

Essay

Original Sin, Prophets, Witches, Preschool Sex Abuse, and Global Warming

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Accepted 08 September 2015

Abstract

Many theologians, including Pope Francis, have taken the position that the planet is in danger because of carbon dioxide input to the atmosphere caused by burning fossil fuel, urge us to stop, and consider it a moral imperative. This article takes the position that this use of fossil fuel has helped civilization advance worldwide, has alleviated abject poverty for billions, and that there is no substitute for it at this time. Thus there is a strong moral component on this side of the argument as well. This paper reviews a great deal of worldwide data, some of which confirms, some of which disputes the global warming hypothesis. While increasing CO₂ in the atmosphere is a concern, it is hardly a planetary emergency. This essay argues that it is treated as such by some because of a new set of at modern day 'prophets' who demand instant action, claiming they have access to knowledge that ordinary people cannot have. But unlike their biblical predecessors, these 'prophets' have no direct pipeline to God. This essay compares these global warming arguments to two other important events in American history, the Salem witchcraft trials, and the prosecution of preschool teachers for child sexual abuse. It argues that in all three cases, a belief in human sin, this sin only discerned by modern day 'prophets', motivates all three arguments. This can lead to panicked action, which can be extraordinarily harmful.

Keywords: climate-energy-theology connection, climate-energy dilemma, energy for civilization, global warming skeptics, global warming believers

This paper is a scientific essay and has not been supported by any outside agency, public or private

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Original Sin and Prophets

One does not have to read very far into the bible to see that God was often quite dissatisfied with his creation and was more than willing to punish. He had hardly finished with creation when he told Adam and Eve in the Garden of Eden that "But from the tree of knowledge of good and evil shall not eat ... (Genesis 2-17)". As we know the serpent tempted Eve to eat the fruit, and this is often regarded as original sin. As punishment God banished Adam and Eve from the garden and forced the serpent to crawl only on its belly.

Not too many generations had passed before God again grew dissatisfied. "Now the earth was corrupt in the sight of God, and the earth was filled with violence (Genesis 6-11)". God resolved to destroy the earth. However at this point something new arose, God decided to take a particular person, a prophet, into his confidence warn him of the disaster

and give him instructions on how to save himself and his family. Then God said to Noah “The end of all flesh has come before Me, for the earth is filled with violence.... I am about to destroy them with the earth” (Genesis 6-13)”. As we know, He told Noah to build an arc and take a male and female of every animal onto it so they could ride out the storm. “And the rain fell upon the earth for 40 days and 40 nights (Genesis 7-12)” “And the water prevailed more and more on the earth so that all high mountains everywhere were covered (Genesis 7-19)”. After the flood receded, Noah and his entourage were able to begin anew.

The figure of the prophet is a recurring one in the bible and this article can hardly even scratch the surface. Another is of course the first patriarch, Abraham. God saw that Sodom and Gomorrah were filled with evil and he resolved to destroy it. He took Abraham into his confidence. Abraham bargained with God, finally getting Him to admit that if there were 10 righteous men there, He would refrain from destruction. But Abraham could not find the 10 necessary righteous men, so God destroyed the city, this time with heat and fire. “Then the Lord rained on Sodom and Gomorrah brimstone and fire from the Lord out of heaven (Genesis 19-24)”.

The greatest prophet of all undoubtedly was Moses. He had many conversations with God and relayed them to the people. Some of the messages he communicated to his people were of vital importance, for instance the 10 commandments. He also conveyed many warning, “Beware, lest your hearts be deceived and you turn away and serve other gods and worship them. Or the anger of the Lord will be kindled against you and He will shut up the heavens so there will be no rain and the ground will not yield its fruit; and you will perish quickly” (Deuteronomy, 11-16 and 17).

While this author is hardly a biblical scholar, the concept of human sin, and prophets who communicated directly with God, is very much a recurring theme of the bible. But are there prophets in the modern era, who use their specialized training, to see sins that nobody else can see? Our theme is that this concept is very much alive in the modern era, and generally these are false prophets with the capacity to do tremendous harm.

The Salem witchcraft trials

One of the strangest incidents in American history has been the Salem witchcraft trials. Marion Starkey published a very authoritative study of the panic in the book “The Devil in Massachusetts” (1949). The contagion began in the house of Reverend Samuel Parris where his daughter, Betty, 9, and her cousin, Abigail, 11 lived. Also in there lived a lady slave Tituba, whom the family acquired in Barbados. Tituba regaled the girls with stories of voodoo and witchcraft.

In January, 1692, the girls began to have frequent fits of hysteria. Soon other town girls began to join. Conferring with other clergy, Reverend Parris concluded that the devil and witches haunted the girls. While Ms Starkey wrote a decade or so before Elvis or the Beatles, she likely would have compared the Salem girls to those at one of these more contemporary concerts.

In any case, encouraged by Reverend Parris the town became convinced that witches haunted the girls. But who were the witches? The only way to find out was to have the girls point them out. It took some convincing, but finally the girls pointed out Tituba and two other lower class women, one of whom had a 5 year old daughter. All 4 were arrested and jailed, awaiting trial. Tragically the 5 year old, spending such a long time in jail, became nearly indistinguishable from an animal.

But how do you prove witchcraft? There was no physical evidence. The examinations and trials relied on what was called specular evidence. It is not easy to explain this to a sophisticated 20th and 21st century audience, and in fact, Ms Starkey had a hard time doing so.

The girls claimed they saw the specter, or essence, or spirit of the person performing witchcraft. In one instance at church, they fell into a fit, claiming they saw a witch's Sabbath in the rafters above them. Others looked, but saw nothing. Yet the girl's words were taken as absolute gospel. The spectral forms for late 17th century Puritans in Salem, were as real to them as your husband or wife, sitting with you at the dinner table is to you today.

The girls accused more and more people during the winter, spring and summer, including respectable people. One was Rebecca Nurse, a 70 year old woman who worked in a farm with her husband and her 8 children. She was tried as a witch, and went to the gallows denying her guilt. Challenging the girls in any way could get you accused of witchcraft. One courageous man who did was John Proctor. He and his wife Elizabeth were jailed, creating 5 orphans. John was executed, but Elizabeth was spared due to her pregnancy. An image from the time of the execution of John Proctor is shown in Figure 1.

While denying witchcraft did not convince the judges, there was an escape hatch, one first used by Tituba. Confess! In this case, the judges were merciful, as long as you promised repentance and implicated other witches. Then nobody could claim the arrests were only on the spectral evidence of hysterical girls, many confessed their witchcraft and implicated others. Not only was this a way to settle old grievances, it obviously led to a violently unstable situation. By September 1692, 20 had been executed and over 150, including several children, had been jailed. Conditions in the

jail were horrible; the people who built the jail had never anticipated such a gigantic crime wave. Furthermore the time spent on the panic was time taken away from work; fields lay fallow, starvation was a real possibility.

At this point, the new governor, William Phips had no choice but to take an interest, even though his main responsibilities lay elsewhere. He conferred with ministers not only from Puritan Massachusetts, but also from New York, where the Dutch influence was still strong. The upshot was he forbade spectral evidence. Without spectral evidence, the cases all collapsed. Also confessed witches were allowed to recant their confessions. The panic was over, it lasted less than a year.

Needless to say there was an unbridgeable gap in the community between the friends and relatives of those falsely executed and their accusers. Nevertheless Marion Starkey ended on a hopeful note. First Reverend Parris, who poured gasoline on the fire, was fired. A new minister, Joseph Green was hired. His goal was to ultimately bring the community back together, and ultimately he largely succeeded. After about a decade and a half, several of the girls, now young adults had confessed their errors in front of the church. Then several of the relatives of Rebecca Nurse and John Proctor were willing to grant them atonement, so as to bring the community back together. Furthermore, Massachusetts made available partial financial compensation to the survivors and relatives of those executed.

So here we have our first example of a self appointed prophet, Reverend Parris and his team of assistants, pointing out sin, which nobody could see except them. He created only chaos in his wake. History lists him as a sinner, not a prophet.



Figure 1. John Proctor at his execution (<http://www.glogster.com/animexshell/john-proctor/g-6mqkh52tm2kpv0tah70c5a0>)

Sex abuse in preschools

In the 1980's and 1990's, there was another hysteria gripping the United States, brought on by another group of false prophets. This was the prosecution of preschool teachers for sex abuse of their students. The similarities between the trials of these day care workers in 1990's and the Salem witchcraft trials of the 1690's are so close as to be almost spooky.

At least 3 preschools were involved, initially the McMartin preschool in Los Angeles, run by the McMartin family; the Fells Acres Day Care Center in Malden, MA, run by Gerald Amirault and several members of his family; and the Little Rascals Day Care Center in Etenton NC, run by Robert and Betsy Kelly.

The original accusation was made by a McMartin mother, one diagnosed with acute paranoid schizophrenia and who later died of chronic alcoholism. In all cases the children (then 6 or 7, trying to recall events when they were 3 or 4) were prodded by social workers and psychologists, in some cases for months before they told about the abuse these

interrogators wanted to hear about.

The stories the children told were fantastic. From one court record “Gerald Amirault had plunged a wide blade butcher knife into the rectum of a 4 year old boy, which he then had trouble removing.” Other children told about satanic rituals in secret and magic rooms, in tunnels beneath the schools; they said they were forced to drink urine, were tied to a tree, were taken up and tortured in balloons

In no case was there any physical evidence, nor were there adult witnesses to back up the children’s testimony. Clearly this sort of evidence, based on the testimony of a six year old, prodded to ‘remember’ what happened when he was 3, can only be regarded as the 20th century version of spectral evidence. Also the fact is that these schools were very open environments, with parents constantly going in unannounced. None saw anything amiss. Ultimately a search was made for the ‘secret’ tunnels under the McMartin School; none were found.

A large number of teachers were arrested and brought to trial. In the McMartin school case, all were acquitted or had hung juries. However many of the teachers were jailed as long as 5 years awaiting trial. Those in Edenton and Malden were not so lucky. They were mostly convicted, several being handed multiple consecutive life sentences. Gerald Amirault served the longest sentence, 18 years. Ultimately all convictions were overturned as the various communities gradually came to their senses.

It is difficult to escape the conclusion that Salem in the 1690’s handled the panic better than Los Angeles, Edenton or Malden did in the 1990’s. In Salem, the panic lasted less than a year, these others lasted for years, decades. After the panic, Reverend Parris was fired. To my knowledge the psychologists, social workers and prosecutors have not been. Quite the contrary, Martha Coakley, one of the lead prosecutors in the Amirault cases won the Democrat nomination for the 2010 Massachusetts senate race. Republican Scott Brown defeated her. After Reverend Parris left they hired a new reverend, one who attempted to bring the community together and largely succeeded. Years later the Massachusetts Bay colony provided partial compensation to the some of the victims and their relatives. But most important, none of the 1990’s governors of Massachusetts, California, or North Carolina showed the wisdom and courage that Governor Phips showed in the 1690’s. Confronted with what was obviously the 20th century version of spectral evidence, they could have devised reasonable rules of evidence for such cases. Instead they did nothing.

There is one thing, which the prosecutors got right. These children were abused and even brutalized, but not by their teachers. They were brutalized by the real 20th century witches, the psychologists and social workers, with their anatomically correct dolls and pseudo science, who forced fantastic, untrue testimony of abuse from innocent children. These children, now adults, all know that their conjured up testimony sent many innocent people to prison, some for long periods of time. How can they possibly live with themselves knowing that?

Fortunately, there is one good witch in the story. She is Dorothy Rabinowitz, a reporter for the Wall Street Journal. From the beginning, she perceived what was happening, and recognized the tremendous injustice involved. She wrote many columns exposing the fraud. Ultimately this series won her a Pulitzer Prize. Finally, and largely due to her efforts, everyone wrongly convicted was freed, the last one being Gerald Amirault, after he served 18 years. Her description of her meeting with him after he was released from prison could bring tears to the eyes of the most hardened cynic. Figure 2 is a photo of Geralf Amirault reunited with his family after 18 years.

So here we are again. There are different prophets, this time the psychologists and social workers. They see what others cannot. Using their specialized training, they can interview children and get them to recall what never happened, and in doing so, send many innocent people to prison. They were not prophets, but were villains, better *they* should have been jailed.



Figure 2. A photo of Gerald Amirault kissing his daughter Gerrilyn, with his wife Patti, after being freed from 18 years in prison (http://law-and-disorder.blogspot.com/2006_03_01_archive.html)

Global warming

The global warming/climate change dilemma is very much on everyone's mind these days. Some make the case that immediate, drastic change in our lifestyle is necessary to save the planet. It may or may not be that global warming will be a threat over a century or so. However panicked responses now, as many advocate, would be extremely harmful. Less panicked responses would be less harmful, but are unlikely to be beneficial considering the world's energy needs and available cash to pay for it.

Since the beginning of the industrial age, humans have been burning coal, oil and natural gas, and as such, have been putting carbon dioxide into the atmosphere. It is a greenhouse gas, which tends to warm up the atmosphere, in a way, which is easily understandable to most scientists. During the industrial age, the CO₂ content of the atmosphere has risen from about 280 to about 400 parts per million. But the atmosphere is very complicated, and there is much more going on than just the greenhouse effect.

Carbon dioxide is an odourless, colourless, harmless gas in small quantities. Every breath we inhale has less than 0.1% carbon dioxide; every breath we exhale, about 4%. It is not a pollutant in the sense of sulfur dioxide or mercury. It is a vital nutrient for plants. Greenhouses generally operate with carbon dioxide rich atmospheres. Without atmospheric carbon dioxide, life on earth would not be possible.

Possible climate change, caused by increasing atmospheric CO₂, features large in the media. For want of a better word, I'll call those who believe in human induced climate change believers, or more emphatically alarmists; those who do not, skeptics, or more emphatically deniers. Most of the American mainstream media, New York Times, The Washington Post, NBC and CBS news etc. generally express the believer's point of view. However there are two very influential media organizations, which express mostly the skeptic's point of view, the Wall Street Journal and Fox News. It is important to note that no skeptic denies climate change; everyone agrees that the earth's climate has been changing for billions of years. What they are skeptical of is the human cause of climate change.

Believers point out that 97% of scientists who publish in the scientific journals on the subject are themselves believers. They get this figure by skimming large number of scientific articles in the major scientific journals, and counting those that see a human finger print on climate change, and those who do not; they come up with the 97% figure. But what are the editorial policies of the journals? What about the policy of those in the government who sponsor the scientific research? It is likely that at least some of the journals have editorial policies prohibiting skeptical articles. If you are a scientist and apply for government support of your research, your chance will be slim, if you are a skeptic. Many skeptics are retired scientists with impeccable credentials, or else have endowed chairs, so they do not have to worry about their next grant. Still 97% is a big number.

Skeptics point out that Frederick Seitz, a former president of the National Academy of Science and former president of Rockefeller University, about as prestigious and establishment as one gets, spearheaded a petition among scientists disputing human induced climate change. It garnered 32,000 signatures, among them many members of the national academies and professors holding endowed chairs at such prestigious universities as Princeton. Of course who knows who all these skeptics are, what their qualifications are, and if they have been screened in any way. I was solicited, but declined to sign. Still 32,000 is a big number.

But what does the data say? Figure 3 shows a NOAA graph of the ground based temperature measurement from 1880 to the present along with the link. From about 1910 to about 1998, there has been a warming trend, where the temperature has increased by about a degree centigrade (1.8 degrees Fahrenheit), but with a 40 year pause from about 1940 to 1980. Then there was another rapid rise from 1980 to about 1998, of a half a degree centigrade, and then another pause from 1998 until the present.

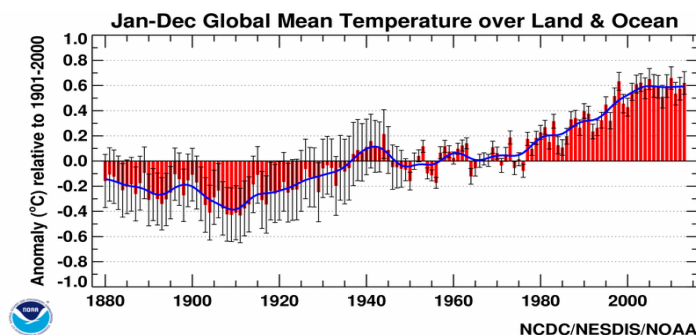


Figure 3. NOAA data on ground based worldwide temperature measurements (<http://www.carlineconomics.com/archives/303>)

But ground based measurements have to collect temperatures from thousands of measuring stations in hundreds of countries and make sure they are all properly calibrated to one another. They have to properly take account of many things, which can locally affect temperature, proximity to cities, factories, etc. Also sea based measurements are necessarily much more sparse. Another way to measure the temperature record is with space-based measurements. Here there is no need to properly calibrate thousands of individual measurements; land and sea, it makes no difference; urban or rural areas, it properly averages over them. NASA has been taking space based temperature measurements since 1979 and the record, archived by Roy Spencer at the University of Alabama Huntsville, is in figure 4, along with the link. The raw data is shown in blue, and a 13-month average in red. There is no steady temperature increase.

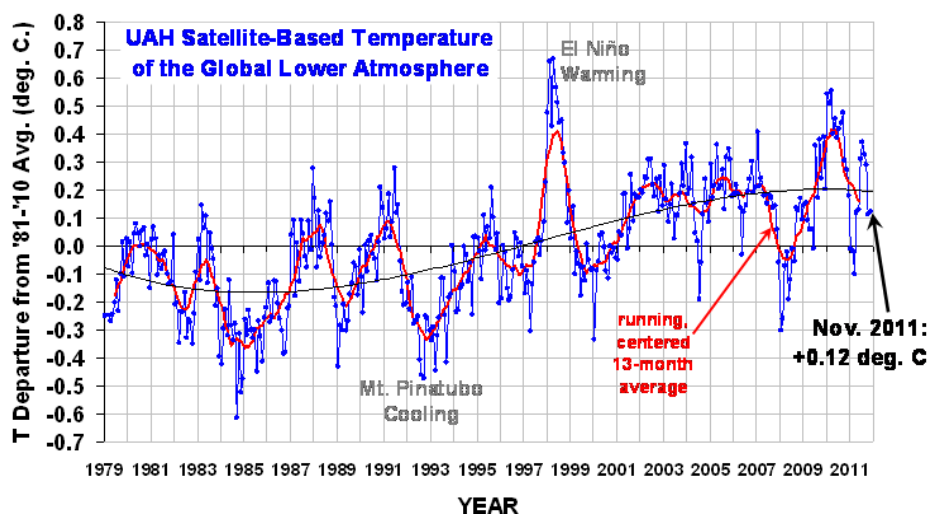


Figure 4. NASA data on space based temperature measurements. Raw data is in blue, a 13 month average showing a rough 5 year oscillation is in red ([Latest Global Temps « Roy Spencer, PhD](#))

What about temperature measurements over a longer period of time? They are of course less accurate, and more speculative; data on the internet seems to reflect the bias of the particular author. For instance there is the famous 'hockey stick' graph by Michael Mann Penn State University and Phillip Jones of East Anglia University, which shows a steady temperature for a thousand or so years, followed by a sudden uptick at the industrial age, shown in Figure 5A. This curve has been widely discredited. It shows neither the medieval warm period, when the Vikings settled Greenland; nor the little ice age right afterward, when these settlements had to be abandoned. Others have published other graphs, including one by Roy Spencer, shown in Figure 5B, along with the link. It seems likely that the recent temperature rise is not at all unprecedented, although it is doubtful that anyone will even know for sure.

Since the hiatus in ground based temperature rise, the believers and alarmists have switched the story somewhat, saying that the extra CO₂ in the atmosphere will cause more frequent and intense hurricanes, tornados, floods and droughts, and rapidly rising sea levels. After a strong storm, you can hardly turn on your TV these days without seeing a commentator say that it is climate change, it is all our fault, we could have prevented it, but chose not to; and things will only get worse. Unlike the greenhouse effect, where there is a scientific explanation most scientists could comprehend, it is not so obvious to this scientist why storms, floods and droughts etc. should be more frequent and intense. Absent global warming is there really any reason that 400ppm of CO₂ should produce more storms than 280? And even with global warming, are storms in the United States really that much more intense than those in Canada? The United States must have an average temperature several degrees warmer.

But what does the data say? Unlike speculations of the temperature of the last few thousand years, here it is unambiguous. Information is available all over the internet, all saying about the same thing. Hurricanes and tornados have been slowly decreasing. Figure 6 is a typical graph, along with the link, of the number of hurricanes striking the United States by decade. Clearly there has been a decrease, with no decade being nearly as bad as the 1940's.

Then there is a year-by-year graph, along with the link, of the number of strong tornados in the United States over about the last 60 years in Figure 7. Clearly there has been a decreasing trend, especially in the 10 year average. What about floods and droughts? In the United States, there has been no recent drought nearly as severe as the dust bowl of the 1930's.

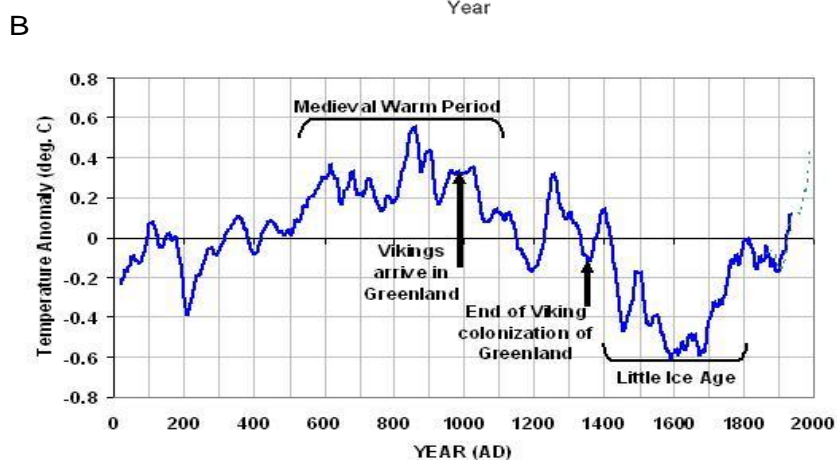
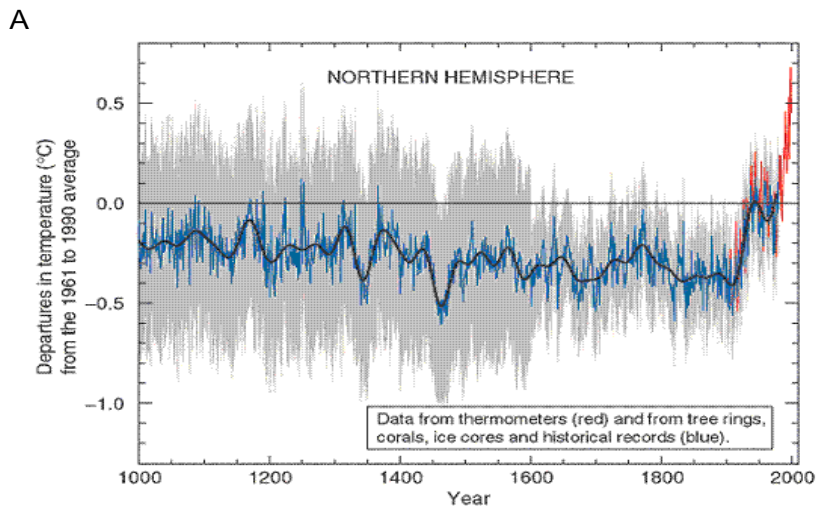


Figure 5A, The Hockey Stick temperature estimate, and B, Another estimate of temperature over the last two millenia by Roy Spencer (<http://wattsupwiththat.com/2010/09/28/loehle-vindication/>)

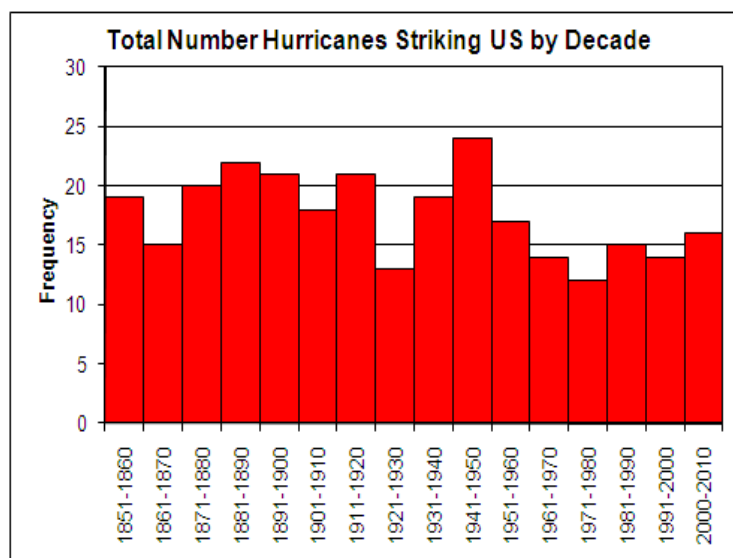


Figure 6: Hurricanes in the United States decade by decade (<http://buzzardsbay.org/hurricane.htm>)

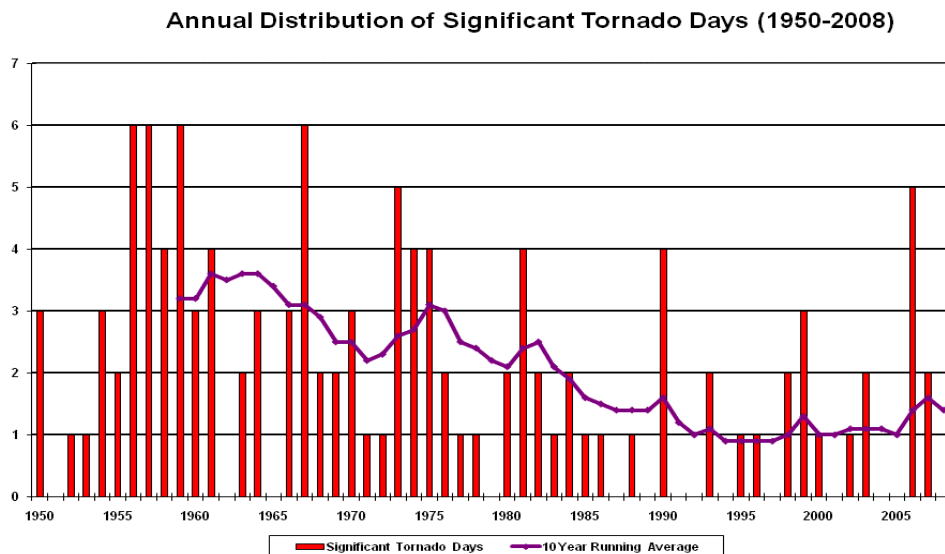


Figure 7. Year by year tornados in the United States. The ten year average shows a decreasing trend. (http://www.weather.gov/lx/tor_climatology)

As I write this, President Obama is in Alaska pointing out the retreat of glaciers and arguing that it is a sign of global warming, one that we could somehow control. Again, consistent information is available all over the internet; President Obama is correct. While glaciers have been receding for several hundred years, their retreat has accelerated in the past 50 or 60 years.

What about sea level rise? You can hardly turn on your TV these days without seeing a gigantic ice mass, thousands of years old, falling off of Greenland or Antarctica and beginning to melt in the sea. Won't we be inundated as Noah was? Again, information is available all over the internet and the answer is unambiguous. There has been no measured rapid increase in sea level rise. Figure 8 is a graph, along with the link; the seas have been rising at about 20 cm per century, and have been for decades, hardly a cause for panic.

Future climate is estimated by doing computer simulations of the atmosphere. Billions have been spent to do these simulations. However computer simulations often fail. The most recent case is one I am rather familiar with, the behavior of the National Ignition Facility at the Lawrence Livermore National Laboratory (LLNL). They set up a gigantic laser to illuminate a tiny target, hoping to heat it and compress it to the point where fusion reactions produced ten times more energy than the original laser light. LLNL is unquestionably a first class laboratory, staffed by only the best scientists and computer engineers. Their simulations predicted ten times more fusion energy than laser energy. As of this writing, (summer 2015), their best shot has achieved a fusion energy of only about 1% of the laser energy; they missed by a factor of 1000! Also the laser target configuration is a much simpler physical system than the earth's atmosphere, for the former, at least LLNL knew what it were starting with.

Certainly no simulations in 1998 predicted the 20 year hiatus in warming from the ground based measurements. In fact quite the opposite; at the time they were predicting imminent 'tipping points'. That is, if nothing is done immediately, in the next year or two, the climate system would 'tip' into a new violently unstable state, producing imminent catastrophe. Thomas L. Friedman's 2008 book (most likely written in about 2006) "Flat, Hot and Crowded" is about the climate dilemma, and he makes frequent assertions of imminent tipping points. However nearly a decade has elapsed, and so far, nothing has 'tipped'.

One question is whether there is an analog to specular evidence in the global warming controversy. Obviously there is not in the literal sense. However broadening the definition to include evidence, which seems reasonable, but on closer examination is meaningless, there is. Either side can use it, but so far the believers have used it more, perhaps because it is more difficult for the skeptics to use it to prove a negative.

The data set describing the earth's climate is vast, but we know that over the last century the earth warmed by about 1°C. However a believer might point out that one large country has seen a temperature rise of 10°C and say it proves global warming. True, but meaningless. Given the average, some other part of the planet about the same size must have cooled by 9°C. Alternatively, if glaciers are now melting fast enough to raise sea level one meter per century, then ice fields somewhere else must be growing fast enough to lower sea level 80 centimeters per century. In short, given the vastness of the data set, a believer or skeptic can always select data to make his case.

A recent instance involved no less a climate observer than President Obama. In the winter of 2013-14, he pointed out that in the west, the winter was very mild and there was virtually no snowpack in either the Rockies or Sierras. He used this to argue the case for government action to control global warming. However had he expanded his view, he would have seen that the east and Midwest had a very cold, snowy winter. Chicago did not get warmer than 0°F for 23 days, and every state in the eastern half of the country, except Florida, was completely or partially snow covered for weeks. For those of us in the east, all we could talk about was the 'polar vortex'. Would the believers seriously claim that the extra CO₂ in the atmosphere is responsible for *both* the heat in the west *and* the freeze in the east? Let's get real!

The lesson: If there is a vast data set, it is always possible to pick out one small subset, which agrees with your case. To this author's mind, it is the equivalent of spectral evidence in the physical world.

So where are we? The ground based temperature measurements and glacial retreats give just a little bit of support to human induced global warming. Space based temperature measurements and the record of storms, droughts and sea level rise give none; and the computer simulations of the future have failed to even predict the present. To reiterate, the earth's atmosphere is extremely complicated. Nevertheless some organizations say we have to stop putting CO₂ in the atmosphere virtually immediately. Many colleges, pressured by their students and faculty are considering divesting in oil, gas and coal companies. Even one of my own parent organizations, the American Institute of Physics (AIP) had articles in its flagship publication, *Physics Today*, October 2011, saying we must stop all carbon input into the atmosphere in 20 years or less.

But right now, and for at least the next few decades, there is nothing to take the place of fossil fuel. To see this, information abounds on the internet. Shown in Figure 9 is a plot of the components of world electricity in 2013, along with the link. After 25 years of heavily subsidized development, wind and solar hardly make a dent. There is no chance that in the next 20 years, it will reach 100%.

To see how seriously countries take their electrification programs, also shown in figure 10 is a plot of coal use, along with the link. All derivatives are positive. The world realizes that taking such extreme measures so quickly would condemn billions to abject poverty. Clearly the world will not listen as we browbeat them to switch from coal to solar to 'save the planet'.

A much better idea would be to encourage the world to switch from coal to natural gas, as Britain has done and as the United States is in the process of doing. Natural gas emits about 60% of the CO₂ that coal does per unit energy produced, and it is very economical and reliable. Better still, switch to nuclear, as France has done, and as even Japan is starting to do once again. This produces no global warming. Best of all, continue the increases in energy efficiency and increases in dollars of GDP per Watt of power which has occurred naturally over the past century or so.

There are all sorts of speculations of what the climate changed world might look like in 100 years. But what will the world look like in 20 years if we stop using carbon based fuel? All we could burn for energy are plants. But the United States as done this before. Until 1850, we burned mostly wood for energy. With a population of 30 million, we deforested half a continent. What about liquid fuel? Currently 1/3 of the American corn crop produces ethanol. This gives the energy of about 1% of the gasoline we use. There certainly will not be enough electricity or ethanol to power very many cars. Hence no cars or airline travel for anyone except for society's grand pooh-bahs. Getting more than 20 miles from your house will be a real challenge. Every few years you might be able to take a trip on a crowded, uncomfortable railroad car. Air conditioning will be gone and space heating in the winter will be greatly reduced.

Everyone will be cold all winter, indoors and out, and hot all summer. Getting to the store for food and clothing will be a difficult and time-consuming process. Modern high tech health care will be gone except for the very wealthy, as few people will have the time or energy to make the difficult trip to the doctors or dentists. There will be virtually no electric power except for the very wealthy. Your house might have a small refrigerator and a few low wattage light bulbs. Manufacturing, which takes a lot of power will come to a nearly crashing halt. Look around your house at all the manufactured items; few of them will remain. There is simply no denying this; civilization takes power and lots of it. Unlike the speculation of what the climate calamity may be like in 100 years, this is what the world will definitely look like in 20 if the AIP has its way.

What about less panicked, but still great effort to reduce carbon based fuel. A useful data point here is Germany. It has decided to embark on an *energiewende*, or energy transition. It has heavily subsidized solar and wind power; not only that, it has decided to phase out its 17 nuclear reactors. It has succeeded in transitioning about 25-30% of its electrical power to solar and wind. But despite the large government subsidy, the price of electricity in Germany is now at least triple its price in the United States, and it is rising fast. Shown in Fig 11 is a plot of the price of a kilowatt-hour of electricity in many different countries, along with the link. Even now, energy intensive manufacturing is beginning to leave Germany. But even with the *energiewende*, Germany has not especially decreased its CO₂ input into the atmosphere. It still needs coal fired power for when the sun does not shine or the wind does not blow. Shown in Fig 12 is a plot, along with the link, of per capita carbon input into the atmosphere of a bunch of countries. German carbon

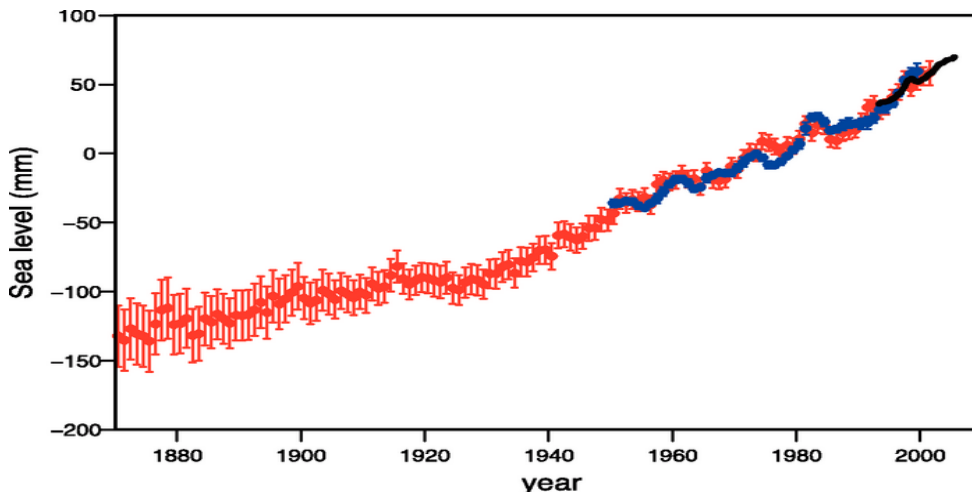
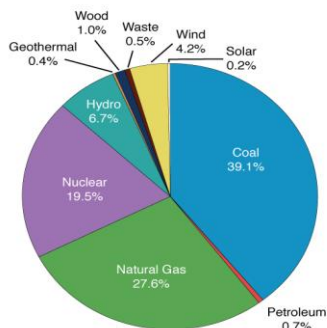


Figure 8. Sea level over the past century. It has been rising at a steady 20 cm per century (https://www.ipcc.ch/publications_and_data/ar4/wg1/en/figure-5-13.html)

ELECTRICITY GENERATION, 2013



Source: http://www.eia.gov/totalenergy/data/monthly/pdf/sec7_5.pdf

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Figure 9. Components of worldwide electricity in 2013

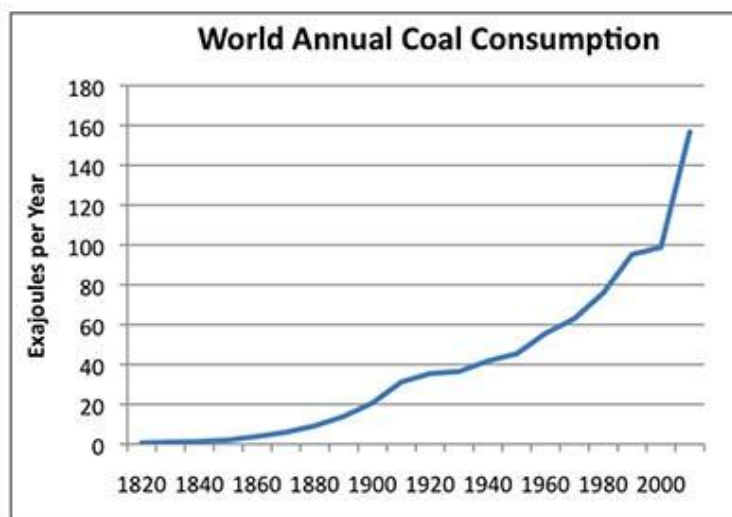


Figure 10: Coal use over the years. It is currently the fastest growing component of the energy mix. <http://theenergycollective.com/gail-tyverberg/107831/long-term-tie-between-energy-supply-population-and-economy>

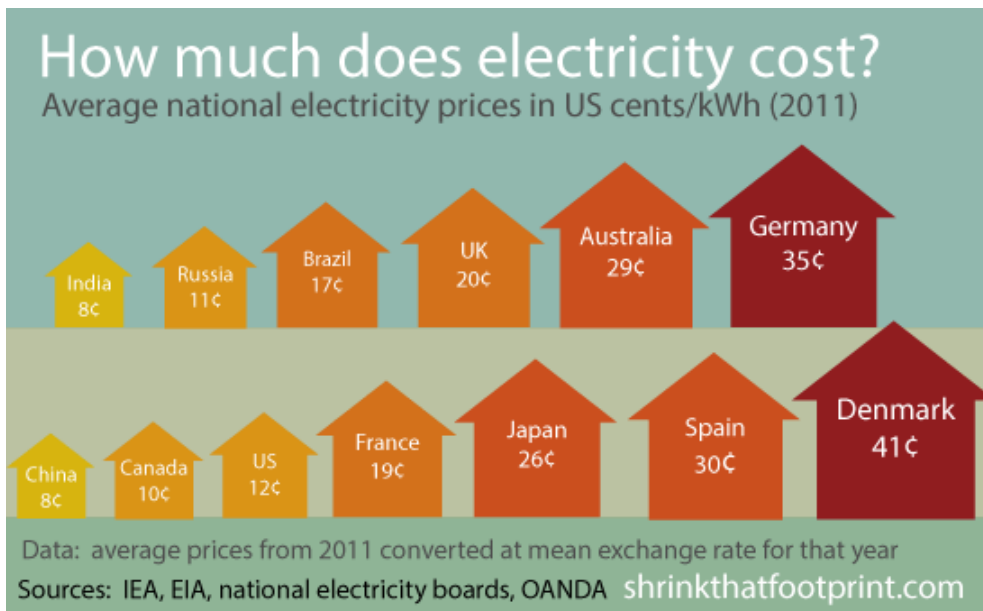


Figure 11. Cost of a kilowatt hour of electric energy in various countries. (<http://www.theenergycollective.com/lindsay-wilson/279126/average-electricity-prices-around-world-kwh>)

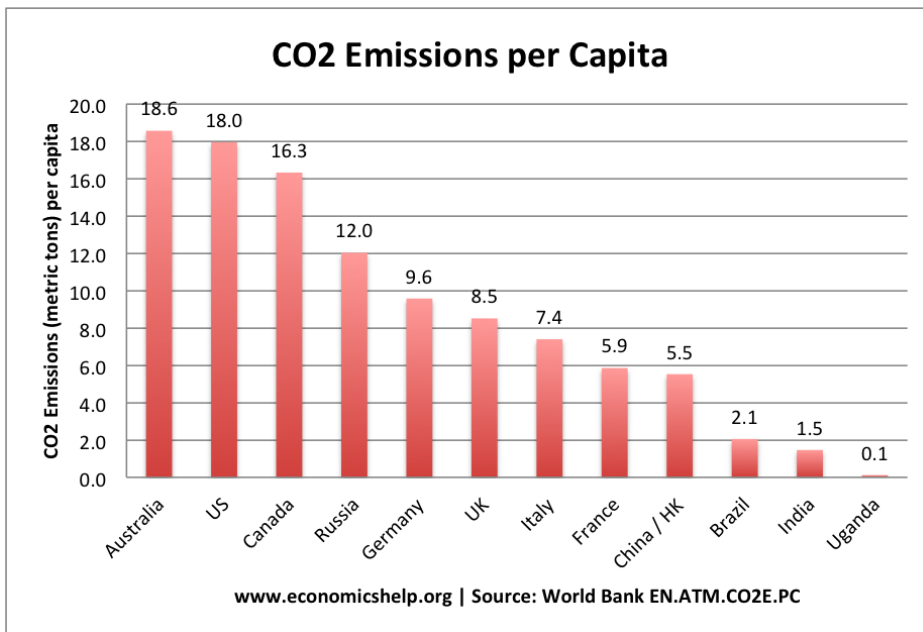


Figure 12. Per capita CO₂ input into the atmosphere for various countries.

input is considerably greater than that of its European neighbors.

However, Germany is a rich country. If it wants to price itself out of the market, it can do so. But what about India, or Mexico or Nigeria? Can they afford their own 'energiewende'? This author's answer is no. The cost of electricity is a vital consideration for most of the poorer, less developed world, which is struggling hard to provide a decent life for its citizens. If reducing CO₂ in the atmosphere is the goal, isn't France, which is largely nuclear, a better model for the world than Germany? The French pay about half for a kilowatt-hour, and its per capita CO₂ input into the atmosphere is about 2/3 of Germany's.

This is not to say that solar energy will definitely be a failure in meeting the world's large scale energy needs. Certainly if unsubsidized solar or wind can be made competitive with conventional sources, or nearly so, in certain

places, or for certain applications, there is a good argument for using it. But so far both require large subsidies, subsidies often hidden from view. These subsidies, in Germany or elsewhere, depend on the changeable politics of the countries involved. Take away the subsidies, and the solar and wind industries would likely collapse quickly. Therefore the German experience is not encouraging. If you have been driving down a road for 15 years, and are getting further and further from your destination, there is a good chance you are going in the wrong direction.

So why the panic, why the forced shift to solar? As one can best interpret today's data, there will, at worst, be some warming in a century or two. In the worst case, there is lots of time to adapt. For instance over the centuries, Holland has reclaimed thousands of square miles from the sea. Also there is plenty of time to develop carbon free power sources, most likely nuclear. (Incidentally the author's scientific work has largely been on developing an advanced nuclear concept using the best of both nuclear fusion and fission. Here is a link: <http://link.springer.com/article/10.1007/s10894-014-9690-9>. With a well supported effort, it might well be able to deliver large quantities of sustainable, economical, carbon free power by about mid century.)

The measurements today simply do not indicate the need to panic; and the computer simulations are not reliable enough to justify an enormous change in lifestyle for billions of people. The reason to justify an enormous change in life style, is that there is a new set of prophets; the scientist and computer modelers, who assure us they alone understand what is happening. I'll bet that nobody reading this article can say for certain that he has personally observed climate change over his or her lifetime. But these prophets do know. They do the measurements, they interpret them, and they do the computer models to predict the future. They see what we cannot. Surely they cannot be wrong! They are scientists! They play on the guilt of the average person. We are sinners. We burn coal, oil and gas and despoil the natural environment in doing so. All we have to do is stop doing this. What could be easier? Never mind that this coal, oil and gas have allowed civilization to flourish in many parts of the world, producing a more prosperous, healthier, longer lived, and better educated population; as well as a cleaner environment. It has alleviated abject poverty for billions. Turn off the oil, coal and natural gas, and the poverty comes roaring back for all but the privileged few. The world would then be as it has been for most of human history, the privileged few living well off of animal and human energy, that is the energy of *other* humans, while the rest of us live in squalor. There is a moral issue here too. Make no mistake about it; in the opinion of this author, those who say we have to turn off carbon-based fuels virtually immediately, before a substitute is available at about the same quantity and price, are no different from Reverend Parris, and the psychologists and social workers. But they would do much more harm, they advocate nothing less than turning off civilization as we know it for, who knows what. Those who attempt to force a large scale, worldwide shift to solar energy, while it is so much more expensive (except perhaps in niche markets), are not much better. It would be better if the believers and alarmists at least recognized that there are great benefits to burning oil, coal and gas. Even if the most extreme alarmists are 100% correct, it cannot be a matter of simply turning off the coal, oil and gas; rather it is a matter of balancing competing requirements.

Nevertheless, we are all guilty of an original sin, which only the prophets can discern. Unless we drastically change our ways, they warn us of impending heat waves, floods, rising sea levels.... What could be more biblical?

CONCLUSION

The prophets are not only from biblical time, they exist today. They play on man's guilt over his original sin, which seems to be deeply imbedded in the psyche of many of us. But how do we discern whether today's prophets are false or real? The case of the Salem witchcraft trials and the preschool arrests, the verdict is in; they were false prophets. In the case of the climate change dilemma, the verdict is not yet in, although those demanding immediate, drastic change are, in the opinion of this author, definitely false prophets.

This author has some suggestions. First, does the concept being peddled make any sense, psychologically, socially, or scientifically? Does it pass the laugh and smell test? Clearly it does not for Salem and the preschools, but it does for climate change. The greenhouse effect is real, even if just one piece of a very complicated puzzle: the earth's atmosphere. Second, are proponents rushing to a solution which would have a drastic effect on many lives, when there is really no emergency? This seems likely in all cases considered here. Third, if the measurement is only discernable to the prophets, as in Salem and the preschools, the prophets are very likely wrong. Fourth, if the measurement is just barely on the edge of a detectable effect; some measurements show a slight effect, others do not, or show the opposite effect, as in the climate change case, there is certainly strong grounds for skepticism, at least as regards the current status of the effect. Fifth, computer simulation is a very powerful technique (I have spend a good part of my career developing and using computer models of complex physical systems), but it is hardly infalable. They should be regarded with at least some skepticism, no matter how many of them point to a particular effect. This is particularly true

if the model has adjustable parameters which the modeler is free to set, as is necessarily the case in the climate simulations (the effect of clouds, for instance is not well understood and is parameterized). Sixth, do the proponents use today's equivalent of spectral evidence? Seventh, claims of great unanimity, whether 97% or 32,000 should be taken with something of a grain of salt. Who knows how proponents arrive at these numbers or what they mean. It is unlikely that they were obtained by a respected, impartial, polling organization. In any case, this is not the way scientific disputes are resolved. Finally, someone claiming that the debate is over, when it obviously is not; as climate change believers often do, is almost certainly a false prophet.

Anyone familiar with recent history knows that mankind has an almost infinite capacity for sin. In the 20th century alone, the unholy triuverte of, Hitler, Stalin and Mao had orchestrated the murder of well north of 100,000,000 people. Clearly they had lots of help. The 21st century has not nearly equaled that record, but nobody would claim it is off to a very good start. Thousands of years after the biblical prophets, do we really still need prophets looking under every rock to find other, much more subtle evidence of human sin, when so much is already obvious to everyone? This author's answer is no.

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