd Nite -

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

Email us at: nerdnitephilly@gmail.com

Penn Science Cafe & Lightbulb Cafe

at World Cafe Live, 3025 Walnut Street, Philadelphia

<http://www.upenn.edu/pennnews/science>

Free and Open to the Public.

Penn State University Abington

112 Woodland Building at 1600 Woodland Rd | Abington, PA 19001

<http://abington.psu.edu/cultural-community-events>

Pint of Science

<https://pintofscience.us/city/philadelphia>

Rittenhouse Astronomical Society

at the Fels Planetarium, The Franklin Institute, 222 North 20th Street, Philadelphia
Astronomy lecture open to the Public.

Third Tuesday of every month.

www.rittenhouseastronomicalsociety.org/

Science History Institute

315 Chestnut Street, Philadelphia, PA 19106

<http://www.sciencehistory.org>

Science on the Hill at St. Joseph's University

at Landmark Americana Tap & Grill at 54th and City Avenue, Philadelphia 19131 at St. Joseph's University

<http://scienceonthehill.weebly.com/>

Free and Open to the Public.

Science on Tap

2nd Monday of each month at 6:00 PM
National Mechanics, 22 S. Third Street, Philadelphia, PA 19106

<http://scienceontaphilly.com/>

University of Pennsylvania Museum

3260 South Street, Philadelphia, PA 19104

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

Wagner Free Institute of Science

1700 West Montgomery Avenue, Philadelphia,

www.wagnerfreeinstitute.org

Free and Open to the Public

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

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The PhACT website is: www.phact.org

"My people are going to learn the principles of democracy the dictates of truth and the teachings of science. Superstition must go. Let them worship as they will, every man can follow his own conscience provided it does not interfere with sane reason or bid him act against the liberty of his fellow men."

— Mustafa Kemal Atatür, (1881-1938), President of Turkey

