

## **Expertise-**

This one will be short. (For those of you who were my students, I'm sure this elicited a groan. Dr. G's short is anyone else's thesis.)

When did being an expert become a bad thing?

Today on the internet we are told that everyone's opinions should be valued and considered, without study or expertise. The more difficult the subject, the more likely that expertise based on study is discounted.

Personally, I take my car to a certified Honda trained technician and go to licensed doctors, and when needed, specialists. I don't take legal advice from a blog. I don't rely on someone whose expertise comes from videos to fix my car, or perform surgery. When I think of supporting my position based on research, I mean checking original literature and verifying sources. Not watching a couple of videos of rants. The failure of people to understand difficult content leads to their acceptance of those who simplify issues.

I am a skeptic. What that means, to me, is that when someone makes a claim, I seek to verify it by consulting experts-those who have taken the time to study the subject. While I am even skeptical of experts, if hundreds or thousands of experts agree on a position, I am more likely to agree with them than with those who have no data other than their feelings. The gut feeling that the world is flat does not trump the evidence from satellites or watching a ship's mast disappear over the horizon. There is an objective truth. The world is an oblate spheroid.

It seems that with this skepticism related to expertise, we have lost shared facts.

We can debate what can or even should be done about global climate change. We shouldn't be debating whether there is global climate change.

Going back to medicine. Imagine I went to the doctor and was diagnosed with an ulcer. I get a second, and third opinions, but all the doctors agree I have an ulcer. They agree that most ulcers are caused by a bacteria (*Helicobacter pylori*) and the course of treatment should be antibiotics. I disagree with their fact (bacteria). I remember that when I was young (there was such a time), people thought that ulcers were caused by stress and coffee. I give up coffee (NOT HAPPENING) and join a Buddhist sect and meditate daily. My ulcer doesn't get better. I'm calmer, just still in pain. There is legitimate debate among experts as to the preferred antibiotic, not as to the fact of the bacteria. I'm certain I could find a dozen videos online that claim different causes for ulcers, along with different (profitable to the video's poster) cures. None the less, bacteria are the cause of most ulcers. Yet somehow, we are more skeptical of the experts who spent years in medical school and training, just to give us this advice, than of a video on the internet.

Just two of many issues that chafe at me-

## **Climate change-**

The world is getting warmer (as a whole). This is due to human activity. These are facts. Yes, there are people who are skeptical of these facts. But, like a patient seeing a doctor, I'm more

likely to believe the scientist-expert, who has studied climate for 20+ years, than the video poster or podcaster (meta-dig). It seems that many of the research papers challenging human derived climate change were funded by (wait for it) the fossil fuel industry. Reminds you of how tobacco company executives swore to Congress that their studies showed how cigarettes didn't cause cancer. (I always found it telling how, as a rule, the children and grandchildren of these executives weren't allowed to smoke.)

I believe that what we do about climate change needs to be open to debate. I'm just worried that the time for action will pass before we agree on the facts. To me, from the outside, it seems like big business will do anything to cloud the issue rather than face the facts. Anything but harm the short term bottom line.

The lack of shared facts, or even how we establish shared facts, is IMHO (ok, not so humble) the main problem. Before the internet became THE source of information, science was a method that established a baseline of shared fact. No more.

**Vaccine hesitancy-**

Between 1900 and 1977 about 500 million (500,000,000) people died from smallpox. Since then-none.

IMHO (see above) vaccines are the single greatest advance in medicine. Surgery is pretty great, and antibiotics, antivirals, and antifungals save many lives, but, vaccines have saved tens of millions. How many people are alive today because of the smallpox or polio vaccines?

A doctor (who lost his medical license for this) published a paper showing a relationship between the MMR vaccine and autism. The paper was withdrawn and debunked by much better studies. The psychiatrist who helped define autism in the diagnostic manual says that the increase in autism is due to a change in the definition and then to better diagnosis to the new, refined, definition. Yet, this debunked study and doctor continue to be touted as an argument against vaccination.

I am not here to tell you that vaccines are 100% safe. They are not. I am not here to tell you that they are 100% protective. They are not. I am here to clarify one important point. You do not just vaccinate yourself or your child to protect yourself or your child. Vaccination is a public health issue, not just a personal one. People get vaccinated to protect those around them who can't get vaccinated. I once had a student who had survived a childhood cancer and was unable to get any vaccinations. What protect that student was that everyone else in the class was vaccinated against polio, pertussis, measles and chicken pox (to name just a few diseases). Prior to the measles vaccine, measles would sweep through an area (I had measles as a child) and almost everyone would get better. If that had happened today, without vaccines, measles would again infect almost everyone in a class. Most would get better, but, my cancer surviving student would probably have died. That student is protected by everyone else's vaccinations.

Vaccines are the victim of their own success. Most doctors have never seen a measles or chicken pox case, let alone an epidemic. If you want to treat polio there are only a few places in the world where it is still problematic. There is no place where smallpox is still found (outside of a few labs). If you are fortunate enough to have relatives who over 80 or so, ask

them about polio. When the polio vaccine came out people lined up. The terror was real. Now, vaccine skeptics suggest that the vaccines cause more health problems than they solved. Ask your grandparents. My wife grew up in a neighborhood where there was a kid in an iron lung. She vividly remembers going into this person's room at Halloween so they could see our costumes.

However, this is a place where experts say things that are unpalatable. I am not an epidemiologist so, I'm making up numbers here, but, imagine that a vaccine killed 1 in a million children. At the same time imagine an unvaccinated population where 10,000 children died each year from the disease. Seems an easy choice from a society point of view, 1 versus 10,000. BUT, if everyone got vaccinated except for your child, your child would have zero risk. How do we convey to parents a large societal good at the expense of a real, but, very small risk. Not being a parent I don't have standing in that argument, but, I know that whenever a vaccine is available for adults, I get in line. I take the risk (small) of a vaccine side effect as the price for society being safer from certain diseases. (I am not immune to the sore arm, fever and ache that come with tetanus shots. I still get one every 10 years.)

Again, we are in a place where for reasons philosophers can debate, the nature of facts and truth is up for grabs. Tens of thousands of virologists, epidemiologists and pediatricians with collectively hundreds of thousands of years of study and experience recommend vaccines. A single mother of an autistic child, looking for someone or something to blame, associates the vaccine schedule with her child's autism, posts a video, and she is believed. Scientific evidence seems to suggest either in-utero or genetic factors. It is easier to blame someone and something else. The internet gives individuals the same platform as the experts.

How can we discuss policy issues when we don't agree on the facts. Worse than that, how can we discuss policy when we don't agree on how one establishes fact. In court there are standards of proof (which differ in civil and criminal trials). By the standards of proof used in courts of law, vaccines don't cause autism, the health risks from the CoVid mRNA vaccine are much less than the health risks from CoVid (even for the young-but personal risk isn't the only reason for vaccination-see above). By the standards used in court, human caused climate change is altering the world as we know it. Yet these facts are still being disputed because the very definitions of fact and truth are being distorted.

What is truth? What is a fact? Can we discuss or debate anything if we don't have a shared definition of truth and fact?

As always, I can be reached at [drg.atm@gmail.com](mailto:drg.atm@gmail.com), through the feedback link on web page <https://mdgottfried.net/Casts/DrGsCasts.html> or through the guestbook on that page. Just please, no death threats.