

"I have at least, as I hope, done good service in aiding to overthrow the dogma of separate creations."

(Charles Darwin /1809-1882 / The Descent of Man / 1871)

Phactum

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

April 2011

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PhACT Meeting - Saturday, April 23, 2011

in the Great Hall (rooms S2-19) of the Winnet Student Life Building at 2:00 PM

Dr. David Cattell, Chairman of the Physics Department of Philadelphia Community College, will host The Honorable Judge John E. Jones of the United States District Court for the Middle District of Pennsylvania

All are Welcome. This event is Free and open to the Public.

Judge Jones will give a talk on

"Science, Religion and the Law: The Dover Intelligent Design Trial"



Judge Jones handed down the decision in the Kitzmiller vs. Dover Area School District trial involving attempts to put "Intelligent Design" in public school books. It has been called the most significant trial defending science teaching since the 1925 Scopes Monkey Trial. Judge Jones, a Lutheran republican, was nominated by former Senator Rick Santorum (a creationist activist) and appointed by George W. Bush. But he is strongly committed to judicial independence. Judge Jones's ruling was that "Intelligent Design" (basically Creationism with a new name) is a religious theory, not sci-

(Continued on page 2)

"Nothing is more dangerous than a dogmatic worldview - nothing more constraining, more blinding to innovation, more destructive of openness to novelty."

~ Stephen Jay Gould (1941 - 2002), American Paleontologist and Evolutionary Biologist

entific, and banned it from public classrooms. He got death threats against his family and was protected for a time by a US marshal. This case was an expensive, crushing defeat for the school district (who later voted out the school board members who started it), and for religionists who Judge Jones found had lied under oath. PhACT is glad for this victory for science and is pleased to host Judge Jones at the Community College of Philadelphia.

Note to Lawyers: This lecture has been approved by the PA CLE Board for 1.5 credit hours of continuing legal education. Lawyers seeking credit in PA must pay a fee of \$1.50 per credit hour directly to the PA CLE Board. Please note that attendees need to submit their own forms to the PA CLE Board. The form is their proof of attendance and will be available at the end of the lecture.

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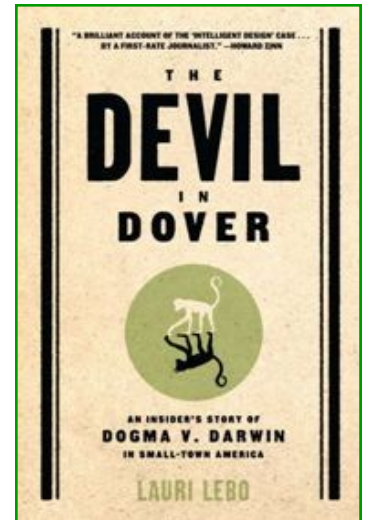
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The Devil in Dover An Insider's Story of Dogma v. Darwin in Small-Town America By Lauri Lebo

Publisher: The New Press **Spring 2009**
Paperback, 256 pages \$16.95
ISBN: 978-1-59558-451-9

Local newspaper reporter Lauri Lebo was handed the story of a lifetime when the Dover (Pennsylvania) School Board adopted a measure to require its ninth-grade biology students to learn about intelligent design. In a case that recalled the famed 1925 Scopes "monkey" trial and made international headlines, eleven parents sued the school board. When the case wound up in federal court before a George W. Bush-appointed judge, Lebo had a front-row seat.



Destined to become required reading for a generation of journalists, scientists, and science teachers, as well as for anyone concerned about the separation of church and state, *The Devil in Dover* is Lebo's widely praised account of a perfect storm of religious intolerance, First Amendment violations, and an assault on American science education. Lebo skillfully probes the compelling background of the case, introducing us to the plaintiffs, the defendants, the lawyers, and a parade of witnesses, along with Judge John E. Jones, who would eventually condemn the school board's decision as one of "breathtaking inanity."

With the antievolution battle having moved to the state level—and the recent passage of state legislation that protects the right of schools to teach alternatives to evolution—the story will continue to be relevant for years to come.

Lauri Lebo has been a journalist for twenty years. As part of an investigative reporting team, she helped solve two civil rights-era murders. As the York Daily Record's education reporter, she covered the intelligent design trial from its earliest beginnings at local school board meetings. *The Devil in Dover* was the first Studs and Ida Terkel Author Fund book. The winner of numerous state and national awards, Lebo lives in Harrisburg, Pennsylvania.

Letters to the Editor



There were no Letters to the Editor this month ... we do not bite and we really do appreciate letters to provoke thought and otherwise improve Phactum.

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Various Ruminations

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

The Tsunami, Radiation, and Potassium Iodide

The March 2011 PhACT lecture by Professor Jonathan Nyquist on the topic of Natural Disasters had been planned months ahead of the event and likewise Phactum was prepared and had been entrusted to the care of the US Postal Service and email copies in PDF format had been sent late in the evening, but prior to the tsunami by about an hour. Then, shortly after the email transmissions had been accomplished TV news channels began to report the Tsunami in Japan. The Tsunami was a fortuitous event for purposes of the lecture but otherwise was fascinating dreadful news that continues today and will continue for many decades.

One matter of major significance not yet resolved is the disturbing damage to four nuclear reactors and release of radioactive materials into the atmosphere and the ocean, largely in the form of Iodine-129 and Iodine-131, presenting a significant health problem for those who have ingested excessive amounts of those substances. For others the situation is not as desperate since the half life of that I-129 and I-131 is but a few days.

People are rightly concerned about health issues and are thinking of ways to protect themselves. Iodine, whether radioactive or not, has the characteristic that it is easily absorbed in the thyroid gland. If the material is radioactive there is significant potential that damage to that gland may occur. If non-radioactive iodine is ingested before exposure to a radioactive form of the substance, the thyroid gland will be saturated and the injurious effects of radioactive emissions diminished.

Accordingly there has been increased interest in Potassium Iodide (KI) tablets for use as a prophylaxis. KI is an interesting substance and is a highly successful and cost effective Public Health success.

Early in the 1900's it had been observed by doctors that many thyroid gland diseases such as goiter can be prevented by adding very small amounts of iodine to the diet. In 1925

federal public health officials required that salt manufacturers include potassium iodide in their table salt product. Thus, if you look on the label of a table salt box you will discover that the product likely contains 67 micrograms of KI per 1.5 grams of the table salt. That is a tiny amount, almost homeopathic in dilution, but it is there, it is measurable, and it has worked to reduce the incidence of goiter in the United States and other jurisdictions where dietary Iodine is naturally too low to maintain good health. The success of this program has been spectacular. KI is described as a micro-nutrient.

Meanwhile, fear of radioactive Iodine leads people to KI tablets which may be obtained at pharmacies in strengths of 65 and 130 milligrams. According to the CDC the normal adult dosage for purposes of protection from radiation poisoning is 130 milligrams in a day, probably as a one time dosage. Unfortunately, KI affords some protection only from unstable isotopes of Iodine, not from other radioactive substances, nor is it useful as a medication once damage has been done. Also, quite unfortunately, overdose of KI can have a wide diversity of undesirable effects. See the Center for Disease Control website for more information on this topic of emergency use of Potassium Iodide.

<http://emergency.cdc.gov/radiation/ki.asp>

Iodized table salt is not a suitable source of KI for emergency use to counteract the effects of radiation. The serving size as described on the salt box is 1.5 grams (1/4 teaspoon) and at 67 micrograms KI/serving would require 1940 servings of salt, roughly 2910 grams (485 teaspoons) to achieve the recommended 130 mg dosage. That amount of ingested table salt would almost surely be lethal.

Eratosthenes of Cyrene (c. 276 BC - c. 179 BC)



basis.

To my personal misfortune the name Eratosthenes was unknown to me until recently. He was a most remarkable scientist as this brief section from a Wikipedia entry indicates. Science history is fascinating and I hope that many Phactum readers agree and might be inclined to contribute some tidbits to illustrate the history of science on an occasional basis, even better on a regular

Eratosthenes of Cyrene was a Greek mathematician, poet, athlete, geographer, astronomer, and music theorist. He was the first person to use the word "geography" and invented the discipline of geography as we understand it. He invented a system of latitude and longitude.

He was the first person to calculate the circumference of the earth by using a measuring system using stades, or the length of stadiums during that time period (with remarkable accuracy). He was the first person known to have proven that the Earth was round, though prior

astronomers, such as Aristarchus of Samos knew, or at least assumed, that the Earth was spherical. He was the first to calculate the tilt of the Earth's axis (also with remarkable accuracy). He may also have accurately calculated the distance from the earth to the sun and invented the leap day. He also created a map of the world based on the available geographical knowledge of the era. In addition, Eratosthenes was the founder of scientific chronology; he endeavored to fix the dates of the chief literary and political events from the conquest of Troy.

Gambling notes

♥ **Casinos could have to mail gamblers monthly loss statements-** For the past three years, a Republican legislator from Bucks County (Pennsylvania) has been pushing for a law that would require casinos to send monthly statements to the homes of their regular gamblers, listing the amount of winnings and losses for the month. "This is a big deal, it's monumental," Rep. Mr. Clymer contended. He said casino officials have until now been able to block the measure. Bill Kearney, a reformed gambling addict from Philadelphia, has been sending emails to legislators for several years, urging enactment of such legislation. The Bill now goes to the full House. Bill Kearney is a Phactum reader and had written an essay for this newsletter.

<http://www.post-gazette.com/pg/11096/1137375-100.stm>

♥ Atlantic City casino profit plunged 26.7 percent - Atlantic City's 11 casinos reported their gross operating profit fell by nearly 28 percent (Quote from article) last year as fierce competition from casinos in neighbouring states continued to batter the nation's second-largest gambling market. That's down from the nearly \$730 million in gross operating profit in 2009.

<http://online.wsj.com/article/AP0316d949957e4935a7ad8f560e585125.html>

♥ **Gambling with gamblers** - A new study shows a high



A map of the world as known by Eratosthenes

success rate for Nevada's new gambling addiction treatment program. The UNLV study of more than 400 Nevadans treated for gambling addiction found that 92 percent "either cut back or completely stopped gambling after treatment. Patients also made improvements in dealing with life issues and avoided harmful behaviors typically associated with gambling excessively." Gov. Brian Sandoval has recommended cutting the current level of funding for the program, \$1.5 million, to about \$738,000.

<http://www.newsreview.com/reno/content?oid=1947908>

♥ **College gambling on rise** - Gambling among the younger set is on the rise, according to a 2005 study done by the Annenberg Public Policy Center of the University of Pennsylvania. Across the United States, there was a 20 percent increase in the monthly rates of card gambling for young people between the ages of 14 and 22, compared with a similar study from 2004. This means that approximately 2.9 million young people gamble with cards on a weekly basis, and just over 80 percent of those gamblers are male.

<http://www.theduquesnedeuke.com/u-s-college-gambling-on-rise-1.2133606>

♥ **Gambling Problems are More Common than Drinking Problems**, according to First-of-its-Kind Study - A study by John Welte and colleagues at University of Buffalo's Research Institute on Addictions finds that after the age 21, problem gambling is considerably more common among U.S. adults than alcohol dependence, even though alcohol dependence has received much more attention. They found that gambling, frequent gambling and problem gambling increases in frequency during the teen years, reaches its highest level in the 20s and 30s and then fall off among those over 70.

<http://www.buffalo.edu/news/12404>

♥ **Your brain on gambling** - Stories like Klinestiver's in this article, and research into dopamine's role in the brain, are helping neuroscientists understand the temptation of gam-

Online PhACT Discussion Board

PhACT does have an online discussion board facility where skeptics, critical thinkers, and others can discuss whatever might be on their minds.

All are invited to participate in discussion of any topic that might be on your mind. You need not be a PhACT member. The discussion board may be found at: <http://phactforum.org/>

bling and the scourge of gambling addiction. This research may also change the way we see casinos, and help shift the debate over whether the government should further regulate slots, roulette wheels, and other games of chance. From the perspective of the brain, gambling has much in common with addictive drugs, like cocaine. Both work by hijacking the brain's pleasure centers -- a lure that some people are literally incapable of resisting.

http://www.boston.com/news/globe/ideas/articles/2007/08/19/your_brain_on_gambling/

Diet water



Get a load of this!!! We can not swear to the accuracy of the translation but supposedly the label proclaims "all the flavor of regular water but half the calories". We offer no comment.

Reader Participation in Phactum

Readers are invited to comment on any matters that appear in Phactum or anything that you may care to opine about. Why not share your ideas on various matters? Your input in the form of Letters to the Editor, articles on topics that interest you, original poetry are highly desired. Agreement with the Editor is not a requirement. Good lasagna recipes are welcome.

Send to Ray Haupt at phactpublicity@aol.com

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William Jennings Bryan (1860 - 1925)

Prosecutor in the Scopes Monkey Trial

"Evolution seems to close the heart to some of the plainest spiritual truths while it opens the mind to the wildest guesses advanced in the name of science."

"All the ills from which America suffers can be traced back to the teaching of evolution. It would be better to destroy every other book ever written, and save just the first three verses of Genesis."

"God may be a matter of indifference to the evolutionists, and a life beyond may have no charm for them, but the mass of mankind will continue to worship their creator and continue to find comfort in the promise of their Savior that he has gone to prepare a place for them."

Columbia Author-Agent Mixer by Albert Fried-Cassorla

Returning on a supremely frigid night to old Columbia U
blasted in air of no comfort and shivering queues,
I headed north on Route One and NJ Transit to get me the
news.

Hurtled into the evening and into a who-knows-what,
battled Penn Station, zipped to 116th, and soon found my
stop
Hopped up the stairs and into the 14 degree freeze,
-- hardly any time for the illuminated trees
and scooted into a mind-numbing breeze.

Up the august steps of Library Lowe, pausing for no one --
moving as fast as I could go,
to a scene with nobody I'd know.

But at last -- I found my church and my secular steeple...
and inside were all the good people!

Seven agents and one fellow writer, that night I happily met.
all open, mostly kind -- even a "We're not right for you," I
did not seem to mind.

"Send the manuscript" and "Synopsis, please"
Those words flattered my ears, set my mind
prematurely at ease.

We found common balance, both the giver and the gotten...
and many beautiful conversations later, little's forgotten.

– February 8, 2011

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

Thank you, Albert.

Phactum readers are invited to submit original poetry.

Saturday, May 21, 2011 - Annual Banquet

This year, the PhACT banquet will again be at the Sorello Rose in Flourtown, PA.



According to the website www.ebiblefellowship.com, the Rapture is to occur on that day -- which is a testable claim that we can investigate together.

Our speaker will be Tom Beebee, who will appropriately speak on "**The Long Awaited Apocalypse**". Tom is author of the book "Millennial Literatures of the Americas". He is a Professor of Comparative Literature and German at the Pennsylvania State University. His publications include *Clarissa on the Continent: The Ideology of Genre, Epistolary Fiction in Europe and Geographies of Nation and Region in Modern Fiction*.

The cost is \$30 a person (\$20 for students).

Checks payable to PhACT may be sent to:

Becky Strickland
6 Samuel Huntington
Turnersville, NJ 08012

Becky may be contacted at: quasar@snip.net

Sorry, but if this day is in fact the start of the end of the world, then we can't promise refunds.



**Prepare to Meet Thy God at Bob's Diner
 in the Roxborough section of Philadelphia**

Meeting Report - March 2011

Dr. Jonathan Nyquist - "Disasters: Geology vs. Hollywood"

Meeting report prepared by Said Elmenyawy, a physics student of
Dr. David Cattell at Philadelphia Community College

Dr Jonathan Nyquist, professor of geophysics at Temple University, presented "Disasters: Geology vs. Hollywood" during the March PhACT Meeting. He compared the science of geology to Hollywood's mostly incorrect interpretations of disasters like earthquakes, volcanic eruptions, landslides, tsunamis and asteroids, using a perfect combination of mini lectures, film clips and in-class exercises. Professor Nyquist has been nominated for a Provost's Award for Innovative Teaching in General Education. His presentation during the PHACT meeting was a short summary of his course.

When reading and studying natural disasters, there are certain questions to keep in mind: What is a geologic process? Where does it occur? How serious is it? How often does it occur? Can we make a short-term forecast? Can we make a long-term forecast? Who is at risk and what can we do about it?

Tsunami was the first natural disaster discussed. Tsunami (plural and singular are the same word) is a series of water waves caused by the displacement of a large volume of water and can be generated by earthquakes, volcanic eruptions, underground landslides and other disturbances above or below water. Tsunami spreads out quickly in all directions and there is almost no warning time. For an earthquake to generate a tsunami it has to reach a magnitude of at least 7 - 7.5 but even then, there is no guarantee that it will produce a tsunami, even if the earthquake takes place underwater.

The tsunami in Indonesia that took place in 2006 left 130,406 people dead, 36,836 people missing and 504,518 people displaced. The water spread out on large distances very fast and people who lived near the starting place of impact had very little time if any at all. Indonesian

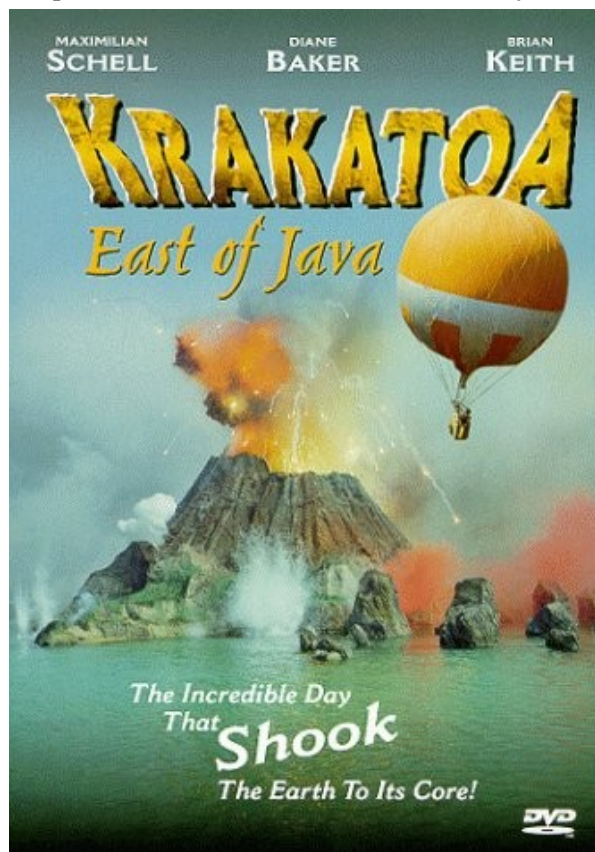
authorities did not know until the occurrence of the first wave that a tsunami was taking a place and then, they did not have a way to contact people as no network was previously established. There is no footage in existence for Indonesian Tsunami as any witness of this tragic event. It is not

earthquakes that kill people but collapsing buildings, fires and tsunami.

How bad is a tsunami? Here is an exact description given by Jon Nyquist regarding a tsunami in Lisbon in 1755: "That day started with a sunny and beautiful weather. The earthquake with a magnitude of 8.6 or greater destroyed Lisbon and other major cities in Portugal. 18,000 buildings were completely demolished. In the first five minutes of the earthquake, about 30,000 people lost their lives. The total lives lost in Lisbon, a city of 330,000, were calculated to be about 90,000 people".

A short video clip from the movie "Tidal wave: No escape" shows Hollywood's precursors of a Tsunami: music, dog barking at the ocean, slight shake of the cup on the table and then "Tidal Wave" that catches people, cars and parts of buildings. Tsunami is often incorrectly referred to as a tidal wave due to tsunami's similarity in coming in like a tide. The car would not stop with the coming of a tsunami wave as the

movie "Tidal wave: No escape" shows, in reality, the car will keep moving and pushing around. A real tsunami moves very fast; in Japan, buildings of 9,000 people were swept away in just one wave. Tsunami is like a giant flood with the waves that can go for 62 - 63 miles or 100 kilometers. Tsunami is similar to a huge tide but very different than Hollywood portrays it and far stronger.



1969 Cinerama Releasing Corporation movie poster. Never mind that the movie was filmed in Lazio, Italy, not Java, or that Krakatoa lies West of Java in the Sunda Strait, not to the East. Check it out on a map.

How do you stop a Tsunami? Hollywood brings a nuclear solution - a force that matches nature's force; essentially an idea is to create a wave that will cancel the other wave. Few additional extremely idealized details appear in the movie "Tidal wave: No escape": guessing of two computer passwords under time constraints of 30 seconds as well as knowing coordinates off hand to project nuclear missile's route. It is that easy! But what would really happen if a nuclear solution would be implemented? In reality waves one from each side do not cancel each other but double in size and produce more standing waves, also increasing their power. The main question that troubles so many is: what can be done about tsunamis? There are tsunami warning systems currently at work: tsunami buoy tacked at height in the bottom of the ocean and is designed to measure even slightest change in the amplitude of waves; tsunami buoy also tells about pressure change.

When discussing earthquakes, an interesting fact was mentioned that a frequency of annual global earthquake occurrence is about 1,000,000 earthquakes bigger in magnitude than 2; 100,000 earthquakes bigger in magnitude than 3; 10,000 earthquakes bigger in magnitude than 4; 1,000 earthquakes bigger in magnitude than 5; 100 earthquakes bigger in magnitude than 6; 10 earthquakes bigger in magnitude than 7 and 1 earthquake bigger in magnitude than 8.

The Pacific Ring of Fire is an area in the Pacific Ocean where large numbers of earthquakes and volcanic eruptions occur. Unfortunately, earthquakes cannot be predicted; the only prediction that can be made is earthquakes recurrence looking at historical record and plotting the data. There is currently an earthquake warning system in place. Earthquakes come in series of waves with different velocities: first wave is a P wave or a primary wave and has the highest velocity; it is the first wave to be recorded. Japanese scientists came up with an idea that if it is possible to track the primary wave, then following waves can be tracked too. Can the time be used to warn people, to do anything? And how much time is there between the waves? There is not much time between earthquake waves, only 15 seconds separate waves of an earthquake. Professor Nyquist performed an earthquake simulation exercise with students from his classes letting them know that there would be an incoming text message to their phones saying "Earthquake" at any time of the day. Students had to track down what they did during 15 seconds upon receiving the warning. One student answered that she ran and hid under the desk, another student ran out of the apartment and according to the time that passed, would be stuck taking the stairs had it been a real earthquake.

Various simulation exercises of earthquakes are regularly taking place in workplaces and schools in Japan and they have a 30-second system in place to warn people about potential earthquake(s). 30 seconds is a long time: the train can be stopped in 30 seconds, a person can get out of an elevator, a surgeon who is in the surgery can take his hands

out of patient's chest, a person can climb out of the window, a car can be pulled over, and power generators can be shut down. The problem is: how real is the warning? If it is false alarm, then there is mass hysteria, panic damage and the one who sent the message will get the blame. At the same time, if somebody knows that there is a 50% chance that an earthquake will take place and says nothing, then there is a lot of damage and possibly casualties. There is a great network in place in Japan.

When discussing flood, the term "100-year flood" is heard most frequently. Many people misinterpret 100-year flood thinking that they are safe. '100-year flood' is a 1 out of 100 chance that the flood will occur in a given year. 100-year flood occurrence is an unconditional probability and the following year the probability of flood occurrence in the same place is also 1 of 100. As for earthquakes, the chance of an earthquake to appear again in the same place in two consecutive years is not as big but still probable.

When making movies about asteroids, Hollywood is mostly correct to put asteroids in the category of a disaster that can end the world. The beginning of the movie "Armageddon" was shown to describe the effects of a six-mile wide rock that hit the Earth and created an impact comparable with 10,000 nuclear weapons: as a result, tons of dirt and rock were thrown into the atmosphere creating a black blanket that even sun could not penetrate for 1,000 years. In reality, nobody knows how long it would take for dirt and rock to settle. Hollywood's proposed solution on comets and asteroids is to use nuclear weapons and in this case Hollywood is not completely off track.

When Hollywood makes another end of civilization or disaster movie, they have their own recipe to follow: a misunderstood scientist and probably good looking, especially if he/she is a geologist, dysfunctional family that would be united by crisis, incredible devastation, preferably in New York City and involving the statue of Liberty and the last but not least – a nuclear weapon solution! Professor Nyquist put together an amazing "movie title-Hollywood disaster solution" list and here are just a few that he presented:

"Magma" – fight fire with fire! (a bunch of nuclear warheads to stop volcanic eruptions)

"Armageddon" – never trust a "C"-grade in Astrophysics

"Deep Impact" – send in the Titans

"The Core" – what is a "nudge" in planetary terms?

"Tidal wave No escape" – evil scientists-Nukes-Tsunami

"10.5" – Only one way to fuse the vault – NUCLEAR EXPLOSION!

In the end of his presentation, Dr Nyquist encouraged people to become geologists to be able to demolish undersea mountains, fuse tectonic plates, vaporize comets and asteroids and jump start the Earth's core as we all can see geologists in Hollywood blockbusters successfully do!

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Law and Freedom, Mencken Discovers, Yield Place to Holy Writ in Rhea County

by H.L. Mencken

(The Baltimore Evening Sun, July 15, 1925)

Dayton, Tenn., July 15. -- The cops have come up from Chattanooga to help save Dayton from the devil. Darrow, Malone and Hays, of course, are immune to constabulary process, despite their obscene attack upon prayer. But all other atheists and anarchists now have public notice they must shut up forthwith and stay shut so long as they pollute this bright, shining, buckle of the Bible belt with their presence. Only one avowed infidel has ventured to make a public address. The Chattanooga police nabbed him instantly, and he is now under surveillance in a hotel. Let him but drop one of his impious tracts from his window and he will be transferred to the town hoose-gow.

The Constitution of Tennessee, as everyone knows, puts free speech among the most sacred rights of the citizen. More, I am informed by eminent Chattanooga counsel, that there is no State law denying it -- that is, for persons not pedagogues. But the cops of Chattanooga, like their brethren elsewhere, do not let constitutions stand in the way of their exercise of their lawful duty. The captain in charge of the squad now on watch told me frankly yesterday that he was not going to let any infidels discharge their damnable nonsense upon the town. I asked him what charge he would lay against them if they flouted him. He said he would jail them for disturbing the peace.

"But suppose," I asked him, "a prisoner is actually not disturbing the peace. Suppose he is simply saying his say in a quiet and orderly manner."

"I'll arrest him anyhow," said the cop.

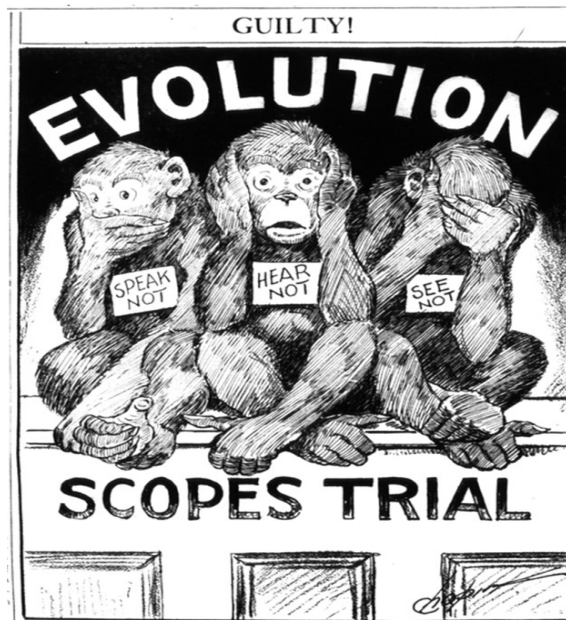
"Even if no one complains of him?"

"I'll complain myself."

"Under what law precisely?"

"We don't need no law for them kind of people."

It sounded like New York in the old days, before Mayor Gaynor took the constitution out of cold storage and began to belabor the gendarmerie with it. The captain admitted freely that speaking in the streets was not disturbing the peace so long as the speaker stuck to orthodox Christian doctrine as it is understood by the local exegetes.



From the San Francisco Chronicle
July 22, 1925

A preacher of any sect that admits the literal authenticity of Genesis is free to gather a crowd at any time and talk all he wants. More, he may engage in a disputation with any other expert. I have heard at least a hundred such discussions, and some of them have been very acrimonious. But the instant a speaker utters a word against divine revelation he begins to disturb the peace and is liable to immediate arrest and confinement in the calaboose beside the railroad tracks.

Such is criminal law in Rhea county as interpreted by the uniformed and freely sweating agents. As I have said, there are legal authorities in Chattanooga who dissent sharply, and even argue that the cops are a set of

numbskulls and ought to be locked up as public nuisances. But one need not live a long, incandescent week in the Bible belt to know that jurisprudence becomes a new science as one crosses the border. Here the ordinary statutes are reinforced by Holy Writ, and whenever there is a conflict Holy Writ takes precedence.

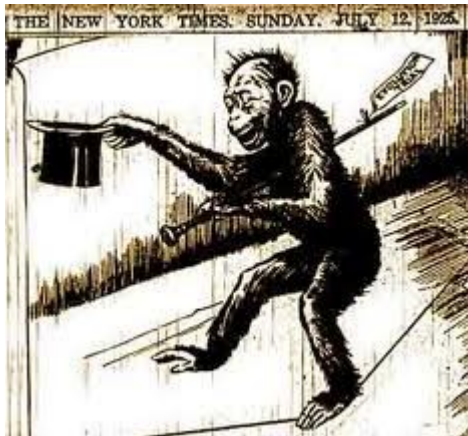
Judge Raulston himself has decided, in effect, that in a trial for heresy it is perfectly fair and proper to begin proceedings with a prayer for the confutation and salvation of the defendant. On lower levels, and especially in the depths where policemen do their thinking, the doctrine is even more frankly stated. Before laying Christians by the heels the cops must formulate definite charges against them. They must be accused of something specifically unlawful and there must be witnesses to the act. But infidels are *fera naturae*, and any

cop is free to bag at sight and to hold them in durance at his pleasure.

To the same category, it appears, belong political and economic radicals. News came the other day to Pastor T.T. Martin, who is holding a continuous anti-evolution convention in the town, that a party of I.W.W.'s, their pockets full of Russian gold, had started out from Cincinnati to assassinate him. A bit later came word they would bump off Bryan after they had finished Martin, and then set fire to the town churches. Martin first warned Bryan and then complained to the police. The latter were instantly agog. Guards were posted at strategic centers and a watch was kept upon all strangers of a sinister appearance. But the I.W.W.'s were not caught. Yesterday Pastor Martin told me that he had news that they had gone back to Cincinnati to perfect the plot. He posts audiences at every meeting. If the Reds return they will be scotched.

Arthur Garfield Hays, who is not only one of the counsel for the infidel Scopes but also agent and attorney of the notorious American Civil Liberties Union in New York, is planning to hold a free speech meeting on the Courthouse lawn and so make a test of the law against disturbing the peace as it is interpreted by the polizei. Hays will be well advertised if he carries out this subversive intention. It is hot enough in the courtroom in the glare of a thousand fundamentalist eyes; in the town jail he would sweat to death.

Rhea county is very hospitable and, judged by Bible belt standards, very tolerant. The Dayton Babbitts gave a banquet



New York Times, July 12, 1925

to Darrow, despite the danger from lightning, meteors and earthquakes. Even Malone is treated politely, though the very horned cattle in the fields know that he is a Catholic and in constant communication with the Pope. But liberty is one thing and license is quite another. Within the bounds of Genesis the utmost play of opinion is permitted and even encouraged. An evangelist with a new scheme for getting into Heaven can get a crowd in two minutes. But once a

speaker admits a doubt, however cautiously, he is handed over to the secular arm.



"WHAT WOULD THEIR VERDICT BE?"

—The Daily Star (Montreal).

From The Daily Star (Montreal), July 25, 1925

Two Unitarian clergymen are prowling around the town looking for a chance to discharge their "hellish heresies." One of them is Potter, of New York; the other is Birkhead, of Kansas City. So far they have not made any progress. Potter induced one of the local Methodist parsons to give him a hearing, but the congregation protested and the next day the parson had to resign his charge. The Methodists, as I have previously reported, are regarded almost as infidels in Rhea county. Their doctrines, which seem somewhat severe in Baltimore, especially to persons who love a merry life, are here viewed as loose to the point of indecency. The four Methodists on the jury are suspected of being against hanging Scopes, at least without a fair trial. The State tried to get rid of one of them even after he had been passed; his neighbors had come in from his village with news that he had a banjo concealed in his house and was known to read the Literary Digest.

The other Unitarian clergyman, Dr. Birkhead, is not actually domiciled in the town, but is encamped, with his wife and child, on the road outside. He is on an automobile tour and stopped off here to see if a chance offered to spread his "poisons." So far he has found none.

Yesterday afternoon a Jewish rabbi from Nashville also showed up, Marks by name. He offered to read and expound Genesis in Hebrew, but found no takers. The Holy Rollers hereabout, when they are seized by the gift of tongues, avoid Hebrew, apparently as a result of Ku Klux influence. Their favorite among all the sacred dialects is Hittite. It sounds to the infidel like a series of college yells.

Judge Raulston's decision yesterday afternoon in the matter of Hays' motion was a masterpiece of unconscious humor. The press stand, in fact, thought he was trying to be jocose deliberately and let off a guffaw that might have gone far if the roar of applause had not choked it off. Hays presented a petition in the name of the two Unitarians, the rabbi and several other theological "reds," praying that in selecting clergymen to open the court with prayer hereafter he choose fundamentalists and anti-fundamentalists alternately. The petition was couched in terms that greatly shocked and enraged the prosecution. When the judge announced that he would leave the nomination of chaplains to the Pastors' Association of the town there was the gust of mirth aforesaid, followed by howls of approval. The Pastors' Association of Dayton is composed of fundamentalists so powerfully orthodox that beside them such a fellow as Dr. John Roach Straton would seem an Ingersoll.

The witnesses of the defense, all of them heretics, began to reach town yesterday and are all quartered at what is called the Mansion, an ancient and empty house outside the town limits, now crudely furnished with iron cots, spittoons, playing cards and the other camp equipment of scientists. Few, if any, of these witnesses will ever get a chance to outrage the jury with their blasphemies, but they are of much interest to the townspeople. The common belief is that they will be blown up with one mighty blast when the verdict of

the twelve men, tried and true, is brought in, and Darrow, Malone, Hays and Neal with them. The country people avoid the Mansion. It is foolish to take unnecessary chances. Going into the courtroom, with Darrow standing there shamelessly and openly challenging the wrath of God, is risk enough.

The case promises to drag into next week. The prosecution is fighting desperately and taking every advantage of its superior knowledge of the quirks of local procedure. The defense is heating up and there are few exchanges of courtroom amenities. There will be a lot of oratory before it is all over and some loud and raucous bawling otherwise, and maybe more than one challenge to step outside. The cards seem to be stacked against poor Scopes, but there may be a joker in the pack. Four of the jurymen, as everyone knows, are Methodists, and a Methodist down here belongs to the extreme wing of liberals. Beyond him lie only the justly and incurably damned.

What if one of those Methodists, sweating under the dreadful pressure of fundamentalist influence, jumps into the air, cracks his heels together and gives a defiant yell? What if the jury is hung? It will be a good joke on the fundamentalists if it happens, and an even better joke on the defense.

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John Tate Raulston (September 22, 1868 – July 11, 1956) was an American state judge in Rhea County, Tennessee, best known for presiding over the 1925 Scopes Trial.

It is debatable whether or not Raulston allowed his personal support for the prosecution to affect his decisions during the course of the trial. He was said to have liked the attention that came with being a part of the trial, especially having his photograph taken. He was very religious and quoted scripture during the trial, as well as beginning each day with a prayer. Raulston also attended sermons prior to the hearing in order to witness William Jennings Bryan's speeches. The judge would always make sure that he and his family had first-row seats.

Among Judge Raulston's rulings during the trial there was this one where the Judge barred theological and scientific testimony of experts.



Judge Raulston delivering a ruling.

"This case is now before the court upon a motion by the [prosecution] to exclude from the consideration of the jury certain expert testimony offered by the defendant, the import of such testimony being an effort to explain the origin of man and life. The state insists that such evidence is wholly irrelevant, incompetent and impertinent to the issues pending, and that it should be excluded. Upon the other hand, the defendant insists that this evidence is highly competent and relevant to the issues involved, and should be admitted. . . . In the final analysis this court, after a most earnest and careful consideration, has reached the conclusions that under the provisions of the act involved in this case, it is made unlawful thereby to teach in the public schools of the state of Tennessee the theory that man descended from a lower order of animals. If the court is correct in this, then the evidence of experts would shed no light on the issues. Therefore, the court is content to sustain the motion of the [prosecution] to exclude the expert testimony."



First Philadelphia Science Festival April 15 - 28, 2011

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

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

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

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

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

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

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

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

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

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

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

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

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

Critical Decision Making: Science, Religion and the Law

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

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

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

A Whole New World: Augmented Reality and Redesigning the Familiar

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

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

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

Manya – A Visit with Marie Curie

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

Wednesday, April 27, 6pm | Chemical Heritage Foundation

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

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

Scientific (Ir)reverence: History of Science

Thursday, April 28, Time TBD | Wagner Institute

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

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

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

"Flavor Tripping:" The Magical Miracle Berry

Monday, April 18, 6pm | Continental Restaurant

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

PARTNERS: Monell Center, La Salle University

Melting Moments of Bliss: The Science of Chocolate

Friday, April 22, 6pm | The Standard Tap

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

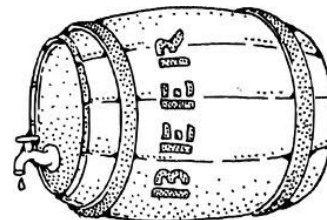
PARTNERS: Monell Center, Mars Candy Company

From Hops to Stein: The Science of Beer

Saturday, April 23, 7pm | Yards Brewery

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

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



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

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

ABOUT THE PHILADELPHIA SCIENCE FESTIVAL

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



What would Ben think of this event?

PhACT Presents Student Awards at the 2011 Bucks and Philadelphia County Science Fairs

Report by PhACT President, Eric Krieg

On March 15th, Tom Napier and I converged at Delaware Valley Agricultural college on the edge of Doylestown, Pennsylvania to act in our 3rd year as judges for the Bucks County Science Fair. This is the first year that we also had special award medallions made up by Al Erpel who owns the company CompuCraft in Montgomeryville. The other judges only review a limited category like Botony, Physics, Engineering, Chemistry, etc. Our scope is all the middle school exhibits for our PhACT special "Critical Thinking" category awards.

Our judging went through 2 phases: First with all the students gone, we split the room and each looked at the exhibits with no students present. We then made up lists of about a dozen exhibits meriting a closer look when we would interview the students.

During the phase with students present, we walked past well behaved students seated waiting to hopefully be interviewed, It reminded me of looks you get from dogs in the pound with their eyes all saying "pick me, pick me".

During the interview, we tried to ask questions to discern is this the student's work or that of a "helicoptering" parent. We were most impressed with students who were most forthright in discussing factors that could limit the accuracy of their own experiment and conclusions.

Over the years, we have been particularly impressed with students who invalidated their own hypothesis. This year our second place award went out to a young lady with the sense to concede that her 1 percent difference between the two subject categories was simply "not significant". Alas if only people who quote mainstream science experiments could be as adept at admitting "not strong enough data to form a conclusion". But following is a summary of the awards given out this year:

- ◆ Sean of Holicong Middle School got first place for his experiment "The Effects of Parabolas on Radio-Wave Propagation". He did a good job (for an 8th grader) of showing that use of a tinfoil reflector can enhance wireless router signal performance in one direction.
- ◆ Hannah of Richboro Middle School got second for an experiment "Do Females or Males Have Better Memory Skills". We were impressed that she did a standard psychology test trick of leading subjects to believe they would be tested for one thing while actually testing them for another. As mentioned, we were glad to see her able to interpret that her net difference in averages was simply not significant given her sample size.

We split our third place prize between 2 separate experiments that investigated the effect of grey water (water bilged from either a dish or clothes washer) on plants. In brief,



most plants are not hurt by water with some soap. These students did a good job of controlling for extraneous variables and making efforts to get beyond randomness.

The two honorable mentions go to:

- ◆ Mackenzie of Lenape Middle School "Does the presence or absence of a net effect free-throw accuracy" (yes, she attributes it to visual cues).
- ◆ Erin of \Our Lady of Mount Carmel "Optimizing the Oil Production of Navicula Pelliculosa Through Nutrient" - She found that algae can be goaded into producing more oil.

Special thanks to all who donated this years \$500 budget which was split between this fair and the one at George Washington Carver Science Fair.

PhACT plans to support the Bucks County Science Fair and the George Washington Carver Science Fair (Philadelphia County) in 2012.

Our goal in 2012 is \$600 to be dispensed in prizes to students who display excellence in Critical Thinking skills and application of the Scientific Method.

Donations are appreciated as is participation by PhACT members as judges at these events. It is an interesting and quite uplifting experience.

Thank you to the many PhACT members who donated to the 2011 Fairs.

Gambling and the Law®: Protecting Players From Themselves: What Could Go Wrong? By Professor I. Nelson Rose

**"I'm a man who can't say no."
Billy Joel, "Easy Money"**

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How far should governments go in protecting casino patrons from themselves?

Governments have always acted to regulate participating in gambling, usually by making it illegal.

But a tidal wave of legalization is sweeping the world. Lawmakers, faced with budget crises and visions of disposable dollars, euros and yens flowing into other jurisdictions, are racing to be the first to authorize the next form of legal gaming. Politicians also recognize that legal gambling does create the risk of harm to some of their own citizens. With no real-world experience, they turn to what they see as common sense solutions, experimenting with social engineering.

The problem is that common sense can be simply wrong. And social engineering is being done by not by scientists, which would be dangerous enough, but rather by people with good intentions, but no actual knowledge.

The situation is made worse because it is lawmakers, not regulators, who are dabbling in social engineering, most often when they first decide to legalize gambling. Statutes are much more difficult to change than regulations, particularly because once they are put in place, lawmakers have no incentive to reexamine the issues.

It took years to eliminate the mandatory early morning closings of casinos in Atlantic City, the \$500 loss limit in Missouri, and the four-hour cruises in Iowa, even when both operators and regulators called for changes.

Why would government agencies ask that player-protections be lifted? Because they turned out to be counterproductive.

Closing casinos at 4:00 am weekdays, 6:00 am weekends, might have prevented Atlantic City patrons who had too little sleep, and too much to drink, from gambling. But it didn't stop them from getting behind the wheel, and all at the same time.

Missouri's \$500 loss limit was almost impossible to enforce. In fact, it created a black market in gaming chips, with big losers willing to pay almost anything to buy chips from other players to remain in action.

My personal favorite "player-protection" was the four-hour cruise. The boats pulled away from the dock and the engine wheels turned at exactly the same speed as the on-coming river, so the ship did not move for four hours. Staring at muddy water and the same 30 foot tall trees for five minutes was enough to drive any passenger back into the casino. And when the ship docked again and dealers called, "Last bet!" players split 10s at blackjack and threw chips all over the roulette layout, just to get the most action.

Taking craziness to the breaking point, casino ships were forced to have phantom cruises, locking their doors for four hours at a stretch, even when weather conditions made it too dangerous to sail. Whose idea was it that the best way to handle a compulsive gambler was to lock him into a river-boat casino for four hours, even when the boat was docked?

Jurisdictions vary wildly in the rules gaming operators are required to impose on players.

The most common is a minimum age, and even this is not universal. Certainly, there is no agreement on when a person is old enough to make his or her own decision about gambling.

The legal fiction is that below a certain age, everyone is incompetent. Then, at the exact second of their 18th or 21st or whatever birthday, they become competent.

The legal term for this is an irrebutable presumption, at

least when it comes to minors. An underage MIT card-counter cannot go to court and prove he is competent to play blackjack.

The MIT would-be advantage player shows one of the major problems with player protections. Government draws an arbitrary line, because it would be too costly to hold hearings to decide each individual's actual competence. A rule is created, which may protect a majority of the population, but harms a significant minority.

We know, for example, that many near-adults are completely competent, just as there are many people way past the age of majority who should not be allowed any-



Florida gambling cruise boats

where near a casino.

Many jurisdictions put the burden on gaming operators to not only know the rules, but to determine which of their players fall under that irrefutable presumption. Some land-based jurisdictions impose strict liability: Casino operators are fined if a minor makes a bet, even if the child had a false I.D. and looked much older than his actual age. Governments regulating Internet gaming operators seem more forgiving, fining sites for allowing underage players only if there were inadequate safeguards in place.

The other side of the age barrier, the adult declared legally incompetent, is so rare that it is not an issue. But the temporary incompetence of a patron, caused by excess drinking or drugs, is a growing legal and political problem for land-based operators.

Internet operators cannot see glassy eyes or smell liquor on their players' breathe. But incompetence can also be caused by internal psychological factors. Some behaviors are so aberrational that any human gaming operator would be put on notice. A person who refuses to leave a slot machine, even to go to the bathroom, will be asked to leave. Should a similar standard be applied to Internet games?

Online poker sites do program their computers to detect players who play nonstop for 24 hours without bathroom breaks. But they are looking for bots, not compulsive gamblers. Should an operator be required to exclude all players who play for hours without breaks, including, maybe especially, if the online game is slots or roulette and the player is losing?

Computer programs are becoming sophisticated enough that it is possible that regulators will start requiring online operators to recognize when a compulsive gambler has gone on tilt. Governments in Australia are already experimenting with programming slot machines to stop operating when they have detected an out-of-control problem gambler.

Governments have always acted to regulate participating in gambling, usually by making it illegal. But now that gambling is becoming legal virtually everywhere, legislators and regulators are toying with imposing restrictions on players, that have to be managed by operators. And there is little thought to the unintended consequences of even the best-motivated social engineering.

In Pennsylvania, there's talk of resurrecting 2007's House Bill 783, which would require casinos to send statements each month to reward-card patrons, telling them how much they had won, or lost, gambling. In 2008, more than 60 members of the legislature signed on as co-sponsors.

The law of unintended consequences should warn all policy-makers to think through what else might happen if a player protection is created. The Pennsylvania proposals, for example, will probably help some borderline problem gam-

blers. But think of the risks. I am sure that there will be increased domestic disputes, even violence, when wives and husbands open letters from casinos stating how much their spouses have lost gambling.

In Australia and Nova Scotia, gamblers don't have to wait. Some of the gaming devices there tell players how much money they have lost and how long they have been playing.

Do players bet less after their slot machines have told them how much they have lost? The government of Nova Scotia conducted a study, which indicates this does work, but not for the players most in need – compulsive gamblers. The study was done, in part, because there were reports that the same machines in Australia actually increased the amounts some players wagered, in attempts to break even. This would make sense, since compulsive gambling is often triggered by players'

anxieties. And what could make a problem gambler more anxious than being told, while he was actually playing the slot machine, that he had lost more than he thought?

Machines of all types are being modified in the name of responsible gaming. ATMs are being removed from casino floors, VLTs are being slowed down, and Internet gaming sites are allowing players to set daily loss limits.

Even Nevada has decided that some devices are too enticing. In 1988 and 1989, Universal was ordered to retrofit 11,000 slot machines programmed to show near-miss jackpots on the payline. Regulators ruled that it was O.K. to have lots of winning symbols artificially bunched to appear above and below the payline. But players were being misled if the machine was programmed to show a winning symbol or two on the payline, when there should be only blanks.

Of course, all gambling requires near-misses. In fact, even after the Universal decision, it is O.K. in Nevada for a slot machine to have many jackpot symbols on the first two reels, and only one on the third reel, of a three-reel machine.

The distinction may make sense, at least with entirely mechanical slot machines. The theory is that a player could tell the true odds, by playing enough games. Of course, in this day of electro-mechanical or pure video gaming devices, it would probably take more than a lifetime to see all the combinations, particularly on a machine with a separate bonus game, such as "Wheel of Fortune."

It is the job of regulators to draw lines, and they decided in Nevada that it was simply going too far to allow slot machines to show symbols on the payline that were not truly random. Players had to be protected from games that seemed more winnable than they actually were.

Internationally, the goal of most governments in the past was to import money won from foreigners, and export social problems.

Casinos often excluded local residents, requiring patrons to show their passports at the door. Countries in the Soviet



bloc restricted play to West German deutsche marks, to squeeze this hard currency out of the underground economy and discourage all but the richest locals from gambling. Even dress codes acted as an efficient barrier to limit play to foreigners.

With the spread of casinos open to local residents, governments had to begin worrying about protecting their own citizens from gambling unwisely and too much.

One of the most restrictive regimes began in England in 1968. New casinos could only be opened if the proposed operator proved there was unmet demand. They were operated as private clubs; players had to register in person 48 hours in advance, before they were allowed to make a single bet. Casinos could have only two -- literally two -- slot machines.

Casinos could not advertise, or extend credit. They could take checks, and they were required to process them through the patrons' banks, even if the player won enough to redeem them. This was done with the express purpose of embarrassing players for writing lots of checks made out to casinos, as if bankers read their customers' checks.

The regulations went so far as to prevent players from making bets that the government thought was unwise. For example, players could only double down at blackjack if their first two cards totaled ten or eleven. Computer studies later showed this hurt card-counters who knew when to double on other hands, like soft 17.

The People's Republic of China has gone the furthest in imposing regulations on casino patrons. The casinos of Southeast Asia are probably the only operators in the world whose fortunes depend more on the restrictions imposed on their customers than on rules from their own governments.

The PRC changed its rules in 2003, allowing mainlanders

to travel to Macau without having to be part of a group. The first western-owned casino, the Sands Macau, opened in 2004, and took only eight months to recover its \$260 million cost.

But, in 2007, residents of Guandong, the province bordering Macau, were suddenly limited to one visit every three months. The impact was immediate, on the 250,000 people who were crossing the Zhuhai-Macau border every day, and on the casinos. I was teaching Gaming Law at the University of Macau and had a student who lost her job, when her position was eliminated: She had been in charge of a casino's frequent visitor program.

No one knows exactly why the PRC is continuously changing its visa requirements for visits to Macau. Since China has practically no programs for compulsive gamblers, protecting casino patrons from themselves is probably far down on its lists of reasons.

It may be that, having allowed mainlanders to easily gamble in Macau, the Beijing government is embarrassed by reports of increased embezzling by government officials.

So this may be a unique case in which a government is acting to protect the government from itself.

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© Copyright 2010. Professor I Nelson Rose is recognized as one of the world's leading authorities on gambling law and is a consultant and expert witness for governments and industry. His latest books, INTERNET GAMING LAW (1st & 2nd editions) and GAMING LAW: CASES AND MATERIALS, are available through his website, www.GAMBLINGANDTHELAW.com.

"Stop cheating!" the dealer told the card player. "I'm not!" claimed the player. "You must be," said the dealer. "That is not the hand that I dealt you."

"You cannot beat a roulette table unless you steal money from it." -Albert Einstein

"He had the calm confidence of a Christian with four aces." -Mark Twain

"A number of moralists condemn lotteries and refuse to see anything noble in the passion of the ordinary gambler. They judge gambling as some atheists judge religion, by its excesses." -Charles Lamb, Essays of Elia (1832)

\$1.6 Billion Corrections Budget vs. Inmate Education and Job Training

by Paul Schlueter III

The recession isn't going away any time soon. Pennsylvania needs to find ways to cut a very large chunk out of its operating budget, and nobody wants THEIR cherished pork barrel trimmed down to size. Until now, Corrections has been an irreducible part of state spending, increasing each and every year in leaps and bounds, while education and infrastructure spending have taken cut after cut.

Politicians have spent decades hyping "the crime problem," asserting that more and more behaviors need to be made "crimes," and the sentences for existing crimes need to be made longer and longer. Build more prisons, put more people in them, enhance the security systems of existing prisons, hire more staff, and all the while tell the public that their community is scarier and scarier. The more terrified the populace becomes, the more willing they'll be to pay taxes to incarcerate still more Pennsylvanians, and hire more Pennsylvanians to watch them, and administer prison programs. Crime rates are dropping; PA politicians claim that it's because they've taken so many criminals off the street. Yet, the reporting of every local crime makes statewide, even national news, and there's always some neighbor willing to tell the news cameras that crime levels are ridiculous, and more people should be locked up.

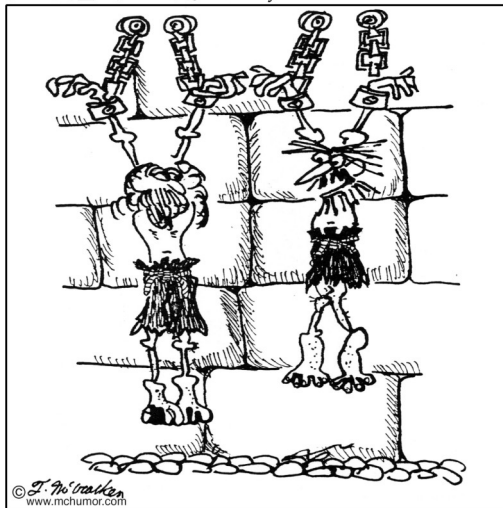
What has this actually bought PA citizens? As industry outsources unskilled jobs overseas, many people have lost their jobs. Some join the service (as do many kids just leaving school), and after that, they return with a strong regimental mindset, and good habits for obeying a chain of command. PA can, and does, employ several thousands of unskilled and/or semi-skilled citizens (especially ex-military) in Corrections, at unionized pay scales and benefits/pension packages that can best be compared to the bloated Autoworkers' Union packages that almost drove Detroit out of business. Yet Detroit at least produced cars. What does PA Corrections produce?

Prison produces almost nothing except ex-cons. 90% of

PA convicts have a parolable sentence, and probably 90% of the technically parolable will actually live long enough to be paroled (the remainder have such long sentences there can be no such chance.) That means 81% of PA cons will be paroled, someday. Currently, PA is on a blitz to parole as many inmates as possible; those with "non-violent" crimes (read "drug offenses," mostly) make up perhaps 50% of the inmate population, while 25% or so are here as parole violators, and perhaps there are better ways to cope with their misbehavior than tying up prison bunks at \$32K/yr. each with people who are primarily learning how to become tougher, slicker, and more antagonistic. Many inmates are here long past their parole eligibility points, simply because they haven't quite schmoozed in sufficient accord with the Parole Board's expectations (not admitting their crime, not taking enough programs, writing too many grievances while in prison, having

too many disagreements with staff which lead to internal misconduct reports, and even having a crime of too serious a nature are ALL among the reasons used by the Parole Board to deny parole, year after year, long past the minimum eligibility date.) Guards are under quiet pressure now to minimize the writing of misconducts against "parolable" inmates, to grease the wheels. Programs are routinely denied to longer-term inmates, just to make room for one or two more short-term participants who can thus reach acceptable status sooner. Pre-release programs, halfway house placements, and other "fast track" programs are being expanded dramatically, all in an effort to release some 7,000 of PA's 50K inmates this year. 2,000 inmates being housed in out-of-state bunks (at PA taxpayer expense, but not benefiting PA workers or vendors at all!) are slated to be returned to the state by year's end. Three entirely new prisons, at some \$200M each, have been scrubbed from the drawing board, so beds have to be emptied WITHIN existing prisons to make room for all the prisoners coming in through the

MCHUMOR.COM by T. McCracken



"I have to talk to my lawyer about the deal he made to get me a suspended sentence."

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

Up until very recently, some 50 - 66% (the statistic depends on which politician you listen to) of released inmates returned to prison within three years. What other industry do you know that GROWS when its product has a 66% failure rate! What other workers can you think of who get pay INCREASES and PROMOTIONS when their products fail so regularly? PA correctional workers have been remarkably successful at preventing video cameras from being installed where the workers themselves can be observed (a big union perk), though the state spends hundreds of thousands of dollars on video surveillance systems each year. Why don't they want to be seen? Because the typical Correctional Officer's routine job is to sit, to do as little as humanly possible, and only when absolutely necessary will he move to push a button to open a door, make a written report or log entry, or otherwise interrupt his seat time. Yes, on the rare occasion when inmates get into a fight, or simply get belligerent enough to annoy staff into action, those C.O.s have to move into action and "pile on" the offending inmate, cuff him, and then a squad of several guards escort him to the "hole" in front of a hand-held camcorder. If a C.O. happens to be injured, his medical coverage kicks in, and he gets days, weeks, even months off to recover and get over his psychological trauma, all while being paid.

It's not the individual workers' fault that the system has become what it is; their union (one of the strongest in the state) has produced the work environment and Correctional culture, point by point, over decades of negotiation. One estimate I've heard states that 90% of the state Corrections budget goes to pay salaries, benefits, and pensions of Corrections staff (union and non-union are both included), though as an inmate within the prison system I'm not privileged to access the public records that would verify or disprove that assertion.

The one aspect of an inmate's treatment that is PROVEN to have the greatest impact on his likelihood for recidivism is the education he receives in prison. If an inmate completes his GED in prison, his chance for recidivism is cut in half. If he gets sufficient vocational training to earn a state Journeyman's license in a field having marketability today, or if he earns ANY college degree while in prison, his recidivism risk drops below 10%! Yet, while he was President, Bill Clinton pushed through changes which ruled ALL inmates ineligible for Pell Grants while in prison (no inmate Pell grant deprived a free citizen of a grant; it was simply that it LOOKED bad

to spend any money on a free education for convicts.) Inmates may still take college courses, but only on a limited basis; Lifers must pay their own tuition and books entirely on their own. A program utilizing the services of dozens of trained inmate literacy tutors to help other inmates learn to read, do math, and improve other GED skills AT ZERO COST TO TAXPAYERS was entirely suspended in my prison a couple years ago, largely because a staffer felt that inmates should not be engaged in teaching other inmates (it was a job strictly for licensed Teachers!)

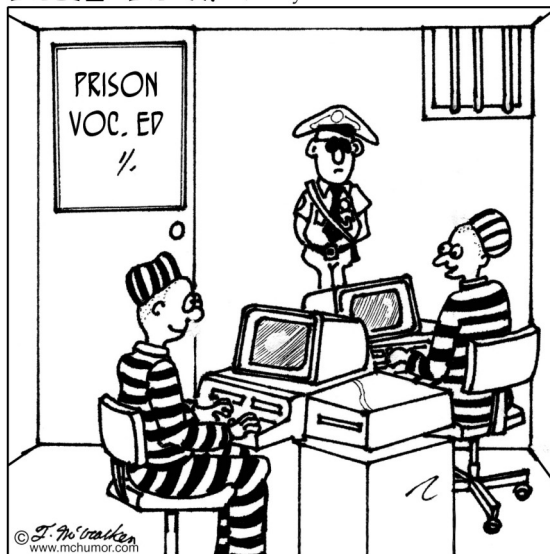
Apprenticeship programs throughout the state were severely curtailed, because it was discovered that some inmate workers were simply being credited for their training hours for merely attending make-work jobs. A few inmates went home with Journeyman's licenses, and sought jobs in their fields, only for it to be discovered that they scarcely managed to read a ruler or turn a screw without assistance. Was this the fault of those inmates, or of the prison staff supervisors

who were paid extra to provide those inmates with Journeyman-level job skills (or, if the inmate wouldn't measure up, to fire him)? The inmates were the ones blamed, and the staff kept their cushy state jobs; Apprenticeship programs, meanwhile, fell under such severe scrutiny by the Dept. of Labor that most such prison jobs simply stopped offering inmate workers an apprenticeship opportunity. Some such jobs turned out to be limited to tools, equipment, books, and skills which were literally decades out of date, and which couldn't be applied to ANY trade out in the community. What good is a machinist who has zero experience with CAD and CAM, because the Corrections system which trained him is paranoid about teaching inmates computer skills? What good is a Journeyman Electrician who cannot install security or fire alarm systems, computer network systems, or automated control systems, because the prison which trained him was worried that

teaching him such things (or even allowing him to buy/read a book discussing them) would enable him to commit crimes better, later?

This prison has two computer courses; the simpler teaches typing skills and basic Microsoft Office Suite courses; the more complex is a self paced programming course, in which some 20 or so students may spend several years following courses, under close observation and a key-stroke-review security system. Yes, perhaps 1% of the inmates at this prison may pursue computer studies, if they stay

MCHUMOR.com by T. McCracken



Cartoon by T. McCracken
<http://www.mchumor.com/>
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out of trouble and get lucky with the waiting list. On the other hand, a proposal to add a computer repair course to the (now defunct) Electronics class was disapproved, because it would have given inmates knowledge about the computers also used by the DOC, and that was considered too risky. Inmates may not so much as swap out mice or keyboards on computers here; two staff positions exist to perform all computer installation, maintenance, and replacement functions. For personal use, inmates are restricted to electric typewriters with 16K character (about 4 pages) memories, because more memory than that might be used to write better lawsuits against the state, or better appeals to get sentences reduced. We may use purposed computers in the library, one set up as a card index, several on a LAN set up for case law research, and one set up with a (somewhat limited) database containing the names and addresses of potential employers across the country. ZERO internet access is permitted for inmates. ZERO desktop publishing, ZERO serious research, ZERO music production, ZERO graphic design... in a modern country where most of the remaining jobs are either dependent upon or heavily linked to computer literacy and advanced competence with computer software related to the field, there's almost nothing 99% of the inmates of this prison can do to prepare for release into a wired community.

Even if we are released, it is almost universal for the Parole Board to prohibit parolees from possessing a cell phone; this modern necessity of life is a parole hazard, because it might enable a parolee to more efficiently sell drugs or arrange other criminal endeavors.

Courses exist for inmates who do not have their GED (statistics on this are amazingly difficult to pin down, but some estimates suggest that as many as 60% of current inmates lack a diploma or GED, and among them, the general reading level hovers somewhere around 5th or 6th grade.) It is mandatory for an inmate to participate in "prescribed" schooling; if he refuses, he is ineligible for a job, and will receive poor recommendations when seeking parole. Still, many of the more "gangsta"-motivated inmates proudly refuse the white man's education, preferring a life of cards,

dominoes, and sports. (NOTE: "The white man" is an authority figure, with relatively little actual racial reference intended.)

What can be done to better spend the Correctional budget? Consider that keeping an ex-con on parole, with drug testing, costs a mere \$5K/year (vs. \$32K/yr. for a prison bunk).

- ◆ Shift spending away from prison staff benefits and pensions, and tie their raises and promotions to ACTUAL educational advancement in criminology, psychology, counseling, etc. Find ways to make prison staff personally more responsible for providing useful vocational training, drug/alcohol treatment, social skills training (including fatherhood skills), etc. Spend more money on meaningful psychological and observed behavioral analysis of each inmate, to determine suitability for parole release.
- ◆ Reduce or end "mandatory minimum sentencing," and make parole eligibility more immune to political pressures. Make parole dependent on demonstrable improvement in responsibility, sociable behavior, and employability skills. Sentences exceeding 10 years have exacted all the punishment that society need impose; beyond that, ANY convict should have the opportunity to demonstrate his suitability for parole.
- ◆ Offer more vocational training, in skills which have meaningful marketability in the modern outside community (group-mopping of the prison corridor is NOT a marketable job skill!) Make Kitchen employment a true trade course in culinary arts, with advancement, pay, and perks commensurate with advancement; it should NOT be the "grind-up" job to which every inmate gets assigned first! Involve inmates in more of the paperwork jobs that they'll encounter on the outside - clerical, accounting, inventory, ordering, shipping & receiving, etc. Use real forklifts, teach the driving of real trucks, train inmates on modern industrial equipment of every sort, and make welding and fabrication courses available INSIDE prison fences, to

William DiMascio, Executive Director of the Pennsylvania Prison Society stated in an opinion piece in the Philadelphia Inquirer, February 2, 2011:

"Facing a budget deficit of about \$4 billion, many Pennsylvania lawmakers are concerned about the cost of the state prison system. The Department of Corrections' operating budget is almost \$2 billion, and that does not include another \$800 million in the capital budget for the construction of four new prisons. And Pennsylvania could save tens of millions of dollars immediately by bringing its prisoners back from rented cells in Michigan and Virginia.

The conservative Commonwealth Foundation, echoing what more liberal groups have been saying for years, has pointed out that lower-cost alternatives to prison could save hundreds of millions of dollars without risking public safety."

The full article can be viewed at:

http://www.philly.com/philly/opinion/20110202_Prisons_are_busting_Pennsylvania_s_budget.html

Mr. DiMascio can be contacted at: dimascio@prisonsociety.org

large percentages of inmates. The more employable you can make an inmate, the more likely he will be able to surmount the inherent disadvantage of seeking a job with a criminal record. If he finds a job that can support him reasonably, and help him meet parental obligations, he will be better inclined to turn his life away from easy-cash criminal activity. What PA pays to educate or job-train an inmate will be a \$32K/yr. savings in future incarceration costs, while also turning that ex-con into a tax PAYER!

- ◆ On the outside, expand the hiring of Parole Officers, to better supervise parolees and probationers. Improve job placement services for ex-cons, and offer tax incentives to employers who hire ex-cons (one or two per company is vastly superior to having sweatshops who hire dozens of ex-cons so they can underpay and mistreat them with impunity!) Set up more halfway houses, in more communities (focusing on the areas where jobs and housing are most available.) Devise, AND USE, more and better Treatment programs, to intervene in juvenile delinquency, to treat drug/alcohol dependency, to improve family relations (especially keeping fathers involved in the lives of their kids), and helping the underprivileged find job training and jobs.
- ◆ Spend much more money on making it appealing to stay in school, on making school classes more useful for those who may not necessarily be seeking college-type careers, and on social programs meant to engage and involve the community in building and reinforcing itself.

\$1.6 Billion per year is a disgraceful amount to spend on incarcerating people, even when much of that money is used to keep other Pennsylvanians employed in Corrections. We do not need to have one of the highest incarceration rates in the world, nor THE highest actual rate of juvenile Life-sentenced persons, period.

Prison space needs to be reserved for the worst of PA's convicts, those who refuse to conform to rehabilitative programming, those who refuse to behave in a socially acceptable manner, and also those who have repeatedly failed to remain non-criminal while on previous paroles. It is undeniable that such "hard cases" exist. It is equally undeniable that many prison inmates will learn NOT to return to crime, if they are given sufficient tools to build a non-criminal life for themselves after parole. People must be given not only the opportunity to turn their lives around for the better, but also the means to do so, and a support system to encourage and assist them as they struggle to do so.

Governor Corbett has reportedly announced a new parole policy for PA, dramatically curtailing the return of parolees to prison for so-called "technical violations" (violations of the terms of parole, such as having a cell phone, missing curfew, losing your job, or getting evicted from your approved housing situation). Instead of returning such parolees to state prison for perhaps years of additional incarceration, the NEW idea is to put them into programs targeted at their particular failure, to impose restrictions such as electronic monitoring and additional reporting, or to assign them to low-security (and low-cost) facilities such as "halfway back houses." This is a remarkably far-sighted position for our former lock-'em-up Attorney General to take.

Additional matters I'd hope the Governor will support are pushing for legislation to provide retroactive parole eligibility for lifers (this 10% of the current prison population may legally NEVER apply for parole, regardless of their accomplishments and rehabilitation, other than through a process of Commutation which has been politically stacked so as to preclude nearly all possibility of success.) Also, the PA legislature could be encouraged to ease legal limitations on when

"To assert in any case that a man must be absolutely cut off from society because he is absolutely evil amounts to saying that society is absolutely good, and no-one in his right mind will believe this today. "

Albert Camus (1913-1960), French novelist, essayist and dramatist.

an inmate may raise newly-discovered evidence for reconsideration of his conviction or sentence (the "time bar" currently in effect holds "finality of conviction" superior to any level of injustice which an inmate may allege on appeal). And, as the top official of our state, the Governor might also be progressively disposed to trying to change the Correctional philosophy from one of punitive retribution and paranoid over-reaction to perceived risks, to one of sincerely trying to CORRECT the social and psychological problems of criminals, and to attempting to restore communities by returning deserving, well-adjusted convicts to their homes and families so they may contribute to society, rather than remain a burden upon it.

PA has many fiscal issues and difficulties to face and solve. Addressing the failed Correctional system's inherent wastefulness and counter-productiveness is one of the essential avenues which must be explored with an open, reasonable mind.

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

www.jaybird.org

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Wagner Free Institute of Science

<http://www.wagnerfreeinstitute.org>

Adult Education Course Schedule Spring 2011 Courses

Natural History of Philadelphia, Professor David Hewitt. 5 Mondays, beginning April 4, 2011, 6:30 to 7:30 PM and one Saturday field trip. Pennsylvania Horticultural Society, 100 N. 20th Street (20th and Arch Streets). This course will present an overview of the current and historic ecology of Philadelphia.

Owing to space limitations, this course requires preregistration.

Preregistration begins March 1, 2011. To preregister, call 215-763-6529, ext. 23.

Lichens in the City, Professors David Hewitt and Alfred E. Schuyler. Begins April 20, 2011. This course is field trip based and will meet for 2 Wednesday lectures and 4 Saturday field trips. The Academy of Natural Sciences, 19th Street and the Benjamin Franklin Parkway. This course will present an introduction to lichens and woody plants that grow in the city.

This course requires preregistration. Preregistration begins March 1, 2011.

To preregister, call 215-763-6529, ext. 23.

A \$25 registration fee applies and you must sign up for the entire series.

Free Courses at the Henry George School & Birthplace Museum

413 South 10th Street, Philadelphia, PA 19147

(215) 922-4278

<http://www.henrygeorgeschoolphila.org>

The 10-week 2 hour **FUNDAMENTAL ECONOMICS FOR A SUSTAINABLE AND PEACEFUL PLANET** classes: The Tuesday Afternoon class meets once per week for 10 weeks from April 19th, 2011 through Tuesday, June 22nd, 2011 from 7:00 - 9:00 PM. **The Production & Distribution of Wealth**

Part I: [Prerequisite for enrollment in PART II & III]

Examine the primary causes of poverty. Are slums, vice, violence, unemployment, and subsistence wages just symptoms?

- Trace the root cause of the business cycle from boom to bust and back to boom.
- Distinguish the Earth, nature and its natural opportunities from the products of human effort.
- Study the relationship between the individual and society.
- Identify those values which are not produced by individuals or corporations but by the community as a whole.
- Consider the free market proposals of Henry George: common ownership of natural resources and private property in the things produced.

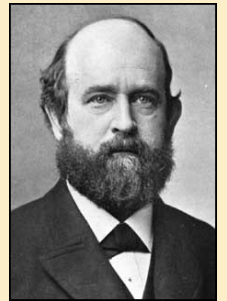
Text: **PROGRESS & POVERTY** (2006 abridged edition).

The 10-week course **APPLIED ECONOMICS** on Monday evenings, April 18th to June 27th from 7:00 - 9:00 PM

Part II: Applied Economics -

Where are we in solving our myriad social problems? Explore the dynamics government, money, central banking, money-creation, international trade and globalization. Do the World Bank, the World Trade Organization, and the IMF represent workers and consumers or large corporations? Text: "**SOCIAL PROBLEMS**" by Henry George

Henry George, a journalist and self-taught political economist, was born September 2, 1839 at 413 South 10th Street in Philadelphia, Pennsylvania. He died on October 29, 1897 in New



York City during his second campaign for the office of Mayor. His ideas and writings inspired an international social movement of enormous importance to secure true liberty and equality of opportunity for all by permanently ending all forms of monopoly — most importantly, that of land rent monopoly. The Henry George School of Social Science was established in New York City in 1932 to make sure the truths revealed in Henry George's writings remain part of the public dialog.

Please feel free to come by the school for a visit. All are welcome to register for the School's courses, our Free Friday Film Forums, and the free Saturday Seminar Series.

PHACT CALENDAR

Dr. David Cattell, Chairman of the Physics Department of Community College of Philadelphia hosts meetings of PhACT - at 2:00 PM on the third Saturday of most months at Community College of Philadelphia.., Parking is easily available and costs \$3.75 for all day. Enter the college parking lot on 17th Street which is one way south bound. This meeting site is handicap accessible. **PhACT Meetings are free and open to the public unless otherwise noted.**



Saturday, April 23, 2011 - Science and the Court Room: Judge John Jones.

2:00 to 3:30 PM in room S2-19 (the Great Hall) in the Winnet Student Life Building just south of 17th and Spring Garden St.

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

Saturday, May 21, 2011 - Annual PhACT Banquet at Sorello Rose in Flourtown, PA. Thomas Beebee, Professor of Comparative Literature at Pennsylvania State University will discuss the End of the World, including the End of the World scheduled for that day. Should our meal begin with dessert? Reservations are a must. See page 6 for more details.

Saturday June 25, 2011 - Annual PhACT Picnic. See website for details. www.phact.org

Saturday, September 17, 2011 at 2:00 PM- PhACT Meeting - The Search for Extra Terrestrial Intelligence. Earl Bennett who has been President of the Philadelphia Area Space Alliance (PASA) for a number of years will discuss this topic. PASA promotes science and technology education by performing outreach to the general public as guests of various museums and organizations.

Monday, April 11, 2011 at 6:00 PM at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106

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

Fermentation: The Amazing Mother of it all in Wine and Beer

Dr. Solomon H. Katz, Distinguished Professor of Anthropology at the University of Pennsylvania; Director of Penn's Krogman Center for Childhood Growth and Development; editor-in-chief of the Encyclopedia of Food and Culture (2003). Most people know that fermentation with yeast--known throughout all of human civilization--produces the alcohol in wine and

beer. But fermentation also is the source of the many of the flavors and nutrients that make beer and wine such culturally important foods. Sol Katz, an expert on the anthropology of food, will explore the development of the fermentation process since ancient times and look at scientific knowledge of the process today. Come learn about zymology, the science of fermentation, and why we love wine and beer so much! This month's Science on Tap presented by the Wagner Free Institute of Science <http://www.chemheritage.org/visit/events/science-on-tap/index.aspx> Free and Open to the Public. Must be 21 or accompanied by a responsible adult.

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

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



Fort Sumter in 1860

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

Wednesday, April 13, 2011 at 6:30PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

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

The History of Childbirth

Speaker: Randi Hutter Epstein, MD is a medical writer and adjunct professor at The Graduate School of Journalism, Columbia University and the managing editor of the Yale Journal for Humanities in Medicine. Get Me Out: A History of Childbirth from the Garden of Eden to the Sperm Bank is her first book. Free. To register: <http://www.eventbrite.com/event/1179763705>

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

Roses exotic and roses erotic; roses botanical and roses theoretical. A girl named Rose who became Napoleon's wife and Empress of France. A famous American expatriate in Paris who called Alice B. Toklas her Rose.

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

In the early 19th century, Empress Josephine cultivated 250 varieties of roses at her Malmaison estate, and the rose soon became a symbol of love. One hundred years later, modernist expatriate Gertrude Stein declared, "Rose is a rose is a rose." Her resonant repetition referred to Alice B. Toklas, upended the romantic rose, and offered up an icon of avant-garde modernism.

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

Program:

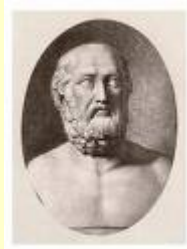
5:30-6:30: Preview and curatorial tour of Of Elephants and Roses, including famed artist J.-P. Redouté's watercolors on vellum and his illustrations in Les Roses inspired by Josephine's roses at Malmaison

6:30-7:30: Presentations and discussion

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

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

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



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

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

Friday, April 15, 2011 at 7:00 PM - Delaware Valley Amateur Astronomers in the Greater Plymouth Community Center, 2910 Jolly Rd, Plymouth Meeting, PA

China's Astronomical Treasures - Bart Fried
Free and open to the public. <http://dvaa.org>

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

The General George B. Meade Society

CALL TO ARMS!

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

All Union military and civilian reenactors and Heritage groups are welcome to participate in the launch event for the Sesquicentennial. NO Fee. Advance registration required. Mounted cavalry encouraged. Be a part of history! Philadelphia launches its Civil War 150 commemorations and salutes the city's response to President Lincoln's first call for volunteers with a march that re-creates the original route past historic Independence Hall and through the nineteenth-century city. Further details and online registration: <http://www.civilwarphilly.net/parade/> Report to free and supervised parking area at Broad & Washington in Center City by 8:00am. Shuttle buses to Parade formation at National Constitution Center at 9:00am. Parade steps off at 10:00am. Living History at Broad & Washington, followed by reception/tours at the Union League. Co-sponsored by the Civil War History Consortium and Union League of Philadelphia. Questions: parade@civilwarphilly.net; call 215 563 6500 x6461

Sunday, April 17, 2011 at 2pm at Laurel Hill Cemetery, 3822 Ridge Avenue - Philadelphia, PA 19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Liberty or Death: The Revolutionary War Patriots at Rest in Laurel Hill

"Give me liberty or give me death!" is the now famous line often attributed to Patrick Henry and his 1775 speech. But what about the Founding Fathers and patriots who truly did give their lives for that freedom we hold so near and dear to our hearts? Join us as we hear their rousing stories of victory, tragedy and revolution from their final place of rest here at Laurel Hill.

\$15.00 general / \$12.00 members / \$10.00 seniors & students.

Children under 12 for free

Wednesday, April 20, 2011 at 12 noon, at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

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

Islam and the West

Islam is a global factor with which the West must contend. What are the bases of the faith? What exactly does it say about jihad, women, and tolerance? How does it differ from Christianity and Judaism? Why is it such a contentious issue in Europe? Why is the impact of Islam in Europe different from that in the United States? What is the portent for the West? How

should the West respond to Islam? These and other issues will be addressed in this topical and engrossing talk.

Speaker: Buntzie Ellis Churchill

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

Cost: \$10.00 includes lunch.

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

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

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

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

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

PhACT Event

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

See Page 1 for more details.

Saturday, April 23, 2011 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue - Philadelphia, PA 19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

Nature in the Necropolis: Birds & Blooms of Laurel Hill

Laurel Hill claims status as the first garden cemetery in the United States, and who could be more welcome visitors to a garden than birds? We will walk through this beautiful park-like landscape – 78 acres of green space in the middle of the city – while taking in gorgeous views of the Schuylkill River, and learning about the site's history as a world-renowned arboretum. In doing so, we will also aim to identify the many bird species, trees, and horticultural specimens that still populate the site.

Share your knowledge or just enjoy nature and the blooming springtime all around you. Bring binoculars should you wish. The program will conclude with refreshments inside our Gatehouse.

\$15.00 general / \$12.00 members / \$10.00 seniors & students

Children under 12 are free

Tuesday, April 26, 2011 at noon. at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

Brown Bag Lecture: "High-Tech Innovation and Economic Uplift: What America Means by Progress"

A talk by Amy Slaton

From President Obama's State of the Union to small town economic strategies, high-tech innovation has lately become a watchword of optimistic planners seeking a way out of the nation's lingering recession. With hopes of renewed global economic dominance, and new jobs for many disadvantaged American communities, boosters invoke the historic role of science and technology as sources of U.S. industrial might. But a close look at the labor patterns that actually accompany high-tech scale-up, including automation and outsourcing, casts doubt on these projections. How, we might ask, do science and technology continue to enlist uncritical support as sources of collective good in spite of these less than promising outlooks?

Amy Slaton is an associate professor of history at Drexel University. She is the author of *Race, Rigor and Selectivity in U.S. Engineering: The History of an Occupational Color-Line*, and is now writing about historical American ideas of skill and opportunity in high-tech industries.

Free and open to the public.

Tuesday, April 26, 2011 at 7:30PM at Central Library 1901 Vine Street, 19103 215-686-5322

Francis Fukuyama | The Origins of Political Order: From Prehuman Times to the French Revolution

Francis Fukuyama is the Olivier Nomellini Senior Fellow at Stanford University's Freeman Spogli Institute for International Studies. A former senior staff member of the RAND Corporation, he has served as deputy director in the State Department's policy planning staff, and captured international attention with his bestselling book *The End of History and the Last Man*. The first in a two-volume work, his new book tracks the evolution of modern political institutions, from the growth of politics among our primate ancestors through the beginning of the French Revolution.

Cost: \$15 General Admission, \$7 Students Buy tickets online

<http://libraryphila.tix.com/Event.asp?Event=329973>

Wednesday, April 27, 2011 - 6:00 PM to 8:00 PM . at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

Tel: 215-925-2222 •

<http://www.chemheritage.org>

Manya—A Visit with Marie Curie

Meet famous scientist Marie Curie, as portrayed by storyteller Susan Marie Frontczak. Best known for her discovery of radium and radioactivity, Curie was the first woman to receive a doctorate in the sciences in Europe, the first woman to receive a Nobel Prize, the first person to receive two Nobel Prizes, and the first woman to teach at the Sorbonne.

From political oppression, to scientific emergence and fame, to the tragedy that forced her into single motherhood as well as further world prominence, Manya's story reveals a compelling journey.

Robert Hicks, director of the Mütter Museum, will introduce Frontczak and describe Curie's visit to Philadelphia in 1921.

A question-and-answer session will follow the one-woman presentation.

This Women in Chemistry program is part of the Philadelphia Science Festival and presented in partnership with the Academy of Natural Sciences and the Mütter Museum of the Philadelphia College of Physicians.

Fee: \$10.00 Open to the Public. To register:

<https://www.chemheritage.org/secure/register-for-an-event.aspx?eventid=71527>



Marie Skłodowska—

Wednesday, April 27, 2011 - at 7:15 P.M. at Brittingham's Irish Pub and Restaurant, 640 East Germantown Pike, Lafayette Hill, Pennsylvania. (610)828-7351

Todd Braisted on "The American Vicars of Bray": Altering allegiances and the recruitment of the Provincial Corps at Philadelphia, 1777-1778

The subject of how many Loyalist troops were actually raised in Philadelphia has been asked since Sir William Howe testified on the subject before Parliament. These Provincial Forces included not only real Loyalists but also relied heavily on desertion from the Continental Army in and around Valley Forge. Using primary sources from the United States, Canada and England, Mr. Braisted will examine the correlation between the desertion of Washington's Army and the raising of new recruits for the British from August 1777 to June 1778. This meeting is free and open to the public.

<http://arrtop.com/>

Thursday, April 28, 2011 from 6:00 PM - 8:30 PM at the The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103 215-299-1108 cep@ansp.org

www.ansp.org/environmental/

Innovative Agriculture for the 21st Century

Modern agriculture techniques have given us unprecedented amounts of food. However, critics note the large amounts of water, energy, and chemicals required for these yields have uncertain impacts on long-term soil fertility and the health of both humans and the environment.

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

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

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

22nd Annual Neshaminy Civil War Reenactment

LIVING HISTORY & BATTLE REENACTMENT

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

Camps open 9AM - Battles at 2:00PM on Saturday and 1:30PM on Sunday

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

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

Registration: www.28pvi.org

Co-sponsored by: The 28th PA Regiment, the Army of Northern Virginia, The Historical Society of Bensalem Township, The Grand Army of the Republic Civil War Museum & Library, the Delaware Valley Civil War Round Table, Neshaminy State Park, and Waste Management, Inc. Information: call 610-809-6540 or e-mail: KGC28PVI@COMCAST.NET

Friday, April 29, 2011 at 6:30 pm at the The Academy of Natural Sciences, 1900 Benjamin Franklin Parkway, Philadelphia, PA 19103

<http://www.ansp.org/adult-programs/lectures.php/> 215-299-1108

An Evening with Andrea Wulf - Author talk followed by book signing
Founding Gardeners, Andrea Wulf's latest book, looks at the lives of the founding fathers and how their attitude toward plants, gardens, nature, and agriculture shaped the American nation. George Washington, John Adams, Thomas Jefferson, and James Madison regarded themselves foremost as

farmers and plantmen and for them gardening, agriculture, and botany were elemental passions, as deeply ingrained in their characters as their belief in liberty for the nation they were creating. In a unique retelling of the creation of the United States, award-winning historian Andrea Wulf will show how plants, politics, and personalities intertwined as never before.

Presented by the Academy of Natural Sciences This event is free and open to the public.

To register: call 215-299-1060 or go to AndreaWulf-FANSP.eventbrite.com in partnership with the Free Library of Philadelphia.



Sir William Howe, 5th Viscount Howe, (1729 - 1814)

Saturday, April 30, 2011 at 2pm at Laurel Hill Cemetery, 3822 Ridge Avenue - Philadelphia, PA 19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Language of the Dead

Victorian Philadelphians loved visual symbolism, and even their simplest grave markers are likely to be ornamented by ivy (for eternal life), lilies (for resurrection) or hour glasses (for brevity of life). Laurel Hill Cemetery is truly an outdoor sculpture garden, where the dead have always left symbolic messages to be read by the living.

\$15.00 general / \$12.00 members / \$10.00 seniors & students

Children under 12 are free

Sunday, May 1, 2011 at 2pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA 19132. 215-228-8200 <http://www.thelaurehillcemetery.org>

Unearthed Laurel Hill: The Hot Spots and Storied Plots

An informative overview of Laurel Hill's long and colorful history, this tour will include all of the highlights, hot spots and notable stories that afford the cemetery its WOW factor. This is the ultimate tour for first-time visitors to Laurel Hill, and anyone else who likes beautiful art, stimulating history, and just enjoying life...even amongst the dead.

\$15.00 general / \$12.00 members / \$10.00 seniors & students

Children under 12 are free

Sunday, May 1, 2011 at 3pm at West Laurel Hill Cemetery, 225 Belmont Avenue, Bala Cynwyd, PA 19004

<http://www.thelaurehillcemetery.org>

Boneyard Bookworms April Book Discussion

Read in Peace. Laurel Hill and West Laurel Hill Cemeteries are pleased to announce the establishment of their first book club, Boneyard Bookworms. Join us each month as we explore fun and fascinating books from our "unique" perspective. Book topics will include cemetery and Victorian - era history, death rituals and mourning customs, horticulture, biographies and of course, mystery. The Boneyard Bookworms will meet monthly at Laurel Hill or West Laurel Hill Cemetery (215 Belmont Avenue, Bala Cynwyd 19004). There is no fee to join or to attend our monthly discussions but advance registration for each session is required. You can sign up, buy books and download discussion questions at www.boneyardbookworms.com.

FREE

April's Book

Swallow: Foreign Bodies, Their Ingestion, Inspiration and the Curious Doctor Who Extracted Them - An Illustrated Presentation by Author Mary Cappello

West Laurel Hill Cemetery proudly welcomes award-winning author Mary Cappello, author of "Swallow: Foreign Bodies, Their Ingestion, Inspiration and the Curious Doctor Who Extracted Them" for an illustrated presentation, reception and book signing.

Inspired by the Chevalier Jackson Foreign Body Collection at Philadelphia's Mütter Museum, Cappello's book explores the pioneering laryngologist Dr. Chevalier Jackson (who is entombed here at West Laurel Hill) and his contributions to medical history. Without surgery, Jackson extracted nearly 2,000 objects ingested by people in the early 20th century

which he saved and framed.

The presentation will focus on Jackson's medical illustrations and the new curation of an exhibition of Jackson's Foreign Body Collection at the Mutter Museum. Cappello will also share poems written about the collection as well as images of "The Swallowing Plates", a series of assemblages created by San Francisco artist Lisa Wood and inspired by Jackson's career.

Cappello is a Professor of English and Creative Writing at the University of Rhode Island and the recipient of many awards including a Fulbright Fellowship.

There is no charge to attend but reservations are requested. For more information or to reserve a place please contact Sarah at 610-664-1591 or contactus@forever-care.com

Monday, May 2, 2011 at 7:30PM at Central Library, 1901 Vine Street, 19103, 215-686-5322

John Sayles | A Moment in the Sun

John Sayles is "one of the country's best independent filmmakers," according to a reviewer for the Washington Post Book World. An Academy Award-nominated writer and director of such classic films as *The Return of the Secaucus Seven*, *Matewan*, *Eight Men Out*, and *Lone Star*, Sayles has also edited screenplays for dozens of major motion pictures, including *Apollo 13*, *Men of War*, and *Mimic*. He won the Writer's Guild of America's Ian McLellan Hunter Award for Lifetime Achievement, and his novel *Union Dues* was nominated for the National Book and National Book Critics Circle awards. Set during the Philippine-American war at the turn of the century, Sayles's latest novel explores the history of that era through the individual voices of Filipino rebels, African American military men, and gold-seeking miners, among others.

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

Wednesday, May 4, 2011 at 6pm at Laurel Hill Cemetery, 3822 Ridge Avenue - Philadelphia, PA 19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

Railroads: The Work of the Age

This is the fascinating story of the nation's railroad system and the men who created it. In little more than a hundred years the railroads became the backbone of commerce and industry, and, in fact, our entire economy. This walking tour, led by Richard A. Sauers, will visit the gravesites of Thomas Leiper, builder of the first permanent railroad in America; Matthias W. Baldwin, founder of the Baldwin Locomotive Works, which became the world's largest manufacturer of steam locomotives; Samuel Vaughan Merrick, first president of the Pennsylvania Railroad; Frank Furness and Charles A. Wilson, architects of numerous train stations; Francis Anthony Chevalier de Gerstner, builder of the first railroad in Russia; and many others.

\$20.00 general / \$17.00 members / \$15.00 seniors & students
Children under 12 are free

Wednesday, May 4, 2011 at 6pm at University of Pennsylvania Museum, 3260 South Street, Philadelphia, PA 19104

"Great Adventures along the Silk Road" Lecture Series - Looking East from Constantinople: Byzantium and the Silk Road Dr. Robert Ousterhout

Medieval Constantinople was the greatest emporium of the eastern Mediterranean, where East and West came together. After a brief overview of the Byzantine capital, the talk will chart the routes merchants took traveling eastward from Constantinople, as well as the cities, sites, and landscapes they passed along the way. It will also examine the luxury goods and exotic commodities they brought back with them.

Admission: Penn Museum members with Advanced Registration: FREE, General Admission with Advanced Registration: \$5, General Admission/Members At the Door: \$10. Free for Full-time college students with ID

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

Thursday, May 5, 2011 at 7:30PM at Central Library, 1901 Vine Street, 19103, 215-686-5322

Jennet Conant | A Covert Affair: Julia Child and Paul Child in the OSS

In 2008, fans of the butter-loving Francophile chef were stunned to learn that Julia Child previously worked for the OSS in the Far East during World War II. Her recently declassified OSS files flesh out Jennet Conant's account of Julia Child's early career, transformative romance with fellow OSS agent Paul Child, and tumultuous years during the McCarthy witch hunts. Jennet Conant is the author of the New York Times best-sellers *The Irregulars: Roald Dahl and the British Spy Ring in Wartime Washington* and *Tuxedo Park: A Wall Street Tycoon and the Secret Palace of Science That Changed the Course of World War II*.

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

Saturday, May 7, 2011 at 12pm at Laurel Hill Cemetery, 3822 Ridge Avenue - Philadelphia, PA 19132. 215-228-8200

<http://www.thelaurehillcemetery.org>

(rain date May 14th) \$50.00 general admission

The Centennial City: From Memorial Hall to Laurel Hill Cemetery

During the Centennial year of 1876, Philadelphia was host to a celebration of 100 years of American progress. The Centennial was the first major World's Fair to be held in the United States, opening on May 10, 1876 on a 285-acre tract of Fairmount Park. The fairgrounds were host to 37 nations and countless exhibits occupying over 250 individual pavilions. Its most lasting accomplishment was to introduce America as a new industrial world power, soon to eclipse the might and production of every other industrialized nation, and to showcase the City of Philadelphia as the center of American culture and industry.

The Centennial City will commence at Memorial Hall, current home of the Please Touch Museum, for a "Lunch & Learn" lecture and tour. More than ten million people came to Philadelphia in the summer of 1876 to learn about the latest inventions, taste new culinary treats, see the latest in art, architecture and design, and hear the sounds of industry and music. Utilizing just some of the thousands of images that were taken at the fair, participants will learn more about this remarkable event and the vestiges it left behind. The program will include lunch, and will be followed by a "behind-the-scenes" tour of the historic building.

So many of the high profile political, industrial and financial leaders of this time later made Laurel Hill Cemetery their final resting place, where the program will reconvene for a walking tour of their resting places within one of America's most beautiful and famous cemeteries. The site remains a remarkable embodiment of the celebration of our nation's 100th birthday. The program will conclude with wine, cheese and socializing at Laurel Hill's historic Gatehouse.

Please note that participants will be responsible for their own transport to and between Memorial Hall and Laurel Hill Cemetery. Detailed directions between sites, just 3 miles apart, will be provided at registration.

Monday, May 9, 2011 at 6:00 PM at National Mechanics, 22 S. Third Street, Philadelphia, PA 19106

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

<http://www.chemheritage.org/visit/events/science-on-tap/index.aspx>

Free and Open to the Public. Must be 21 or accompanied by a responsible adult.

Tuesday, May 10, 2011 at Noon at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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



**Julia and Paul Child in the kitchen
Chef & Spy**

Brown Bag Lecture: “Snatching Defeat from the Jaws of Victory: RCA and the Commercialization of the LCD”

A talk by Benjamin Gross

When RCA executives announced the creation of the first liquid-crystal display (LCD) in 1968, the commercial possibilities seemed endless. As the nation’s leader in consumer electronics, RCA was well-positioned to integrate LCDs into wristwatches, automobile dashboards, and perhaps even flat-panel televisions. Yet within a decade the company abandoned these efforts and sold its liquid-crystal manufacturing facilities. This Brown Bag Lecture explores the chain of events culminating in RCA’s decision to abandon the LCD, from the perspective of the scientists, engineers, and managers associated with the project.

Benjamin Gross is a Ph.D. candidate in the history of science program at Princeton University and the 2009–2010 Charles C. Price Dissertation Fellow in Polymer History at the Chemical Heritage Foundation. His dissertation focuses on flat-panel display research at RCA between 1951 and 1976. Before applying to graduate school he taught Philadelphia public high-school students chemistry and physics as a member of Teach for America.

Free and open to the public.

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

www.rittenhouseastronomicalsociety.org

Wednesday, May 11, 2011 at 12:30 PM at University of Pennsylvania Museum,, 3260 South Street, Philadelphia, PA 19104

Penn Museum Scholars Lecture Series

A series of lunchtime lectures that highlights the work and research of Penn Museum scholars. Guests are welcome to bring their lunch.

This week: Melinda G. Nelson-Hurst - Middle Kingdom Careers: Ideology vs. Reality

Scholars have long recognized that the ancient Egyptians considered it ideal for a son to follow in his father's footsteps in terms of his social standing, his role within his family, and his profession or office. A son following his father in these ways, especially the latter, is often referred to as an aspect of the son's inheritance. However, many factors could influence a man's career trajectory, including his social standing, wealth, age, experience, ties to the royal court, political alliances, and his family's influence. This talk will discuss the results of an examination of numerous family case studies dating to the Middle Kingdom period to identify whether officials from this time were often able to achieve the ideal of following in their fathers' offices and, when they did not, which other types of career paths they frequently followed.

Admission: Pay-what-you-want

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

Thursday, May 12, 2011 at 6:30PM at College of Physicians of Philadelphia, 19 South Twenty-Second Street, Philadelphia, PA 19103, (215) 563-3737 x304

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

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

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

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

Willrich explores the government’s response to the deadly smallpox epidemic at the dawn of the activist progressive era and during a moment of great optimism about modern medicine. The measures enacted to contain the disease—quarantines, pesthouses, and “virus squads”—sparked a

wave of popular resistance among Americans who perceived them as a threat to their health and to their rights.

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

Thursday, May 12, 2011 at 6pm at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA19132. 215-228-8200

<http://www.thelaurelhillemetery.org>

The Science of Death: What Lies within Mutter and beneath Laurel Hill

Curiosity is a wonderful thing and this twilight tour’s trip through the mysterious and bizarre is sure to keep you riveted from beginning to end. Join Anna Dhody, Curator at The Mütter Museum of the College of Physicians, as she regales you with an informative talk on the historic rise of embalming during and after the Civil War. Let your inquisitive side be your guide as you learn about chemicals, equipment and just what makes the science of death. Attendees will also have the opportunity to check out some of the Museum’s great objects along with the lecture.

Afterwards, journey with us through Laurel Hill Cemetery as we visit some of our “residents” with the oddest stories, including a prominent industrialist’s strange and fatal dental visit, a victim of the Old West cook nicknamed “Red Bill” and the woman who simply left behind her heart. No tour on this subject would be complete without greeting a few of Philadelphia’s famed undertakers as well. The event will conclude with light refreshments, wine and beer in the gatehouse where visitors can mingle and ask what is sure to be many questions after this fascinating excursion through history.

This joint program between the The Mütter Museum of the College of Physicians and the Friends of Laurel Hill Cemetery will take place at Laurel Hill Cemetery, 3822 Ridge Avenue, Philadelphia, PA 19132. For more information about the The Mütter Museum of the College of Physicians, please visit www.collegeofphysicians.org.

Advance registration is required. \$30.00 admission.

Sunday, May 15, 2011 at 1:30pm at Eastern State Penitentiary, 2027 Fairmount Avenue, Philadelphia, PA 19130 phone: (215) 236-3300

Alumni Reunion

People are sometimes surprised to find that many of Eastern State's former officers and inmates enjoy returning to the cellblocks to catch up with old friends and share their memories with the public.

This weekend only, our Alumni — both officers and inmates — answer questions and meet visitors.

Free with admission

<http://www.easternstate.org>

Tuesday, May 17, 2011 at Noon . at the Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106

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

Brown Bag Lecture: “Body Holocaust: Antibiotics, Good Germs, and Disease Ecologies, 1940s–1950s”

A talk by Funke Sangodeyi

This talk will examine how antibiotics and sulfa drugs affected medical research and practice and created new clinical problems because of the effects of the drugs on the “normal bacterial flora” of humans. It will show how the eradication of this flora came to be seen as a problem and a research tool within and beyond the clinic.

Funke Sangodeyi is a Ph.D. candidate in the history of science at Harvard University.

Free and open to the public.

Tuesday, May 17, 2011 at 7:30PM at Central Library, 1901 Vine Street, 19103, 215-686-5322

Erik Larson | In the Garden of Beasts: Love, Terror, and an American Family in Hitler's Berlin

Widely acclaimed as a master of narrative nonfiction, Erik Larson is the author of three New York Times bestsellers, including *The Devil in the White City*, which remained on the hardcover and paperback lists for a combined total of more than three years. Set on the cusp of World War II,



In the Garden of Beasts follows the American ambassador to Nazi Germany and his family as they settle in the heart of Hitler's Berlin in a grand old house on the city's central park, the Tiergarten—in literal translation, the Garden of Beasts. Suffused with the tense atmosphere of the period, the family first experiences an optimistic city of packed cafés and concert halls before a climactic spasm of violence reveals Hitler's ruthless ambition and true character.

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

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

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

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

Friday, May 20, 2011 at 7:00 PM - Delaware Valley Amateur Astronomers in the Greater Plymouth Community Center, 2910 Jolly Rd, Plymouth Meeting, PA

The Transit of Venus in 2012

Drew Maser

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

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

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

PhACT Event

Saturday, May 21, 2011 - Annual PhACT Banquet at Sorello Rose in Flourtown, PA. **Thomas Beebe, Professor of Comparative Literature at Pennsylvania State University will discuss the End of the World, including the End of the World scheduled for that day. Should our meal begin with dessert? Reservations are required. See page 6 for details.**

Saturday, May 21, 2011 at 1pm at Laurel Hill Cemetery, 3822 Ridge Avenue - Philadelphia, PA19132. 215-228-8200 <http://www.thelaurehillcemetery.org>

Corpses to the Grave: A History of the Hearse

Corpses to the Grave explores the history of the hearse and other funeral conveyances. The lecture starts in the 1700s by examining historic documents and rare surviving colonial artifacts. By the mid-1800s, simple hearse styles were evolving into ornate examples. This trend would continue after the Civil War when manufacturers produced stunning hearses with heavy plate glass windows, hand carved wooden bodies, and silver plated trimmings. Other trends of the 19th century will be explored as well, including smaller white hearses for children – a style first developed in New Jersey. By the early 1900s motorized hearses began to replace horse-drawn modes of transport. The first commercially produced motorized hearse was offered in 1909, the same year that motion picture cameras documented one of the earliest automobile funeral processions from New York City to a New Jersey cemetery.

This well-illustrated lecture will be led by Mark Nonestied. Mark has been a staff member with the Middlesex County Cultural & Heritage Commission since 1991. He currently serves as the Director of Exhibits and Programs for a historic site in central New Jersey. He is a member of the Association for Gravestone Studies and served as conference co-chair for the 1998 Annual Conference in, New Jersey. He has lectured widely on New Jersey cemetery topics both regionally and internationally. Mark has also co-authored various articles that have appeared in *Ceramics in America* on New Jersey's role in the brick, tile and terra cotta industry. He is the author of *East Brunswick*, published by Arcadia Press and the co-author (along with Richard Veit) of *New Jersey Cemeteries and Tombstones: History in the Landscape* Rutgers University Press 2008.

After the lecture, join us for refreshments and a chance to view two historic – though very different – funeral vehicles on display. West Laurel Hill Cemetery (www.forever-care.com) will provide an original example of a post-Civil War era, hand carved, horse-drawn hearse, replete with red velvet interior and working lanterns. The hearse can still be rented out for funerals through West Laurel Hill's Bringham Funeral Home, ensuring that passengers will reach their final destination in style. In addition, collector Russ Slegel will provide FYNLYRD (<http://who2c.com/FYNLYRD>), his 1947 Pontiac Hearse, which has been modified as a street rod. Having taken many a corpse to their grave, this hearse is now enjoying a life most hearses never know. Dubbed the ultimate Sport Undertaker Vehicle, FYNLYRD will be available for not-so-final rides through Laurel Hill.

\$30.00 general / \$27.00 members / \$25.00 seniors & students
Children under 12 are free

Sunday, May 22, 2011 at 10am at Laurel Hill Cemetery, 3822 Ridge Avenue - Philadelphia, PA19132. 215-228-8200
<http://www.thelaurehillcemetery.org>

Memorial Day Flag Placement
The General Meade Society of Philadelphia, in conjunction with the Friends of Laurel Hill Cemetery, calls all VOLUNTEERS to assist in preparing for the nation's Memorial Day commemoration. The group will convene at Laurel Hill Cemetery on Sunday, May 22 at 10:00 AM. Those assembled will be assigned to place American flags on the gravesites of Veterans that served in all of our nation's Wars. As time and manpower permit, and in addition to Laurel Hill, cemeteries covered may include Mount Moriah, Mount Peace and St. James the Less. Free refreshments will be provided.

FREE

Sunday, May 22, 2011 at 2pm at Laurel Hill Cemetery, 3822 Ridge Avenue - Philadelphia, PA19132. 215-228-8200 <http://www.thelaurehillcemetery.org>

By Arms and Courage: The Military Legacy of Laurel Hill

In addition to the many Civil War military figures who rest at Laurel Hill, there are numerous individuals who served in our Nation's other conflicts: the Revolutionary War, War of 1812, Mexican War, Indian Wars, Spanish/American War, and the great global conflicts of the 20th Century. Join us as we pay tribute to those who served bravely and now rest in honored glory.

\$15.00 general / \$12.00 members / \$10.00 seniors & students
Children under 12 are free

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

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

Local Food - Safe Food: Bringing it to Market

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

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

Free. To register, please visit:

<http://www.localfoodsafefood.eventbrite.com>

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

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

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

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

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

Name: _____

Address: _____

Phone: _____ E_mail _____

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

Phactum is, in theory, distributed 6 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. \$25 for US Mail subscription. \$10 for students, email only. Donations are welcome.

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Prizes awarded in 2011	= \$ 500.00
Leftover prize from 2011 prizes	= \$ 28.00
New donations	= \$ 28.00
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Please donate. Small contributions are preferred and donations in excess of the 2011 goal will be applied to the 2012 Prize Fund or some other youth science education project not yet determined.

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

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