**“Glen’s Parallax Perspectives”** is a series of TV programs that offer fresh ways for people to see issues such as foreign policy, social and economic justice, governmental functioning, and so forth. We provide voices and viewpoints that are rarely heard in mainstream media.

Mainstream media, politicians, and culture see the world in conventional ways. In order to solve problems, we need to see things differently. Glen Anderson created this TV series to help people see things differently so we can solve problems at all levels from the local to the global.

This series title refers to “Parallax Perspectives.” ***Parallax*** is the view you get by looking from different perspectives. For example, put one finger in front of your nose and another finger farther away. Close one eye. Then open that eye and close the other. Your fingers will seem to move. This is called a “parallax” view. This TV series invites you to look at issues from fresh perspectives.

Each program airs three times a week (currently every Monday at 1:30 pm, every Wednesday at 5:00 pm, and every Thursday at 9:00 pm) for the entire month on Thurston Community Television (TCTV), channel 22 for cable TV subscribers in Thurston County, Washington. You can see TCTV’s current schedule at [**www.tctv.net**](http://www.tctv.net). This is part of Thurston County Media,[**www.tcmedia.org**](http://www.tcmedia.org).

**You can also watch the program described below through your computer** at [**www.parallaxperspectives.org**](http://www.parallaxperspectives.org). All episodes of “Glen’s Parallax Perspectives” are posted on that blog’s “TV Programs” part and also in one or more of the categories listed in the right side of the computer screen. Also, see much information about a variety of issues grouped by topic at [**www.parallaxperspectives.org**](http://www.parallaxperspectives.org).

🡪 Please invite other people to watch this video at the “TV Programs” part of [**www.parallaxperspectives.org**](http://www.parallaxperspectives.org) and/or read this thorough summary there.

🡪 This document includes some information beyond what we had time to say during the interview. That supplemental information is noted as such.

🡪 The end of this document lists many excellent sources of information.

**Here is this month’s program:**

**July 2018**

**“Base Public Policy on Honest Science”**

by Glen Anderson, producer and host of the TV series “Glen’s Parallax Perspectives”

The July 2018 episode of “Glen’s Parallax Perspectives” helps us understand how science works.

It also pushes governments to use honest science as a basis for smart and wise public policies. Governments should make decisions based on what is actually true, not corrupted by financial greed or ideological pressures.

Many scientists – and many people in the general public – are deeply concerned that financial greed and rigid ideologies have been elbowing honest science out of the way and corrupting our governments. Those powerful financial and ideological forces are hurting our society, our environment, our climate, our health, and our democracy.

**I interview two guests to help us explore this topic:**

* Sarah Cabbage has a Master’s degree in Epidemiology and a Ph.D. degree in Molecular and Cellular Biology. She has been teaching biology at the college level since 2011. She was a primary organizer of the Olympia Science March that occurred on April 14, 2018.
* Ann Heitkemper has a Master’s degree in Public Health, and a Master’s of Science in Applied Microbiology. She has done research. She has been teaching science at the college level for 24 years. She believes that science literacy and factual curriculum help students and our society have better futures.

**Evidence shows that a war on science is underway now:**

We are experiencing what seems to be a “war on science.” For example, while every other nation in the world recognizes the climate crisis is real, powerful business and political interests in the U.S. are denying reality – and preventing the U.S. from taking responsible actions based on honest science. In fact, the U.S. is the ONLY nation in the world to refuse to support the Paris climate agreement.

In other areas of public policy too, some rigid ideologies are denying science and imposing their beliefs upon our nation. We discussed this more thoroughly later during our interview, but we started with some basic information new.

We began our interview with Ann providing evidence that science is under attack in the U.S. She said we see this in the federal Environmental Protection Agency (EPA), and the war on science also trickles down into various parts of our society, including in classrooms. Some people are promoting their beliefs that oppose vaccinations, oppose evolution, and oppose the reality of the science that has proven the climate crisis.

Sarah said she has seen an anti-science bias in the political realm. Governmental agencies that are responsible for doing serious research to understand the reality of how the world functions are being told what they can and cannot research, and told what they can and cannot say. They are told that their research has to fit within certain agendas. These political constraints reveal powerful people’s disregard for science and their misunderstanding of science. Glen said this shows not only ignorance but also a malevolent intent. Sarah said it’s hard to distinguish between those two.

More information, beyond what we said in the interview:

The war on science is serious, especially in this age of Trumpism, which has called lies “alternative facts,” and which denounces as “fake news” anything that disproves Trump’s lies. In this Orwellian world, truth and science are in extreme danger.

Also, because some people make money by ignoring honest science, they are making war against it. Exxon and other oil companies knew that burning oil was hurting the climate, but they deliberately deceived the public and the government for decades. The danger has worsened because so many people in our society do not understand the scientific method.

**Why should we base public policy on honest science?**

Later in the interview we discussed why we should base public policy on honest science, but we started now with just a brief summary of this topic. Sarah said science is the best way we have for knowing what is going on in the world around us. Scientific facts are true whether or not we “believe” in them. If we do not believe the facts, we will not act on them. She said the climate crisis is a powerful example of this. If we do not believe that the climate is changing because of human activity, we won’t take the actions necessary to slow down those changes, or even to adapt to those changes. Glen agreed and quoted someone who had said, “Either you deal with reality, or reality will deal with you.”

More information, beyond what we said in the interview:

The government needs good, honest science in order to devise smart public policy. But Trump’s agencies have been slashing the numbers of competent scientists, failing to consider the information of those who remain, replacing respected scientists with industry “insiders,” and doing other things that hurt science – and ultimately hurt public policy.

See this article: <https://www.motherjones.com/environment/2018/01/report-the-trump-administration-really-has-very-little-use-for-scientists/>

**What is the scientific method?**

When we were preparing for this interview, each of our guests told me that she wanted to help our viewers understand the scientific method.

Sarah said the scientific method is more complicated than many people realize. Schools teach us that we develop a hypothesis, make predictions about that hypothesis, test it, and see whether or not the evidence supports the hypothesis. What is often left out are a number of options, such as working with multiple hypotheses, “controlling for” certain variables in order to not have those variables interfere with what you are trying to measure, and so forth.

She gives her students a simple example of turning on a flashlight but when the light does not come on, is it because the battery is dead or is it because the bulb has burned out. If you change both, you’d probably be wasting money, and you would not know which one of those had been the actual problem. The scientific method urges us to look for multiple explanations for what we have observed, and reason our way down to the actual reason for our observation.

Ann said what’s really so wonderful about the scientific method is that the data we gather expose the validity of what we were seeking to learn. Perhaps the data support our hypothesis, or perhaps the data disprove it. Either way, we have learned something. The scientific method is useful either way. It might lead to further research.

Sarah said she appreciated someone who had said that the most exciting phrase in science is not “Eureka!” but rather, “Hmm. That’s funny.” It’s not very exciting to find what you expected to find, but it is very exciting to discover something that you did not expect. That’s when you learn something new.

Glen affirmed the open-mindedness and curiosity that are inherent in the scientific method. But this open-mindedness and curiosity are precluded when somebody has his or her mind already made up because their religious dogma has told them what the answer is supposed to be, so the person refuses to accept any answer that’s different from the assumption – or they have their mind already made up because their funding source has told them in advance what the answer must be, so they refuse to allow any evidence that disagrees with that. Sarah added that this occurs when the employer tells the employee that the already-decided policy must be supported, no matter what. Glen agreed that this occurs a lot in government, even in state government, where the competent scientists who work for some agencies are overruled by managers or politicians who have already decided what answers they will allow and what answers they will stifle.

Sarah mentioned that science is about “living in the realm of not knowing.” Science is not just a bunch of facts to memorize. Some people think scientists are arrogant because they think they have all the answers. But that’s not how science works. Scientists say what they think is real based on the evidence that they have. New evidence might arrive tomorrow that changes what we think. Science does not insist on having final, concrete answers.

Glen agreed that scientists approach their work with a sense of modesty. Even if they think they know what’s going on, they are always open to learning things that are new and different from what they had thought. Sarah said it is an iterative process, so we are always learning new pieces to the puzzle.

More information, beyond what we said in the interview:

Science is not just a bunch of facts to be memorized. Rather, it is a way of knowing. People use science every day when they try to figure out why the car doesn’t start, or when something went wrong with a piece of equipment. People use a sequence of tests and experiments, consider the evidence, develop a hypothesis, and test the hypothesis. And – if necessary – revise their hypothesis and go through the process again.

People need to appreciate the importance of scientific consensus. The fluidity of our body of knowledge can cause some people to distrust science. People say, “The information is always changing. What is considered healthy in the diet one day, is unhealthy the next.” This is how science works; change is integral to the ongoing process.

**What is science?** Neil DeGrasse Tyson listed 5 rules that generations of researchers have used for developing a body of knowledge:

1. Test ideas by experiment or observations

2. Build on those ideas that pass the test

3. Reject the ideas that fail the test

4. Follow the evidence wherever it leads

5. Question everything

**Many people misunderstand what the term “theory” really means.**

**Our guests explained its real meaning:**

Many people seem to misunderstand what the term “theory” means. Also, science deniers try to deceive people into thinking that a “theory” means that scientists are not really confident in their scientific conclusions. They promote doubt by saying “it’s ONLY a theory!”

Ann said scientists use the term “theory” very differently from the common misunderstanding. She said the term “theory” really means “a reliable account of the natural world.” She said a theory is “based upon many people’s observations and experiments through time.” So it’s a very solid explanation.

This is very different from the common misunderstanding. We talk about the “theory of gravity,” but that does not mean that scientists are not sure that gravity exists.

Glen agreed. A “theory” is “a summary of the evidence that has been accumulating into a coherent way of understanding natural phenomena.” He said that our drinking glasses rest upon the table, and the table rests upon the floor, so the theory of gravity seems to hold pretty well in the room that we were in.

Sarah said that the public is often confused about scientific terminology. She said many people use the term “theory” to mean what a scientist means by the term “hypothesis.” A theory – like the theory of gravity or the theory of evolution – is a hypothesis that has been tested over and over and over by multiple people over centuries or millennia, and they have confirmed it over and over and over again as true.

**In the scientific method, what is “peer review”?**

Another important part of the scientific method is “peer review.” A scientist reports his or her findings and invites other scientists to review it and critique it. Experts in the field can critique the methodology, assumptions, data collection, reasoning, and so forth.

Sarah and Ann explained what “peer review” means. Sarah said it’s a very important part of the scientific method. It helps science become objective reality instead of just someone’s own understanding. She tells her students about “peer review” by saying she could step outside and claim that the sky is green instead of blue. She said she could print up flyers and write letters to the editor and post articles to the internet and create YouTube videos – all claiming that the sky is green instead of blue. But she said her claims would not be published in a “peer-reviewed” scientific journal without a huge amount of solid evidence for her claims. Other scientists could argue with her based on their own evidence and evidence that has accumulated over the years.

Science is different from other ways of knowing. Science recognizes that individuals have biases, pet ideas, beliefs they don’t want to give up, and so forth. Science has developed ways to counter those and seek the truth. In order to get your findings published and accepted, other scientists who are experts in your field need to corroborate your methodology and the conclusions you drew. This includes how you gathered the data, what variables you considered, and so forth.

Another scientist will replicate the experiment – try it out again – perhaps with a different collection of data sources, or perhaps with a different methodology. If those findings come out similarly, this adds credibility to the first research.

Sarah said scientists in some fields – especially psychology – are trying to figure out why some attempts at replication are not working. She said scientists are paying attention to make sure bias does not creep into the body of scientific knowledge.

During the rally for the Olympia Science March on Saturday April 14, one speaker used the familiar “call-and-response” format that is commonly used at political rallies. *Commonly it goes something like this:*

*Speaker: “What do we want?”*

*Crowd: “Peace!”*

*Speaker: “When do we want it?”*

*Crowd: “Now!”*

At the Olympia Science March rally, a speaker called out, “What do we want?” The crowd said “Evidence-based policy!” The speaker asked, “When do we want it?” When the crowd shouted “Now!” the speaker said, “No! After thorough peer review.” Everybody enjoyed a good laugh.

**Some people misunderstand scientists’ modest ways of expressing findings, etc.**

Glen said the scientific method causes scientists to report their findings in modest ways, based upon the protocols of the scientific method. Instead of making hard statements, they might express their findings as estimates or probabilities. So if some scientific research concludes a 90% probability of something, the mainstream press is likely to erroneously report – and the public is likely to conclude – that the scientists are not sure because they did not reach 100% certainty. Actually, to be able to predict something with 90% probability is very solid. But the general public often misunderstands scientists ways of reporting their findings, so the mainstream news media and the public mistakenly think the scientists lack confidence in what they have discovered. And the “deniers” will debunk that altogether and say, “See, the scientists can’t even make up their minds.” As a result, ordinary people lack confidence in conclusions that are actually solid science.

Ann agreed. These are among the reasons why the public does not understand science and does not trust science. The public expects absolute certainty. She said the scientific process is “somewhat messy” with new data arriving that might change what we had thought before.

Sarah said the mainstream news media often overstate or generalize new findings rather than understand the limited scope of the findings. She gave a hypothetical example that sounded very typical of the erroneous reporting we hear.

Glen said journalists are not scientists and typically do not know how to accurately write about scientific findings. Sarah said that’s one more reason to be careful about where we get our information about scientific matters.

Ann said that a huge amount of new information is discovered every day.

Glen agreed with their cautions about not believing everything we see in mainstream media. He said that Abraham Lincoln once said, “Don’t believe everything you see on the internet.” He knows that this quotation from Lincoln was true, because he had read it on the internet.

**Sarah helped us clarify what science IS and what it is NOT:**

Sarah distinguished between what science **IS** and what it is **NOT**. Earlier in the interview she had said science is not just a bunch of facts to memorize. Some of her college students are “looking for facts to memorize and spit back on tests.”

Rather, she said, science is a rigorous process and a way of deeply understanding something. The scientific process helps us understand how we came to know these facts. This scientific process is exciting, while just memorizing facts is boring.

**Honest misunderstandings occur in mainstream media, internet, etc.**

**How can we be alert to those? How can we correct them?**

Glen said that when we were preparing for this interview one of our guests had said that some people start with a particular conclusion in mind, and then they go shopping around to find science that would justify their pre-existing conclusion. Ann said that many people do not understand how the scientific method works. Glen said we see this in government when a business lobbyist with a specific agenda tries to fool elected officials or agency officials by cherry-picking scientific details that support the lobbyist’s bias. Then the government official can tell the public that science supports this position.

Sarah says we keep seeing advertising that says, “We have the new greatest supplement …. Here is a research article that supports it. Buy this supplement from us!” She said that besides that, people are misled by an individual’s personal story about something that was not based on solid science. For example, a child was vaccinated and later was diagnosed with autism, so this family’s story is mistakenly promoted as proof of “cause-and-effect,” even without scientific process. A huge amount of scientific research has NOT proven any “cause-and-effect” relationship between vaccination and autism, but people believe odd case stories.

Glen said this is how superstitions develop. Someone breaks a mirror and then has bad luck. They assume a “cause-and-effect” relationship. People naturally look for such relationships.

More information, beyond what we said in the interview:

Some children have gotten sick and even died because their parents believed rumors and did not vaccinate the children.

It’s important for people to understand the difference between what the scientists are actually saying vs. what is reported in the popular media. Seek out sources of reliable information. Instead of simply mass media, look for what the professional organizations are saying about the topic. Pay attention to where there is a consensus among scientists, vs. where scientists are genuinely uncertain.

Some scientists have created organizations and made other efforts to help the public understand the scientific method and to discern truth from baloney. Ann mentioned that the National Institutes for Health has provided resources to help people find the good sources of information.

Much “information” is available to us now. It’s a challenge to help people design a filter to filter out the crap. The internet has a lot of misinformation. Many people don’t realize that their web searches are misleading them or giving them bad information.

Also, misunderstanding about science occurs also when people try to substitute religious belief in place of actual science. For example, the Bible was never intended to be a scientific textbook. Misusing the Bible in that way actually abuses the Bible and causes people to dislike the Bible.

Let’s resist the temptation to spread information that might not be accurate. Let’s verify the facts rather than merely pass it on.

**More information about the current war on science:**

We began this interview by briefly mentioning the war on science that is occurring now. We explored this further.

Ann said that we should watch out for anyone who has an agenda that is not backed up by honest science. Somebody who wants financial profits is easily tempted to disregard honest science or abuse it. This is common in politics now. We mentioned some strategies and methods they use to deceive the public, the media and the governments.

Glen gave the example that for many years the tobacco companies claimed that scientists were not sure that smoking tobacco was bad for our health, and that more research should be conducted before anyone should conclude that tobacco was harmful. Some of those same corporate consultants have been using exactly the same methods to deny the scientific consensus that burning fossil fuel is disrupting the climate.

Sarah said that this allows those corporations to portray themselves as reasonable and truth-seeking. Those companies said the nation should take no action until more research has been concluded. Actually, she said, the scientific evidence was already solid. Glen said that the science about the climate was already solid decades ago about the climate, besides having been already solid regarding tobacco. He said that in some cases those corporations or their consultants conducted their own “research,” which failed to see that their commercial products were harmful.

Ann added that the Union of Concerned Scientists ([www.ucsusa.org](http://www.ucsusa.org)) has a really great article that explains these corporations’ “playbook” for manipulating and “putting the fix” on the scientific data. Sarah mentioned the book ***Merchants of Doubt*** about the tobacco industry’s efforts to suppress scientific findings and mislead the public and the government. Glen said the climate deniers are using exactly the same methods and some of the same consulting firms.

Glen said that at one of our weekly peace vigils he was holding a sign supporting the climate. A pedestrian walked by and said very derisively, **“Science: Bah!  That’s just some guy’s opinion!”** He was not making a joke. His tone of voice showed utter contempt for science. Such attitude and ignorance are driving public policy now. Sarah added that “peer review” is the well-established remedy for that pedestrian’s misunderstanding.

Although we did not say explicitly during the interview these next ideas, “peer review” means that no scientist can get away with publishing “just some guy’s opinion,” because other scientists would expose and rebut it. But that pedestrian’s misunderstanding is a “canary in the mine” indicator of the widespread misunderstanding and distrust that is very much afoot throughout our society.

Glen expressed appreciation for Sarah’s skilled efforts to lead the planning for the 2018 Olympia Science March, which occurred on Saturday April 14, 2018. He said he enjoyed hearing Ann speak. The Science March is important for helping the public show their support for honest science and for helping the public become advocates for it. See brief information at <https://actionnetwork.org/events/march-for-science-olympia-2018>

Sarah added that very rich and powerful forces are pushing against honest science through lobbying and other activities, so we need to use our voices and our numbers. Glen added that we also have friends and allies who can help us protect honest science from those who deny or abuse it.

He said that we need to organize from the grassroots up a shift in our culture, just like people changed our culture so it was no longer OK to tell sexist or racist jokes, and so our society came to support equal rights for LGBTQ people. Many aspects of our society are in flux. We can organize from the grassroots up to move our society in better directions. This includes moving our society to better understand science, to better support science, and to push the politicians away from the corrupting influences that are hurting science and hurting our society.

More information, beyond what we said in the interview:

A local environmental scientist told me that although governments **say** they support the “Best Available Science,” those governments’ actions show that they often really do **not** support the “Best Available Science.” This local person said that governmental agencies often do not hire expert scientists as employees or as consultants – or if they do, they disregard those expert scientists’ findings and recommendations. Instead, the governments base their actions on advice from people who are not really expert scientists. They base their actions on advice from the “experts” employed by the businesses that would benefit from certain decisions.

A local scientist wrote that businesses know how to skew the “science” in order to avoid showing problems. For example, this person wrote, “If industry wants to prove that dioxin is harmless and they know damage to DNA becomes quantifiable after five years, cut the study off at four years” in order to show no harm. They find ways to exclude certain kinds of relevant research that would likely produce findings that businesses do not want revealed.

An interesting source of information is “The Poison Papers” at <https://www.poisonpapers.org> See the box of information on page 14 of this document, in the section of information sources.

Also relevant is a Sept. 1, 2017, posting by DeSmog Blog [www.desmogblog.com](http://www.desmogblog.com): [12 Years after Katrina, Hurricane Harvey Pummels Gulf Coast and Its Climate Science-Denying Politicians](http://desmogblog.cmail19.com/t/t-l-kikrct-blijustr-w/)

In 2013 I wrote a short article titled, “Cautious Scientists Reach Consensus on Climate Crisis.” See the box in a section of information sources near the end of this document, on page 15.

An article from December 2016 urges us to really understand the dark rigidity of fundamentalist rural America: <http://www.rawstory.com/2016/11/the-dark-rigidity-of-fundamentalist-rural-america-a-view-from-the-inside/>

Nowadays people criticize the previous attacks on science. For example, centuries ago the Catholic Church vigorously opposed Galileo for scientifically showing that the earth revolves around the sun, not vice versa. Not until just a very few years ago did the Catholic Church apologize.

The U.S. has examples of abuse too. The 1925 Scopes “Monkey Trial” in Tennessee convicted a high school teacher because he taught evolution.

Both of these examples show anti-science biases enforced at those times, but now these examples are shameful examples of gross injustice. Already, the current anti-science denialism and abuse in the U.S. has caused many millions of Americans and the entire rest of the world to feel contempt toward the Republican Party’s bias and corruption.

**Trump and the Republicans have escalated the war against honest science:**

Glen said that the war on science has escalated now that Trump and the Republicans have so much power. They dominate all three branches of the U.S. government and many state and local governments. He said they are acting in highly partisan – and highly corrupt – ways. Their agenda includes denying and suppressing honest science that refutes their biases.

Ann said that sometimes liberals also deny science that disagrees with them. So the problem is not “a party line issue.” Glen agreed that scientists must be free to conduct honest science and let the chips fall where they may. We should not allow abuse from any part of the political spectrum.

Sarah said that partisanship can have an enormous influence on what kinds of research are conducted or not conducted. She said the federal government’s National Institutes of Health and National Science Foundation fund a lot of research. If they choose not to fund certain kinds of research, those kinds of research are not likely to be done.

Glen added that – based on his decades of research in the peace movement – he has found that while other federal funding for science has sometimes been cut, more and more funding for scientific research is being funneled through the Pentagon. This is skewing scientific research toward researching subjects that serve military purposes rather than impartial honest science overall.

He said that Trump has shown an amazing contempt for science in many ways.

One especially outrageous example is that in August 2017 Trump was promoting Sam Clovis – a **NON**-scientist – to be the Chief Scientist at U.S. Department of Agriculture. Sam Clovis had **absolutely ZERO science background and absolutely NO qualifications** to be in charge of a federal agency’s science. Sam Clovis was a white racist with an extreme right-wing radio program. He had worked on Trump’s election campaign and was absolutely loyal to Trump. Fortunately, he was prevented from getting the job.

Ann said Trump has left many science advisory positions vacant. But he needs competent advice about scientific matters. Sarah said that people who had donated money to political campaigns have gained massive influence over many matters, including scientific research.

Glen said that the Trump administration’s denialism smacks of the Catholic Church's punishment of Galileo for saying the Sun – not the Earth – is at the center of the solar system.

He said that likewise the USSR’s Stalin denied that the USSR's rapid industrialization would hurt the environment because his ideology – the almost religious absolutist belief that the USSR’s communism was absolutely the perfect political and economic system that could not possibly have any shortcomings – prevented him from recognizing scientific truth. As a result, the USSR’s mining and manufacturing caused horrible environmental problems – and horrible damage to public health. But under the dictator Stalin, the USSR held to an absolutely rigid ideology that prevented them from admitting or dealing with the environmental problems. The nation’s environment and health suffered horribly from their denialism, and those problems still persist decades later. Nowadays the U.S. and the whole world are suffering from Trump’s denialism, and his scientific denialism will cause us to continue suffering for many decades.

Sarah said, “There are objective truths that exist regardless of whether they fit into your worldview, your beliefs, or your political agenda.” She said, “If we don’t acknowledge them or have the ability to even figure out what those are, we’re in a very dangerous situation.”

More information, beyond what we said in the interview:

Years ago the Republican-dominated Congress banned research about gun violence.

A December 2016 article had this headline: “Scientists are frantically copying U.S. climate data, fearing it might vanish under Trump.”

In January 2017 – at the very beginning of the Trump era, someone sent out information saying that scientists across all federal agencies were furious about gag orders. They created “Alt- and Rogue Twitter pages for the Park Service, EPA, NASA, National Weather Service, and more.” Federal agencies were already dominated by new appointees hostile to honest science. But employees were finding ways to speak out – on their own time, of course. The person who provided this information said “their motto is [**#resist**](https://www.facebook.com/hashtag/resist?source=feed_text&story_id=10209673614610290).”

The Trump administration has removed scientific information from websites of several federal agencies because the information contradicted the Trump administration’s biases about the climate and other matters.

March 2017: A researcher about the Arctic wrote that Trump was deleting his citations. <https://www.theguardian.com/commentisfree/2017/mar/28/arctic-researcher-donald-trump-deleting-my-citations>\_

May 2017: EPA and Interior replaced peer-review scientists with business big-shots: <http://grist.org/briefly/goodbye-peer-review-hello-industry-review/?utm_campaign=daily&utm_source=newsletter&utm_medium=email&utm_content=daily-static>

The Trump administration has actually censored certain words and ordered employees of several federal agencies to not use those words.

Many scientists have been fired, forced out, or reassigned to trivial jobs. **EXAMPLE:**

In August 2017 CREDO launched a petition opposing a federal agency’s censoring scientific experts who were doing their jobs honestly. The petition called for “an investigation into Interior Department Secretary Zinke’s arbitrary reassignment of Joel Clement and 50 other senior officials and scientists.” Joel Clement was the top climate change scientist at the Department of the Interior, but Zinke banished him to an accountant job processing royalty payments from fossil fuel companies.

NRDC said, “Clement is one of about 50 scientists and senior officials quietly removed from their posts at the Department of the Interior in July [2017]. He believes he was punished for speaking out about the climate risks facing Alaska Native villages.

NRDC said, “Systematically eliminating the government's expertise on climate change is not only foolish, it is dangerously irresponsible. As temperatures increase, so will the dangerous impacts of climate change – flooding, catastrophic storms, heat waves and droughts. We need our scientists to help us understand how to prevent and respond to these threats.

“Unfortunately, helping out oil and coal companies is a far bigger priority for federal agencies under Trump's authority. Instead of helping us prepare, they are retaliating against anyone who acknowledges the risks we face.

“Joel Clement’s story is part of a broader pattern. Trump has appointed anti-science ideologues and industry lobbyists to key agency roles, revoked environmental safety regulations, removed climate information from government websites, censored scientists from speaking up and reduced public access to data. This administration is at war with reality, and our future will be the casualty.”

Trump is utterly ignorant about science, and he shows utter contempt for science. He is eliminating honest science from many parts of U.S. public policy. He pulled the U.S. out of the Paris Climate Agreement, so the U.S. is the ONLY nation in the world to reject honest climate science and responsible actions to protect the world from climate chaos. (Initially, Syria did not join because its civil war was a compelling priority, and initially Nicaragua did not join because the Paris deal was not strong enough. But both did join soon after. **Under Trump, the U.S. is the world’s only rogue nation regarding the Paris Climate Agreement.**

After Trump withdrew the U.S. from the landmark Paris Climate Agreement, his Secretary of State and former ExxonMobil CEO Rex Tillerson indicated that he would eliminate the position of the State Department’s Special Envoy for Climate Change. Read this article: <https://www.desmogblog.com/2017/08/30/tillerson-scraps-us-climate-envoy-position-ahead-un-talks?utm_source=dsb%20newsletter>

Under Trump's rule, business is winning out against science: <http://grist.org/briefly/business-interests-are-winning-out-over-science-in-the-trump-administration/?utm_medium=email&utm_source=newsletter&utm_campaign=daily>

Read this December 2016 article about the war on science and climate being conducted by Texas Governor Rick Perry: <http://www.motherjones.com/environment/2016/12/rick-perry-energy-secretary-climate-censorship>

Scientists planned a march in Washington DC to protect science. See <http://www.huffingtonpost.com/entry/scientists-planning-march-washington_us_5888f55de4b061cf898c487f>

Scientists are suing the Environmental Protection Agency (EPA) because its Administrator, Scott Pruitt, is trying to suppress science: <https://www.huffingtonpost.com/entry/scientists-sue-epa-scott-pruitt_us_5a68a218e4b0dc592a0e87f0?utm_medium=email&utm_campaign=__Politics__012518&utm_content=__Politics__012518+Version+A+CID_d5c0e194203206b82a88f40e03596a83&utm_source=Email%20marketing%20software&utm_term=READ%20MORE&ncid=newsltushpmgnews__Politics__012518>

In August 2017 the Natural Resources Defense Council (NRDC, [www.nrdc.org](http://www.nrdc.org)) noted that major news media were reporting that the Trump White House was deciding how to deal with one of “the most comprehensive climate science reports” ever published. “The report — which was written and reviewed by scientists from 13 federal agencies — affirms that climate change is real, it's caused by human activity, and it's already hurting people across the U.S.” **That powerful research directly contradicted the Trump-Pruitt climate “denialism.” The NRDC said this:**

“Completed this year as part of the National Climate Assessment, the report concludes that ‘from the top of the atmosphere to the depths of the oceans,’ evidence of climate change is overwhelming — and there's no doubt that humans are the cause. The furor over the draft report comes soon after the National Oceanic and Atmospheric Administration confirmed 2016 as the hottest year on record, and that:

• Greenhouse gases were the highest on record.

• Sea-surface temperatures were the highest on record.

• Global upper ocean heat content neared record high.

• Global sea level was the highest on record.

• Antarctic had a record low sea ice extent.”

This is yet one more example showing that Trump and the big polluters do not want people to know these facts, nor to understand how honest science works. I believe that every person has a right to know the truth about the urgent threat that climate change poses to our future, whether Trump likes it or not.

In June 2018 the leaders of 7 rich nations gathered in Canada for the G-7 economic summit. All 7 came from business-friendly political parties, but Trump is so extremely beholden to fossil fuel companies that he denies that the climate crisis is real, and he rejects climate science. Trump left the G-7 summit early, before the world leaders discuss the climate or oceans. The Sierra Club provided information and a statement: <https://www.sierraclub.org/press-releases/2018/06/report-trump-only-leader-g-7-summit-who-refuses-accept-climate-science>

The more Trump ignores science, the more attention it gets: <http://www.motherjones.com/environment/2017/08/the-more-trump-ignores-science-the-more-attention-it-gets/>

Over the years, NASA has provided excellent scientific research about the climate. Trump is cutting that and wants to send astronauts to Mars. The non-partisan Pew Research Center’s recent public opinion survey showed that the public wants NASA’s top priority to be climate research. See [Americans Think Climate Change Should Be NASA’s Top Priority…](http://click.actionnetwork.org/mpss/c/FQE/ni0YAA/t.2i5/KY2FB1yVSQOM_Iyi6zRxIQ/h6/wShsN-2F4HsO0XTVjofDEHZKZed2AcQDhu6ClYWFafC2TdXS5FvyWQkxQwrtDj-2BDHtnKhRK-2FW84HRgBZ-2FOIcqHiapmnecZriqTwlHrDgPblhkgH6sFrPI5OYq60hxO27DMRhuKFjgTGZU6uJMxm6HQCk0bUbntazLcz0n1-2FK1mg-2FGJtzdRKBk-2FlIgdxKBD-2FHjYRqcN1AIY8oZenphUMWOmpwE5pg0acOcAEWhur3O-2F2zZLVmtoF7gYJ5bYS33j1Ok2fWTQMzUsOhxIfgVLIdw4lslS65Iw-2B5lr7-2BfL1YdNhYEMExU1dzIF2-2BFcrCSJ83GV)

If we want our nation to be “great,” we must demand that governments at all levels – federal, state and local – take strong actions to protect and sustain a clean and healthy environment.

Michael Moore denounced Trump’s executive orders ending all efforts to stop and reverse climate change. Michael Moore said:

“Historians in the near future (because that may be the only future we have) will mark today, March 28, 2017, as the day the extinction of human life on earth began. President Trump has signed executive orders ending all efforts to stop and reverse climate change. He is rescinding President Obama's six climate change orders. He is instructing the Environmental Protection Agency to cease its climate change efforts and do no environmental regulations that get in the way of profits or ‘jobs.’ The EPA is to only concern itself with "clean air and clean water" - while Trump orders a massive increase in the use of coal.

“This is a defining moment in the history of mankind. By signing these executive orders today, Trump is declaring an act of war on the planet and its inhabitants. The one silver lining here is that Trump can't kill the planet; the planet wants to live and has a long history of wiping out any real or perceived threats. With the actions Trump is taking today, the planet is paying attention -- and the planet will make sure it dispenses with a species hell-bent on destroying Earth.” <http://www.bbc.co.uk/news/amp/39415631>

In denying science, Trump and the Republican-dominated Congress want us to be ignorant. Ignorance is deadly for a democracy. They want to weaken or abolish many laws and regulations that have been protecting the environment. This would cause more pollution. A polluted nation is not “great.” A polluted nation is dirty, and it makes people sick. Trump campaigned that he wants to “make America great.” Actually, a “great” nation needs **truth** and the **best available science**. Trump is actually making America corrupt, polluted, sick, and ignorant.

This is not a partisan matter. Don’t lambaste only the Republicans. People across the entire political spectrum sometimes fail to treat science with respect. They cherry-pick data to advance their own agendas and spread information that has not been verified.

**The U.S. has experienced cycles of anti-intellectualism throughout our history:**

In about 1970 I bought a book, and for nearly 50 years I had kept thinking that I want to read it. Now – with the war on science – I actually read it and found it fascinating. It is Richard A. Hofstadter’s 1962 book ***Anti-Intellectualism in American Life*.**

This highly respected historian’s book implies that the current war on science is not entirely an aberration. Throughout the centuries of U.S. history, there have been cycles of anti-intellectualism and periods of time when education was valued. Our nation’s founders included a great many scholars. But after that era the nation focused on opening up the frontier and disparaged “book-learning.” Education was valued during the Progressive Era, but in the 1920s right-wing fundamentalism disparaged education. President Franklin Roosevelt brought scholars into his administration, but during the 1950s, the Eisenhower-Nixon-McCarthy era distrusted scholars, so people ridiculed the 1952 and 1956 Democratic presidential nominee Adlai Stevenson because he was an intellectual. But after the Soviet Union’s Sputnik satellite caught the U.S. by surprise in 1957, the U.S. started caring about science education. Now – more than half a century after the book was published – the U.S. is suffering another anti-intellectual cycle.

So let’s not feel that we are doomed by the ignorance being imposed upon us. Let’s organize to reverse the cycle of anti-intellectualism. Let’s push back against stupidity and corruption. Let’s lift up the value of thoughtful life, the scientific method, and other humane values.

Ann said that some people think climate scientists have pre-determined agendas (alternative energy, etc.). But, she said, they did not have the intention to establish certain amounts of increased CO2 or certain amounts of increased temperature. Rather, they used the scientific method, discovered what was happening, and shared this information with us. It is a positive thing that they have informed us of the realities. She said that centuries ago we would not have known this, so we should thank scientists for discovering what’s happening and informing us. We need more media attention about the great things that science is giving us. Medicine and technology are all based on science.

Sarah pointed out that science denial and anti-intellectualism reveal a distrust of “experts” and distrust of authority. Some people choose to believe an anti-vaccination blog posting by a mother of an autistic child rather than believe the pro-vaccination research findings by a professional organization of pediatricians. She also gave the example of a person who believes a climate denier on the radio instead of the research findings of climate scientists. She sees a common thread of anti-intellectualism and distrust of scientific experts. Such persons think that they are making a thoughtful independent choice in deciding whom to believe.

Glen agreed. He said if you’re going to drive across a bridge high above a big river, would you rather that the bridge had been designed by a competent bridge engineer or by some amateur who said, “I don’t need no stinkin’ degree in bridge engineering! I don’t need no stinkin’ mathematics!”?

Sarah said that part of understanding the scientific method is knowing the difference between someone who is competent versus someone who relies only on a gut feeling or a coincidence or a single story.

Glen said that although Trump says he wants to “make America great,” any nation that wants to really be “great” must respect and seek **truth** as a foundation for greatness. Build public policy on the best available science. In contrast, denialism veers away from truth and is doomed to prevent greatness.

More information, beyond what we said in the interview:

For many years the U.S. has been underfunding and degrading public education while promoting selfish consumerism. Now we have a nation of illiterate, self-centered consumers who do not understand science and do not know how to protect democracy from corruption by big business and greedy politicians. Seriously, our nation needs to become scientifically literate. People need to assert the value of truth over propaganda and greed.

Republicans’ tax legislation shows that they oppose honest science – and they oppose college education. The Republicans’ gigantic tax legislation in December 2017 cut taxes for extremely rich people but is raising taxes on graduate students by taxing “tuition waivers.” The G.I. Bill had worked well, but now Republicans are financially penalizing college students. The Republicans’ bill also raises taxes on private university endowments. The American Council on Education calculates the new law’s 10-year cost to higher

education will be $65 billion. Info: <http://www.acenet.edu/news-room/Documents/Letter-on-House-Tax-Cuts-and-Jobs-Act.pdf>

On Dec. 8, 2017, the Seattle *Times*’ Danny Westneat published an article about Republicans’ bias against college education. A news items in the summer of 2017 reported that conservatives were telling pollsters that colleges hurt our nation. A *Newsweek* article headline stated, “Majority of Republicans say colleges are bad for America (yes, really).” See: [read one such headline](http://www.newsweek.com/republicans-believe-college-education-bad-america-donald-trump-media-fake-news-634474). Westneat’s article reported:

“[A]n extraordinary 80 percent of “core conservatives” — aka the Trump base — say that colleges and universities are bad for the country. Pew Research interviewed 5,000 voters last summer, and followed up with 2,000 of them later to create an [in-depth look at our various political tribes](http://www.people-press.org/2017/10/24/political-typology-reveals-deep-fissures-on-the-right-and-left/). You can take their test to see what tribe you’re in, at [www.people-press.org/quiz/political-typology.](http://www.people-press.org/quiz/political-typology/)

“Core conservatives are [overwhelmingly anti-college](http://www.people-press.org/2017/10/24/4-governments-role-and-performance-views-of-national-institutions-expertise/4-2-2/), by 80 to 16 percent — a worse rating than they gave to labor unions or Islam. The other slice of Trump’s base, “Country First Conservatives,” are anti-college by 60 to 32 percent.

“The research didn’t plumb the reasons for this. But recently, the president’s son, Donald Trump Jr., gave the [conservative nutshell view of how colleges operate](http://www.washingtonpost.com/sf/national/2017/11/25/elitists-crybabies-and-junky-degrees/?utm_term=.0a2d0ee50bba): “We’ll take $200,000 of your money; in exchange, we’ll train your children to hate our country.”

“So congressional Republicans are just doing what their constituents apparently want. Sticking it to college kids, and giving the money to CEOs.

“Danny Westneat’s column appears Wednesday and Sunday. Reach him at 206-464-2086 or dwestneat@seattletimes.com

In a democracy, people’s brains matter. Truth matters. It is vitally important to base public policy on honest science. We have talked about problems. A few minutes later we talked about solutions.

Wendell Berry wrote, “Whether we and our politicians know it or not, Nature is party to all our deals and decisions, and she has more votes, a longer memory, and a sterner sense of justice than we do.”

Here is one compelling reason why we need honest science to drive public policy: <https://www.ecowatch.com/warning-to-humanity-scientists-2544973158.html?utm_source=EcoWatch+List&utm_campaign=aaad04f9dd-EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_49c7d43dc9-aaad04f9dd-85369701>

**How could ordinary people educate themselves about science so we can live
better in a democracy?**

In a democracy, ordinary people need to educate themselves, propose solutions, and exercise leadership toward solving problems. How could we improve people’s thinking so we can live effectively in a democracy where people’s brains and well-being matter?

Sarah said we’ve already mentioned that people need to know where to seek valid information. Check the sources. She said not to believe anyone who won’t provide valid sources.

Ann said that she had already mentioned a website at the National Institutes of Health (NIH) that helps people with that. The website offers five W’s: Who, What, Where, Why, When. She said the NIH urges people to ask those five questions about the source of information. Who is providing the information? What’s in it for them? Who is paying for it? Are the data old or new?

Glen said that Ann’s advice to find out who paid for the research reminded him of Deep Throat’s advice during the Watergate scandal: “Follow the money.” Is this research legitimately funded, or did somebody with an axe to grind pay for it in order to achieve a pre-determined result?

Sarah said that lobbying and cultural campaigns involve a lot more money than many people realize. Every kind of interest group has their own entity. For example, supermarkets pool their resources to pay for political actions that they want, and they pay for advertising campaigns to induce people to spend their money in the ways that the supermarkets want. Interest groups exist for every other kind of interest – beef, milk, etc. They advocate and advertise in ways that will benefit them.

Glen said that in addition to individuals needing to know how to identify and evaluate sources of information – and to make better decisions in evaluating scientific information – so also do governmental decision-makers need to do this too.

More information, beyond what we said in the interview:

SCIENCE IS BEING ATTACKED:

Science is under attack. Trump packed his cabinet and other appointments with unapologetic climate change deniers with close ties to the fossil fuel industry.

And in an unprecedented move, the Trump transition team sent out a questionnaire seeking the names of federal employees who helped implement President Obama’s climate change goals – a move some called a witch hunt. Meanwhile, climate scientists started furiously working to archive public data because of the concern that it all could be erased when Trump had taken office.

This short video explains and supports science: <http://www.ecowatch.com/neil-degrasse-tysons-science-video-2371964033.html?utm_source=EcoWatch+List&utm_campaign=d8b76684b2-EMAIL_CAMPAIGN_2017_04_12&utm_medium=email&utm_term=0_49c7d43dc9-d8b76684b2-85369701>

DAILY LIFE, PUBLIC POLICY, AND ADVOCACY:

The lottery is a tax on people who are bad at math.

Many federal and state legislators ignore science in favor of profit and convenience.

People need to understand science in order to protect ourselves from scams in the marketplace and scams in politics. Informed citizens need to be able to separate fact from fiction. We need to understand science in order to make important decisions about our lives and what public policy our governments should adopt. Many people want to mislead or deceive us. We need to understand and sort out fact from fiction. People need to advocate for science in public policy.

**In December 2016 in San Francisco hundreds of climate scientists poured into the streets to rally in the name of scientific freedom**. They were joined by representatives of indigenous communities and other groups that are most vulnerable to the impacts of climate change. **Their message was simple: we must stand up for science!** The rally was organized by ClimateTruth.org and The Natural History Museum to support scientists at a time when they are under threat. Scientists aren’t usually ones to rally in the streets. As Naomi Oreskes, Professor of the History of Science at Harvard University, said at the rally, **“We don't want to be here...we want to be in our labs, we want to be in the field, doing the work that we were trained and educated to do...We are at a moment in time, a moment in history, where we have to do something else as well. And that's stand up and be counted.”**

**Watch this short video about the scientists’ historic rally in San Francisco in December 2016:** <https://act.climatetruth.org/sign/standupforscience_rallyvideo/?t=3&akid=5553.239724.leq8I0>

MORE INFORMATION about the climate scientists’ rally in San Francisco in December 2016:

"Scientists prepare to fight for their work during ‘the Trumpocene,'" The Washington Post, 12-15-16
[https://act.climatetruth.org/go/1485?t=7&akid=5553.239724.leq8I0](https://act.climatetruth.org/go/1485?t=6&akid=5553.239724.leq8I0)

“Fearful of Trump, hundreds in San Francisco rally for science,” Eos, 12-14-2016
[https://act.climatetruth.org/go/1486?t=9&akid=5553.239724.leq8I0](https://act.climatetruth.org/go/1486?t=8&akid=5553.239724.leq8I0)

"Trump appointees cause climate change panic," CNN, 12-15-2016
[https://act.climatetruth.org/go/1498?t=11&akid=5553.239724.leq8I0](https://act.climatetruth.org/go/1498?t=10&akid=5553.239724.leq8I0)

"Scientists protest climate-change deniers among Trump’s cabinet picks," FiveThirtyEight, 12-14-2016
[http://act.climatetruth.org/go/1487?t=13&akid=5553.239724.leq8I0](http://act.climatetruth.org/go/1487?t=12&akid=5553.239724.leq8I0)

"This is not normal – climate researchers take to the streets to protect science," The Guardian, 12-16-2016
[https://act.climatetruth.org/go/1483?t=15&akid=5553.239724.leq8I0](https://act.climatetruth.org/go/1483?t=14&akid=5553.239724.leq8I0)

"Climate scientists protest the Trump administration in San Francisco," VICE, 12-14-2016
[http://act.climatetruth.org/go/1488?t=17&akid=5553.239724.leq8I0](http://act.climatetruth.org/go/1488?t=16&akid=5553.239724.leq8I0)

EDUCATION:

Let’s improve science education. Kids need to learn about science earlier. All kids need to learn about science.

Some schools’ science courses teach only “fun” activities for kids. Make sure they teach kids the scientific method, not just “fun” activities in the name of science.

Oil companies and other polluting industries have written educational materials and urged schools to use those in their science courses. They are biased. They mislead students about science-related issues. Do not use them.

When a state government promotes “science” curriculum that is biased by industry pressure or religious dogma, people who support honest science should oppose that. Oppose it within the state legislatures, state education departments, and local school districts.

Another strategy is to organize pressure from the outside, urging businesses to NOT locate in states that teach corrupt science, because those states mis-educate students about science, so those graduates will be poorly educated. Instead, businesses should be encouraged to move to states that teach honest science, so they can hire knowledgeable employees.

**How could we improve governmental activities and decisions regarding science?**

Governments at all levels – federal, state and local – have often failed to protect honest science from abuse – and governments have often failed to use honest science to make governmental decisions. Ordinary people need to inform ourselves and push in strategically smart ways from the grassroots up.

Ann said many positive actions are already underway from the grassroots, including protests and the Science March. She expressed support for “Zero Hour,” an effort led by diverse young people who support climate science. It will occur on **Saturday July 21, 2018** in various places throughout the U.S., including Washington DC and also in Olympia’s Heritage Park. See <http://thisiszerohour.org>. The organizers recognize the climate crisis’s urgency and the need for IMMEDIATE changes in public policy. She said that’s why they call it “Zero Hour.”

Ann also recommended electing more scientists to public office. A great many lawyers and business people are elected officials, but very few scientists are. She said Congress has approximately 200 lawyers, 7 radio hosts, 6 owners of car dealerships, but almost no scientists.

She said a new organization is urging the election of more scientists. It is called “314 Action.” See information at [www.314action.org](http://www.314action.org).

More information, beyond what we said in the interview:

Our government would make wiser decisions if we elected more scientists, social workers, poets, and other candidates with very diverse backgrounds. We are vastly overrepresented by lawyers and business people.

Another remedy would be to improve media coverage of science-related matters and to emphasize science’s accomplishments. We should appreciate the scientists who have been figuring things out about the climate and many other issues, and we should use their information to help us solve problems.

**Many excellent sources of information exist:**

Glen said he has posted much information to my blog, [www.parallaxperspectives.org](http://www.parallaxperspectives.org). To read it, click on the **“Science”** link or the **“TV Programs”** link to find the title of this episode of the TV series “Glen’s Parallax Perspectives.” This episode’s title is **“Base Public Policy on Honest Science.”** Then click the link to watch the interview online and/or the link to read the **thorough summary** of what we said during this interview. (*This is the document you are reading now*.) At the end of this thorough summary you’ll see links to many sources of information.

More information, beyond what we said in the interview:

We did not have time during the interview to list the huge amount of information that supports and gives examples of the issues we have been discussing during this TV interview. See the lists below of non-profit organizations, publications, specific articles, etc.

NON-PROFIT ORGANIZATIONS and PUBLICATIONS:

Well-respected non-profit organizations provide information and advocacy. Some focus on the broad public interest, on the environment or climate, on public health, and/or directly on science. Most of these organizations publish magazines or newsletters (in print form and/or online) containing substantive information and/or brief news features. I recommend these, and there are many more besides:

* Americans United for the Separation of Church and State [www.au.org](http://www.au.org) – This 70-year-old organization protects all levels of government (federal, state, local, schools) from encroachment and abuse by religious pressures – and vice versa. For example, they work to prevent creationism from being taught in schools.
* Bulletin of the Atomic Scientists [www.thebulletin.org](http://www.thebulletin.org) After the U.S. dropped atomic bombs on Japan in 1945, some atomic scientists organized to prevent that from ever happening again. This is the well-respected organization that maintains the famous “Doomsday Clock.”
* Center for Science in the Public Interest [www.cspinet.org](http://www.cspinet.org) has been providing information and advocacy for a safe, nutritious food system since 1971.
* Olympia Science Café offers monthly speakers on scientific topics that are interesting and understandable for lay people. Olympia Science Café took the summer of 2018 off and will resume in September. Info: Kerry Martin kmartin@trl.org Email notices sent by Gregory Milligan gmilligan@stmartin.edu voice: 360-438-4314
* Physicians for Social Responsibility [www.psr.org](http://www.psr.org) These medical professionals and other people work to prevent nuclear war, climate danger, and other problems. They are grounded in good science.
* Poison Papers: The Bioscience Resource Project and the Center for Media and Democracy released a trove of rediscovered and newly digitized chemical industry and regulatory agency documents stretching back to the 1920s. The documents are available at <https://www.poisonpapers.org/> **(See info in the box below)**
* Public Citizen [www.citizen.org](http://www.citizen.org) Ever since Ralph Nader founded this organization in 1971, it has represented the broad public interest and defended democracy against a number of abuses, including corporate power and governmental corruption. Some of their work is science-related.
* ***Science*** Magazine ([www.sciencemag.org](http://www.sciencemag.org)) is published by the American Association for the Advancement of Science, [www.aaas.org](http://www.aaas.org) It is excellent.
* Union of Concerned Scientists [www.ucsusa.org](http://www.ucsusa.org) invites people to join with professional scientists in promoting honest science to serve the public interest.
* [www.314action.org](http://www.314action.org) This grassroots community of over 400,000 scientists and advocates supports honest science and facts. They urge more scientists to run for elected office. It is a source of organizing and training to help scientists run for office and win.

**This item is listed above.**

A source of information is “The Poison Papers” at <https://www.poisonpapers.org>

The resource was mentioned in a press release dated July 26, 2017 from the Center for Media and Democracy. It listed two contact persons: Dr. Jonathan Latham, jrlatham@bioscienceresource.org (607) 319-0279 and Cara Newlon, cara.newlon@berlinrosen.com, (703) 899 3206 Carol Van Strum, cvstrum@gmail.com

HEADLINE:  **“The Poison Papers Expose Decades of Collusion between Industry and Regulators over Hazardous Pesticides and Other Chemicals: Watchdog Groups Digitize and Release 20,000 Documents for Public Review”**

The news release said the Bioscience Resource Project and the Center for Media and Democracy released a trove of rediscovered and newly digitized chemical industry and regulatory agency documents stretching back to the 1920s. “Together, the papers show that both industry and regulators understood the extraordinary toxicity of many chemical products and worked together to conceal this information from the public and the press. These papers will transform our understanding of the hazards posed by certain chemicals on the market and the fraudulence of some of the regulatory processes relied upon to protect human health and the environment.”

Three additional sources of information: a.wilson@bioscienceresource.org [www.independentsciencenews.org](http://www.independentsciencenews.org) [www.bioscienceresource.org](http://www.bioscienceresource.org)

In 2013 I wrote a short article titled, “Cautious Scientists Reach Consensus on Climate Crisis.” Here it is:

Human beings have psychological defense mechanisms that make it hard for us to accept hard realities. It’s hard for many people to accept the hard reality that the coal, oil and natural gas we have burned in the past few hundred years have put so much carbon dioxide into the atmosphere that we have caused a “greenhouse” effect that has warmed the planet and disrupted the world’s climates.

About fifty years ago scientists reached consensus that smoking tobacco hurts health. The only dissenters were a few who were being paid by tobacco companies.

The most respectable climate scientists have reached similar consensus about fossil fuels hurting the climate. Professional organizations of climate scientists and meteorological scientists have issued clear statements that the climate crisis is serious and caused by humans.

As with tobacco decades ago, the oil and coal companies are spending millions of dollars on propaganda and oddball “scientists” to confuse people about scientific truth.

It’s psychologically hard to acknowledge hard realities, but we must honestly deal with the real world. I encourage people to learn about the climate crisis and urge governments and businesses to act responsibly. Either we deal with reality, or else reality will deal with us.

**Closing encouragement:**

Glen thanked Sarah Cabbage and Ann Heitkemper for sharing their information and insights during this interview. He also thanked the viewers for watching this program.

In modern America, honest science is being attacked by gigantic business corporations in order to corrupt all levels of government so our government will serve those gigantic business corporations instead of serving truth and the broad public interest.

Also, some rigid religious and other ideological forces are attacking honest science for their own selfish purposes.

In a democracy, “we the people” should be in charge, not corrupt private interests that distort the truth for their own private purposes.

One of the most important human values is respect for truth. In the current political climate, that is gone. Trump lies and gets away with it. His political appointees deny scientific truth and get away with it. They erase truth – honest facts – from agency documents and websites. Just like in Orwell’s 1984, truth is being destroyed in order to manipulate and control us.

Science is at extreme risk – especially in this age of Trumpism, “alternative facts,” “fake news,” climate denialism, and out-of-control capitalism.

Our news media and our schools should inform us about honest science, not propaganda devised by giant business corporations or other people with rigid ideologies.

In order to protect our nation and ourselves, we need to understand, protect and support honest science.

You can get information about a wide variety of issues related to peace, social justice and nonviolence through my blog, [**www.parallaxperspectives.org**](http://www.parallaxperspectives.org)or by phoning me at
(360) 491-9093 or e-mailing me at **glenanderson@integra.net**

**We're all one human family, and we all share one planet.**

**We can create a better world, but we all have to work at it.**

**The world needs whatever you can do to help!**