THE PHONEY WAR OF DENIAL AND HOPE

Imagine, in 2020, our Prime Minister announcing that …. "*It is my melancholy duty to inform you that Australia is at war. We are therefore, as a great family of nations, involved in a struggle which we must at all costs win".* This involves each of us. Australia needs you! It will mean a great changes to our way of life. Skilled industrialisation must be accelerated, young people conscripted, our intelligence forces expanded. We have to accept that travel will be seriously curtailed, and our use of cars rationalised, all to help the war effort.

The opening sentences were broadcast by Prime Minister Robert Menzies in September 1939 at the start of World War 2, the deadliest conflict in human history. In 2020, Australia and the world have a new enemy. We have just experienced the hottest decade on record, with unusual heat waves in Europe North America, Asia, and Australia. The raging fires across New South Wales, Queensland, South Australia and Western Australia have caused devastating losses of life and homes. The current war is against *climate change*.

In the 1940s, after the declaration of war, there followed a long period of quietude and inactivity known as the Phoney War, when the civilised world withheld violent conflict while the enemy's mayhem progressed. Our world is in a twilight phase once more. Australia was one of the first Nations to declare war in 1939, and we can and should assume a leading role again. In 2013 the Australian Medical Association forewarned that climate change will pose a public health emergency. The doctors predicted dire consequences including heat stress, severe weather events, increasing vector-borne diseases such as malaria, food insecurity, and physical and mental ill-health.

Now our "Family of Nations" has responded with a cascade of climate emergency declarations since 2016, from the European Union (representing 28 member states), and separately Germany, the United Kingdom, France, the Republic of Ireland, Portugal, the Holy See, Canada, Argentina, Spain, Austria, and Malta. In 2019 the President of the European Commission Jean-Claude

Juncker outlined that from 2021 to 2027, every fourth Euro spent with the European Union budget will go towards mitigating climate change. His recently elected successor, Dr Ursula von der Leyen (previously Germany's Foreign Minister) wishes to make the EU a super-power, stating that *"We will embark on transformation that we will touch every part of our society and economy. We will do it because it will be the right thing to do, not because it will be easy".* This year the Russian Government has acknowledged that Russia is warming 2½ times more rapidly than the rest of the planet, and plans to reduce the vulnerability of their population with multiple measures including dam building, expansion of agricultural lands, switching to drought-resistant crops, and the preparation for crisis measures such as evacuation. They also anticipate using the advantages of warmer temperatures to achieve more trade and navigation across the Arctic Ocean.

We are all climate change deniers, in different ways. Sigmund Freud described denial as a means to deal with a situation that is too uncomfortable to live with. Denial is recognised as a psychological coping mechanism. It protects us from anxiety and guilt. Most of us have implicit denial. We know about the science but fail to come to terms with the need for action. We drive large petrol fuelled vehicles, we fly whenever we can, and most of us consume large quantities of meat and dairy produce. We continue to use plastics, and we assume that having any number of children our right. Many of us make token gestures, such as purchasing hybrid vehicles, using solar hot water heaters, and perhaps changing our diet. A friend told me recently "I have given up meat to make up for our international flights". Clearly she was unaware of the Swedish phrase *flygskam* or "flight-shame", coined in 2017 to encourage travel on land or water. Flying in planes tops the list for carbon-intensive activities.

There is also interpretive denial. Those with it cling to misconceptions about the evidence, arguing that what is observed can be explained by natural phenomena such as the solar cycle, fluctuations in the ocean currents, volcanic activity, or other occurrences beyond our control. They reject the science, and they use their prejudices as a shield.

The most culpable category of deniers are the climate sceptics. A sceptic means one who questions, but these are flagrant disbelievers, rejecting the evidence

and denouncing the facts. Some are just ignorant and manipulative. Witness Donald Trump tweeting “climate change is a hoax … a money-making industry”. Witness Scott Morrison, when Treasurer, brandishing a lump of coal in the Parliament to indicate his firm ongoing support for unrestricted coal mining. Now as Prime Minister, he initially rejected, but has recently and grudgingly accepted that there is a link between greenhouse gas emissions and the severity of Australia’s fires raging throughout the continent. On New Year’s Eve, his Energy Minister Angus Taylor was publicly defending the government from pointed international criticisms about Australia’s lack of leadership in the climate war. Yet he acknowledged, paradoxically, the need for new technologies including the use of hydrogen, carbon capture and storage, and the development of biofuels. He actually boasted that 25% of energy on the National Electricity Market now comes from renewables.

These disbelievers, the doubting Thomases, follow in the footsteps of creationists, geocentrics, and flat-earthers, but they are much more dangerous, especially if they are in positions of power or can influence policy. Their tactics include the use of rhetorical questions to suggest controversy and uncertainty, as an attempt to reposition global warning as a theory rather than a fact. In the United States, where only 69-73% of the population think there is any threat from climate change (compared to 89% of Australians) the US Republican Party appears to have been brainwashed, with most of their members toeing the party line of extreme conservatism. The major oil companies, and the coal industry at large, have quite consistently promoted disinformation so as to modify or block policy changes that might threaten their survival. The tobacco industry used similar tactics, but science eventually prevailed. In Australia, Royal Commissioner Kenneth Hayne has warned all company directors that they must openly include climate change issues in their future governance as a legal responsibility, or they may face penalties. He declared that climate change was a fact rather than a matter of belief or ideology, and he decried entrenched attitudes of “learned helplessness” and “short-termism”, clearly pointing the finger at the Morrison Government.

In this era of information technology, most of us can access the science of climate change. Our records from ice cores, the ocean floor, ancient corals, and living and fossilised tree rings, indicate that until recently our climate was

unusually stable for about 8000 years. Now there are direct measurements of the Earth's surface, the temperature showing a progressive and consistent increase since the 1880s, commensurate with the documented increase in greenhouse gases. Over millennia, the cage of greenhouse gases in the atmosphere, mainly water vapour and carbon dioxide, has kept our climate stable, and without them the Earth would have experienced precipitous freezing and ice ages. The sun's radiant heat warms the earth's surface and atmosphere, and the envelope of greenhouse gases prevents the heat from dispersing. This natural balance that existed has been disturbed by man-made increases in concentrations of carbon dioxide, plus methane, nitrous oxide, and fluorocarbons. The massive human population explosion has led to an ever increasing carbon dioxide levels, plus methane produced from livestock, nitrous oxide coming from fertilisers in animal waste, and highly potent hydro-fluoro carbons and nitro-fluoro carbons from pressurised cans. Of all of these, carbon dioxide is clearly the largest contributor. The problem is that carbon dioxide persists for hundreds of years, as compared to water vapour which has an atmospheric life of 10 hours.

The scientists expressed their global concerns at the 1979 First World Climate Conference, which focussed on the CO_2-climate problem. Then in 1992, 1,575 signatories from the Union of Concerned Scientists including 99 Nobel laureates, signed a document entitled "World Scientists Warning to Humanity" declaring that we must take immediate action to stop the ever increasing environmental degradation that threatens global life support systems on this planet. They asked human kind to adopt fundamental changes to avoid the consequences of our damaging activities, and indicated that a great change in our stewardship of this Earth and the life on it will be required. Last year, 15,372 scientists from 184 countries published the "World Scientists Warning to Humanity: A Second Notice", summarising graphically the time-series data since 1992, and confirming the parallel rises in global temperature and carbon dioxide levels. They acknowledged that there is some evidence of human responsiveness. The stratospheric ozone layer has stabilised because of declining release of ozone-depleting substances, predominantly fluorocarbons. There has been a world-wide reduction in extreme poverty and hunger, and a rapid decrease in fertility rates in many countries, following the enhanced education of girls and women. There is less de-afforestation, and there is evidence for a continued growth in the renewable energy sector.

The scientists in 2019 specified six items for our immediate attention:

- Cease using fossil fuels and replace with renewable clean energy.
- Cut emissions of methane, carbon, and hydrofluorocarbons.
- Protect and restore the ecosystems of our seas and lands.
- Follow a plant-based diet.
- Prioritise the planet over the economy.
- Reduce population growth.

Through the Inter-governmental Panel on Climate Change (IPCC) – the scientists state with some urgency that we must achieve zero net emissions within 30 years to prevent inevitable catastrophe. The Panel has urged us all to compel our political leaders to act, but also it recommends at the individual level that we should limit reproduction, and drastically diminish the consumption of fossil fuels and meat.

Children are leading the way in promoting political change. Swedish teenager Greta Thunberg began her rebellion by persuading her parents to become vegetarian and to avoid air travel. Then in 2017 after Sweden's hottest summer for 262 years, which had caused wildfires – she elected to "strike" from attending school, and sat day after day in front of the Swedish Parliament, holding up a sign that stated "schools strike for the climate". Within 18 months of this solo protest, she soared into prominence, meeting world leaders, and becoming Time Magazine's Person of the Year *"…for sounding the alarm about humanity's predatory relationship with the only home we have, for bringing to a fragmented world a voice that transcends backgrounds and borders, for showing us all what it might look like when a new generation leads".* Since her arrival on the international stage, millions of school strikers have signalled their protests. The Extinction Rebellion has become an environmental force in major cities around the world, using non-violent civil disobedience in an attempt to influence governments.

There is hope that the climate apocalypse can be delayed or even prevented. In 2017–2018 South Australia suffered from huge storms that devastated transmission lines, with a subsequent failure of power supplies during a heat

wave. Now the state has developed an electricity network more reliable than in New South Wales and Victoria, using wind and solar power that meets two-thirds of its energy needs. The South Australian government has the goal of achieving 100% renewable energy by 2030. This year the ACT Government has proudly announced that their goal, which was set in 2016 to achieve 100% renewable energy for electricity supplies, has been achieved.

In the United States, Democratic Party presidential candidate Michael Bloomberg declared the present US government to be “an existential threat”. He wishes to achieve a 100% clean-energy future for America as soon as is humanly possible. His is a commendable track record. When Mayor of New York City in 2007 he launched ‘PlaNYC’ to achieve a greener greater New York, to fight global warming, to protect the environment, and to accommodate population growth. By 2013 the city’s greenhouse gas emissions were down by 19%, and New York has had the best air quality measures in more than 50 years. This was accomplished by legislation that phased out heavily polluting home heating oils, and set up a traffic congestion pricing plan to encourage public transport. He also launched the Million Trees NYC initiative which reached its target ahead of schedule in 2015. The other leading presidential candidates, Joe Biden, Bernie Sanders, and Elizabeth Warren, have all made commitments to immediate climate change action.

Before China joined the Paris Agreement, a United Nations initiative to mitigate greenhouse gases, it had been identified as generating the most of the world’s carbon dioxide emissions at 29% (followed by the United States 14%, Europe 10%, and India 7%). The 2008 Beijing Olympics were notoriously the most polluted games on record, the athletes and spectators being exposed to dangerous levels of smog, despite the administration’s earlier efforts to shut down factories and reduce construction and car usage. But recent travellers to that city will tell you the miracle of Beijing’s blue skies and quiet streets, where citizens travel on electric scooters, cars and buses. Vineyards and green spaces abound in regional country areas, interrupted by accommodation towers, acres of solar panels, and wind farms. Within four years, sulphur dioxide has fallen by 70% and particle pollution by 36%. This dramatic and largely unpublicised transformation was the outcome of a Clean Air Action Plan set up in 2013 by the city’s Municipal Government that targeted coal combustion and household fuel.

There are parallel data to indicate that the Chinese authorities are aware of the risks of climate change, and are acting on it. China owns 99% of the world's electric buses. There are 62 Chinese cities that are monitored by the World Health Organization, which reports that their particle pollution has been reduced by 30%. In February 2019 NASA released the report that the world is a greener place because of China, which has contributed 25% of the global increase in green leaf area between 2000 and 2017.

The Danish have an interesting proverb - *habet er lysegren* - "hope is bright green". Hope is a much more effective coping mechanism than denial, and offers us pathways and goals and empowerment. Our vast and beautiful continent, ravaged by fires, drought, and storms, has enormous resources including natural water reserves, sunlight, wind, tides, and even uranium. The Government's 2004 mandatory 20-year renewable energy goal was achieved by 2019 with 23.5% of our energy production coming from hydroelectricity, wind power, and solar photo-voltaic sources. The Snowy Mountain Scheme, started in 1949, was the biggest engineering feat in Australian history. The vast waters of the Snowy River were diverted under the Great Dividing Range to feed 16 dams and 7 power stations by 1974. We have other water holdings such as the Ord River Project that could be expanded to help our irrigation and energy supply problems.

Australia has excellent wind resources, with the Roaring Forties across the southern coast and Northern Tasmania and the high country in New South Wales and Queensland. It is self-evident also that we must exploit our huge exposure to sunshine, having large vacant land spaces to accommodate solar electricity generators. Solar power is growing fast here, but it is still less than 5% of the estimated potential for this commodity.

Australia is a major exporter of uranium, which is used overseas to produce electricity, under the strict safeguards of the International Atomic Energy Agency. The time must come when we use our uranium to generate power here. Historically, nuclear power has proved to be extremely safe, with the lowest level of mortality per unit of energy produced, as compared with power from coal, petroleum, natural gas, or hydroelectricity, (despite the known disasters at Three Mile Island in 1979, Chernobyl in 1986 and Fukushima in 2011). The main

contention will be the disposal of nuclear waste, requiring secure underground repositories or the development of sophisticated re-processing technology.

For Australians, the Beacon of Hope, the Light on the Hill, is that Australia could be entirely self-sufficient with renewable energy and also be a major exporter of it to our neighbours. This will have to be accompanied by a rapid transition to electric vehicles, closing down coalmines, and re-allocating employment to achieve these goals.

This war against climate change is a fight against the most important threat that humanity has ever faced. In The Art of War (sun.tzu@500BC), Sun Tzu wrote: *"If you know yourself and your enemy, you can win a hundred battles".* We know the enemy, but do we know ourselves? Will anything we do have any influence? David Suzuki, that great ambassador for the environment, told us – *"In a world of seven billion people, each one of us is a drop in the bucket. But with enough drops, we can fill any bucket."*