Science God and Us

Journalists have recently referred to our current state of affairs as Truth Decay and as opposed to tooth decay that won't be fixed by fluoride in our water supply or toothpastes. This has stimulated me to share thoughts about God and science, on the importance of good science as opposed to false science, how this impacts our daily lives and reflects on the confusion in our Covid epidemic. It takes me about 30 hrs to write a reflection, prayers and organize the service. I am grateful as always for Brent who consulted on the music for the choir, Chantal in the office and the tech team here today again.

I ask you to close your eyes for a moment and visualize a warm clear dark night in a setting where there is no artificial light. Imagine sitting or lying on the ground comfortable and looking up at the star saturated sky and enjoy again the wonder of the beauty and size of the tiny section of the universe you can see. Keep your eyes closed a moment longer and try to visualize what an astrophysicist has stated that there are more celestial bodies in the universe than grains of sand on earth and no I won't volunteer to do the math to check that out. Keep visualizing and try and grasp that the universe is estimated to be 93 billion light years in diameter. A light year is the distance that light travels in one year which is nearly 6 trillion miles so multiple that by 93 billion to get the diameter of the universe. Thanks, please join me back of earth. The purpose of this little exercise was to recapture that sense of awe I hope we all feel when we take time to contemplate the mysterious miracle of our unique place in this universe and ponder the how and why. A photon checks into a hotel and is asked if he he needs help with this luggage. He replies "no I am travelling light."

That brief foray into astrophysics was to begin a short look at physics and the tussle between science and faith. Physicists have played a significant role in the faith vs reason conversation. That struggle got rolling in the 17th century when Galileo, a devout Catholic Christian revealed that the earth revolved around the sun and not the opposite. He was convicted of heresy by the Inquisition, condemned to house arrest, forced to recant his idea and publication of his book banned. The conflict between physicists and faith is ongoing. On the one hand we have Einstein and Hawking who refute the idea of a Creator and faith. On the other hand, we have physicists like the 2018 Canadian Nobel Prize winner, Dr. Donna Strickland, who is an active United Church member of Westminster United in Waterloo, Ontario). She does not see why being a physicist would be at odds with having a religious faith. Another physicist, Frank Tipler wrote a book, the Physics of Immortality using advanced physics theory and mathematics, claims to scientifically prove the existence of God and our immortality. Another astrophysicist Jocelyn Bell Burnell writes that she believes in God, that there is more to life than physical existence. She does not believe in a God who was the prime creator- the initiator of our physical universe. To her the physical universe seems to be purposeless. She envisions a loving, caring, supportive, empowering God who works through people – a God of inspiration. Personally, when I ponder the immensity of the universe, I can only grasp a Creator who initiated the universe 14 billion and 3 years ago. How can I be so specific in age- well in 2018 I read that the age of the universe was 14 billion years old and that was 3 years ago. A poll of American scientists in 2009 revealed that 51 percent believed in some form of deity or higher power. The Catholic

church is against an antiscience literalist point of view and Pope Francis is staunchly pro science.

Why did the star go to the bathroom – it had to twinkle

The brawl between faith and biologic science really got boiling when Darwin wrote the book on the Origin of Species where he explained evolution and natural selection. Religions viewed this as wholesale attack on the biblical story of creation and therefore an attack on Christianity. Since then, good science has proven the absolute accuracy of evolution but there are still those who choose to deny the overwhelming evidence. The Flat Earth Society folks believe the Earth is flat. Walking around on the planet's surface, it *looks* and *feels* flat, so they deem, all evidence to the contrary, such as satellite photos of Earth as a sphere, to be fabrications of a "round Earth conspiracy" orchestrated by NASA and other government agencies. Ironically the flat earth society claims they have members all <u>around</u> the globe!

There are contemporary scientists with glowing credentials who write with authority and take aim at religious faith. Richard Dawkins, for example, is a British evolutionary biologist who states that belief in God is both wrong and dangerous. With an opposing view, Dr. Francis Collins, a physician-geneticist noted for his landmark discoveries of disease genes and his leadership of the international Human Genome Project, which culminated with the completion of a finished sequence of human DNA. He converted from atheism to Christianity in his twenties after seeing how radically his patients' faith transformed their experience of suffering, and after reading several works by C.S. Lewis. Some 30 years later, he stands by his convictions, positioning science not as substitute for

theology, but as a subset of it. He has described himself as a "serious Christian". In his 2006 book, The Language of God: A Scientist Presents Evidence for Belief, Collins wrote that scientific discoveries were an "opportunity to worship" and that he rejected both Young Earth creationism and intelligent design.

I love reading books about science. Last week I read a book on helium—couldn't put it down. Why do some fish live in salt water?- because pepper makes them sneeze>

Brent read for us this morning the words of Paul in his letters to Timothy and in my mind, they are right on the mark for what we need to hear today. Paul wrote,

"Timothy guard what has been entrusted to your care. Turn away from godless chatter and the opposing ideas of what is falsely called knowledge. For the time is coming when people will not endure sound teaching, but having itching ears they will accumulate for themselves teachers to suit their own passions, and will turn away from listening to the truth and wander off into myths."

We are living at a time of Truth Decay. The Covid pandemic has brought this into focus because there are false prophets today who are harming themselves and the world around them. I respect your opinions if they are different from mine but I hope whatever YOU believe is based on truth and fact. We have heard outlandish theories of conspiracy in the last few years including Covid. I mentioned the flat earth believers as just one example of that. Of coursr, there are real conspiracies that exist. For example, the tobacco industry deceived the public about the harmful effects of smoking. False conspiracy theories tend to persist for a long time even when there is no decisive evidence for them. Typically conspiracy theories are not supported by evidence that withstands proper scrutiny but this

doesn't stop them from blossoming. Some of the reasons that people believe in conspiracy theories and -worse -sharing them are: People who feel powerlessness or vulnerable are more likely to endorse and spread conspiracy theories. Conspiracy theories allow people to cope with threatening events by focusing on a set of conspirators. A conspiracy theory satisfies the need for a big event to have a big cause such as MI5 assassinating Princess Diana instead of an ordinary event - driving while intoxicated. Conspiracy theories act as a coping mechanism to help people handle uncertainty.

What do you call an acid with an attitude A mean oh acid"When a plant is sad what do other plants do" Photosympathize

A new study shows we can get people to believe anything as long as it is said " A New Study shows", before whatever we say"

Social media has created a world in which any individual can potentially reach as many people as mainstream media. The lack of traditional gate keepers on social media is one reason why misinformation spreads farther and faster online than the truth. Misinformation is another manifestation of Truth Decay and is nowhere more obvious than when it comes to the Covid pandemic. It can be very difficult for people that aren't trained in science to separate fact from fiction, good science from bad science. Podcasts by popular speakers with large audiences can influence huge numbers of people because they can spout data that is presumed to be scientifically accurate but no one checks the authenticity of those claims. For example, there is a recent surge of misinformation promoting Ivermectin (a cattle horse dewormer) to prevent or treat Covid. No legitimate clinical

studies have proven yet whether ivermectin can slow or stop Covid from growing in human cells — but that hasn't stopped right-wing media personalities and politicians from touting it as a possible treatment or cure for COVID-19. Many of you who watch national television will have seen Dr. Lynora Saxinger, an infectious disease physician in Edmonton. She speaks with common sense and good science. She says "There's been a lot of pressure to say, 'Hey, we found something possibly useful, we should share it immediately,"

"Enthusiasm travels so quickly and becomes ingrained before you even have a chance to really support whether it's a good idea. Then you're facing a bit of a battle to actually calm down enthusiasm if the data are less strong than the press release really suggested.

"Doctors who treat people with COVID-19 in hospital wards, intensive care units and out in the community continue to juggle conflicting clinical trial results —most of which feature data from small numbers of patients. To try to make sense of the small numbers, clinicians follow their training to assess what's known about the drug and apply it to their patients' cases. That's why "Show me the data" is a refrain doctors use when weighing treatment options for patients with COVID-19 in the face of promising press releases that are short on key details. At this point in the pandemic, Saxinger said, the norm of presenting science by press release needs to be questioned because there's an alternative. That is, press releases can be accompanied by what are known as preprints, or draft manuscripts that haven't been checked for errors but include all of the available data and a study's methods, so clinicians can assess the merits for themselves. Saxinger said."For a single trial to be truly practice changing, it has to be pretty watertight,". Multi-centre studies running in multiple countries can be difficult to set up, especially since health-care

systems are already stretched. "Despite all of the advances in treatments, Saxinger sees greater potential in prevention from public health measures such as physical distancing, masking and staying close to home until Canada reaches better vaccine coverage." At the end of the day, medical treatments against a viral and inflammatory illness are always going to be disappointing compared to just preventing the illness, by vaccination" she said. "Any kind of treatment that reduces really severe outcomes doesn't actually reduce people getting sick and doesn't reduce people spreading it to others.

It is too easy for us to be swayed by anecdotal reports. Good medicine requires a foundation of review in a study based on reproducibility, statistical accuracy and solid data.. The pharmaceutical industry can support an experiment or study but that must be reported by the authors of the study. I have published in refereed journals and sat on the editorial board of an international journal so I know of the rigor that goes into reviewing manuscripts before they can be published. I understand that a patient will try almost anything when faced with a life -threatening issue. However, I hope that those folks would not try a drug or treatment that has the potential of harm when compared to conventional treatment. A Scientist' mantra is In God we trust- all others must show data

Let me use an example of drug misuse. One day I answered a phone call at the veterinary ophthalmology service where I worked. The lady on the phone described her Cocker Spaniel dog going blind from cataracts and she was using this new drug that advertised it would treat the cataracts without surgery. She purchased on the internet and was costing her over a hundred dollars a month. She wanted my opinion on the drug. I told her that the

drug had been studied and found that it did not stop the progression of cataracts and suggested that she have the dogs eyes evaluated. She declined but phoned 2 months later boasting that the cataract had disappeared from one eye. Again I suggested that the eyes should be examined. When she finally did come in the poor dog was blind and in pain. The reason the cataract had disappeared was that the cataractous lenses of the eye had dislocated into the back cavity of the eye and the dog now had painful glaucoma. Eventually both eyes had to be surgically removed to allow the dog to live without pain.

Jesus told us through Matthew that we should be aware of false prophets who come in sheep's clothing but inwardly are ravenous wolves.

The disciple Thomas makes 3 prominent appearances in the Gospel of John each to embody an important moral or theological principle. Yet we remember Thomas only from the Doubting Thomas Story. Thomas wasn't with the other disciples when Jesus first appeared to them following his resurrection. When the other disciples tell Thomas what they saw he says, " Unless I shall see in his hands the print of the nails and put my finger into the print of the nails and thrust my hand into his side, I will not believe". In today's world we face the dilemma of trying to determine what is truth and what Isn't. It is like the apparent conflict between science and religion. In science we accept as truth those things which can be proven by legitimate science experiment. Our religious experience we rely on faith because virtually nothing can be proven. A good scientist must look at the world objectively. But we have to unravel good science from bad science by using our intellect, relying on legitimate experts and our common sense.

This morning I have tried to show that science and faith are compatible. I have shared my understanding of good medicine and science versus bad medicine and science. I end by

saying Thank God for science and for those who try to lead us by truth and fact and common sense. Amen