

“Iron rusts from dis-  
use; water loses its  
purity from stagna-  
tion ... even so does  
inaction sap the vig-  
our of the mind.”

~ Leonardo da Vinci

# Phactum

The Newsletter of PhACT, the  
Philadelphia Association for Critical Thinking  
January/February/March 2019

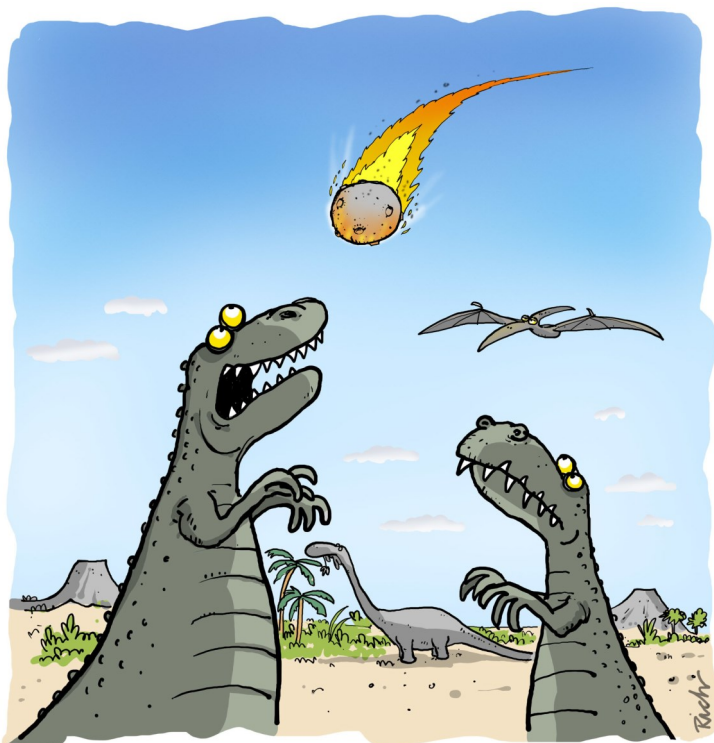
PhACT supports science, critical thinking and science education, and encourages the scientific investigation of controversial or extraordinary claims.

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## Dinosaur Extinction: Volcanoes or a Meteor?

by Paul Schlueter III



“WELL, THERE'S SOMETHING YOU DON'T SEE EVERY DAY.”

We all know that the dinosaurs died off around 65 million years ago; most people living today were taught about the dinosaur age, and that it was over long before humans appeared on Earth, in our early grammar school classrooms. We've spent our lives watching in fascination as scientists have discovered and described species after species which got wiped out at the end of a run that extended 135 million years through ancient time. We've learned that today's birds are descended from the last dinosaurs and somehow managed to survive the extinction which killed off much of the life on our planet. We ourselves descended from tiny mammals who were just evolving, and which found a great niche into which to expand after the huge lizards died off.

We know that some of our religious kin insist that there was no evolution; they think that humans and dinosaurs co-existed, having both been created in the space of a week by a miraculous divinity. This essay is not about that particular debate.

Rather, this essay follows a fabulous article, printed in the Sept. 2018 issue of *The Atlantic*, pp. 44-55, by Bianca Bosker, titled “What really killed the dinosaurs?” The drawing at the beginning of the article is alone worth the price of a subscription; it's a pile of dead dinos that you just have to

*(Continued on page 2)*

see for yourself (art by Denise Nestor).

The heroine of the story is 73-year-old Paleontology and Geology professor Gerta Keller, from Princeton University. As written, the bad guy of the article is physicist Luis Alvarez, who found (in 1980) iridium in a geographic stratum worldwide, and proposed that it came from the meteor that wiped out the dinosaurs.



Today, nearly everyone "accepts" the "Impactor Theory," which holds that a meteor (possibly a comet?) larger than Mt. Everest impacted the shallow waters off Chicxulub,

Mexico, creating a crater 111 miles wide, and causing such an environmental catastrophe that it caused Earth's "fifth extinction" over what was essentially a very nasty weekend. Alvarez managed to convince the world of his views in just the space of two years (by comparison, convincing the world of the reality of tectonic plates and continental drift took some 60 years); he simply dominated the conversation until his views were taken as true.

Keller, on the other hand, has sought (and claims to have found) some other event to explain the much more gradual extinction event she and others have seen in the fossil record; the Deccan Traps, an enormous volcanic eruption which occurred in western and central India at just the right

point in time. Keller holds that a volcanic event (that resulted from an area three times the size of France splitting apart and filling the world with toxic gasses and dust) caused the fifth extinction over a gradual decline lasting 300,000 years. Keller's theory follows the proposal first made in 1978 by a less-imposing group of scientists.

In what the article calls "a thirty-year war," the opposing sides of this debate have argued with near-religious fervor to try to overpower the voice of their opposition. Both sides accuse the other of refusing to review relevant evidence, and both sides call one another scientifically ignorant. The article details decades of mutual threats, slander, sabotage, spurious data, discrimination, and attempts to "torpedo careers." Observers describe the debate as "acrimonious," and many scientists have left the field because they don't want to become entangled in it.

Alvarez died in 1988, but his side of the debate has been carried forward with vigor by his son, Walter Alvarez, and the Dutch geologist Jan Smit. In 1991, the Chicxulub crater was found, and for many that settled the question; it added a "weapon" to the Impactor extinction theory that then prevailed.

Keller continues to research her evidence today, in India

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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](mailto:phactpublicity@aol.com)

**New entry: ARGUMENT FOR EVANGELISM, THE** - The idea that people's beliefs and behaviors are subject to their being convinced through dialogue. Specifically tends to offer some authority (religious, political, or social) as the sole reliable source of information. Since the evangelist believes in the authoritative source, everyone else should adopt the same position too (often includes argument that "having contrary views" subjects one to exclusion/punishment).

and indeed across the world. She has had some 125 articles published (around half of her published work), trying to poke holes in the Impactor theory. Her research has made great effort to date the Deccan Traps, and to date the foraminifera (single-celled marine organisms at the base of the food chain) which had a lengthy die-off just before the fifth extinction, including evidence from over 300 sites around the world. She found 20 inches of limestone deposits between the meteor impact layer and the peak of the foraminifera die-off, which she thinks weakens the impact theory; Impactors merely rebut that by claiming that the impact itself caused such a great tsunami that it deposited all that limestone in one big splash! Keller still maintains that there is no evidence of a sudden mass extinction, but rather there is evidence of a lengthy progression of die-offs lasting hundreds of thousands of years (something like the entire species duration of *Homo sapiens*!)

Keller also points out that, though there have been countless meteor impacts upon our planet, none of them caused the previous four extinctions. She holds that the Chicxulub meteor actually hit around 200,000 years before the dinosaur extinction, making it far too early to be the cause.

For comparison, the article discusses the 1783 eruption of a similar type of volcano in Iceland, the Laki event. The Earth tore open, and witnesses recorded that dust blocked out the sun so that it was impossible to read. Mass Icelandic deaths began eight days later; 60 percent of the livestock and 20 percent of the human population were killed. Benjamin



Franklin recorded "a great fog" over much of America. Droughts struck Egypt, India, and China; Japan experienced "a year without a summer," and its worst famine in history. Europe had a three-year famine, and some historians blame the French Revolution on the Laki eruption. It was, shall we say, a serious event.

Yet, the Laki eruption released a mere 3.3 cubic miles of lava; the Deccan released 720,000 cubic miles of lava! Mountains of volcanic basalt in India reach 2.1 miles in height, almost twice the depth of the Grand Canyon. Lava flows (the longest on Earth) extend some 600 miles, to the Bay of Bengal.

Keller argues that the environmental consequences of the Deccan eruption included a 46 degree increase in air temperature around the world (and here WE are, debating whether 2.5 degrees of global warming is an issue or not!) She says that the volcanic trauma lasted tens of thousands of years before the peak of the extinctions, and that global recovery took another half a million years afterward.

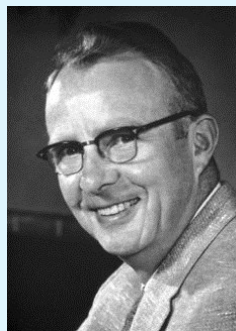
In 1997, scientists distributed fossil samples for a blind test, to attempt to reconcile the question of how long the fifth extinction lasted. "The researchers came back exactly split." At "a recent conference," researchers debated "the validity of the Deccan volcanism versus the impact theory" in front of a "peer" audience. The Volcanologists claim a 70/30 win, by vote of hands. The Impactors claim a 60/40 win, by the exact same vote of hands.

*(Continued on page 4)*

## Luis Walter Alvarez

June 13, 1911 – September 1, 1988

Alvarez was an American experimental physicist, inventor, and professor who was awarded the Nobel Prize in Physics in 1968. The American Journal of Physics commented, "Luis Alvarez was one of the most brilliant and productive experimental physicists of the twentieth century."



During World War 2 Alvarez worked on various SONAR and RADAR projects and in 1943 arrived at Las Alamos, New Mexico where he reported to Dr. Robert Oppenheimer on the Manhattan Project.

Alvarez and his son Walter Alvarez, a geologist, developed the Alvarez Hypothesis of Extinction positing that a meteor or comet struck the Earth. The theory published in 1980 paper and was considered improbable by many scientists. In a decade the theory was eventually accepted by most scientists as the likely cause of dinosaur extinction.

## Gerta Keller (born 7 March 1945)

Gerta Keller is Professor of Paleontology and Geology in the Geosciences Department of Princeton University since 1984.

She received a B.S. degree from San Francisco State University in 1973 and a Ph.D. degree from Stanford University in 1978. Since 1984 Keller has been Professor of Geosciences at Princeton University.

Gerta Keller is a paleontologist who contests the Alvarez Hypothesis that the impact of the Chicxulub impactor, or another large celestial body, caused the Cretaceous–Paleogene extinction event. Keller maintains that such an impact predates the mass extinction and that Deccan volcanism and its environmental consequences were the most likely major cause possibly exacerbated by the impact



In 2010, forty-one authors co-signed a paper in Science claiming that Chicxulub was indeed the extinction-causing event. "[D]ozens of geologists, paleontologists, and biologists" objected to the journal, contesting the paper's bona fides. They argued that "science is not done by vote," and the subject remains unresolved, having reached no reliable consensus. Thus, the Extinction Wars continue.

The article wraps up by tying in today's global warming situation. It is arguable that the same chemicals we're releasing by burning fossil fuels are those which the Deccan eruptions released. Keller argues that "[w]e are living in the middle of a mass extinction today, but none of us feel that urgency, or that it is really so." This brings the shade of relevance to this issue from Earth's most recent, 66M-year-old fifth extinction; is our current sixth extinction the fault of humani-

ty? One group of us are certain that humans have caused global warming, a planetary threat. The other group is equally certain that this is just an ordinary environmental swing, among many, and we may go on as we've been doing, with no concern. Just as the evolution/creation debate continues, so does the volcanism/impact debate over the cause of the fifth extinction, and so does the political debate over global warming and the future of our planet. I can't begin to resolve any of these debates in this forum, but I CAN highly recommend the Atlantic article to everyone who loves a well-written story about an ongoing scientific dispute of global proportion.

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### A History of Extinction (Paraphrased from the article discussed above, by Bianca Bosker.)

- ◆ The Earth is 4.5 billion years old (give or take a week).
- ◆ 700Mya, single-celled organisms in the ocean began linking together to create multi-cellular life forms.
- ◆ 440Mya, the first extinction wiped out many of the earliest life forms, due to apparent volcanic causes. Fish appeared, and four-legged creatures began living on land.
- ◆ 372Mya, the second extinction destroyed three-quarters of all life on the planet. It was apparently caused by volcanoes. For 100 million years, life thrived once again. The first reptiles, the first shelled eggs, and the first plants with seeds appeared.
- ◆ 252Mya, "the Great Dying" occurred, the third extinction. 96 percent of all species vanished. Volcanoes were again the apparent cause.
- ◆ 201Mya, half the survivors of the third extinction were wiped out by the fourth extinction. Volcanoes were yet again the cause. What followed was the age of dinosaurs. They thrived for some 135 million years. Stegosaurus lived and went extinct; 67 million years later, Tyrannosaurus appeared (we are separated by only 65 million years from Tyrannosaurus!) During the dinosaur era, the first flowering plants appeared, as did placental mammals, and the largest land animals ever to walk the earth.
- ◆ 65Mya, the fifth extinction took place. We're apparently still trying to figure out how that one happened.



# 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, January 19, 2019 at 2:00 PM- PhACT Lecture.**

**Our speaker will be Paul Offit, M.D., a vaccinologist and pediatrician.**

**His topic will be his book:**

***Bad Advice: Why Celebrities Aren't Your Best Source of Health Information***

Science doesn't speak for itself. Neck-deep in work that can be messy and confounding, and naïve in the ways of public communication, scientists are often unable to package their insights into the neat narratives that the public requires. Enter the celebrities, the advocates, the lobbyists, and the funders behind them, who take advantage of scientists' reluctance to provide easy answers, flooding the media with misleading or incorrect claims about health risks. Amid this onslaught of spurious information, Americans are more confused than ever about what's good for them and what isn't.

In *Bad Advice*, Paul A. Offit shares hard-earned wisdom on the dos and don'ts of battling misinformation. For the past twenty years, Offit has been on the front lines in the fight for sound science and public health. *Bad Advice* discusses science and its adversaries: not just the manias stoked by slick charlatans and their miracle cures but also corrosive, dangerous ideologies such as Holocaust and climate-change denial.

**Paul A. Offit, M.D.** is the director of the Vaccine Education Center at the Children's Hospital of Philadelphia as well as the Maurice R. Hilleman Professor of Vaccinology and professor of pediatrics at the Perelman School of Medicine at the University of Pennsylvania. He is an award-winning physician, coinventor of a rotavirus vaccine, and the author of several books on medical and scientific issues.



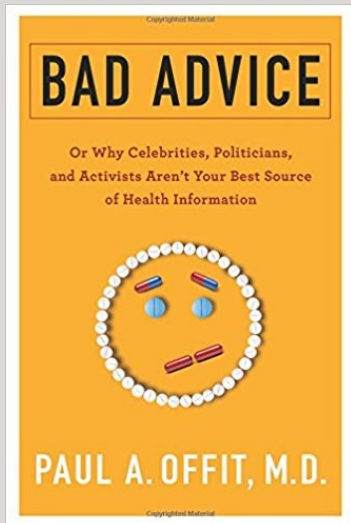
## Saturday, February 16, 2019 at 2:00 PM - PhACT Lecture.

**Our speaker will be Earl Bennett,  
past President of Philadelphia Area Space Alliance.  
His topic will be: *The Search for Extra Terrestrial Intelligence***

The Search for Extra Terrestrial Intelligence, or SETI, has gone on since it was first recognized that the planets and stars are objects like the earth and the Sun. Many techniques from history were rather limited before we had electronics and nuclear technologies. Some of the present techniques will be discussed, and the possibilities of future systems based on what have been planned by various groups and organizations. Technology developed in the last few years have not only identified over 2000 exo planets, but is getting data on their atmospheres. Latest technology to search for intelligent life now includes newer optical technology as well as radio waves .

Our speaker, Earl Bennett, was born in Philadelphia, in 1949, and attended Drexel University. His interest in space exploration and science has lead him to join various organizations including: The SETI League, The Planetary Society, AMSAT (The Amateur Satellite Corporation), and The National Space Society, N.S.S. Earl has been President of the Philadelphia Area Space Alliance for a number of years. They promote science and technology education by performing outreach to the general public as guests of various museums and organization.

## Saturday, March 16, 2019 - PhACT Lecture. Topic to be Determined



## Bad Advice: Or Why Celebrities, Politicians, and Activists Aren't Your Best Source of Health Information by Paul Offit M.D.

**Hardcover: 272 pages Publisher: Columbia University Press (June 19, 2018)  
ISBN-10: 0231186983 ISBN-13: 978-0231186988**

Science doesn't speak for itself. Neck-deep in work that can be messy and confounding and naïve in the ways of public communication, scientists are often unable to package their insights into the neat narratives that the public requires. Enter celebrities, advocates, lobbyists, and the funders behind them, who take advantage of scientists' reluctance to provide easy answers, flooding the media with misleading or incorrect claims about health risks. Amid this onslaught of spurious information, Americans are more confused than ever about what's good for them and what isn't.

In *Bad Advice*, Paul A. Offit shares hard-earned wisdom on the dos and don'ts of battling misinformation. For the past twenty years, Offit has been on the front lines in the fight for sound science and public health. Stepping into the media spotlight as few scientists have done—such as being one of the first to speak out against conspiracy theories linking vaccines to autism—he found himself in the crosshairs of powerful groups intent on promoting pseudoscience. *Bad Advice* discusses science and its adversaries: not just the manias stoked by slick charlatans and their miracle cures but also corrosive, dangerous ideologies such as Holocaust and climate-change denial. Written with wit and passion, Offit's often humorous guide to taking on quack experts and self-appointed activists is a must-read for any American disturbed by the uptick in politicized attacks on science.

## Saturday, April 20, 2019 - PhACT Lecture. Topic to be determined

## Saturday, May 18, 2019 - PhACT Expedition to Indian Rock

At Tyler Arboretum in Delaware County by the picturesque Rocky Run sits a peculiar artifact known, at least since 1907, as Indian Rock. Our guide, Don Nigrone, will relate the theories as to what Indian Rock might really be and we will discuss the local history of the Lenape and a strange document, the Walum Olum, ascribed to them. Robb Kerr will be providing botanical information about this scenic Piedmont site and Kim Sheridan will be photo-documenting the day's activities. We will meet at the Visitor Center by the parking lot at 10:00 AM. Then we will hike from the Visitor Center along the Blue Trail for one mile each way to inspect this mysterious stone.

For directions to Tyler Arboretum at 515 Painter Road, Media, PA 19063 go to <https://www.tylerarboretum.org/>. Although we may not figure out what Indian Rock really is, we will learn about the history and natural history of this Piedmont site. Bring insect repellent, sturdy shoes, lunch, and a camera.

The event is free and open to the public.



American Chestnut nursery at Tyler Arboretum.

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“We need the tonic of wildness...At the same time that we are earnest to explore and learn all things, we require that all things be mysterious and unexplorable, that land and sea be indefinitely wild, unsurveyed and unfathomed by us because unfathomable. We can never have enough of nature.”

— Henry David Thoreau, (1817-1862),  
*Walden: Or, Life in the Woods*

# Letters to the Editor

Letters and Rants to the Editor are encouraged.

Send to

[PhACTPublicity@aol.com](mailto:PhACTPublicity@aol.com)



Editor: 49 trades of Apple stock were executed while Apple's market capitalization rose above \$1 trillion for the first time, 06 August 2018. Or so I learned from an article online from "MarketWatch" of "Dow Jones Newswires". But that's not what the headline said. It read: "Nearly 50 Trades In Apple's Stock Went Through At The \$1 Trillion Market-cap Level".

"49" is fewer characters and can be said more quickly than "nearly 50". Why the journalistic aversion to precision (which is common, I think)? Is it believed that "nearly 50" leaves more of a desired impression--is more memorable--than "49"? I don't know.

PS Enough with the gambling articles already (again).

Howard J. Wilk

Philadelphia

Editor: Look at this website:

<https://www.gatestoneinstitute.org/13434/turkey-brain-drain> it includes:

"Dr. Yavuz Örnek from Istanbul University's Marine Sciences Faculty, claimed that technology was more advanced in the times of the Prophet Noah than it is today. Hosted by TRT, Örnek said that Noah had talked to his son on a mobile phone in order to convince him to come aboard his ark. And that ark, Örnek claimed, was made of steel construction resistant to waves as high as 400 meters. Noah's ark ran on nuclear power, he added."

And here is another version of the story:

<https://friendlyatheist.patheos.com/2018/01/11/turkish-scientist-noah-called-his-son-on-a-cell-phone-before-boarding-the-ark/>

In decades as a skeptic, I've found the easy part of dealing with paranormal claims is learning "where they simply fall to the ground" - their lack of evidence and the real Science that should lead people to reject them. For years I've noticed that is not enough to get through to people. There is a useful motto for those of us who try to promote reason, "ideas irrationally arrived at are not easily rationally dismissed". I've found the direct approach with believers will often just alienate them. I've found I can get farther if I take a more engaging dialog along the lines of "that would be really fascinating if that is correct - now what kind of evidence or test could prove it?". In my long personal attempt to combat false claims of free energy -I've

offered a monetary prize for real proof, and even a finders fee for someone who can convince a claimant to take my challenge and pass.

The following is a start of a dialog with a man who believes he has a design that could make us all the power we need out of thin air.

Man: "I got an inquiry from you about the prize. "

Eric: "Yes, It is still available and I would love to pay it out. If there were there a form of non polluting energy with no conventional fuel that would power a typical house - my net worth would bump up much more than that price as the planet would enter a new golden age. Solar voltaics, solar heat energy, fusion power, fission power for nuclear decay do not count. The device would need to be transportable - if that would be tough, I'd be willing to travel only if someone I arrange would see it run first. I'd want 24 hours time of seeing it put out at least 5000 watts energy (could be dumped as just heat) in a way I could measure. As an electrical engineer, I would need to validate that level of energy in the electrical form. The excess energy would need to be externally available - preferably in the 50 - 300 volt range so I could arrange an electrical load. If you have something



DID YOU GET IT WET?

CartoonStock.com

working, I'd want to touch bases with you to make sure my terms would be ok with you before you would travel to the Philadelphia area.

A few things I have told the many people like you who have thought they have an idea that could work: if you do a little looking on line, You would likely see your idea has



been thought of many times over the last century  
I encourage you to read over the laws of conservation of energy

I encourage you to read up on people who have dedicated their entire lives and fortunes to chasing down such ideas

I always recommend that people test their idea on a small cheap scale first: a proof of concept that can at least self run for days even with no excess power

If you believe in a conspiracy that would potentially silence you for doing this - I encourage you to write up the design and forward it to a number of people (I'd be glad to be one) who could always broadcast it far and wide on the internet in case you were silenced. (some people are far more afraid of such an idea being stolen than in a big conspiracy against FE)

Even if you would have something that say only makes 100 watts, I'd be open to negotiating possible custom made acceptance-test-terms that maybe could accommodate a lesser amount of power

The big thing I would need to do in my test is be able to completely rule out any kind of fraud like hidden power

sources - so I'd prefer as much as possible of the inner workings exposed for inspection. Terms for that are negotiable as well.

Even if you have too little excess power to get close to my prize terms - if you have something that defies the laws of physics that engineers and scientists like me presently believe in; I'd be happy to help promote your work if you even have something that appears to violate known rules of physics."

Eric Krieg,  
Phoenixville, PA

Editor's note: The man never displayed his invention.

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## Reader Participation Desired

**"It is the mark of an educated mind to be able to entertain a thought without accepting it." - Aristotle**

Aristotle certainly makes a major Critical Thinking observation in that statement. There is an abundance of examples of thoughts regarding social customs, religion, sex, politics, science, slavery, prisons, vegetarianism and many others aspects of life where there is a multitude of differing and controversial opinions. One may accept or reject any of those ideas but progress in Civilization can only be made if serious thinkers entertain various propositions. We invite readers to ventilate with passion, but not anger, on some matter that might interest Critical Thinkers and annoy some others.

We would very much like participation from Creationists, UFOlogists, Homeopaths and others often scorned by Skeptics. Student letters and essays are as welcome as communications from established professionals. It could be a great mental and writing exercise to entertain some thoughts that you do not accept. But, please, no electoral politics and we really do not care about the vapid antics of the Kardashian Sisters.

Send submissions to the Phactum Editor at [phactpublicity@aol.com](mailto:phactpublicity@aol.com)

Aristotle (384 BC – 322 BC),



Greek philosopher. He was a student of Plato and teacher of Alexander the Great.

# Various Ruminations of Woo Woo and Real Science and some Gossip

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

## The Evolution of Creationism

Eric Krieg was the PhACT speaker in October, his topic being *The Evolution of Creationism*. It is an interesting topic for sure. Eric mentioned that he did derive a lot of inspiration from the work of NCSE (National Center for Science Education) and I must agree, but unfortunately NCSE has not been mentioned much in recent Phactum editions. We apologize for that as NCSE is quite scholarly and does keep track of the various matters of Creation and Intelligent Design that keep popping up around the United States and elsewhere.

NCSE is about more than just Creationism, it also is deeply involved in the Climate Change debate. I will confess that I am somewhat of a Climate Change skeptic. It is not that I dispute the fact that the climate is changing because of human activity, but I must say that I am highly skeptical of the various corrective solutions that I have heard up to now.

NCSE is a good place to obtain up to date information about climate change and we plan to tune in more closely.

The NCSE website is: [www.NCSE.com](http://www.NCSE.com) and note that it is COM, not ORG! [www.NCSE.org](http://www.NCSE.org), coincidentally is also operated by very nice people in North Carolina Southeast, a region that recently got very badly whacked by a major hurricane. Was that storm caused by or exacerbated by Climate Change? .

## Gambling Notes:

### ♣♦♥♠ USA - NHL To Reap \$200M From Sports Betting, Casino Industry Says

On the heels of a sports betting hearing on Capitol Hill, the U.S. casino industry released new findings to show that the National Hockey League will see a financial windfall from legal sports betting. The NHL annual revenue "may increase" by \$216 million annually due to widely available, legal and regulated sports betting, according to a Nielsen Sports study commissioned by the American Gaming Association. The findings follow a similar study that laid out how the National Football League could reap \$2.3 billion in additional revenue annually. The NFL is the most popular sport for betting. The casino industry itself is eyeing about \$15 billion in additional gambling revenue per year, if all 50 states have legal sports betting. Americans are said to bet \$150 billion each year on sports, with the vast majority coming through illicit channels. . .

Read article: <https://www.cardplayer.com/poker-news/23270-nhl-to-reap-200m-from-sports-betting-casino>

### -industry-says

### ♣♦♥♠ USA - Wisconsin - Talk to your kids about the risk of gambling

The Wisconsin Council on Problem Gambling (WCPG) is urging parents to take some time and talk to their children about the risk factors of gambling. "Parents and others should be aware that teens and young adults are among the highest risk groups for developing gambling problems," said Rose Blozinski, WCPG Executive Director. "It's important for people to know that gambling can become an addiction. Awareness is an important part of heading off problems before they get too far." Blozinski says parents should be talking to their middle school and high school age kids, as well as those in college. "The independence of campus living may be an inducement to gamble for some college students," Blozinski says. "But the seeds are often sown at a much earlier age. This is really the first generation that has grown up with widespread gambling throughout the United States." Read article: [https://lacrossetribune.com/community/westbytimes/news/talk-to-your-kids-about-the-risk-of-gambling/article\\_7f1458ad-7062-5732-882d-79d334c4f8f1.html](https://lacrossetribune.com/community/westbytimes/news/talk-to-your-kids-about-the-risk-of-gambling/article_7f1458ad-7062-5732-882d-79d334c4f8f1.html)



### ♣♦♥♠ USA - Pennsylvania - Betting with a smartphone? The casinos know who you are, and where you are located.

When online gaming launches soon in Pennsylvania, bettors with a smartphone will be able to gamble from just about anywhere in the state. You can gamble from work. You can gamble from school. You can gamble in a bar. You can gamble from the bleachers. You can even bow your head and gamble from a pew. Say amen. But there is one place in the commonwealth where you can't engage in interactive wagering - and that is from inside the state's 13 licensed casinos. Under Pennsylvania's expanded gaming law passed last year, which legalized a range of new ways for gamblers to put their money on the line, licensed operators must prevent players from accessing interactive games while they are inside casinos, using the same cell-phone technology to determine whether they are actually within the state's borders.

Read article: [http://www.philly.com/philly/business/tourism\\_casinos/pa-allows-online-betting-from-anywhere-except-casinos-20181010.html](http://www.philly.com/philly/business/tourism_casinos/pa-allows-online-betting-from-anywhere-except-casinos-20181010.html)

♣♦♥♠ **USA - Philadelphia** 2-year sentence for 'Skinny Joey' Merlino, reputed longtime Philly mob boss

"Skinny Joey," the onetime boss of the Philadelphia mob, was sentenced Wednesday to two years in federal prison for a gambling-related count to which he pleaded guilty in April. Manhattan-based prosecutors accused Merlino and 45 other alleged mobsters of operating illegal gambling rings and bribing doctors to write unnecessary prescriptions for topical skin creams, among other alleged schemes. Nearly every defendant pleaded guilty before trial, but Merlino opted to take his case before a jury - even though he faced a lengthy potential prison term if convicted. It was the stiffest possible penalty for Merlino, who had opted to plead guilty to a single count instead of facing a retrial on a litany of other charges

Read article: <http://www.philly.com/philly/news/crime/joey-merlino-philadelphia-mob-boss-sentenced-federal-prison-gambling-20181017.html>

♣♦♥♠ **USA - Nevada—Dangers of gambling increase as jackpot hits high**

The highest jackpot in history is up for grabs, with Mega Millions at \$1.6 billion for Tuesday night's drawing, but with the high-dollar amount comes large crowds and an increase with some of the dangers and risks that come with gambling. "People are spending up to a thousand dollars on buying tickets for this lottery, so where should that money be going and how much house-hold has been taken?" asks Donna Meyers, a certified problem gambling counselor at Bristlecone. Meyers says gambling itself is not about the money, but the behavior. "So when a person is taking their rent money or their bill money and spending it on the lottery or in casinos, it doesn't matter, but

they're taking that same behavior every single day and exhibiting that their gambling is more important than the rest of their lives," she says.

Read article: <https://www.kolotv.com/content/news/Dangers-of-gambling-as-jackpot-hits-all-time-high-498261671.html>

♣♦♥♠ **Canada - British Columbia - How flashing lights and catchy tunes make gamblers take more risks**

Lights and sounds coming from electronic gambling machines - also known as EGMs, pokies or slots - contribute to their addictive potential according to new research published today. Scientists from the University of British Columbia, Canada, set up experiments with human subjects using gambling tasks and "sensory cues" such as flashing lights and catchy tunes. They found that people made riskier decisions and were less able to interpret information about their probability of winning when exposed to cues associated with previous wins. In their new study, lead authors Catharine Winstanley and Mariya Cherkasova subjected humans to rewards accompanied by sensory cues such as flashing lights and casino sounds. This increased arousal, or excitement - measured by dilation of the pupils of the eye. It also led to a decline in sensitivity to information about odds and probabilities..

Read article: <https://theconversation.com/how-flashing-lights-and-catchy-tunes-make-gamblers-take-more-risks-105852>

♣♦♥♠ **USA - Pennsylvania - Pennsylvania grants license to Harrah's for sports gambling**

The Pennsylvania Gaming Control Board Wednesday approved an application from Harrah's Philadelphia Casino for the \$10 million license at a hearing in Harrisburg. "We know Pennsylvanians are passionate sports fans and we are working hard to be ready to launch a sports book at Harrah's Philadelphia along with a mobile product when first given



By Brooks Rimes

## Freethinking Cryptograms

### By Brooks Rimes

**Publisher: Independently published (October 30, 2018)**

**Paperback: 109 pages**

**ISBN-10: 1729113931**

**ISBN-13: 978-1729113936**

Solving cryptograms is fun and these quotes will inspire new ideas! •Respected and admired men and women have quotes here, including Abraham Lincoln, Andy Rooney, Benjamin Franklin, Billy Joel, Ernest Hemingway, Frank Lloyd Wright – a total of 191 famous folks. •Many walks of life are represented, including Actors, Astronomers, Comedians, Explorers, Inventors, Magicians, Musicians, Presidents and Singers – 71 occupations in all. •So sharpen your pencil, put on your thinking cap and start solving the 250+ puzzles!

the go ahead," said Harrah's Philadelphia Senior Vice President and General Manager Chris Albrecht in a statement. Harrah's expects to be able to draw from the experience of its parent company, Caesars Entertainment Corp., which already conducts sports betting in Nevada, Mississippi and New Jersey.

Read article: [https://www.delcotimes.com/business/a-sure-bet-pa-grants-license-to-harrah-s-for/article\\_9bdef69e-dd4b-11e8-8c02-23bacee0fe3f.html](https://www.delcotimes.com/business/a-sure-bet-pa-grants-license-to-harrah-s-for/article_9bdef69e-dd4b-11e8-8c02-23bacee0fe3f.html)

### ♣♦♥♠ **United Kingdom - Women are gambling more than ever, but why?**

For many years, gambling has been considered to be a male habit. The world of online casinos provides a safe space where players of any gender can enjoy the thrill of gambling without having to contend with the unwanted social elements. In fact, the ranks of female online gamblers are swelling so rapidly that they've become a cause for scientific study and tabloid newspaper concern.

Casino firms have taken note, and altered their formats to better serve their new customers. RoseSlots.com wouldn't exist if there wasn't an audience for it, but it's out there and

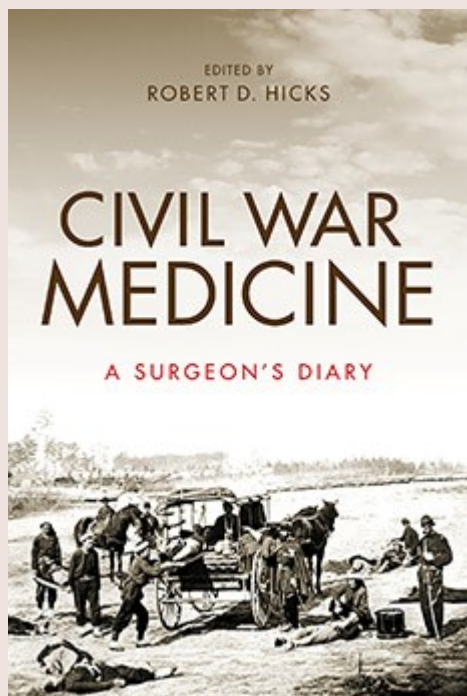
thriving. So how do female customers engage with the online gambling world? Do they have different aims and habits than men?..

Read article: [https://www.novinite.com/view\\_news.php?id=193086](https://www.novinite.com/view_news.php?id=193086)

### ♣♦♥♠ **USA - New York - - The sports-betting mission pro leagues refuse to tell fans about**

Now there's a rush by every pro team, league and mass media enterprise to promote gambling - to partner with gambling operations - in order to race state governments for their share of the profits. While the primary mission of gambling operations is to have customers lose their money, no commissioner or team owner would dare go on record telling that indisputable truth. Gambling operations, legal and illegal, are predicated on customers losing their money. Period, end story. The failure to reveal or even acknowledge such an incontrovertible truth is equally shameful and unsurprising. Next stop: Ancient Rome.

Read article: <https://nypost.com/2018/11/10/the-sports-betting-mission-pro-leagues-refuse-to-tell-fans-about/>



## Civil War Medicine A Surgeon's Diary

Edited by Robert D. Hicks

Publisher: Indiana University Press

Publication date: 05/01/2019

Hardback 360 pages

ISBN: 978-0-253-04007-7

This product is currently in production and will be available on 05/01/2019

In this never before published diary, 29-year-old surgeon James Fulton transports readers into the harsh and deadly conditions of the Civil War as he struggles to save the lives of the patients under his care. Fulton joined a Union army volunteer regiment in 1862, only a year into the Civil War, and immediately began chronicling his experiences in a pocket diary. Despite his capture by the Confederate Army at Gettysburg and the confiscation of his medical tools, Fulton was able to keep his diary with him at all times. He provides a detailed account of the next two years, including his experiences treating the wounded and

diseased during some of the most critical campaigns of the Civil War and his relationships with soldiers, their commanders, civilians, other health-care workers, and the opposing Confederate army. The diary also includes his notes on recipes for medical ailments from sore throats to syphilis.

In addition to Fulton's diary, editor Robert D. Hicks and experts in Civil War medicine provide context and additional information on the practice and development of medicine during the Civil War, including the technology and methods available at the time, the organization of military medicine, doctor-patient interactions, and the role of women as caregivers and relief workers. Civil War Medicine: A Surgeon's Diary provides a compelling new account of the lives of soldiers during the Civil War and a doctor's experience of one of the worst health crises ever faced by the United States.

### ♣♦♥♠ USA - California - Nuns embezzled \$500,000 which they spent on vacations and casinos

Two nuns in California allegedly stole more than \$500,000 from the school they had been at for years, which they spent in casinos and on vacations. Bank records show Sister Mary Margaret Kreuper and Sister Lana Lang had been embezzling funds from St. James Catholic School in Torrence for at least a decade. But officials from the Archdiocese of Los Angeles told parents and alumni of the school that auditors have not been able to trace all of the money trail. : "We do know that they had a pattern of going on trips, we do know they had a pattern of going to casinos, and the reality is, they used the account as their personal account."

Read article: <https://www.newsweek.com/nuns-gambling-casinos-margaret-kreuper-redondo-torrence-1250634>

### ♣♦♥♠ USA - Gambling Habits In Men And Women-What Do They Have In Common?

If we are to divide the preferences based on the types of games, men are more into games which require skills and strategy. On the other hand, women prefer games of luck and those which are lower-risk ones. Moreover, men tend to compete against each other, and ladies choose live dealers instead. So, you will find men enjoying sports betting at the first place, and various table games, while ladies are more into bingo and slots. Of course, these are just some general likes and dislikes, no one says a man cannot have fun spinning the reels or women can't enjoy the thrill of a good game of poker. As for betting, men are comfortable with non-predetermined wagers whereas ladies choose fixed bets and longer sessions at lower stakes..

Read article:

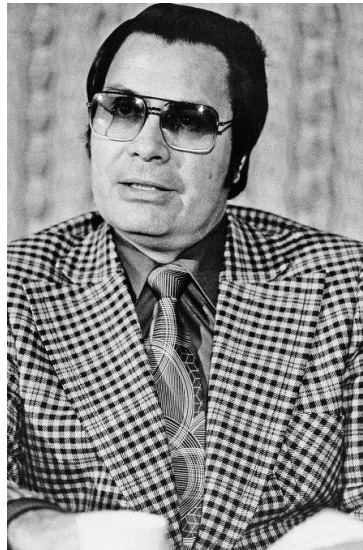
<https://www.casinonewsdaily.com/2018/12/18/gambling-habits-in-men-and-women/>

### A Coincidence About Cults or "Don't Drink the Cool-aide"

Joe Szimhart, an expert on cults, was the PhACT speaker on Saturday, November 17, 2018. By great coincidence *The Guardian*, a British publication, presented an article the very next day by author Laura Woollett, who in 2015 spent two months in the United States researching the cult known as the People's Temple.

Forty years ago, in 1978, a mass murder/suicide resulting in 918 deaths occurred in a remote village called Jonestown in the jungles of Guyana. The leader of the People's Temple was a charismatic preacher named Jim Jones who had named the town after himself. Jones was originally from Crete, Indiana but the People's Temple first formed in Redwood Valley, California where the original Temple still stands.

This is an interesting story, well worth a few minutes to read. Not mentioned in this account of the People's Temple cult is the fact that on the fatal day, November 18,



People's Temple founder and leader,  
Jim Jones (1932 1978)

1978, Congressman Leo Ryan of California who had led a fact finding delegation of cultist family members and media personnel, was shot as the delegation was attempting to depart Jonestown. Ryan and four others were murdered at that time. Future Congresswoman Jackie Speier who served in the House of Representatives from 2008 to 2013, was among those in the Ryan party and was badly wounded, shot five times, in the ambush.

Most of the 918 victims in this incident were American citizens. A few died of gunshot but most, 909, died of cyanide poison administered in a sweet drink. The term "Don't drink the Cool-aide" was coined because of the Jonestown Massacre.

Jim Jones also died on that day, his demise being a self inflicted gunshot to the head.

<https://www.theguardian.com/culture/2018/nov/19/the-c-word-what-are-we-saying-when-we-talk-about-cults>

### Dr. Stephen Barrett Reports in Consumer Health Digest

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:

[chd-subscribe@lists.quackwatch.org](mailto:chd-subscribe@lists.quackwatch.org)

Dr. Barrett's main website is: [www.quackwatch.org](http://www.quackwatch.org)

### ▶▶▶ "Alternative medicine" use linked to shorter survival for cancer patients

Using the National Cancer Database, researchers from Yale School of Medicine identified 281 patients who: (a) had breast, prostate, lung, or colorectal cancers that had not metastasized at the time they were diagnosed, (b) chose "unproven cancer treatments administered by nonmedical personnel" (the AM group), and (c) did not receive conventional cancer treatment (CCT), defined as chemotherapy, radiotherapy, surgery, and/or hormone therapy. All but one patient were matched to two others who received CCT and were similar in age, cancer type, clinical group stage, other health problems, insurance type, race, and year of diagnosis. [Johnson SB and others. Use of alternative medicine for cancer and its impact on survival. *JNCI* 110:121-124, 2018.]

<https://academic.oup.com/jnci/article/110/1/121/4064136>

The researchers found:

- They could be 95% confident that, after a median of 66 months of follow-up, the "alternative medicine" (AM) users had between 88% and 227% higher risk of death than those who chose CCT.
- Among those with breast cancer, 58.1% of AM patients survived at least five years, while 86.6% of CCT patients survived at least five years.
- Among those with lung cancer, 19.9% of AM patients survived at least five years, while 41.3% of CCT patients survived at least five years.
- Among those with colorectal cancer, 32.7% of AM patients survived at least five years, while 79.4% of CCT patients survived at least five years.

Among those with prostate cancer, five-year survival percentages were similar for AM (86.2%) and CCT (91.5%), which the researchers attributed to the fact that most prostate cancers progress slowly.

### ▶▶▶ Anti-vaccine chiropractor's clinic shut down

Dena Churchill, D.C., has announced that she closed her Halifax clinic after the Nova Scotia College of Chiropractors suspended her chiropractic license and ordered her to shut down the clinic. A spokesperson for the regulatory body said it is continuing to investigate Churchill's online posts about issues outside her scope of practice, but he did not confirm that regulatory actions were taken against Churchill. [Campbell F. [Anti-vaxxing statements led to Oxford Chiropractors clinic closure](https://www.thechronicleherald.ca/news/local/anti-vaxxing-statements-lead-to-halifax-chiropractic-clinic-closure-251956/). The Chronicle Herald. Oct 22, 2018 <https://www.thechronicleherald.ca/news/local/anti-vaxxing-statements-lead-to-halifax-chiropractic-clinic-closure-251956/>]

Churchill's personal and professional Facebook pages have promoted implausible health claims including: (a) associations of vaccines with autism and cancer, and (b) the notion that bras are a greater cancer risk than smoking. [Controversial chiropractor ordered to shut down practice. CBC News, Oct 19, 2018 <https://www.cbc.ca/news/canada/nova-scotia/controversial-chiropractor-ordered-to-shut-down-practice-1.4870345> ]

### ▶▶▶ Spain proposes "alternative medicine" ban in health centers

Science and health ministers of Spain have announced a proposal to: (a) remove "alternative medicine" such as acupuncture and homeopathy from health centers where all treatment must be given by recognized professionals, and (b) develop alliances with deans, chancellors or Spanish regional authorities to end the awarding of diplomas by Spanish universities linked to these practices. Health and science advocates pressured the health ministry to act following several high-profile deaths, including that of 21-year-old Mario Rodriguez, who died after stopping his hospital treatment for leukemia based on the advice of a supposed

naturopath who claimed to be able to cure cancer with vitamins. [[Spain plans to ban alternative medicine in health centres](https://www.theguardian.com/world/2018/nov/14/spain-plans-ban-alternative-medicine-health-centres). The Guardian. Nov 14, 2018 <https://www.theguardian.com/world/2018/nov/14/spain-plans-ban-alternative-medicine-health-centres> ]

### ▶▶▶ Lead found in spices, herbal products, and ceremonial powders

The North Carolina Childhood Lead Poisoning Prevention Program has identified 59 homes where 61 children ranging from 0.9 to 6.6 years old had elevated blood lead levels ( $\geq 5$   $\mu\text{g/dL}$ ) and found that 28.8% of the 386 samples of spices, herbal remedies, and ceremonial powders in the residences contained  $\geq 1$  of mg/kg lead. [Angelon-Gaetz KA and others. [Lead in spices, herbal remedies, and ceremonial powders sampled from home investigations for children with elevated blood levels—North Carolina, 2011-2018](https://www.cdc.gov/mmwr/volumes/67/wr/mm6746a2.htm). MMWR 67:1290-1294, 2018 <https://www.cdc.gov/mmwr/volumes/67/wr/mm6746a2.htm> ]

Of the contaminated products, 11% were not intended for consumption but young children may ingest them when within reach. Most of the families were of Asian decent. but some were African American or Hispanic. Children with chronic lead exposure [can suffer developmental delays and behavioral problems](https://www.cdc.gov/nceh/lead/). <https://www.cdc.gov/nceh/lead/>  
The investigators noted:

“Increasing testing of spices, herbal remedies, and ceremonial powders for heavy metals by food safety regulators at the port of entry when these substances are imported into the United States might reduce the occurrence of lead poisoning associated with these substances. Because these products are sold nationwide, setting a national maximum allowable limit for lead in spices and herbal remedies might further reduce the risk for lead exposure from them.”

Ω Ω Ω

**[Alternative medicine is defined as] that set of practices that cannot be tested, refuse to be tested or consistently fail tests.**

**~ Richard Dawkins**

## Do We Really Need Science Education?

I am sure that we often see examples of the costs of unsatisfactory science education and impeded Critical Thinking. We likely see that every day in normal daily life at the supermarket and in a barrage of breathless media advertising of products with nearly supernatural powers to clean stains, restore vigor, to invest with astounding profits, and so on. What we do not observe so often, although it is a common occurrence, is a consumer oriented legal proceeding gone wrong because of poor problem analysis and lack of scientific understanding on the part of a jury.

Consider this item that was extracted from Dr Stephen Barrett's news letter of December 2, 2018.

### Jury decision affirmed in favor of homeopathy sellers

The United States Court of Appeals for the Ninth Circuit has affirmed a jury verdict (<https://www.casewatch.net/civil/lewert/appeal.pdf>) in a consumer class action deceptive advertising case in favor of Boiron Inc. and Boiron USA, Inc., the sellers of Oscillocochinum, a homeopathic product marketed for the relief of colds and flu-like symptoms. In the jury trial, the plaintiff argued that the product was essentially water resulting from homeopathic dilution sprayed on sugar, but the jury was persuaded by Boiron's anecdotes, clinical studies, and expert testimony that it is effective and therefore Boiron did not violate California's laws against deceptive advertising. The Appeals Court ruled that Boiron presented sufficient evidence from which the jury could have concluded that Oscillocochinum actually works and that a battle of plaintiff's versus defendants' experts could not be relitigated upon appeal. [[Ninth Circuit affirms jury verdict in favor of homeopathic remedy for flu-like symptoms](https://www.natlawreview.com/article/ninth-circuit-affirms-jury-verdict-favor-homeopathic-remedy-flu-symptoms). The National Law Review. Nov 27, 2018 <https://www.natlawreview.com/article/ninth-circuit-affirms-jury-verdict-favor-homeopathic-remedy-flu-symptoms>] Boiron had previously settled two class-action lawsuits but new ones persuaded it to go to trial. [[Consumer suits after trial led Boiron to go to trial](https://www.bna.com/consumer-suits-settlement-n57982075784/). Bloomberg BNA, July 27, 2016 <https://www.bna.com/consumer-suits-settlement-n57982075784/> ]

Oscillocochinum is prepared by incubating small amounts of a freshly killed duck's liver and heart for 40 days. The resultant solution is then filtered, freeze-dried, rehydrated, repeatedly diluted, and impregnated into sugar granules. The dilution is so great that the finished product cannot contain its alleged "active ingredient," which means that no amount of research can prove that it is effective. [Barrett S. [Homeopathy: The ultimate fake](https://www.quackwatch.org/01QuackeryRelatedTopics/homeo.html). Quackwatch, Aug 25, 2016 <https://www.quackwatch.org/01QuackeryRelatedTopics/homeo.html> ] However, this point was apparently beyond the jury's understanding.

In this legal situation both parties presented evidence to support their claims, the plaintiff asserting the homeopathic product in question, Oscillocochinum that, is useless for its stated purpose; the defendant asserting that their product works as advertised. The jury in this case decided in favor of the defendant and unfortunately the judge was obliged to accept such a decision. One hopes that the judge at least understood the incorrect conclusion of the jury.

Do we really need Science Education? Darn right we do!

A few suggestions:

- ◆ Help PhACT to once again participate in school science fairs in Philadelphia County and Bucks County.
- ◆ Please check out the National Center for Science Education at [www.ncse.com](http://www.ncse.com)
- ◆ Attend PhACT lectures, and other lectures listed in the Calendar starting on page 27
- ◆ Read "*Homeopathy and its Kindred Delusions*" by Dr. Oliver Wendel Holmes, Sr., published in 1842, the definitive argument against homeopathy. <http://www.gutenberg.org/files/2700/2700-h/2700-h.htm>
- ◆
- ◆ Get your flu shots

## Meeting Reports - October/November 2018

Reported by Peter Li, John Lam, and Josh Hansen, Physics students of Dr. David Cattell at Community College of Philadelphia.

### Eric Krieg, an Electrical Engineer and long time skeptic discussed: “The Evolution of Creationism” Saturday, October 20, 2018

#### Reported by Peter Li

The standing and longing question of “where did we come from?” and “why are we here?” is an age-old question that has yet to be answered, but one that is open for interpretation. Among some of the theories is creationism.

Eric Krieg, an electrical engineer with three children, presents an introduction on theories that certain civilizations believed in. For example, Ancient Egypt believed in Atum, the first god who created himself. Egyptians believed then that Atum created more gods by spitting them out. However, the Japanese believed in two divine gods named Izanami and Izanagi, who were a divine couple. T

he birth of other gods followed in their actions. One common theme stemmed from those theories and that seemed to be that there is a god. While these theories provided an all-mighty entity, people went off on tangents and sought answers for other questions such as the age of our planet.

The question about whether our planet was young or old created controversy. It is this question that spawned multiple theories. One such theory is the Gap theory, which details the creation of Earth in six literal 24-hour days. Looking at the evolution of religion, years of changes to beliefs offer new theories or conform to match the proven aspects of life, which people refer to as just plain science. Although, using science to disprove these religious theories often lead to being labelled as atheist, which deters some people from arguing. These accusations stem from how religion views science as a threat. Krieg points out that national creationist groups compete often try to out-science and out-skeptic other theories to one up each other. This makes competing or arguing against these religious views very hard. As an example, Krieg discusses his visit to a museum called Noah’s Ark in Kentucky. In this wooden palace, there exists a plaque or label that favors creationism over evolution by method of swaying people to think evolution offers despair. The plaque mentions religious people who die will live peacefully in the afterlife. On the contrary, people who believe in evolution will die a meaningless death, only consisting of a chemical reaction process.

It is noteworthy then to mention that these tactics to sway people do not affect people who are exposed to early proper science studies. Though this may be, people ingrained into this mentality prove hard to debate. They stick to statements that do not allow debate to progress in conversations. Furthermore, religion and other creationist theories are being pushed upon schools over evolution. Currently, certain countries, such as Turkey and countries in the middle east, have already banned the teachings of evolution. Only some countries, such as Japan and countries in South America, remain as strong teachers of evolution. This may affect issues such as climate change, which affects us all. However, it is in our best interest to continue building relationships and continue healthy debate in order to allow the free access of factual knowledge to spread.

Overall, I enjoyed the meeting and I learned some interesting historical knowledge. It was interesting to see the evolution of religion and theories of creationism as well as learn how evolution fits into all this entanglement.



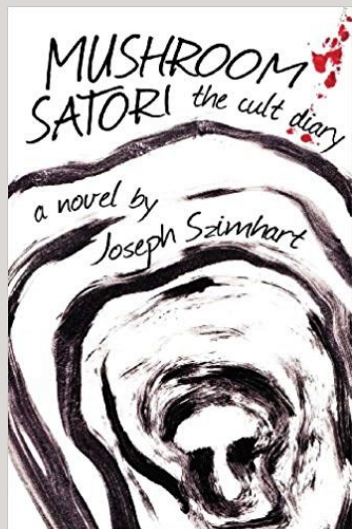


**Joe Szimhart, an artist and an internationally recognized expert on cults discussed: “Cults: 30 Years Ago and Today,”  
Saturday, November 17, 2018**

**Reported by John Lam**

In the PhACT meeting titled “Cults: 30 Years Ago and Today,” Joe Szimhart an ex-cult member himself, and experienced exit counselor discussed cult activities throughout the last 30 years. Szimhart spoke first on his own experience with the nature of cults and how he himself had been a member of a new age cult called Church Universal and Triumphant which idolized a woman leader who members believed various gods and holy figures from various religions spoke through and through whom they delivered prophecies. According to Szimhart, he became so enthralled with this cult that he neglected his wife and child who ended up leaving him.

Joe then continued to speak on various cults and cult-like occurrences over the last thirty years and what exactly classified these events and groups as cults. One such event that occurred around August 16-17 in 1987 was the Harmonic Convergence. This was event based on the planets aligning and the Mayan calendar in which all people on the Earth would come together and meditate and a “great harmonic happening” would occur. Unfortunately this did not happen.



## Mushroom Satori: The Cult Diary

By Joe Szimhart

**Publisher: Aperture Press (May 15, 2013) 398 pages**  
**ISBN-10: 9780985002695 ISBN-13: 978-0985002695**

A powerful journey where faith, -philosophy, and family collide...

The philosophy was perfect. The image, so new-age. And the idea of Zen enlightenment, so fantastically nontraditional. For Jake, the Zen Center in remote New Mexico seemed like the perfect answer to life's problems, and for ten years he knew little else. His life was slowly consumed by the cult that he thought was saving him.

Acclaimed exit therapist and cult expert Joseph Szimhart crafts a narrative that explores the complex interactions between faith, family, and reality. Inspired by the author's own experiences in a cult, the story's framework is set in the emotionally rooted trappings of a fringe religious commune, which provides a poignant backdrop for examining the problems we all struggle to overcome. It also presents a chilling look at the subtle manipulations that charismatic figures use on the rest of us.

It is estimated that five to seven million Americans have been involved in cults or similar groups. Today, organizations such as the Church of Scientology continue to grow in size and in fame, even as they become more and more controversial. Through his vast experience Joseph Szimhart gives readers a unique opportunity to not only peer behind this curtain, but to truly understand what it is like to be entangled in a cult. He provides insight and perspective on the abstract, the dogmatic, the ordinary, and everything in between. Mushroom Satori is a secret glimpse into a world that most of us cannot fathom, and it serves as both lens and mirror with which to examine our own lives.

This novel ultimately presents a beautifully crafted message--one that will interest any reader who seeks more substance than just another happy ending. Readers will find themselves grieving over the protagonist's stolen youth even as they sympathize with the young man's bewildering trek toward adulthood. They will marvel at Szimhart's uncompromising account of the wild promises and limitations of faith that surround us and Jake alike. Mushroom Satori reminds us that when we are down, when we are disheartened, and when we are looking for answers, we are not alone.

But when we go hunting for answers and for messiahs we must be cautious--they are hunting us too.

Another series of events going on in the 1980s were cult hotlines, essentially phone lines where people would call to report cult extremism, which were flooded with very high levels of calls regarding Satanism, Scientology, and even a combination of both. Large numbers of reports were also issued about various new religions formed at the time. Joe described the hysteria from the fear of Satanism as almost cult-like in nature itself, a cult of “Fear of Satanism” to quote Joe.

Additionally, many books and literature that explored the reasoning behind cult and cult ideas were published at this time as well. Joe mentioned a book called “The Fringes of Reason: A Whole Earth Catalog: A Field Guide to New Age Frontiers, Unusual Beliefs & Eccentric Sciences” published in 1988 whose title is as self-explanatory as it is long. Also, in 1988, the magazine, *Skeptical Inquirer*, also published articles regarding cult ideas, mostly from a skeptical viewpoint of course. Books like “Homo Aestheticus: Where Art Comes From and Why” related art to ideas, many of which were found in cults. Szimhart mentioned that when he himself became involved with the cultic, he was also looking for deeper meaning in himself and his art as was a common state of thought for artist of the time.

Thus Joe described cult activities at this time as cult of ideas, places, and events. They were not always religious organizations. Szimhart described cult activity as a “Self Sealing Social System.” The “Self” aspect involved an attraction that would draw people into a cult like a higher calling such as a sense of belonging, higher understanding of an art (martial arts, aesthetics, etc.), and some great afterlife just to name a few examples. The “Sealing” refers to an exclusive authority which the controlled the cult through fear or idolization. Joe stated that these leaders could be normal looking individuals with no tell that they were cultists. The “Social” part Joe described as a “circular tension in orbit” the deeper one became involved with a cult or a cult like social structure, the more of themselves they invest into the cult, the more their lives tend to “orbit” the cult and the more they risk when leaving, the “tension.” This leads into the “System” aspect of the cult in which it is a system of indoctrination. To escape the system or leave the cult, there tends to be an “exit cost”, be it financially, mentally, socially, and even physically.

One major cult that Joe had worked with was the martial arts cult called Chung Moo Quan which was founded by John C. Kim (1934-2016) who members believed had supernatural powers which members feared. The cult indoctrinated members with physical hazing and made them take vows of death upon joining, convincing members that dying to join the cult was better than living without it. It also extorted members like a client that Joe was worked with, a young man who was almost convinced into spending over a hundred thousand dollars to be promoted into a leadership role within the cult. The cult was also known to hurt people that opposed them.

### **Reported by Josh Hansen Cults 30 Years Ago and Today**

Joseph Szimhart presented an interesting talk regarding his experience with cults in the peak of their popularity in the late 70’s and 80’s. Having been ensnared by a cult and emerging, he realized he had a knack for helping people leave cults. Apparently he has had some training with psychologists, or at least some guidance from them, but no formal education. He is an artist, a painter first and foremost from what I gathered from his talk.

Mr Szimhart’s presentation was clearly a product of his art background, drawing his conclusions about cult formation and behavior from the parallels between art and culture. Specifically as the relationship between humans and the perceived metaphysical. How some art, especially the art he was most influenced by attempts to make visual, feelings a connectedness to something else. His contention is that this desire of humanity is what a cult leader can exploit to catch and keep members.

Using several anecdotes, Mr. Szimhart was able to transform the perception of a cult member to a human seeking to be human, that was manipulated not because they are weak or stupid, but out of a true desire to be connected, belong and do good. He spoke with little ego as it pertained to his work with these cult survivors. His presence was, in general, accepting and non-confrontational. I imagine this works in his favor during his work, he also seemed very knowledgeable but admitted with ease when he didn’t know something.

He was baited to throw Catholicism on the pile of cults, but he rejected the comparison skillfully by recognizing the loose logical comparison but tossing it away easily by defining the term cult in reasonable terms. Simple psychology trick but very effective especially in a Q&A forum. He was also asked to relate Fox news watchers to cult members. When he told us his wife loved Fox news I almost laughed out loud. When he said he leaned right of center the whole room changed.

While I don’t necessarily think that cults are a very current or important topic, I really appreciated a skeptical critical thinker who was informed on his topic and stayed on topic. I think more skeptics who may not match the belief system of the group would be a benefit to meetings in the future.



## 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

At the time of Phactum publication the Wagner Free Institute Lecture Schedule for Winter/Spring 2019 had not yet been announced. Please consult the website at:

<http://www.wagnerfreeinstitute.org>

### Adult Education Winter/Spring 2019 Course Schedule

#### Fermentation: An Introduction

##### Professor Karen Snetselaar

6 Tuesdays, January 22 - February 26, 2019, 6:30 - 7:30 PM. Pennsylvania Horticultural Society, 100 N. 20th St. (20th and Arch Sts.).

This course will explore the biology behind one of the oldest ways that humans process and preserve foods: fermentation. It will look at food products from all over the world, providing an overview of the diverse and widespread nature of fermentation. The focus will be on common themes: the microbes that are used and how they are managed to produce safe fermented foods.

This course requires preregistration. Pre-registration begins on December 3, 2018.

Register online or call 215-763-6529 x23.

#### Stimulating Molecules: The Biochemistry of Euphoria

##### Professor Joseph B. Rucker

6 Wednesdays, January 23 – February 27, 2019, 6:15 - 7:30 PM. Independence Branch of the Free Library, 18 S. 7th Street (between Market and Chestnut).

This course will offer a biochemist's view of how common substances that we eat, drink and smoke work and what they tell us about how the human nervous system functions. Each week will focus on a different substance, such as caffeine or nicotine, and look at where it comes from and how it acts at the molecular and cellular level.

No preregistration necessary. Register by completing a form at the class.

#### Environmental Geology: Humans and the Earth

##### Professor Jason Downs

8 Saturdays, January 26 - March 16, 2019, 10:30 AM to Noon. City Institute Branch of the Free Library, 1905 Locust Street (west side of Rittenhouse Square).

This course will introduce environmental geology—the study of the interaction between humans and their geological environments. It will focus on topics in geology that are most relevant to the human experience, including geological impacts on human health, economics and culture, as well as human impacts on other organisms,

natural resources, and climate.

This course requires preregistration. Pre-registration begins on December 3, 2018.

Register online or call 215-763-6529 x23.

#### Recycling Realities

##### Professor Kevin Cannon

6 Mondays, March 4 - April 8, 2019, 6:30 - 7:45 PM. Falls of the Schuylkill Branch of the Free Library, 3501 Midvale Ave (at Warden Drive).

This course will survey current recycling technologies and policies. In addition to addressing the recycling of glass, paper products, food wastes, and traditional common metals, special attention will be given to plastics and technology metals recycling.

No preregistration necessary. Register by completing a form at the class.

#### Extreme Plants: Radical Adaptations in the Vegetable Kingdom

##### Professor Jordan Teisher

6 Tuesdays, March 26 – April 30, 2019, 6:30 - 7:30 PM. Pennsylvania Horticultural Society, 100 N. 20th St. (20th and Arch Sts.). This course will examine some of the most dramatic examples of plant adaptations, including carnivory, parasitism, mimicry, and drought tolerance. By exploring the biology underlying these extreme evolutionary innovations, students will gain an understanding of the basic challenges facing all plants and a greater appreciation for the diversity and ingenuity of plant form and function.

This course requires preregistration. Pre-registration begins on December 3, 2018.

Register online or call 215-763-6529 x23.

#### Genetic Engineering and Its Impact on Society

##### Professor Mary Beth Davis

6 Wednesdays, April 3 – May 8, 2019, 6:15 - 7:30 PM. Independence Branch of the Free Library, 18 S. 7th St. (between Market and Chestnut).

The Human Genome Project was completed in 2003. This course will look at some of the discoveries from human genome research, especially rapid, low-cost DNA-sequencing, and examine the ethical, legal and social implications of emerging technologies in genetic engineering.

No preregistration necessary. Register by completing a form at the 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.**

# Dr. Carl Woese, Discoverer of Archaea

by Paul Schlueter III

Most critical thinkers have an appreciation for the sciences that is well above that among the rest of society. Often, the most significant difference in scientific acceptance among critical thinkers is their acknowledgement that evolution exists, and has been the underlying mechanism of the vast diversity of life we see on Earth today. We acknowledge that, as we trace our roots backward through deep time, our species has evolved from predecessor species, families, and orders. We're all familiar with a tree-like diagram which represents the branching of the many forms of life, all diverging from previous forms, across eons and epochs, through massive extinctions and bottlenecks, and traveling across the planet in much the same way as the continents have drifted. We don't exactly know what the "first form of life on Earth" may have been, nor exactly how it came to become "alive" in the first place, but we're reasonably certain that the first Terrestrial life was a single-celled organism, and that through evolution everything else eventually derived from that first form.

If you're older than about 35, you were taught in school that evolution occurs SOLELY through diversion; a life form reproduces with variations, and those variations sometimes diverge until speciation occurs. These teachings were reasonably accurate, but they were not complete. While diversion does occur, and it causes the differentiation between many species, it has been discovered that separate parts of the genome, even parts very far apart within the "tree of life," can MERGE, entering the genomes of species very different from their source. As it turns out, the person who recognized this was also the person who discovered/named the third domain of life, the Archaea. Dr. Carl Woese's discoveries are inseparable and very interesting.

The New York Times Magazine ran an article in its 8.19.18 issue (starting at p. 34) called "Scrambling Darwin," by David Quammen. The article explains (at a level readable by high school grads) the scientific role played by Woese, who essentially created the science of "molecular phylogenetics," starting around 1969 at the University of Illinois at Urbana.

When most biologists were considering the speciation of plants and animals, Woese wanted to examine evolution a billion years earlier, among the earliest organisms. Prokaryotes (which most of us would call bacteria) were then one branch of just two, splitting the trunk of the great tree of life;

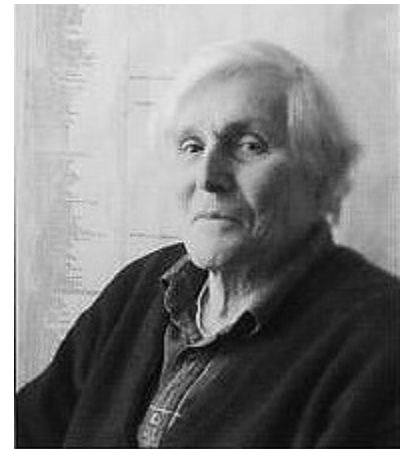
Eukaryotes (every other form of life, except for viruses) made up the other branch, coming along much later in evolutionary time. Before DNA could be "read" on non-existent "computers," Woese sought to trace the evolution of prokaryotes by examining their "ribosomes" (a minute "molecular mechanism" within every living cell that reads the instructions from DNA - via "messenger RNA" - and uses those instructions to manufacture specific proteins).

Woese settled on studying "16 S ribosomal RNA," a specific molecular fragment of the ribosome, to distinguish between bacterial species and trace their genetic heritage. Mitchell Sogin, Woese's chief technical assistant at the time, essentially had to invent, build, and operate the necessary equipment for reading this extremely short sequence of genetic information, and which printed out "the DNA code of A, C, G, T, but with U replacing the T" because this was RNA, not DNA. In pursuing this work, Woese befriended and sought advice from one of the actual co-discoverers of DNA itself, Francis Crick of Cambridge, England.

Woese discovered that a distinct group of bacteria-like organisms carried some of the DNA sequences of bacteria, yet also contained bits that other bacteria didn't have. He had discovered a completely new and separate form of

life (announced in the New York Times on Nov. 3, 1977), something which has come to be known as Archaea.

That discovery alone should have made Woese a household name (at least among biologists), but it turns out that Woese wasn't much of a publicist, he had marginal lecturing skills, and he was something of an outsider among the scientific community. However, not only did Woese discover this new form of life, but he also clarified that genes can sometimes transfer horizontally, between disparate lifeforms, en-



**Dr. Carl Woese (1928-2012)**

tirely separate from typical inheritance (which was viewed as a "vertical" gene transfer).

Horizontal Gene Transfer (H.G.T.) can transfer segments of DNA itself, sideways between the limbs and branches of the tree of life, from one sort of creature into another unrelated sort! This disrupted the thinking among many biologists of the time, and Woese still wasn't done shaking the branches.

Woese's third major revelation was that we humans have a distinct DNA heritage which we probably obtained through H.G.T. from that bacteria-like third domain of life, the Archaea! Biologists took Woese for a whacko crackpot. Yet, we indeed carry some DNA sequences that match Lokiarchaeota, recently discovered 11,000 feet down (between Greenland and Norway), near a deep sea hydrothermal vent (among other curious DNA segments).

George Fox, Ph.D., had joined Woese in Urbana, and he became Woese's sole co-author on the 1997 paper revealing the third domain of life (often referred to as "Woese and Fox (1997)" in subsequent biology papers). Unfortunately, the general press misunderstood Woese's scientific terminology, and many reporters distorted Woese's findings so badly that most of the Biology field distanced themselves from his work for a decade.

Finally, in Europe, others began to recognize that Woese had indeed found something important. In 1984, Woese was granted MacArthur Fellowship recognition for his work in phylogenetic analysis and his discovery of archaea. In 1988, he was elected to the National Academy of Sciences (at the relatively late age of 59).

Woese published a second major paper in June 1990, in "Proceedings of the National Academy of Sciences," titled "Towards a Natural System of Organisms." In it, Woese proposed that organisms should be classified solely by "natural" classes (phylogeny, reflecting evolutionary relationships). Second, he proposed that "the tree of life" should contain three main branches which he named "domains," not the two (or sometimes five) that were previously recognized. Third, he named the domains Bacteria, Eukarya (our domain), and Archaea.

So, only 28 years ago, the field of Biology finally began to accept Woese's discoveries as authentic. H.G.T. became much better understood as DNA "fingerprinting" became much easier and cheaper, and the genomes of many more

organisms were read. Even the complete genomes of many disparate species of life have now been completely examined and compared.

It has become clear that H.G.T. happens in three main ways: In "conjugation," chunks of DNA are passed between bacterial cells which come into direct contact (not reproduction exactly, but genes are transferred). In "transformation," DNA segments are sometimes left "floating in the environment" after cells get destroyed, and then they can be taken up by other cells and incorporated into those new cells' DNA. And, in "transduction," bits of DNA are picked up by viruses which infect cells of one organism, and

then when those viruses move to another organism, the DNA bits can be dropped into those cells.

Bacterial DNA has been found in the genomes of plants, but this isn't the only instance of transfer between separate domains which scientists have proven. Scientists have discovered that there is DNA from *E. coli* (yes, the familiar bacteria) present within the DNA of brewer's yeast (a fungus). When you imbibe, thank *E. coli* for that buzz!

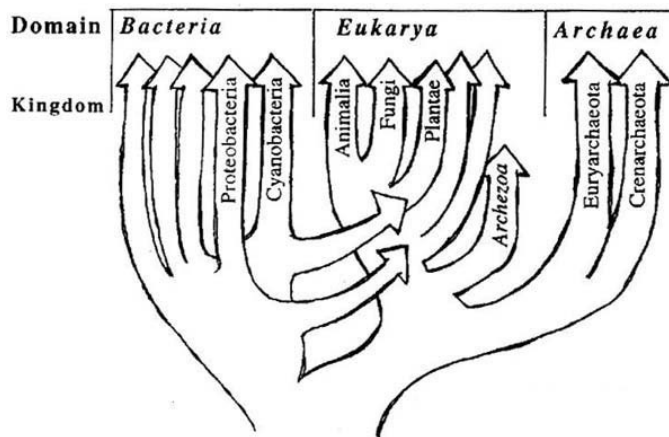
Rotifers (microscopic water critters) reproduce without sex, yet they have significant genetic diversity. It has been discovered that, through H.G.T., rotifers have genetic sequences from at least 22 other organisms. Some were fungal, some were plant, and some were bacterial. This wasn't just "junk DNA," either; some of those DNA segments produce enzymes or other products useful to the rotifers in their survival.

H.G.T. was also discovered to have occurred between different species of insects, something previously thought impossible.

Then, evidence of H.G.T. was found among mammals, and even human mammals: "[Human DNA] sequencing has revealed the boggling reality that 8 percent of our human genome consists of viral DNA inserted sideways into our lineage by retroviruses. ... [and] have even been co-opted to function in human physiology, such as creating an essential layer between the placenta and the fetus during pregnancy." That's an astonishing statement, for a gene transfer process which wasn't even recognized by biologists when prime time TV was showing the Dukes of Hazard and Starsky and Hutch!

Want another shocking realization? Consider the fact that DNA sequencing has revealed that all post-African hu-

## Horizontal Gene Transfer



man genomes include Neandertal DNA - as much as 4% (yet still only half as much as the retroviral component discussed above!)

Woese later received other recognitions for his work. He was granted the Leeuwenhoek Medal (microbiology's highest honor) from the Royal Netherlands Academy. In 2000, he was announced as the winner of the National Medal of Science (from the United States). In 2003, he received the Crafoord Prize from the Royal Swedish Academy of Sciences. He was nominated for a Nobel, but didn't win that one.

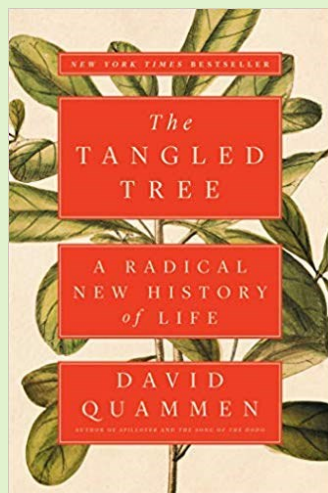
In 2004, Woese wrote another paper, this one critical of the biological sciences. Printed in *Microbiology and Molecular Biology Review*, his 14-page "A New Biology for a New Century" proposed that microbiology had strayed from the legitimate endeavors of understanding the origins and evolution of life, and become instead "an engineering discipline" focused on creating G.M.O.s for agriculture and environmen-

tal remediation.

In 2012, Woese learned that he was dying from pancreatic cancer. He gave a final interview, taping for 7 hours (across three days) "for the historical record." He answered the questions of his professional colleagues to the best of his ability, but time had taken its toll, and Woese had become (in the words of his daughter) "like a sick old man." The recording left no overwhelming impressions.

The article I've recounted here can probably be found and read in several public libraries, but for even greater depth and detail, please review *The Tangled Tree: A Radical New History of Life*, published by Simon & Shuster, from which the New York Times Magazine article was "adapted."

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## The Tangled Tree: A Radical New History of Life by David Quammen

**Publisher: Simon & Schuster; 1st Edition edition (August 14, 2018)**

**Hardcover: 480 pages**

**ISBN-10: 9781476776620 ISBN-13: 978-1476776620**

Nonpareil science writer David Quammen explains how recent discoveries in molecular biology can change our understanding of evolution and life's history, with powerful implications for human health and even our own human nature.

In the mid-1970s, scientists began using DNA sequences to reexamine the history of all life. Perhaps the most startling discovery to come out of this new field—the study of life's diversity and relatedness at the molecular level—is horizontal gene transfer (HGT), or the movement of genes across species lines. It turns out that HGT has been wide-

spread and important. For instance, we now know that roughly eight percent of the human genome arrived not through traditional inheritance from directly ancestral forms, but sideways by viral infection—a type of HGT.

In *The Tangled Tree* David Quammen, "one of that rare breed of science journalists who blends exploration with a talent for synthesis and storytelling" (*Nature*), chronicles these discoveries through the lives of the researchers who made them—such as Carl Woese, the most important little-known biologist of the twentieth century; Lynn Margulis, the notorious maverick whose wild ideas about "mosaic" creatures proved to be true; and Tsutomu Wantanabe, who discovered that the scourge of antibiotic-resistant bacteria is a direct result of horizontal gene transfer, bringing the deep study of genome histories to bear on a global crisis in public health.

"Quammen is no ordinary writer. He is simply astonishing, one of that rare class of writer gifted with verve, ingenuity, humor, guts, and great heart" (*Elle*). Now, in *The Tangled Tree*, he explains how molecular studies of evolution have brought startling recognitions about the tangled tree of life—including where we humans fit upon it. Thanks to new technologies such as CRISPR, we now have the ability to alter even our genetic composition—through sideways insertions, as nature has long been doing. *The Tangled Tree* is a brilliant guide to our transformed understanding of evolution, of life's history, and of our own human nature.



# The Water-and-Wine Paradox

## By Howard J. Wilk

Here's the paradox in my own words, which are not technically accurate: You have a glass containing a "random" mixture of water and wine (whatever that means). You're told that there's at least as much water as wine, but no more than twice as much water as wine; in other words there are 1 to 2 parts water to 1 part wine. (Different versions of the paradox have different numbers.) Of all these possible mixtures, what's the *average* ratio of water to wine (also written water:wine or water/wine)? Seems easy. If there's 1 to 2 parts water to 1 part wine, the average ratio of water to wine is 1.5. Pure mathematicians prefer to use fractions: 1.5 is  $3/2$ .

To get the inverse of a fraction or a ratio just flip it over; wine/water is the inverse of water/wine. "There's at least as much water as wine, but no more than twice as much water as wine" is the same thing as saying the mixture is at least half as much wine as water to at most as much wine as water: wine/water ranges from 0.5 to 1. What's the *average* wine to water ratio? Again, seems easy. Halfway between 0.5 and 1 is 0.75, which is  $3/4$ . But if we take this wine/water ratio and flip it over to get the inverse, the water/wine ratio, we get 1.333..., which is  $4/3$ . But finding the ratio this way gives a different number than the first way:  $4/3$  does not equal  $3/2$ ! 1.333... does not equal 1.5!

I'm not certain by which series of clicks I learned about the paradox. There's a *Science* magazine blog post <https://bit.ly/2DMDk2K> which led me to *The Atlantic* <https://bit.ly/2TpNieV>, which is an essay by a writer named Veronique Greenwood about her grandfather, a physicist named Francis Pesey. The latter link mentions the paradox and the former link has a link to a manuscript by Pesey (<https://www.researchers.one/article/2018-10-6>) in which he discusses the paradox. Pesey was a well-respected physicist who later had lots of papers rejected with words such as "incomprehensible" and "maddeningly repetitious philosophical froth". I'm not sure if this particular manuscript was ever published.

I googled /water wine paradox/ and evidently so did a lot of other people because downloads of one of the results increased astronomically this month. This isn't like the Monty Hall paradox (See Monte Hall Paradox in Phactum, April/May/June 2017, Page 23 <http://phact.org/data/phactums/Phactum%202017-04.pdf>), many very smart people have looked at this paradox and come up with different answers. One paper says "Everyone seems to agree that it has no solution."

Pesey argues for an average water to wine ratio of 1.4, or  $7/5$ . Reasoning differently, I also got 1.4. I did and I didn't. I actually got,  $3/(\sqrt{10}-1)$ , which is 1.3874258867227929...the digits go on (randomly?). Another approach got me to one of the original answers, 1.333... For want of a better idea, you could average the two original averages and get  $17/12$ , or 1.41666... So I dunno.

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



# Petrarch – Why it's worthwhile knowing a bit about him

by Albert Fried-Cassorla



**Petrarch** (Francesco Petrarca) was a famous writer, scholar and poet of the 1300's who was widely renowned for his writing and scholarship. He was especially admired for his sonnets. Also he is considered one of the prime founders of Humanism, which entails a preference for critical thinking over dogma.

In my history class at the University of Pennsylvania (Rome to the Renaissance), we read his essay, "*On My Own Ignorance and that of others.*" His tone is very human, self-effacing, and apparently honest. He is reminiscent of Montaigne, to my ear, as I mentioned to my professor. "No accident!" she quipped. It turned out that Montaigne modeled his writing in part on Petrarch.

Petrarch says in this essay that he cannot believe he is envied by his friends. He has nothing that others should envy. Of his friends, he protests: "What is it that they envy me? I do not know, I must admit, and I am amazed when I try to find out."

He was criticized for not bowing down to everything Aristotle ever said. Petrarch mainly faults Aristotle for not having the benefit of Faith. However, Cicero comes off better in his estimate, even though he too lacked Christian faith, having lived before Christ.

He believes that pure knowledge is not as important as moving the Will in the right direction. "It is safer to strive for a good and pious will than for a capable and clear intellect. The object of the will, as it pleases the wise, is to be good; that of the intellect is truth. It is better to will the good than to know the truth."

Petrarch's essay on his own ignorance is a scant 26 pages in the edition I will link to:

<https://online.hillsdale.edu/document.doc?id=386>

Is he worth the reading time? It's your call. I say he is readable, although it certainly helps if you know some of the players to whom he refers: Aristotle, Cicero, Augustine, Plato et al.

On the notion of Happiness, I disagree with his dismissal of the views of Aristotle as expressed in his *Nicomachean Ethics*. He says that Aristotle knows no more about the subject than any old woman or a fisherman (his disparagements, not mine!).

Mainly, besides faulting the ancient philosopher for being born pre-Christ, he dissents from his generalizations about the ingredients of happiness. In my view, the notion of Eudaimonia, or general flourishing, felicity and well-being, is one of Aristotle's great contributions to thought. Yes, all generalizations are to some degree flawed. But some serve to frame a discussion and to enable comparisons.

Since Petrarch is most famous for his sonnets, I will end this brief note with a link to 15 of them. I like No. 10 (X) in particular.

<https://www.gutenberg.org/files/50307/50307-h/50307-h.htm>

[https://commons.wikimedia.org/wiki/File:Altichiero,\\_ritratto\\_di\\_Francesco\\_Petrarca.jp](https://commons.wikimedia.org/wiki/File:Altichiero,_ritratto_di_Francesco_Petrarca.jp)

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**Albert Fried-Cassorla** is a poet, playwright, teaches Introduction to Poetry at Gwynedd Mercy University, and is a founder of the long-running Melrose Park Philosophy Club. He may be reached at [amfriedcas@gmail.com](mailto:amfriedcas@gmail.com)



# Eric's \$10,000 Challenge

## Why We Need Better Science Education

By Becky Strickland

PhACT's president's email gets some unusual letters. Most recently we had a query about how to collect Eric's offer of \$10,000 for a working free energy machine. The sender had designed a magnet motor but hadn't yet built a prototype. Eric Krieg, a founding member and past president has long offered \$10,000 to anyone who could offer proof of a free energy machine. Eric is an electrical engineer so qualified to assess such a machine.

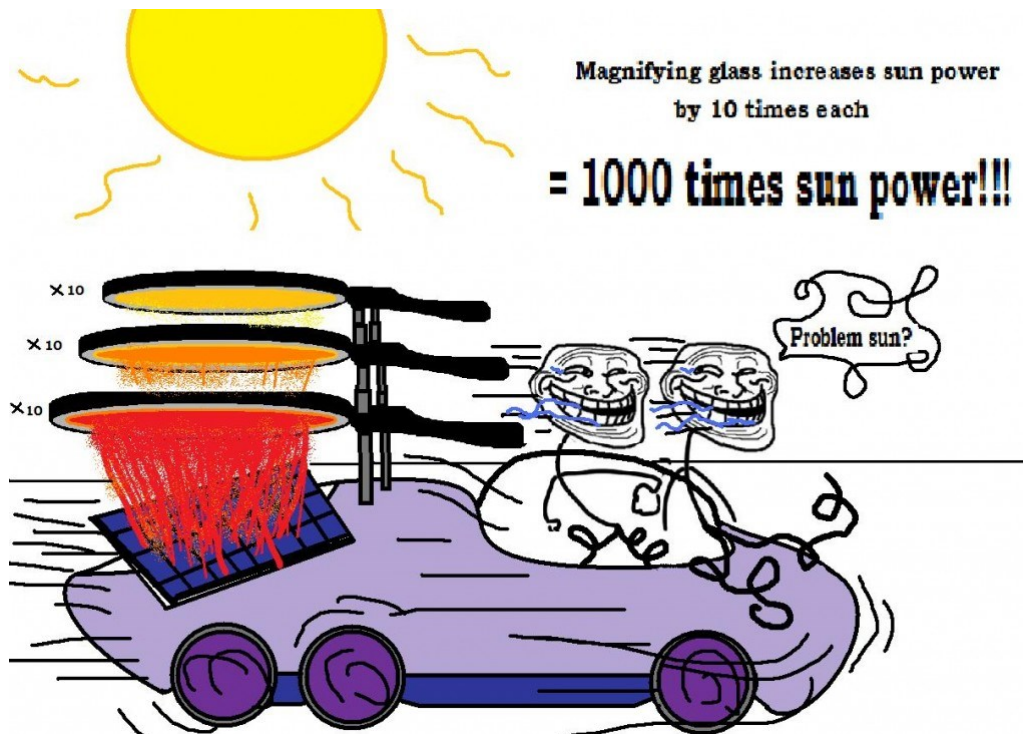
Eric's response:

*I got an inquiry from you about the prize. Yes, it is still available and I would love to pay it out. If there were there a form of non-polluting energy with no conventional fuel that would power a typical house, my net worth would bump up much more than that price as the planet would enter a new golden age. Solar voltaics, solar heat energy, fusion power, fission power for nuclear decay do not count. The device would need to be transportable - if that would be tough, I'd be willing to travel only if someone I arrange*

*would see it run first. I'd want 24 hours' time of seeing it put out at least 5000 watts energy (could be dumped as just heat) in a way I could measure. As an electrical engineer, I would need to validate that level of energy in the electrical form. The excess energy would need to be externally available - preferably in the 50 - 300 volt range so I could arrange an electrical load. If you have something working, I'd want to touch bases with you to make sure my terms would be ok with you before you would travel to the Philadelphia area.*

*A few things I have told the many people like you who have thought they have an idea that could work:*

- if you do a little looking on line, you would likely see your idea has been thought of many times over the last century
- I encourage you to read over the laws of conservation of energy
- I encourage you to read up on people who have dedicated their entire lives and fortunes to chasing down such ideas



•I always recommend that people test their idea on a small cheap scale first: a proof of concept that can at least self-run for days even with no excess power

•If you believe in a conspiracy that would potentially silence you for doing this, I encourage you to write up the design and forward it to a number of people (I'd be glad to be one) who could always broadcast it far and wide on the internet in case you were silenced. (some people are far more afraid of such an idea being stolen than in a big conspiracy against FE)

•Even if you would have something that say only makes 100 watts, I'd be open to negotiating possible custom made acceptance-test-terms that maybe could accommodate a lessor amount of power

•The big thing I would need to do in my test is be able to rule out any kind of fraud like hidden power sources - so I'd prefer as much as possible of the inner workings exposed for inspection. Terms for that are negotiable as well.

A few days later we received this letter from a different hopeful.

“Thank you for your time. I have a question for you

that is about physics. I was wondering if there are ways to overcome gravity. I may have come up with a new type which may lead to series of new formulas and ratios for us to figure out comparisons. I am an amatuer but would ask that you briefly describe ways you know of to see if it is new. If not mentioned I was also wondering where I could begin in implementing this new concept. I am not a scam I simply am asking for guidance. Thank you.”

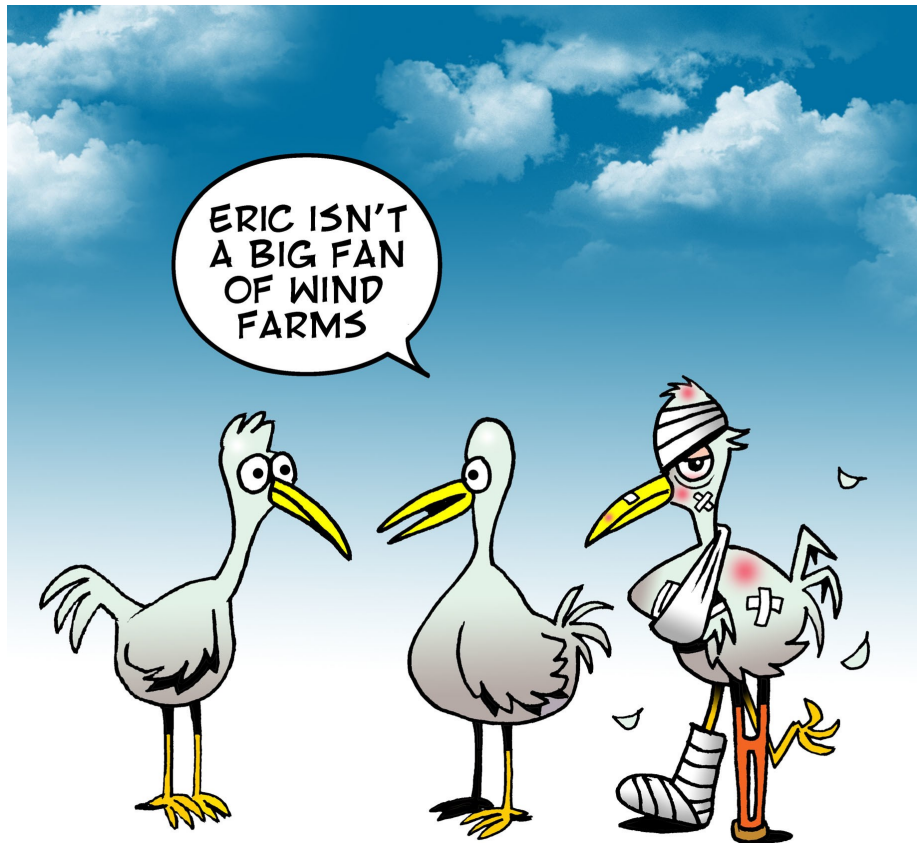
We sent a much shorter response.

“There is no way to overcome gravity.”

Eric has offered this challenge for about 20 years and will also pay out for proof of paranormal abilities. He's had various inquiries and always responds with details about exactly how he would test. No one has ever gotten back to him.

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**Becky Strickland** is a long time skeptic and member of PhACT. She is a psychologist and teacher at a community college.



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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, January 19, 2019 at 2:00 PM PhACT Lecture.**

**Our speaker will be Paul Offit, M.D., a vaccinologist and pediatrician. His topic will be his book: *Bad Advice: Why Celebrities Aren't Your Best Source of Health Information.***

**See page 5**

**Saturday, February 16, 2019 at 2:00 PM PhACT Lecture.**

**Our speaker will be Earl Bennett, past President of Philadelphia Area Space Alliance. His topic will be: The Search for Extra Terrestrial Intelligence**

**See page 6**

**Saturday, March 16, 2019 at 2:00 PM PhACT Lecture. Topic TBA**

**Saturday, April 20, 2019 at 2:00 PM PhACT Lecture. Topic TBA**

**Saturday, May 18, 2019 at 2:00 PM PhACT Expedition to Indian Rock ,**

**See page 7 for more details.**

**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

**Monday, January 14, 2019 at 6:00 PM at National Mechanics, 22 S. Third Street, Philadelphia**

**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/>

**Monday, January 14, 2019 7:30 p.m. at the Free Library of Philadelphia, 1901 Vine Street, Philadelphia**

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

**Gregory B. Jaczko | Confessions of a Rogue Nuclear Regulator**

The Chairman of the United States Nuclear Regulatory Commission from 2009-2012, Dr. Gregory Jaczko oversaw the U.S. government's response to Japan's Fukushima nuclear disaster. An NRC commissioner from 2005-2009 and former science policy advisor to Senator Harry Reid, he is now an adjunct professor at Princeton University and Georgetown University, and has created a clean energy development company. In *Confessions of a Rogue Nuclear Regulator*, Jaczko blows the lid off the public and private controversies surrounding nuclear energy and explains how the U.S. government has allowed it to endanger our lives.

Cost: Free

**Tuesday, January 15, 2019 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/](http://www.rittenhouseastronomicalsociety.org/)

**Thursday, January 17, 2019 at 5:30-7:00 p.m. at the American Philosophical Society, Benjamin Franklin Hall, 427 Chestnut Street, Philadelphia**

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

**In celebration of Benjamin Franklin's 313th birthday, the Historical Society of Pennsylvania and the American Philosophical Society welcome Nick Bunker to present his new account of Franklin's early life.**

From his early career as a printer and journalist, to his scientific work and his role as a founder of a new republic, Benjamin Franklin has always seemed the inevitable embodiment of American ingenuity. But in his youth he had to make his way through a harsh colonial world where he

fought many battles: with his rivals, but also with his wayward emotions. Taking Franklin to the age of forty-one, when he made his first electrical discoveries, Bunker goes behind the legend to reveal the sources of his passion for knowledge. Always trying to balance virtue against ambition, Franklin emerges as a brilliant but flawed human being, made from the conflicts of an age of slavery as well as reason. With archival material from both sides of the Atlantic, we see Franklin in Boston, London, and Philadelphia, as he develops his formula for greatness. A tale of science, politics, war, and religion, this is also a story about Franklin's forebears: the talented family of English craftsmen who produced America's favorite genius.

Free and open to the public.

Please RSVP to attend.

**Saturday, January 19, 2019  
2:00 PM**

**PhACT Lecture. Paul Offit, M.D., a vaccinologist and pediatrician. His topic will be his book: *Bad Advice: Why Celebrities Aren't Your Best Source of Health Information.***

**See page 5**

**TUESDAY, JANUARY 22, 2019 at 6:00 PM at Suzanne Roberts Theatre, 480 South Broad St., Philadelphia**

**Penn Lightbulb Café**

<https://penntoday.upenn.edu/news/penn-science-and-lightbulb-cafe-lecture-series-spring-2019>

**Ian Lustick, professor of political science and Bess W. Heyman Chair, School of Arts and Sciences**

**"Why the U.S. President Doesn't Matter for the Middle East Peace Process"**

The Israeli-Palestinian "peace process," focused on the future of the West Bank and Gaza Strip, has continued for almost three decades. But it is more of a carousel, lots of movement but no direction, than a process of moving the state of affairs in a particular direction. In his talk, Ian Lustick will explain why the carousel continues when no one involved really believes a negotiated two-state solution is possible. In this view, whether the White House is occupied by a President named Bush, Clinton, Obama, or Trump makes no

substantial difference for Israeli-Palestinian peace. He will also explain what to look for to know that real change is happening. Lustick is a world-renown expert on Middle Eastern politics. His present research focuses on the demise of states and the implications of the disappearance of the option of a negotiated "two-state solution" to the Israeli-Palestinian conflict.

Free and Open to the General Public

**Friday, January 25, 2019 at 11 AM at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia**

<http://www.thelaurelhillemetery.org>

**Lunch Box Lecture: Unearthing Laurel Hill**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$12/person.



**Monday, January 28, 2019 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/>

Join us on Monday, January 28th, as we proudly welcome noted author **William Kidder** as he presents his talk on his newest book, **Crossroads of the Revolution: Trenton 1774-1783.**

See website for program details.

Free and Open to the Public.

**Tuesday, January 29, 2019 at 5:30 p.m. to 6:00 p.m. the American Philosophical Society, Benjamin Franklin Hall, 427 Chestnut Street, Philadelphia**

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

Join us for "**Trust in Science: Vaccines,**" the first event in a series inspired by *Perceptions of Science in America*, a report from the Public Face of Science Initiative at the American Academy of Arts and Sciences. Two more events later in the year will cover trust in science through evolution and climate change. This series is presented by the Consortium for History of Science, Technology and Medicine.

This event will examine vaccine skepticism, in contemporary America, historically, and in the clinic. What are the historical roots of resistance to vaccination? What is the data about contemporary attitudes? How do these attitudes relate to changing social, economic and political contexts? How do these issues play out in the relationship between a doctor and a patient? Experts in medicine, the history of public health, and more will

discuss these questions.  
Free and open to the public.  
Please RSVP to attend.

**TUESDAY, FEBRUARY 5, 2019 at 6:00 PM** at Wilma Theater, 265 South Broad St., Philadelphia  
**Penn Science Cafe**

<https://penntoday.upenn.edu/news/penn-science-and-lightbulb-cafe-lecture-series-spring-2019>

**Nicholas Betley, assistant professor of biology, School of Arts and Sciences**

“Food on the Brain: How Hunger and Eating Change Brain Activity”

Neuroscientist J. Nicholas Betley has studied how forces key to survival—like the drive to eat and drink—affect neurons in the brain. In this talk, Betley will share what his research tells us about how hunger, food, and even certain drugs can change the activity of brain neurons known to influence feeding, and how that knowledge may be exploited to address obesity, eating disorders, and encourage healthy eating.

**Free and Open to the General Public**

**Tuesday, February 5, 2019 at 6:00 PM – 7:00 PM** at **Eastern State Penitentiary**, 2027 Fairmount Avenue, Philadelphia

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

**Brianna Remster: The Impact of Incarceration on Political Representation and Voting**

Free and Open to the Public.

A reception will follow the lecture.

**Tuesday, February 5, 2019 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>

**Valley Forge – America’s Existential Moment Bob Drury will speak.**

Free and Open to the Public.

**Wednesday, February 6, 2019 at 6:00PM - 7:00PM** at University of Pennsylvania Museum, 3260 South Street, Philadelphia

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

**THE STUFF OF LIFE: ANIMAL REMAINS Katherine Moore, Mainwaring Teaching Specialist, Zooarchaeology**

Animal “stuff” in the Museum includes bones of animals dedicated as offerings, animal parts discarded as food, and animal parts made into ornaments and game pieces. Some of the oldest materials in the Museum are animal bones; hundreds of modern skeletons live in the CAAM labs at the Penn Museum. When archaeologists find bones, those bones can reveal the relationships that people have had with animals in ancient times. In this lecture, zooarchaeologist Katherine Moore will tell some of the most unexpected animal stories she has reconstructed while working on Penn Museum collections.

Admission: \$10 per lecture; Members, \$5.

Space is limited; advance online reservations strongly suggested

**Thursday, February 7, 2019 at 5:30–7:00 p.m.** at the **American Philosophical Society**, Benjamin Franklin Hall, 427 Chestnut Street, Philadelphia

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

**The Food Explorer** is the story of David Fairchild, a late-19th-century food explorer traveling the world as a special agent of the American government. He visited more than fifty countries, all by boat, in search of foods that would enrich the American farmer and enchant the American eater.

His work came during a formative era. The golden age of travel, the Gilded Age, and the rise of industrial America. The cusp of the 20th century brought the ground-breaking innovation of telephones, electric light, and airplanes that could fly through the sky. Fairchild’s culinary ambition came as the United States was opening itself to the world with the bombast of imperialism. And through him, America transformed from a blank agricultural canvas to the most diverse food system ever created.

From writer **Daniel Stone** comes Fairchild’s story and the story of a nation newly emboldened to collect new things—most exciting among them, new foods. Fairchild was the first American foodie, the father of globalized agriculture, and, in an era of transformative inventors and political leaders, he was a culinary visionary whose country, because of his work, would never be the same.

Daniel Stone is a staff writer for National Geographic and a former White House correspondent for Newsweek and The Daily Beast. A native of Los Angeles, he holds degrees from UC Davis and Johns Hopkins University.

Free and open to the public.

Please RSVP to attend.

**Saturday, February 9, 2019 at 11:00 a.m.–12:00 p.m.** at the Science History Institute, 315 Chestnut Street, Philadelphia

<http://www.sciencehistory.org>

**The Sweet Science of Chocolate**

Humans have consumed food and beverages derived from cocoa beans for 2,500 years. Mayans and Aztecs valued the cocoa bean so highly they used it as currency, not to mention as the basis for the foamy beverage they drank in religious rites. Join us for a short history of chocolate and some

fascinating perspectives on its science from Joe Vinson.

◆ Learn how cocoa pods are harvested and fermented.

◆ Find out about the fats, alkaloids, and 300 other chemicals at work in your dried and roasted cocoa beans.

◆ Get the inside scoop on how chocolate affects our health and whether it’s truly an aphrodisiac.

◆ Bring your valentine for a tasty visit that will have you making informed decisions about which chocolate to buy and how much to consume.

**About the Speaker**

**Joe Vinson**, an emeritus professor of chemistry at the University of Scranton, is best known for his work with chocolate, tea, coffee, grape juice, cranberry juice, popcorn, and marijuana. His current research interests include the effect of foods, vitamins, and antioxidants on nutrition and health. Vinson was born in Arkansas and grew up in the San Francisco Bay Area, attending the University of California, Berkeley. At Berkeley he received a BS in chemistry and later, at Iowa State University, received a joint PhD in physical organic chemistry and analytical chemistry. There he also worked at the famous Atomic Energy Commission’s Ames Lab. Vinson is the author of over 100 publications and has been featured on ABC Good Morning America Sunday and National Public Radio. For the last 40 years he has been a National Tour Speaker for the American Chemical Society.

Free and Open to the Public

**Saturday, February 9, 2019 at 12:00 p.m.–2:00 p.m.** at the Science History Institute, 315 Chestnut Street, Philadelphia

<http://www.sciencehistory.org>

**WikiSalon**

With science topics ranging from medical history to the environment, Wikipedia’s content reaches more than 500 million people around the globe.

Interested in joining the ranks of this online encyclopedia’s volunteer editors? Stop by for our monthly 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.

You provide your own laptop; we provide coffee,

**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>



tea, and plenty of opportunity for spontaneous discussion and collaboration.

First-timer? No problem! One of our experienced guests will coach you through the process.

Free and Open to the Public

**Saturday, February 9, 2019 at 10:00 AM** at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia

<http://www.thelaurelhillcemetery.org>

**Laurel Hill: The Hot Spots and Storied Plots**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$12/person.

**Saturday, February 9, 2019 at 11:00 AM** at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia

<http://www.thelaurelhillcemetery.org>

**Till Death Do Us Part: The Love Stories of Laurel Hill**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$20/person.

**Monday, February 11, 2019 at 6:00 PM** at **National Mechanics**, 22 S. Third Street, Philadelphia

**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://scienceontapphill.com/>

**Tuesday, February 12, 2019 - 7:00pm to 10:00pm** at The Franklin Institute Science Museum, located in Center City Philadelphia, at 20th Street and the Benjamin Franklin Parkway.

<http://www.fi.edu>

**NIGHT SKIES IN THE JOEL N. BLOOM OBSERVATORY**

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

Cost: \$10 for non-members.

**Tuesday, February 12, 2019 at 7:15 PM** at the Fels Planetarium, The Franklin Institute, 222 North 20th Street, Philadelphia, PA 19103

**The Rittenhouse Astronomical Society**

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

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

**Wednesday, February 13, 2019 at 5:30 PM – 8:00 PM** at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia

<https://collegeofphysicians.org/events>

**Philadelphia Public Health Grand Rounds: Access to Primary Care in Philadelphia: Scope of the Problem, Identifying Solutions**

**Topic: Access to Primary Care in Philadelphia: Scope of the Problem, Identifying Solutions**

Multiple reports have demonstrated that having a

regular source of primary care enhances receipt of prevent care services and improves health outcomes. However, many factors may affect access to primary care, including health insurance; work, family, and school commitments; difficulties traveling to primary care facilities; lack of primary care providers; and lack of knowledge about the health care system. Social determinants of health, including race/ethnicity, also are associated with disparities in receipt of primary care. This Public Health Grand Rounds will explore barriers to accessing primary care in the Philadelphia area and examine solutions to improve access to care among underserved populations. Pre-registration for all programs and events is strongly urged.

**Saturday, February 16, 2019 at 9:00 AM** at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia

<http://www.thelaurelhillcemetery.org>

**Great Back Yard Bird Count.**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

Free.

**Saturday, February 16, 2019  
2:00 PM**

**PhACT Lecture. Earl Bennett,  
past President of Philadelphia Area  
Space Alliance will discuss:  
*The Search for Extra Terrestrial  
Intelligence*  
See page 6**

**Sunday, February 17, 2019 at 1:00 PM** at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia

<http://www.thelaurelhillcemetery.org>

**Death Loves A Shining Mark: The Language of Mourning**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$15/person.

**TUESDAY, FEBRUARY 19, 2019 at 6:00 PM** at Wilma Theater, 265 South Broad St., Phila.

**Penn Lightbulb Café**

<https://penntoday.upenn.edu/news/penn-science-and-lightbulb-cafe-lecture-series-spring-2019>

**Meta Mazaj, senior lecturer in cinema and media studies, School of Arts and Sciences**  
“The Academy Awards and World Cinema”

What can we expect at this year’s Academy Awards? Meta Mazaj will discuss this year’s Oscar nominated films, the science behind Oscar picks, and the relationship between Hollywood and world cinema, the subject of her new co-authored book, with Shekhar Deshpande, *World Cinema: A Critical Introduction*. Mazaj’s teaching

and research interests include film theory and history, film and nationalism, as well as world cinema.

**Free and Open to the General Public**

**Thursday, February 21, 2019 at 6:15PM - 7:15PM** at University of Pennsylvania Museum, 3260 South Street

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

**LIFE, DEATH AND EVERYTHING IN BETWEEN: THE ROLE OF THE DEAD IN THE ANCIENT NEAR EAST**

Death and the physical remains of a once-living person can elicit a huge range of human reactions, from fear and revulsion to reverence and intrigue. In this talk, Dr. Jennie Bradbury, Assistant Professor in the Department of Classical and Near Eastern Archaeology, Bryn Mawr College, examines the relationship between the dead and the living in the ancient Near East. The talk considers whether we can see changes over time in how human remains were being treated, and explores what these patterns might tell us about human belief and mortality. Presented in partnership with the Archaeological Institute of America.

Free admission.

**Thursday, February 21, 2019 7:30 p.m.** at the Free Library of Philadelphia, 1901 Vine Street  
<http://libwww.freelibrary.org/authorevents/>

**Steve Luxenberg | Separate: The Story of Plessy v. Ferguson, and America’s Journey from Slavery to Segregation**

A 30-year writer and senior editor at The Washington Post, Steve Luxenberg has overseen reportage that has won a host of awards, including two Pulitzer Prizes for explanatory journalism. He is the author of *Annie’s Ghosts: A Journey in a Family Secret*, the tale of his eponymous aunt who was locked away in a mental institution and seemingly erased from his mother’s memory. In *Separate*, Luxenberg unearths the Philadelphia-born court case that established the idea of "separate but equal" in the courtroom, thus creating legal precedent for the landmark *Plessy v. Ferguson* case. Cost: \$15 General Admission, \$7 students. Cost: FREE

**Friday, February 22, 2019 at 10:00 AM** at **Laurel Hill Cemetery**, 3822 Ridge Avenue, Philadelphia

<http://www.thelaurelhillcemetery.org>

**Laurel Hill: The Hot Spots and Storied Plots**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$12/person.

**Monday, February 25, 2019 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/>

Join us on Monday, February 25th, as we proudly welcome noted author **Tim McGrath** as he presents his talk on **Benjamin Franklin’s Navy**.

**See website for program details.**

**Free and Open to the Public.**

**Saturday, March 2, 2019 at 10:00 AM at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia**

<http://www.thelaurehillcemetery.org>

**Annual Tour Guide Training: Part 1**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

**Tuesday, March 5, 2019 at 6:00 PM – 7:00 PM at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia**

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

**Topic TBA**

Free and Open to the Public.

A reception will follow the lecture.

**Tuesday, March 5, 2019 at 7:00 PM at Washington Memorial Chapel, on Route 23 in Valley Forge.**

**Friends of Valley Forge Park**

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

**Spies, Patriots, and Traitors:**

**American Intelligence in the Revolutionary War**

**Ken Daigler will speak.**

Open to the Public.

Suggested donation of \$10 per person. A complimentary reception follows each talk.

**Wednesday, March 6, 2019 at 6:00PM - 7:00PM at University of Pennsylvania Museum, 3260 South Street, Philadelphia**

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

**THE STUFF OF LEGEND: EARLY 19TH CENTURY EXCAVATIONS AT NIPPUR**  
**Richard Zettler, Associate Curator-In-Charge, Near East Section**

Stuff. It fills our homes, offices, minds, and bodies. It can be defined as a collection of belongings, ideas, expertise, and much, much more. With roughly one million objects in our care, the Penn Museum is filled with great stuff. The 2018–2019 Great Lecture Series explores select objects and ideas housed within our Museum. Join us on the first Wednesday evening of each month at 6:00 pm, October through June, and see if we know our stuff!

Admission: \$10 per lecture; Members, \$5.

Space is limited; advance online reservations strongly suggested

**Saturday, March 9, 2019 at 12:00 p.m.–2:00 p.m. at the Science History Institute, 315 Chestnut Street, Philadelphia**

<http://www.sciencehistory.org>

**WikiSalon**

With science topics ranging from medical history to the environment, Wikipedia's content reaches more than 500 million people around the globe.

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You provide your own laptop; we provide coffee, tea, and plenty of opportunity for spontaneous discussion and collaboration.

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**Penn Science Cafe**

<https://penntoday.upenn.edu/news/penn-science-and-lightbulb-cafe-lecture-series-spring-2019>

**Coren Apicella, assistant professor of psychology, School of Arts and Sciences**

**“The Evolution of Cooperation”**

Why do humans cooperate? In the realm of evolutionary biology and survival of the fittest, it's a risky business, yet humans do it on a scale unmatched by any group in the animal world. For more than a decade, Coren Apicella has been studying this trait in the Hadza of Tanzania, one of the last remaining nomadic hunter-gatherer populations in the world. She'll discuss what she's so far learned from working with the Hadza, including recent findings that revealed that cooperation isn't necessarily innate.

**Free and Open to the General Public**

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Philadelphia, PA 19103

**The Rittenhouse Astronomical Society**

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

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**Tuesday, March 12, 2019 - 7:00pm to 10:00pm at The Franklin Institute Science Museum, located in Center City Philadelphia, at 20th Street and the Benjamin Franklin Parkway.**

<http://www.fi.edu>

**NIGHT SKIES IN THE JOEL N. BLOOM OBSERVATORY**

Black History Month Edition

Join us for an evening of out-of-this-world astronomy activities hosted by Franklin Institute Chief

## 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/](http://www.rittenhouseastronomicalsociety.org/)

Astronomer Derrick Pitts.

Cost: \$10 for non-members.

**Wednesday, March 13, 2019 at 7:00 pm - 9:00 pm at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Phila.**

**The Institute for Science and Religion**

<http://www.irands.org>

**Teilhard, Original Sin, Evolution, and the Curia: What Went Wrong?**

**Daryl Domning, PhD**

Daryl Domning, PhD, Professor of Anatomy at Howard University in Washington, DC, is a paleontologist who studies the evolution of marine mammals. Daryl has also developed an interest in the theological implications of evolution and is active in science/religion activities and dialog. With the late theologian Monika Hellwig, he wrote *Original Selfishness: Original Sin and Evil in the Light of Evolution* (2006). He was a co-organizer and speaker at the Washington Theological Union's public conference series "Atom + Eve: Using Science in Pastoral Ministry."

Come join us at 7pm on March 13th! Free Will Donations are accepted and very much appreciated. Light refreshments will be offered.

**Saturday, March 16, 2019 at 11:00 AM at Laurel Hill Cemetery, 3822 Ridge Avenue, Phila.**

<http://www.thelaurehillcemetery.org>

**St. Patrick's Day Tour: Toasts and Tastes**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$20/person.

**Saturday, March 16, 2019  
2:00 PM**

**PhACT Lecture.  
Topic TBA**

**TUESDAY MARCH 19** at 6:00 PM at Suzanne Roberts Theatre, 480 South Broad St., Phila.

**Penn Lightbulb Café**

<https://penntoday.upenn.edu/news/penn-science-and-lightbulb-cafe-lecture-series-spring-2019>

**Emily Wilson, professor of classical studies, School of Arts and Sciences**

**"Translating the Odyssey: Why and How"**

Emily Wilson's research interests include tragedy, epic, gender, genre, philosophy, as well as the reception of classical literature. She has published verse translations of Seneca, Euripides, and most recently the "Odyssey." In this talk, she will talk about her goals in re-translating this much-translated poem, including her approach to verse form, style, pace, repetition and characterization. She will discuss the ways she aimed to be responsible to the literary, psychological and ethical complexity of the original poem, bringing out its diverse, contradictory voices and points of view; she will consider what it means to say that translations are always interpretations. She will also talk about the media reception of her translation, analyzing the benefits and costs of coverage that seemed, for a while, to focus exclusively on the author's gender.

Free and Open to the General Public

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**Annual Tour Guide Training: Part 1**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

Free

**Monday, March 25, 2019 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/>

Join us on Monday, March 25th, as we welcome NPS Ranger David Lawrence as he presents **The Southern Campaign.**

See website for program details.

Free and Open to the Public.

**Sunday, March 31, 2019 at 1:00 PM** at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia  
<http://www.thelaurehillcemetery.org>

**Classy Broads and Daring Dames of South Laurel Hill**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$15/person.

**Tuesday, April 2, 2019 at 6:00 PM – 7:00 PM** at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia

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

**Danielle Sered: Reckoning with Violence: Mass Incarceration, Restorative Justice, and the Road to Repair**

Free and Open to the Public.

A reception will follow the lecture.

**Tuesday, April 2, 2019 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>

**Remember Our Valley Forge Times: Lafayette, Washington, and the Winter of 1777 –78**

**Diane Windham Shaw will speak.**

Open to the Public.

Suggested donation of \$10 per person. A complimentary reception follows each talk.

**Wednesday, April 3, 2019 at 6:00PM - 7:00PM** at University of Pennsylvania Museum, 3260 South Street, Philadelphia

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

**THE STUFF OF ARCHAEOLOGY: AN INTRODUCTION**

**Lauren Ristvet, Dyson Associate Curator, Near East Section**

Cities. Buildings. Graves. Pottery. Animal Bones. Pollen. DNA. Oxygen molecules. The stuff of archaeology is changing rapidly, as are the questions we can ask and answer. How do archaeologists reconstruct past civilizations and ways of life? What new information can we expect in the future? Join Dr. Lauren Ristvet for an exploration of the new frontiers of the stuff of archaeology.

Admission: \$10 per lecture; Members, \$5.

Space is limited; advance online reservations strongly suggested

**Thursday, April 4, 2019 at 6:00 PM** at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia  
<http://www.thelaurehillcemetery.org>

**Cities of the Dead for the Living: Laurel Hill Cemeteries and Collective Memory**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$15/person.

**Thursday, April 4, 2019 at 6:30 PM – 8:30 PM** at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia

<https://collegeofphysicians.org/events>

**The Strange World of Seeds: Book Talk &**

**Signing with Author Thor Hanson**, joined by Jacqui Bowman, PhD, Director of Education & Co-director of Living Exhibits at The College of Physicians of Philadelphia

We're teaming up with Longwood Gardens for an evening in celebration of one of the most fascinating objects on earth: seeds. Join fellow readers and botany aficionados alike to hear Triumph of Seeds author Thor Hanson and Director of Education Jacqui Bowman, PhD share their thoughts on how these tiny marvels have shaped human history.

As America's finest museum of medical history and a historic national landmark, the Mütter displays beautifully preserved collections of anatomical specimens, models, and medical instruments in a 19th-century setting. Contained within the collections are some unexpected examples demonstrating the relationship between humans and seeds, including a collection of 15th century herbals and the Benjamin Rush Medicinal Plant Garden.

A light wine and cheese reception created by Catering By Design with a book signing will follow. Pre-registration for all programs and events is strongly urged.

**Saturday, April 6, 2019 at 1:00 PM** at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia  
<http://www.thelaurehillcemetery.org>

**Laurel Hill Goes to the Movies: Cinematic Connections**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$15/person.

**Sunday, April 7, 2019 at 1:00 PM** at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia  
<http://www.thelaurehillcemetery.org>

**Designing for the Dead: The Art and Architecture of Laurel Hill**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$15/person.

**Sunday, April 7, 2019 at 1:00 pm - 4:00 pm** at Commonwealth Chateau, Chestnut Hill College, 9230 Germantown Avenue, Philadelphia,

**The Institute for Science and Religion**

<http://www.irands.org>

**Cultivating a Sense of Place: Contemplative Ecology in a Time of Loss**

**Douglas Christie, PhD**

The Spanish philosopher José Ortega y Gasset once said: "Tell me the landscape in which you live and I will tell you who you are." Here we find a beautiful expression of the deep and fundamental connection that exists between place and human identity. But how in fact does place shape identity? How is it that our deepest emotions and values, including those that we consider to be part of our spiritual life, come to be so closely tied to the places we inhabit? What do we lose—in relation to our identity, our sense of meaning, even our sense of God—when these places are lost or degraded? Is it still possible to cultivate a sense of wholeness and integrity in relation to the places we inhabit? If so, what sensibilities and practices



(especially contemplative practices) will help us realize it? This workshop will focus on what it means to cultivate a deeper sense of place and a stronger ethical commitment to caring for the places we love.

Douglas E. Christie, PhD received his B.S. from the University of California, Santa Cruz, his M.A. from Oxford University and his Ph.D. from the Graduate Theological Union, Berkeley and has been awarded fellowships from the Luce Foundation, the Lilly Foundation, and the NEH. His primary research interests focus on contemplative thought and practice in ancient and medieval Christianity and on spirituality and ecology. He is the author of *The Word in The Desert: Scripture and the Quest for Holiness in Early Christian Monasticism*, *The Blue Sapphire of the Mind: Note for a Contemplative Ecology*, and is the founding editor of *Spiritus: A Journal of Christian Spirituality*. His current work is focused on the idea of mystical darkness and the contemporary sense of exile, loss and emptiness.

Come join us at 1pm on April 7th! Free Will Donations are accepted and very much appreciated. Light refreshments will be offered.

**Monday, April 8, 2019 at 6:00 PM at National Mechanics, 22 S. Third Street, Philadelphia**

**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, APRIL 9, 2019 at 6:00 PM at Wilma Theater, 265 South Broad St., Philadelphia**  
**Penn Science Café**

<https://penntoday.upenn.edu/news/penn-science-and-lightbulb-cafe-lecture-series-spring-2019>

**Phil Nelson, professor, Department of Physics & Astronomy, School of Arts and Sciences**  
**“Human and Superhuman Color Vision”**

Scientists often seem to be asking obscure theoretical questions. But sometimes, asking such questions and doggedly following the answers leads to unexpected practical payoffs, as well as deep insights into how the world works. Philip Nelson, a physicist in the department of Physics & Astronomy, will explore how the question “What is light?” leads us to an understanding of how we see, and to some powerful new ways to do so. See website for lecture details.

**Free and Open to the General Public**

**Saturday, April 10, 2019 at 10:00 AM at Laurel Hill Cemetery, 3822 Ridge Avenue, Phila.**

<http://www.thelaurehillcemetery.org>

**Laurel Hill: The Hot Spots and Storied Plots**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$12/person.



**Tuesday, April 10, 2019 at 7:15 PM** at the Fels Planetarium, The Franklin Institute, 222 North 20th Street, Philadelphia,

**The Rittenhouse Astronomical Society**

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

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

**Saturday, April 13, 2019 at 12:00 PM at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia**

<http://www.thelaurehillcemetery.org>

**The Revolutionary War Veterans of Laurel Hill: Service and Wreath Laying Ceremony. Presented by the St. Andrews Society of Philadelphia.**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

Free.

**Saturday, April 13, 2019 at 1:00 PM at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia**

<http://www.thelaurehillcemetery.org>

**Liberty or Death: Revolutionary War Patriots of Laurel Hill**



For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$15/person.

**Saturday, April 20, 2019 at 2:00 PM.**

**PhACT Lecture.**  
**Topic TBA**

**TUESDAY, APRIL 23, 2019 at 6:00 PM** at Suzanne Roberts Theatre, 480 South Broad St.,

**Penn Lightbulb Café**

<https://penntoday.upenn.edu/news/penn-science-and-lightbulb-cafe-lecture-series-spring-2019>

**Beth Wenger, Moritz and Josephine Berg Professor of History and History Department Chair, School of Arts and Sciences**

**“American Jewish Men and the Anxieties of Breadwinning, 1850-1940”**

Beth Wenger’s teaching interests vary widely from broad surveys of modern European and American Jewish history, to courses on Holocaust memory, contemporary Jewish culture, American religious history, gender, and Jewish history, as well as many others. A specialist in American Jewish history, Wenger’s interests also include

European Jewish culture, American religion and ethnicity, and cultural, social and gender history. Free and Open to the General Public

**Saturday, April 26, 2019 at 10:00 AM at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia**

<http://www.thelaurehillcemetery.org>

**Laurel Hill: The Hot Spots and Storied Plots**

For more information see website.

Free parking is located in the lot across the street from the Gatehouse.

The cost is \$12/person.

**Monday, April 29, 2019 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/>

Join us on Monday, April 29th, as we proudly welcome noted historical archaeologist **Wade Catts** as he presents his talk on **Archaeology and the Exploration and Preservation of Revolutionary War Battlefields.**

See website for program details.

Free and Open to the Public.

**Wednesday, May 1, 2019 at 6:00PM - 7:00PM** at University of Pennsylvania Museum, 3260 South Street, Philadelphia

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

**THE STUFF BEYOND: THE GREAT MAYA COSMOS**

Simon Martin, Lead Curator, upcoming Mexico and Central America Galleries

People, whether ancient or modern, seek out ordering principles to the world, an understanding of the forces of nature and celestial phenomena. Foremost among these are the structure of the universe and the perceived meaning of both life and the afterlife, as governed by hidden hand of the divine. This talk explores the multi-dimensional world of the ancient Maya cosmos and how this preeminent New World civilization sought to set humanity within a far greater scheme of space and time.

Admission: \$10 per lecture; Members, \$5.

Space is limited; advance online reservations strongly suggested

**Thursday, May 2, 2019 at 6:30 PM – 9:00 PM** at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia

<https://collegeofphysicians.org/events>

**Leonardo at 500**

Leonardo da Vinci was arguably the most creative person who ever lived. Exquisitely gifted in both arts and science, he practiced them as a “scientist of art and an artist of science.” Five hundred years later, his anatomical drawings remain testimony to his unique way of engaging the world both artistically and scientifically. From pioneering the injection of molten wax into ventricles, to multiple views of specimens, to the recurrent use of cross-sections and cutouts, those drawings remind us of a brain that always thought in pictures. Yet, they also challenge us to understand what made Leonardo so creative. This may be especially worthwhile in times when medical education has been accused of hindering creativity.

Dr. Mangione is back at the College with this

fascinating lecture. This event has sold out in the past. Pre-registration is highly encouraged. Pre-registration for all programs and events is strongly urged.

**Tuesday, May 7, 2019 at 6:00 PM – 7:00 PM at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia**

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

**Topic TBA**

Free and Open to the Public.

A reception will follow the lecture.

**Saturday, May 11, 2019 at 12:00 p.m.–2:00 p.m.** at the Science History Institute, 315 Chestnut Street, Philadelphia

<http://www.sciencehistory.org>

**WikiSalon**

With science topics ranging from medical history to the environment, Wikipedia's content reaches more than 500 million people around the globe.

Interested in joining the ranks of this online encyclopedia's volunteer editors? Stop by for our monthly 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.

You provide your own laptop; we provide coffee, tea, and plenty of opportunity for spontaneous discussion and collaboration.

First-timer? No problem! One of our experienced guests will coach you through the process.

Free and Open to the Public

**Monday, May 13, 2019 at 6:00 PM at National Mechanics, 22 S. Third Street, Philadelphia**

**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, May 14, 2019 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 30, 2019 at 6:30 PM – 8:30 PM** at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103.

<https://collegeofphysicians.org/events>

**The Leslie Nicholas, MD Lecture**

**Book Launch & Signing for Civil War Medicine: A Surgeon's Diary by Robert Hicks, PhD, Director of the Mütter Museum**

Join us for the world launch of *Civil War Medicine: A Surgeon's Diary* by Dr. Robert Hicks, based on the diary of a Civil War surgeon who participated in the Battle of Gettysburg and including essays about the diary by foremost historians of the medical Civil War. The subject of the book is Assistant Surgeon James Fulton, 143rd

Pennsylvania Infantry Regiment. Dr. Hicks' illustrated talk will be followed by Q & A moderated by Anna Dhody, Curator of the Mütter Museum and Director of the Mütter Research Institute.

The Civil War Exhibit of the Mütter Museum will be open for this event. A light reception and book signing will follow the program. Books will be available for purchase.

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

**Saturday, May 18, 2019**

**PhACT Expedition to Indian Rock**

See page 7

**Monday, May 30, 2019 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/>

**Join us on Monday, May 20th as we welcome Dr. Bruce M. Venter** who will be speaking about his book **The Battle of Hubbardton: The Rear Guard Action that Saved America .**

See website for program details.

Free and Open to the Public.

**Tuesday, June 4, 2019 at 6:00 PM – 7:00 PM at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia**

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

**Topic TBA**

Free and Open to the Public.

A reception will follow the lecture.

**Wednesday, June 5, 2019 at 6:00PM - 7:00PM** at University of Pennsylvania Museum, 3260 South Street, Philadelphia

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

**WHOSE STUFF IS IT, ANYWAY? DECOLONIZATION AND THE ROLE OF MUSEUMS IN CONTEMPORARY SOCIETY**

**Tukufu Zuberi, Lead Curator, upcoming Africa Galleries**

Looking at African artistry and craftsmanship, and the impact of the European colonial mentality in the collection of African Art and crafts, Dr. Zuberi will consider the current redesign of the Africa galleries at the Penn Museum, one of the oldest ethnographic museums in the US. The foundational works that constitute the Penn Museum Africa Galleries were collected prior to the end of World War II. They were collected at a time in which the world was divided into the colonizer and the colonized. Most of the contributions were collected by ethnologist of the time who tended to be gentlemen travelers and professional men and their wives or antiquarians and amateur historians. These decolonization efforts and the struggle for liberation which culminated in independence in north, south, west, and east Africa. During these

formative years the Penn Museum Africa Galleries were curated in ignorance, or denial, of the social movements of Pan-Africanism (in the Anglophone colonies), Negritude (in the Francophone colonies), and Pan-Arabism (in the Maghreb and North Africa colonies) transforming the world, specifically, Africa's relationship to the World. Re-considering this institutional legacy of colonialism, and thus challenge the idea that the works in the Penn Africa Galleries magically give us access to African history and culture untainted by the imperial desires from parts of Europe and the United States of America.

Admission: \$10 per lecture; Members, \$5.

Space is limited; advance online reservations strongly suggested

**Saturday, June 8, 2019 at 12:00 p.m.–2:00 p.m.** at the Science History Institute, 315 Chestnut Street, Philadelphia

<http://www.sciencehistory.org>

**WikiSalon**

With science topics ranging from medical history to the environment, Wikipedia's content reaches more than 500 million people around the globe.

Interested in joining the ranks of this online encyclopedia's volunteer editors? Stop by for our monthly 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.

You provide your own laptop; we provide coffee, tea, and plenty of opportunity for spontaneous discussion and collaboration.

First-timer? No problem! One of our experienced guests will coach you through the process.

Free and Open to the Public

**Tuesday, June 11, 2019 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/>

**Monday, June 24, 2019 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/>

Join us on Monday, June 24th as we welcome award winning author **Bob Brury** who will be speaking about his book **Valley Forge**

See website for program details.

Free and Open to the Public.

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# 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](mailto: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](http://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](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](http://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](http://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.lrsm.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](mailto: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/](http://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](http://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*.

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

Donation of \$ \_\_\_\_\_ enclosed for additional support

Donation of \$ \_\_\_\_\_ dedicated for High School Science Fair prizes

Name: \_\_\_\_\_

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Phone: \_\_\_\_\_ E\_mail \_\_\_\_\_

**Mail checks to:**  
**PhACT**  
653 Garden Road  
Glenside, PA 19038

or to pay online go to  
[www.PhACT.org](http://www.PhACT.org)

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

#### Statement of Purpose

The Philadelphia Association for Critical Thinking (PhACT) supports science, critical thinking and science education. It encourages the scientific investigation of controversial or extraordinary claims and disseminates factual information through its newsletter, *Phactum*, and a lecture series held at the Community College of Philadelphia.

*Phactum* is distributed 4 times a year and is the main propaganda organ for the Philadelphia Association for Critical Thinking.

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

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*Phactum* Editor, Ray Haupt  
[phactpublicity@aol.com](mailto:phactpublicity@aol.com)

#### The PhACT Council 2018/19

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"It had long since come to my attention that people of accomplishment rarely sat back and let things happen to them. They went out and happened to things."

~ Leonardo da Vinci, (1452-1519)

