



The Enlightenment



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The Future of Humankind

Que sera, sera,
Whatever will be, will be;
The future's not ours to see.
Que sera, sera,
What will be will be.

So sang Doris Day in the 1956 movie *The Man Who Knew Too Much*. Yes indeed, what will be will be, but although we cannot see everything about the future, because surprises will occur, perhaps there are some things that we can predict. But before looking ahead, a bit about the past.

People who attempt to predict what may lie ahead are called futurists. One of the most famous futurists of the past was Nostradamus (1503-1566), a French astrologer, physician, seer and author of *Les Prophéties*, a collection of 942 poetic quatrains allegedly predicting future events. Published in 1555, it has rarely been out of print. The predictions are generally considered to be rather vague but can often appear to be related to subsequent events.

Fast forward to the mid 1940s. After the end of WW II in August 1945, articles began to appear in various media predicting great things for the future. Significant scientific and technological advances had occurred during the War, culminating in nuclear fission in the form of the atomic bomb. Early on it was predicted that atomic energy would be harnessed to produce electricity and this prediction came true. It was also predicted that plastics would become ubiquitous down the road and this came true. China was forecast to become a great power by the end of the century. This has happened. It was believed that future economic conditions would be favourable for the development of a prosperous middle class. These conditions came about (at least in the Western world) and prevailed until 1980 when real incomes began to level off. A few computers were developed during the War and, although they were large and required air-conditioned rooms, as predicted, they began to be used by universities and businesses. Many were IBMs. A safe prediction was that television sets, developed before the War, would be a fixture in most homes by the mid-1950s and this of course did happen.

Not all predictions came to pass, however. There were fantasies, like the possibility that many car ports would harbour a mini helicopter that could be used for commuting, but this never happened. It was thought that new chemical insecticides such as DDT would virtually eliminate flies and mosquitos, but the insects

became resistant and they are still here. (DDT proved harmful to birds and its use had to be curtailed. Newer and supposedly safer pesticides have been developed, but there is still concern because there is a real possibility bee population is being reduced from the use of the latest products. No bees, less food.)

Then there were devices that were not predicted, but actually did come to fruition, either by serendipity (the microwave oven) or as a result of dedicated research and determination as in the case of the invention of the transistor at the Bell Laboratories in New Jersey in 1947. This invention, that led to microchips, integrated circuits and miniaturization, changed the way we live. Not in our wildest dreams, even as late as fifty years ago, could we have imagined the internet, personal computers in our homes, iPads, navigation by GPS, touch screens, and the ubiquitous cell phone. Today, in almost every public venue, at least half the people you observe will be talking on or looking at a cell phone. These devices are not only a phone, they are a camera, a GPS, a clock, a calendar, a photo album, a source of games and music, a date book and much more. Truly amazing!

So, in looking into the future, what can we learn from the past? There are a few things. We can conclude that some predictions will come true and others will not. And it is virtually certain that things we never dreamed of will come about in the areas of science and technology. But perhaps most importantly, there will be unexpected events that could change the course of history. Events caused by the actions of the world's political and economic leaders such as, heaven forbid, wars, and also events caused by natural phenomena including hurricanes, earthquakes and tornados. And as we now know, deadly viruses.

Without question, with the digital revolution and artificial intelligence underway, it is plainly evident that we are living at a time like no other. The challenges ahead are overwhelming to the extent that the survival of humanity is at stake. The threat of nuclear war is ever present. The threat of terrorism is still with us. Racism is present. Populism is on the rise and democracies are threatened in some areas. Climate change must be dealt with. The population explosion is a concern. To boot, inequality is increasing as the rich get richer and others fall behind.

Those of us who were fortunate to have lived out our careers in the last half of the twentieth century, the so called "golden age," are now concerned for the lives of our grandchildren and great grandchildren. Many of us bought and paid for a home on one income. For my children, two incomes were necessary, and my grandchildren may never own a home. This can hardly be called progress. What in the world has gone wrong? In a word, greed, but I will leave that topic until the end. In the meantime, let's look briefly at the digital age and other happenings mentioned above.

The digital age began with the first computers using a binary number system. It developed slowly and then accelerated with the inventions already mentioned coming into existence, and now we are wondering how artificial intelligence (AI) might change our lives. The possibilities are mind-boggling. Will robots not only replace humans in manual labour, but also acquire intelligence to rival that of humans? Not beyond the realm of possibility, but most importantly, it is imperative that AI be used for the benefit of all, not just a few.

And what about science and technology in the future? Will these disciplines be used for the benefit of the few or the many? I believe the efforts of many scientists, technologists and engineers should be directed toward clean energy. We know it will be disastrous for humanity if we keep burning fossil fuels at the current rate. An obvious approach is to replace internal combustion engines with electric motors, but battery

technology needs further development before electric cars and trucks become commonplace. And clean generation of electricity is also required, whether it be hydro, nuclear, wind or solar, as coal and gas-fired generation is phased out. Improved technology is also required if hydrogen is to become a practical source of energy. Scientists, technologists and inventors have brought about great things to make living easier and more enjoyable for humans since the dawn of the industrial revolution. Let's wish them well in helping to solve the challenges ahead. Some politicians are also attempting to help, with mixed success, by implementing a tax on carbon.

Then there is agriculture, a major source of greenhouse gasses. The production of meat is the main culprit. It takes a lot more energy and a lot more arable land to produce food nutrients in the form of meat than in fruits, grains, vegetables and sea foods. And cows belch considerable amounts of methane that is a worse green house gas than carbon dioxide. Will a significant number of meat eaters switch to imitation meat-like plant-based foods to help minimize climate change? That remains to be seen, but every bit will help.

Next, we come to population increase or, as some would say, the population explosion. It is most interesting to explore the history of world population growth. It is believed that the population of the earth may have been no more than 4 million people at the start of the agricultural revolution around 9,000 BCE. It took until 1500 CE to reach 500 million and until 1800 to reach 1 billion. It reached 2 billion in 1930 and 2.5 billion in 1950. Then it started to take off exponentially, 6 billion by 2000 and 7.8 billion today. Projections show 10 billion by 2050 and, assuming birth rates start to decline, 11 billion by 2100.

But how many people can our planet support before we run out of resources, with food and potable water being the most important? The ultimate maximum number of people the earth can support is estimated to be about 10 billion people. Therefore, lowering birth rates by 2050 is just as important as reaching the Paris Climate Accord targets by 2050 – both huge challenges!

The fastest-growing countries are in central Africa and the Muslim countries stretching from North Africa east to Afghanistan and beyond. The solutions are obvious, but hard to implement. Birth rates go down with prosperity and also when religions stop encouraging large families. Can poor African countries become wealthier, and can Islam move into the 21st century in the next thirty years? These are tall orders.

Now is the time to get realistic. If conditions remain as they are now, or get worse in terms of inequality, there is no hope of achieving the 2050 targets outlined above. Why? Because some people are greedy. For the past 50 years the wealth of the top 1% has been steadily increasing as a percentage of total wealth. In 1989 the top 1% held 30% of the world's wealth. Today it is close to 50%. In 1950 executives made 20 times as much as workers. Today executives earn as much as 300 times what workers earn. What has happened? What is the difference between the "golden age" and now?

The difference is that back then wealth was shared or spread around more equitably. The wealthy were taxed at a rate about double what it is today, and corporate earnings were reinvested to create more jobs. Today profits are reduced by higher executive salaries and bonuses and this money is hoarded, sometimes in tax shelters, rather than reinvested in activities that create well-paying jobs. The result is a shrinking middle class and more inequality. In short, compassion and concern for the well-being of the many has been replaced by the greed of the few. Unless the wealthy are willing to share their wealth to help achieve the 2050 targets mentioned above, those targets will not be met and life on earth will be a struggle for many, and revolutions could happen.

What is needed are more people like Bill Gates, once the wealthiest man on earth. The Bill & Melinda Gates Foundation is deeply involved in reducing world poverty, improving world health care and improving education in the United States. Billionaire Warren Buffett has contributed a significant amount to the Gates Foundation and is a director. More billionaires like Jeff Bezos, now richest man on earth and founder and CEO of Amazon, need to be involved in projects that will help in achieving 2050 targets.

But human nature being what it is, can the few become less greedy and become more compassionate and more caring about the welfare of the many? Or will conditions get so bad that life will be miserable for most? Through evolution we have been given the natural resources and hopefully the brain power to provide a sustainable environment on our amazing planet for everyone to enjoy a satisfying life. But what will the future bring? Will common sense prevail, or will humanity become extinct as is happening to many other animals today? It took the Great Depression and WW II to bring about the “golden age.” What will it take to ensure a sustainable lifestyle for our descendants? A very serious question! Will humans be up to the challenges? The Future of Humankind depends on global cooperation in order to achieve solutions that will benefit everyone, not just the wealthy.

Addendum

The preceding was written before the COVID-19 virus began to spread throughout the world in late 2019 and early 2020, resulting in a world-wide pandemic. The unexpected appearance of this deadly virus perfectly illustrates just how risky and difficult it is to predict the future. But there is also a lesson to be learned. Five years ago Bill Gates warned that sooner or later a world-wide viral pandemic will occur and that preparation should be made for this eventuality by stockpiling personal protective equipment (PPE). But instead of heeding this advice, many governments did nothing, while others just kept spending on their military in case of a future war. Well, a war has engulfed us, but in an unexpected manner. When this virus world war will be over is still in doubt.

The deadly virus should have prompted national leaders of all stripes to unite and fight the virus as a unified team; but no, politics has gotten in the way, allowing the virus to spread in many countries and bring economies to a standstill worldwide. This has brought about excessively high unemployment and hardship, especially for those who are living from paycheck to paycheck. And governments are incurring huge deficits in an attempt to help the needy.

But some countries, particularly those led by women, have fared better than others. Fortunately, Canada for the most part has put politics aside as Federal and Provincial governments are cooperating with each other. Although there have been some problems in nursing homes and among temporary foreign farm labourers, for the most part we are on the road to recovery by wearing masks when required, practising social distancing and washing hands frequently.

The Enlightenment is an independent publication issued to a select group of readers. Editor and publisher is Don Hatch – dahatch@rogers.com. Past Enlightenment, along with Goldwin Emerson’s *London Free Press* (LFP) articles and a list of topics of past HALA meetings, can be read at humanists-london.org. Future Enlightenment and future LFP articles by Goldwin Emerson will both be available on this site.