St Paul's Cathedral
Together transforming our City and Diocese

SERMON

Sunday 18 August 2024

A sermon preached by the Revd Canon Stephen Ames during Science Week 2024, at St Paul's Cathedral Melbourne.

Readings: 1 Kings 2.10-12; 3.3-14; Psalm 111; John 6.51-58

St Paul's is keeping National Science Week as we do at this time every year and at other times as well. National Science Week has its origins in 1984 through an initiative by CSIRO and the Australian Science Teachers Association. In 1997 the Federal Government established National Science Week, a national celebration encouraging Australians of all ages to become engaged with the sciences.

The Cathedral partners with ISCAST, a group based here in Melbourne, for over sixty years, with many practising scientists who are Christians. ISCAST is dedicated to promoting the conversation between science and Christian faith.

The Cathedral takes up whatever is the theme for National Science Week in Schools and reflect on the science-faith conversation we might have with the theme.

This year the school theme for National Science Week is Species Survival - More than just sustainability. The theme aims to highlight the importance of science and innovation in ensuring the survival and thriving of different species in an ever-changing world and that includes the species of humankind.

The Australian Science Teachers Association provides excellent resources to help think about this theme.

We share our island home with more than 200,000 animal species – more than in any other developed nation – and around 24,000 species of native plants, each contributing to our rich biodiversity. As a nation we have a great responsibility to protect their long-term survival.

Why is species survival so important? We're all part of the big, interconnected web of life. Every creature, from the bees that pollinate our fruit trees to the worms that enrich our soil, plays an essential part. Their survival doesn't just protect nature's beauty, it ensures the health of the ecosystems that provide our food, clean water and the air we breathe.

The United Nations' 17 Sustainable Development Goals are all quite human-focused, but many tie back to other species' survival. Just two examples

"Zero Hunger" (Goal 2) goes beyond human nutrition. The global decline in bees threatens one-third of the food we eat every day.

"Clean Water and Sanitation" (Goal 6) isn't just about human health. Clean water is essential for our homes, farms, schools and businesses. Healthy freshwater habitats support countless aquatic species, as well as migratory paths for wildlife. Research has shown that increasing the diversity of species within water systems promotes clean water.

The resources provided for National Science Week assure us that students interests will be engaged by the many areas to do with sustainability of species, including artificial intelligence. This caught my eye because I had not though about a connection between species survival and AI.

There are good news stories about recovery of threatened species. Here are two examples. A study published in the journal Biological Conservation in March 2023 found that between 2000 and 2022, 26 Australian species recovered enough to no longer be listed as threatened, thanks to conservation efforts.

ALL'S WELL WITH WHALES Once hunted to near extinction, with numbers plummeting to just over 100 in the sixties, the iconic humpback whales off Australia's east coast are a testament to conservation success. Following a 1963 ban on whaling, these majestic giants have rebounded impressively, reaching an estimated 40,000 by 2023, with their population growing at 10-11% every year.

Christian faith surely affirms and celebrates these good things. As the reading from Genesis shows, humankind is created in the image of God, given extraordinary power over the earth and all its creatures, and commanded to be fruitful and multiply and fill the earth. Christian faith thinks of humankind as stewards of creation, which fits well with how National Science Week describes human being as stewards of the earth.

What about faith and science? Here we need to recall that historically the leading lights of the rise of the natural sciences in the 16th-18th centuries were all deeply committed Christians who saw their inquiry into the natural world as bringing to light the wisdom and power of God who created the world.

Our culture is ambiguous when it comes to species survival. There are good news stories, some already noted, but I also want to highlight the recent discovery by Australian scientists on how to break down one of the world's most stubborn plastics using mushrooms.

Chemical engineering professor Ali Abbas, who supervised the research team, said the findings were significant.

"It's the highest degradation rate [of plastic] reported in the literature that we know in the world," the professor said.

Dr Harvey, another researcher also made the point that,

"We have an addiction to plastic and we're not getting any better at kicking that addiction."

"We, as a country, don't seem to get the enormity of the plastic pollution problem that we are facing.

"And we don't seem to get the fact that we need to be reducing our plastic waste because we don't have the room for it in landfills, we don't have the strategies in place for managing plastic waste and we're generating far, far too much of it."

Professor Abbas, who led the University of Sydney team, agreed. "We can't afford to wait, we do need to act," he said.

"The technology itself -may be ready, as we said, within the next few years. That however will not solve the problem alone.

"We need the behavioural issues, we need the social issues, we need the business issues, all of these need to be resolved around the plastics problem. The technology is only half the solution."

The science-faith conversation would at this point speak about the other half of the solution. It would offer wisdom from the Bible about not worshipping false gods and in particular, the insight that we become like what we worship.

We gain some insight into what we worship but reflecting on what we have become and are becoming.

Our culture is saturated with science, technology and the free market economy. Our economy is driven by the new golden rule. You remember the old golden rule – do to others as you would have them do to you. The new golden rule is those who have the gold make the rules, and first rule is make more gold to be concentrated in the hands of those who have more gold.

Science and technology are used to expand this economy with new technologies, new goods and services, to meet the expanding demands of growing populations, which leads to more waste, more pollution, more impact on existing species.

In this context, AI is a new technology that is predicted to revolutionise our lives in many ways, including strongly promoting businesses with the potential of increasing impacts on the environment including species survival. There are also companies using AI to reduce climate impacts. Here some examples

- ending waste from textile production using AI and robots
- decarbonising waste from buildings responsible for 40% of carbon emissions – more than all the emissions for planes, trains and automobiles.
- monitoring crop development leading to 85% reduction in the use of agrochemicals
- reducing manufacturing emissions in the metal, mining, oil, and gas industries

All to the good with many more examples. But let's step back to look at the bigger picture.

A small step back would allow us to see the Murray Darling Basin. No shortage of STEM inputs to this plan, but the Basin is near collapse. Environment Victoria has a sharp account of the other half of the problem. Too much water taken out. Right from the start, a handful of powerful corporate interests and their cashed-up lobbyists have lobbied governments to undermine the Plan and rig the rules in their favour.

We can take a bigger step back to look at the 2024 UN report on progress towards the UN sustainable development goals, agreed to in 2015 by 193 nations.

The UN Report finds that only 17 per cent of the SDG targets are on track, nearly half are showing minimal or moderate progress, and progress on over one third has stalled or even regressed. The scarring effects of the COVID-19 pandemic, escalating conflicts, geopolitical tensions, and growing climate chaos are hitting SDG progress hard. Furthermore, systemic deficiencies and inequities in the global economic and financial system leave developing countries to tackle enormous and growing challenges with only a fraction of the international support they need and deserve.

Professor Abbas, who led the University of Sydney team on the use of mushrooms to eat plastic, said that the technology was only half the solution.

The National Science Week makes this point, and I quote "Beyond STEM, society and culture are deeply connected to species survival. Indigenous communities, for example, have coexisted with their environments for millennia, using cultural practices that sustain rather than exploit."

There is something to learn from first Nations People on developing cultural practices that sustain rather than exploit the environment.

The Cathedral could include this under the banner of its stated advocacy for Climate Justice in addition to its present practice of working to reach net zero emissions as soon as possible and continued action to reduce waste and emissions. We could also produce a leaflet distributed in the Cathedral on how Australia is contributing to the achievement of the UN's 17 Sustainable Development Goal.

For three reasons I want to recommend that we take due care in our pursuing our strong support of STEM – science, technology, engineering and mathematics

Firstly, Professor Abbas, who led the University of Sydney team on the use of mushrooms to eat plastic, said that the technology was only half the solution. The other half is to do with the way our culture shapes us. And that seems to me to call for the Arts, including history, philosophy, literature, politics, ethics, music and other subjects, including Indigenous studies and the religious beliefs and practices of other traditions. We should maintain support for STEM but insert an 'A' for the Arts. STEM could become STEAM and we would pray that it steams ahead.

Secondly, we could listen to Nick Cave reported in the Weekend Australian for last week. Cave says he asked a generative AI called Suno to create for him a a dark, slow, gothic song about a banana. "And within 15 seconds it spat this song out called The Dying Peel." Cave said, "It was good; it had a good chorus. It wasn't great. It even understood that there's a sort of joke going on about the dark gothic song on the banana, that you were taking the piss a little bit – so the Dying Peel talks in all these metaphors about the blackening of the skin." Amazed, at least initially, Cave prompted Suno to write a death metal song about the Rape of Nanking – by halfway through he'd lost interest, depressed and nauseated. "It's frightening, but my manager is like, 'It's OK, because ultimately people will want the real thing.' I'm not so sure about that. I'm an enormously optimistic person about the world in general, but I just think the demoralising effect, or humiliating effect that AI will have on us as a species will stop us caring about something like the artistic struggle. That we will just accept what is fed to us through these things; that we will be in awe of the banal. That to me is the direction that it's going."

Finally, I recently came across a report of a letter that Einstein wrote in 1955. In it he issued a dire warning: that we were living under a grave threat, not only the prospect of the atomic bomb and the prospect of nuclear war, but also of a second weapon, one he considered just as dangerous for humanity. He called it the information bomb.

I am still looking into what this might mean and hope later this year to give a talk here at the Cathedral on the Information Bomb.

I mention this today to underline the care we need with our information technology that manifest our God given powers especially to use the deep powers inscribed in the natural world that God sustains in existence.

We are inclined to boast of all that we can achieve through these powers and boasting blinds us to the down sides. This recalls a word from the prophet Jeremiah 9:23 to the leaders of the nation:

Do not boast of your wealth. Do not boast of your knowledge. Do not boast of your military might. If you want to boast, boast of this: that I the Lord love justice.

So, to God be the glory and to us the desire to boast of God as God desires.