



# The Enlightenment



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## 21 Lessons for the 21<sup>st</sup> Century

*By Yuval Noah Harari*

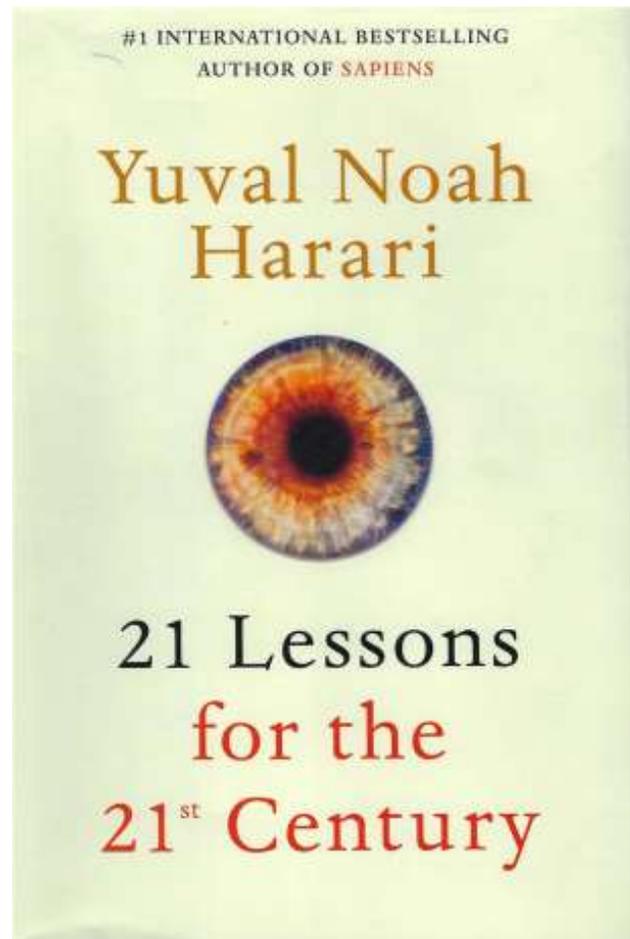
### A Book Review

*By Don Hatch*

This is Harari's third book. The first, *Sapiens*, explored the past. The second, *Homo Deus*, explored the future. The latest, *21 Lessons for the 21<sup>st</sup> Century*, explores the present and highlights major challenges facing humanity in the immediate future.

After the introduction, the book is divided into five parts. Part I, The Technological Challenge, consists of four chapters entitled, Disillusionment, Work, Liberty, and Equality. It begins by stating: *Humankind is losing faith in the liberal story that dominated global politics in recent decades, exactly when the merger of biotech and infotech confronts us with the biggest challenge humankind has ever encountered.*

Part II, The Political Challenge, consists of five chapters entitled Community, Civilization, Nationalism, Religion, and Immigration. It begins by stating: *The merger of infotech and biotech threatens the values of liberty and equality. Any solution to the technological challenge has to involve global cooperation. But nationalism, religion, and culture divide humankind into hostile camps and make it very difficult to cooperate on a global level.*



Part III, Despair and Hope, consists of five chapters entitled Terrorism, War, Humility, God, and Secularism. It begins by stating: *Though the challenges are unprecedented, and though the disagreements are intense, human-kind can rise to the occasion if we keep our fears under control and be a bit more humble about our views.*

Part IV, Truth, consists of four chapters: Ignorance, Justice, Post-Truth, and Science Fiction. It begins with: *If you feel overwhelmed and confused by the global predicament you are on the right track. Global processes have become too complicated for any single person to understand. How then can you know the truth about the world, and avoid falling victim to propaganda and misinformation?*

Part V, Resilience, consists of three chapters entitled Education, Meaning, and Meditation. It begins with: *How do you live in an age of bewilderment, when the old stories have collapsed, and no new story has yet emerged to replace them?*

The chapter titles and the above excerpts in italics give an overview of the contents and the challenges dealt with in the book, so rather than go through it chapter by chapter, I will pick out what I believe to be the most relevant and important matters at hand.

The recent shift away from globalization and toward nationalism, with Trump in the U.S., Brexit in the UK, and populist governments elected in Poland and elsewhere, has prompted Harari to include a chapter on nationalism. For many generations the most basic criticism of nationalism was that it led to war. But all that changed in 1945 with the advent of nuclear weapons and the start of the cold war. The threat of total destruction made nuclear war unthinkable, and fortunately, the cold war ended literally without firing a shot. Now with a possible threat from North Korea (which may have recently died down), it is vitally important that this issue be monitored on a global basis, without nationalism getting in the way.

Another issue requiring immediate global cooperation is global warming, because climate change is not a fantasy, it is a present reality. The polar ice cap is melting, sea levels are rising, deserts are expanding, and hurricanes are getting more severe. Global action via the Paris Accord was encouraging, but the nationalistic U.S. has now pulled out. This is a serious backward step threatening the welfare of billions. Nationalism at its worst!

The third nationalism-versus-globalism issue is the Technology Challenge. The merger of infotech and biotech opens the door to a cornucopia of doomsday scenarios, ranging from digital dictatorships to the creation of a global useless class. Nationalism offers no answers to these menaces. In order to make wise choices about the future of life we need to go way beyond the nationalistic viewpoint and look at things from a global or even a cosmic perspective. This is particularly important when it comes to Artificial Intelligence (AI). Harari fears the rise of AI might eliminate the economic value and political power of most humans. At the same time, improvements in biotechnology might make it possible to translate economic inequality into biological inequality. The combination of AI with bioengineering could result in a small class of superhumans and a massive underclass of useless Homo sapiens. Is this science fiction or is it a real possibility? In any case, it seems imperative that this possibility must be dealt with globally in order that humans as a whole can enjoy satisfying lives in the future.

At the end of the chapter on nationalism, Harari asks: "if nationalistic sentiments are getting in the way of global political solutions, can we rely on the universal religious traditions of humankind to unite the

world?” After analysing the situation in the following chapter on religion, he concludes: “Unfortunately, the shared beliefs in fictions makes religions part of the problem, not part of the remedy.” No, we cannot look to any of the plethora of religions in the world to provide any kind of global cooperation for solving global problems.

The second chapter in the book is entitled *Work: When You Grow Up, You Might Not Have a Job*. Many jobs are already disappearing, thanks to robotics and Artificial Intelligence (AI), and the loss of jobs could well accelerate. New well-paying jobs will likely demand high levels of expertise and will therefore not solve the problem of unemployed unskilled laborers. Governments will have to step in, both by subsidizing a lifelong education sector and by providing a safety net for the inevitable periods of transition. Lifetime careers will not be a reality for many people in the future and retraining while retaining one’s mental balance will be a challenge. Maybe the emphasis should be on protecting people’s basic needs, rather than trying to protect disappearing jobs, by providing a universal basic income (UBI) financed by higher government taxes on billionaires and corporations. Will this be a practical solution? It remains to be seen. Harari suggests, “we might do well to flip a switch in our minds and realize that taking care of a child is arguably the most important and challenging job in the world.” This approach has much appeal and will be brought up again in the chapter on secularization.

A chapter that merits careful consideration is entitled *Equality*. In hunter-gatherer times everyone was more-or-less equal. The fruits of hunting and gathering were shared by all. After the Agricultural Revolution, hierarchical societies emerged in which small elites monopolized most wealth and power. For generations there was a ruling class and a peasant class. The aristocrat and the proletariat. After the Industrial Revolution, a substantial middle class gradually came about and a more egalitarian society developed, particularly in the last half of the 20<sup>th</sup> century. Now, however, there are signs of growing inequality both between and within societies. Today the richest 1% own half the world’s wealth. Even more alarming, the richest one hundred people together own more than the poorest four billion. How can this trend be reversed? Will a means of sharing the world’s wealth on a global basis be devised cooperatively by governments, or will it take a revolution, or even worse a war, to bring about more equality? Scary stuff indeed!

In the last section of the chapter on equality the question “Who owns the data?” is asked. Data has always been collected by governments in order to better manage the country, but data is now being amassed at an alarming rate by private companies including Amazon, Google, Facebook, and Apple, as a means of improving their profits and becoming wealthier. How do you regulate data? This may become the most important political question of our era.

The shortest chapter in the book is entitled *God*. The first sentence is: Does God exist? The short answer is No! To the best of our scientific knowledge, both God and religious sacred texts are human inventions. The last sentence in the chapter states: “As the last few centuries have proved, we don’t need to invoke God’s name in order to live a moral life.” Secularism can provide us with all the values we need. This leads to the next chapter entitled *Secularism*.

Secularism is sometimes defined as a negation of religion, but this is not necessarily the case. A secular society is one that has a firm separation of church and state and people are judged on their behavior rather than what they may or may not believe. Secularism enshrines the values of truth, compassion, equality, freedom, courage, and responsibility. It forms the foundation of modern scientific and liberal

democratic institutions. And past experience has shown that in prosperous democratic secular societies, God tends to disappear as religions decline. (The U.S. is an exception).

A most important secular commitment is a reliance on the truth, which is based on observation and evidence rather than on mere faith. Secularists strive not to confuse truth with belief, but people are free to believe in the tenets of their religion if they desire. At the same time non-believers have the same freedom.

In addition to a commitment to truth, there is an equal commitment to compassion and the avoidance of suffering. A well-run secular society strives to ensure that children are not allowed to suffer through a lack of basic needs such as food, clothing, and shelter. What a tremendous ideal to strive for!

Chapter 17 is entitled *Post-Truth: Some Fake News Lasts Forever*. This chapter is particularly relevant at this time in history with Donald Trump proclaiming “fake news” every time there is a negative comment about him in the media. And having taken a page from German propagandist Joseph Goebbels’ book stating “a lie told once is a lie, but a lie told a thousand times becomes the truth,” Trump has become the consummate liar. Fact-checkers have determined that in a period of 558 days, Trump made false or misleading claims 4,229 times.

Although we may get the impression that fake news is a modern phenomenon, it has been around for millennia. Since there is no verifiable evidence that God does in fact exist, it can be assumed that all the tenets of monotheism exemplified by Judaism, Christianity, and Islam are fake news. And regrettably, at least a third of the world’s population purports to believe this fake news. Yes, untruths can be very influential and even harmful.

How do we avoid these brainwashing machines? By relying on the scientific community, our most reliable source of knowledge for centuries. A case in point is global warming. To avoid catastrophe, we must rely on scientific facts, not on the denials of a few industrial moguls and conservative politicians.

There is an important chapter on education. Free public education has been an important hallmark of human progress ever since it was introduced in relatively recent times. But education is now more important than ever as we ask the question: how can we prepare ourselves and our children for a world of such unprecedented transformation and radical uncertainties? What a daunting challenge! People will have to constantly learn and reinvent themselves and prepare for a career change as often as every ten years.

Surprisingly the last chapter is entitled *Meditation*. Harari ponders about the mysteries of the mind and the difference between mind and brain. The brain is a material network of neurons, synapses, and biochemicals. The mind is a flow of subjective experiences such as pleasure, anger, and love. How these experiences originate is a mystery, at least for now. Harari describes how he became a student of a guru named Goenka, an instructor in Vipassana, a Buddhist meditation technique. He seems vague in stating whether or not it did him any good.

The above is just a brief summary of Harari’s third book. I found this book to be both informative and stimulating. I highly recommend it.

## **Very Interesting Predictions: Will They All Come to Pass?**

Auto repair shops will go away. A gasoline engine has 20,000 individual parts. An electrical motor has 20. Electric cars are sold with lifetime guarantees and are only repaired by dealers. It takes only 10 minutes to remove and replace an electric motor. Faulty electric motors are not repaired in the dealership but are sent to a regional repair shop that repairs them with robots. Your electric motor malfunction light goes on, so you drive up to what looks like a Jiffy-auto wash, and your car is towed through while you have a cup of coffee and out comes your car with a new electric motor!

Gas stations will go away. Parking meters will be replaced by meters that dispense electricity. Companies will install electrical recharging stations; in fact, they've already started. You can find them at select Dunkin Donuts locations.

Most (the smart) major auto manufacturers have already designated money to start building new plants that only build electric cars.

Coal industries will go away. Gasoline/oil companies will go away. Drilling for oil will stop. So say goodbye to OPEC!

Homes will produce and store more electrical energy during the day than they use and will sell it back to the grid. The grid stores it and dispenses it to industries that are high electricity users. Has anybody seen the Tesla roof?

A baby of today will only see personal cars in museums.

### **The FUTURE is approaching faster than most of us can handle.**

In 1998, Kodak had 170,000 employees and sold 85% of all photo paper worldwide. Within just a few years, their business model disappeared, and they went bankrupt. Who would have thought of that ever happening? What happened to Kodak will happen in a lot of industries in the next 5 to 10 years and most people don't see it coming. Did you think in 1998 that 3 years later, you would never take pictures on film again? With today's smart phones, who even has a camera these days? Yet digital cameras were invented in 1975. The first ones only had 10,000 pixels, but followed Moore's law. So as with all exponential technologies, it was a disappointment for a time, before it became way superior and became mainstream in only a few short years. It will now happen again (but much faster) with Artificial Intelligence, health, autonomous and electric cars, education, 3D printing, agriculture, and jobs.

Forget the book, "Future Shock", welcome to the 4th Industrial Revolution. Software has disrupted and will continue to disrupt most traditional industries in the next 5 to 10 years.

UBER is just a software tool, they don't own any cars, and are now the biggest taxi company in the world! Ask any taxi driver if they saw that coming.

Airbnb is now the biggest hotel company in the world, although they don't own any properties. Ask Hilton Hotels if they saw that coming.

Artificial Intelligence: Computers become exponentially better in understanding the world. This year, a computer beat the best Go-player in the world, 10 years earlier than expected. In the USA, young lawyers already don't get jobs. Because of IBM's Watson, you can get legal advice (so far for right now, the basic stuff) within seconds, with 90% accuracy compared with 70% accuracy when done by humans. So, if you study law, stop immediately. There will be 90% fewer lawyers in the future (what a

thought!); only omniscient specialists will remain. Watson already helps nurses diagnose cancer; it's 4 times more accurate than human nurses.

Facebook now has a pattern recognition software that can recognize faces better than humans. In 2030, computers will become more intelligent than humans.

**Autonomous Cars** - In 2018 the first self-driving cars are already here. In the next 2 years, the entire industry will start to be disrupted. You won't want to own a car anymore as you will call a car with your phone, it will show up at your location and drive you to your destination. You will not need to park it: you will only pay for the driven distance and you can be productive while driving. The very young children of today will never get a driver's license and will never own a car. This will change our cities, because we will need 90-95% fewer cars. We can transform former parking spaces into parks.

1.2 million people die each year in car accidents worldwide including distracted or drunk driving. We now have one accident every 60,000 miles; with autonomous driving that will drop to 1 accident in 6 million miles. That will save a million lives plus worldwide each year.

Most traditional car companies will doubtless become bankrupt. Traditional car companies will try the evolutionary approach and just build a better car, while tech companies (Tesla, Apple, Google) will do the revolutionary approach and build a computer on wheels. Look at what Volvo is doing right now: no more internal combustion engines in their vehicles starting this year with the 2019 models, using all electric or hybrid only, with the intent of phasing out hybrid models. Many engineers from Volkswagen and Audi are completely terrified of Tesla, and so they should be. Look at all the companies offering all electric vehicles. That was unheard of only a few years ago.

Insurance companies will have massive trouble because, without accidents, the costs will become cheaper. Their car insurance business model will disappear. Real estate will change. Because if you can work while you commute, people will move farther away to live in a more beautiful or affordable neighborhood. Electric cars will become mainstream around 2030. Cities will be less noisy because all new cars will run on electricity. Cities will have much cleaner air as well. (Can we start in Los Angeles, please?)

Electricity will become incredibly cheap and clean. Solar production has been on an exponential curve for 30 years, but you can now see the burgeoning impact. And it's just getting ramped up. Fossil energy companies are desperately trying to limit access to the grid to prevent competition from home solar installations, but that simply cannot continue - technology will take care of that strategy.

**Health** - The Tricorder X price will be announced this year. There are companies who will build a medical device (called the "Tricorder" from Star Trek) that works with your phone, which takes your retina scan, your blood sample, and you breath into it. It then analyses 54 bio-markers that will identify nearly any disease. There are dozens of phone apps out there right now for health purposes.

WELCOME TO TOMORROW – it actually arrived a few years ago.

**Editors Note** – The above article on the future was obtained from an email I received from a friend. I attempted to find the author but was unsuccessful. Nevertheless, I feel it merits being printed because it is so fascinating. Predicting the future is risky and all of these predictions may not take place, but some of them will. And of course, other things not predicted here will also occur.

# **ARE WE DRIVEN BY PREHISTORIC TRIBAL INSTINCTS?**

## **SHOULDN'T WE KNOW ABOUT THAT?**

*By Duncan Watterworth*

Only once in my life did I intentionally set out to injure someone.

My Aylmer high school football team was playing a St. Thomas school, and one of our guys got hurt. A plan for retaliation swept through our team: we'll hurt one of them! Any one will do. I was fully on side.

The memory of that incident troubles me to this day. I don't want to hurt anyone, generally. And why would anyone want to do that? What got into me?

In those days, scientists thought that we were born with "blank slate" minds, ready to be imprinted with whatever emotions and behaviors our culture supplied. But that theory is being replaced by the newer science of evolutionary psychology. A seething assortment of pre-human instincts has been discovered beneath our 21<sup>st</sup> century exteriors. And they can be in the driver's seat without us even knowing. Case in point: I now believe that my tribal instinct was driving my emotions and behavior on that football field

For millions of years pre-humans and humans lived in small tribes. That was our survival strategy. Those with the traits to thrive in a tribal setting survived and multiplied, while those lacking the traits died out. As a result, over countless generations of natural selection, a strong tribal instinct arose in our species. That tribal instinct now drives us to belong to groups, says Harvard evolutionary biologist E.O. Wilson, and find in them feelings of acceptance, security, joy, loyalty, and identity.

These days, the tribal instinct can be satisfied by multiple tribes as varied as social clubs, religious congregations, political parties, work groups, and Blue Jays fans. But tribal feelings and behavior are fraught with perils for the larger society. Tribes tend to consider themselves as superior, and outsiders as less likeable and less trustworthy. Prejudice can arise, and outsiders can face brutal exclusion and demonization.

Science writer Robert Wright says that tribalism is "the biggest problem of our time," based on the current "discord and even open conflict along religious, ethnic, national, and ideological lines." He fears that tribalism "could undo millennia of movement toward global integration...just when... the prospect of a cohesive planetary community is within reach."

We have seen American President Trump promote an us-versus-them nationalist mentality with his "America First" rhetoric, and his rejection of international relationships, treaties, and institutions. Within his country, he has triggered tribal instincts and exacerbated social divisions.

In a plea for a return to rationality in political (and other) discourse, Harvard psychologist Steven Pinker has recently written, "political tribalism is the most insidious form of irrationality today...[and this]... is still fresh and mostly unknown." Instead of people making up their own minds on issues, Pinker explains, they simply "cling to whatever opinion enhances the glory of their tribe, and their status within it." Failure to accept the tribe's opinions, and even its "facts," risks loss of status within the tribe, or even ejection.

The good news is that tribal boundaries can be malleable and transitory. I no longer feel loyalty to my football team. Some people feel that all of humanity is a single tribe, on its little, blue dot. And Pinker points out that nationality, religion, and skin colour are not inborn focal points of tribe. They didn't appear on the scene until long after the tribal instinct had developed.

For now, I'm happy to report that my former football tribe didn't manage to hurt any of you St. Thomas players that day. And I'm far more aware, and wary, of our tribal instincts.

"Redemption lies in understanding ourselves," says Wilson.

**Editors Note:** We welcome Duncan Watterworth back as a contributor to the *Enlightenment*. Duncan is a world traveller and lives in St. Thomas. He regularly contributes articles to *Elgin This Month*.

## HALA Happenings

The next Annual General Meeting (AGM) of the Humanist Association of London and Area (HALA) is coming up on January 9<sup>th</sup>, 2019. There will be approval of the minutes of the January 10<sup>th</sup>, 2018, AGM, a financial report and the presentation of a slate of executives and directors for nomination in 2019. There should be no problem filling all of the slots except one, namely that of president. After eight years of capably serving as president of HALA, Rod Martin has indicated he wishes to step down from this position and take a well-earned rest. But so far, after an appeal to the membership, no one has come forward to guide and lead HALA into the future. Consequently, the HALA board has decided to operate for 2019 without a president, sharing presidential duties and rotating the chairing of regular monthly meetings. It remains to be seen how well this will work without a competent leader to keep things on track.

Perhaps this is a good time to assess where HALA should go in the future. Should we continue with our purpose as stated in our Constitution: "To educate and increase the public's understanding of secular world views, including humanism, through the provision of seminars, conferences and newsletters," or should we engage in additional or other activities? This is something the 2019 Board of Directors will have to consider and work out. Input from members as to where they think HALA should be going will be welcomed. Suggestions should be sent to Secretary Elizabeth Bright-See at [ebright@uwo.ca](mailto:ebright@uwo.ca)

### The Board of the Humanist Association of London and Area (HALA)

President – Dr. Rod Martin – 519-673-6635 – email – [ramartin@uwo.ca](mailto:ramartin@uwo.ca)  
Vice President – Carl Goldberg – 519-657-1362 – email – [carlg1948@gmail.com](mailto:carlg1948@gmail.com)  
Secretary – Dr. Elizabeth Bright-See – 519-471- 3963 – email – [ebright@uwo.ca](mailto:ebright@uwo.ca)  
Treasurer – Brian Prachar – 519-668-0237 – email – [brianprachar@hotmail.com](mailto:brianprachar@hotmail.com)  
Member at Large – Celina Everling – 226-235- 2425 - email – [celinaeverling@gmail.com](mailto:celinaeverling@gmail.com) - Membership  
Member at Large – Brad Banks – 519-902-1213 – email – [elbankster@gmail.com](mailto:elbankster@gmail.com) - Publicity  
Member at Large – Sherry Keddie – 226-926-2426 – email – [sherrykeddie@gmail.com](mailto:sherrykeddie@gmail.com) – Social  
Non-voting – Don Hatch – 519-472- 6167 – email - [dahatch@rogers.com](mailto:dahatch@rogers.com) – Enlightenment