DavidsGuides.com - Book Summary

Book Author: Yuval Noah Harari
Book Title: Sapiens: A Brief History of Humankind
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https://www.amazon.com/Sapiens-Humankind-Yuval-Noah-Harari/dp/0062316117

Summary:
I only read the summaries for this book. It goes into the history of humankind and how we've evolved over thousands of years. Our quality of life is getting better, and we have all the luxuries in the world, yet our happiness and loneliness is getting worse. The first 4 pages of this summary are my notes, followed by 28 pages of book summaries online.

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Life becomes harder with more luxuries:

1. Fascinatingly, the first few thousand years of the Agricultural Revolution actually made life harder for humans by creating more work, less leisure, and a ballooning population that created more mouths to feed. Each individual generation didn't see how their life was becoming worse because the small changes were so tiny.
2. One of history's few iron laws is that luxuries tend to become necessities and to spawn new obligations. Once people begin to enjoy new luxuries they tend to become expected and then count on them.

3. Like the ancient Egyptians, most people dedicate their lives to building pyramids. It's just that the names, shapes, and sizes of the pyramids change from one culture to another.
4. According to Buddhist tradition: the mind naturally craves more in all situations. And all suffering arrives from craving.
5. Nietzsche: “He who has a why to live can bear almost any how.”

Peace & Violence:

1. Most people don't realize just how peaceful of the times are we live in.
2. In recent years, more people die from suicide each year than from war and violent crime. The same can said for car accidents.
3. Live in a safe community, drive as little as possible, and love yourself. Violent local crime, car accidents, and suicide are some of the biggest killers of humans.

Consumerism:

1. People today spend a great deal of money on holidays abroad because they are true believers in the myths of romantic consumerism.
2. Romanticism tells us that in order to make the most of our human potential we must have as many different experiences as we can. We must open ourselves to a wide spectrum of emotions; we must sample various kinds of relationships; we must try different cuisines; we must learn to appreciate different styles of music.
3. Romanticism, which encourages variety, meshes perfectly with consumerism. Their marriage has given birth to the infinite ‘market of experiences’, on which the modern tourism industry is founded. The tourism industry does not sell flight tickets and hotel bedrooms. It sells experiences.

Happiness:

1. The Buddhist philosophy of happiness centers around the idea that you are not the events that happen to you, but you are also not the feelings you have. You are not your feelings. They are just feelings. Thus, if you understand this, you can release the needs to keep chasing the need to feel happy or to not feel angry or to not feel sad. In other words, you have to understand yourself.

2. In the past 1000 years, humans have evolved to take over the world and are on the verge of overcoming natural selection and becoming gods. Yet, we still seem unhappy in many ways and we are unsure of what we want. Is there anything more dangerous that dissatisfied and irresponsible gods who don't know what they want?
3. The How of Happiness. Human "happiness does not really depend on objective conditions of wealth, health or even community. Rather, it depends on the correlation between objective conditions and subjective expectations." This means yesterday's luxuries are today's necessities. And by raising expectations further, mass media and advertising may be depleting the human potential for contentment. However, happiness may be a false god ('fiction') inappropriately elevated from its natural status as a fleeting neurochemical response designed to reward adaptive behaviour. For Sapiens, happiness may not be the absence of misery, but the cause of misery driven by the tension, restlessness and dissatisfaction that comes from the pointless, perpetual pursuit of an ephemeral neurochemical response.

Men VS Women:

1. Another theory explains that masculine dominance results not from strength but from aggression. Millions of years of evolution have made men far more violent than women. Women can match men as far as hatred, greed and abuse are concerned, but when push comes to shove, the theory goes, men are more willing to engage in raw physical violence. This is why throughout history warfare has been a masculine prerogative.
2. As men competed against each other for the opportunity to impregnate fertile women, an individual's chances of reproduction depended above all on his ability to outperform and defeat other men. As time went by, the masculine genes that made it to the next generation were those belonging to the most ambitious, aggressive and competitive men.
3. In order to ensure her own survival and the survival of her children, the woman had little choice but to agree to whatever conditions the man stipulated so that he would stick around and share some of the burden. As time went by, the feminine genes that made it to the next generation belonged to women who were submissive caretakers.

Controlling your mind & emotions:

1. Gautama found that there was a way to exit this vicious circle. If, when the mind experiences something pleasant or unpleasant, it simply understands things as they are, then there is no suffering. If you experience sadness without craving that the sadness go away, you continue to feel sadness but you do not suffer from it. There can actually be

richness in the sadness. If you experience joy without craving that the joy linger and intensify, you continue to feel joy without losing your peace of mind.
2. He encapsulated his teachings in a single law: suffering arises from craving; the only way to be fully liberated from suffering is to be fully liberated from craving; and the only way to be liberated from craving is to train the mind to experience reality as it is.

Money:

1. Everyone always wants money precisely because everyone else always wants money.
2. The rich used to live carelessly on extravagant luxuries, whereas peasants lived frugally, minding every penny. Today, the tables have turned. The rich take great care managing their assets and investments, while the less well heeled go into debt buying cars and televisions they don't really need.

Book summaries from online are below. The 4 pages above are David's notes from the summaries below:

Sapiens, The Book in Three Sentences

Human history has been shaped by three major revolutions: the Cognitive Revolution (70,000 years ago), the Agricultural Revolution (10,000 years ago), and the Scientific Revolution (500 years ago). These revolutions have empowered humans to do something no other form of life has done, which is to create and connect around ideas that do not physically exist (think religion, capitalism, and politics). These shared "myths" have enabled humans to take over the globe and have put humankind on the verge of overcoming the forces of natural selection.

Sapiens summary

This is my book summary of Sapiens by Yuval Noah Harari. My notes are informal and often contain quotes from the book as well as my own thoughts. This summary also includes key lessons and important passages from the book.

- Human cultures began to take shape about 70,000 years ago.
- There have been three major revolutions in human history: the cognitive revolution, the agricultural revolution, and the scientific revolution.
- Prehistoric humans (2 million years old or so) were no more important and impressive than other mammals.
- Homo Sapiens means “wise man.”
- Humans first evolved in Africa about 2.5 million years ago.
- The author believes it is unlikely Homo sapiens will survive for another 1,000 years.
- From about 2 million years ago until 10,000 years ago, multiple human species roamed the earth together. The depiction of man evolving from hunched over to upright incorrectly displays human evolution as a linear trajectory. In fact, the species lived simultaneously.
- Humans have huge brains for their body size.
- Human brains account for 2-3 percent of body size, but use 25 percent of energy.
- Human kind was very much in the middle of the food chain until 400,000 years ago and didn't leap to the top of the food chain until 100,000 years ago.
- Most animals at the top of the food chain made it there gradually over millions of years. Humans, however, jumped to the top relatively rapidly. This means that the rest of the food chain wasn't ready and neither were we. Hence we feel anxious and stressed because we aren't used to being at the top.
- The advent of fire and cooking food may have opened the way for the evolution of a smaller intestinal track and a larger brain.
- There are two theories of how Homo sapiens evolved: Interbreeding theory and Replacement theory. The reality is probably a combination of both theories.
- Perhaps this is why Homo sapiens wiped out the Neanderthals: “They were too familiar to ignore, but too different to tolerate.”
- The last dwarf species of humans died out 12,000 years ago.
- Homo sapiens conquered the world because of its unique language.
- The Cognitive Revolution occurred between 70,000 to 30,000 years ago. It allowed Homo sapiens to communicate at a level never seen before in language.
- As far as we know, only Homo sapiens can talk about things we have never seen, touched, or smelled. Think religions, myths, legends, and fantasies.
- The telling of myths and stories allow Homo sapiens to collaborate in large numbers in extremely flexible ways. This separates us from all other animals.

- Chimps can't form groups of more than 50 or so. For humans, the group size is usually 150 or so. Beyond that, you can't rely on gossip and personal communication. You need something more to get large numbers of people working together.
- Large numbers of people can collaborate by sharing common myths and beliefs.
- In academic circles, stories are known as fictions, social constructs, or imagined realities.
- An imagined reality is not a lie because the entire group believes it.
- Ever since the Cognitive Revolution, humans have been living in a dual reality: the physical reality and the imagined reality.
- The way people cooperate can be changed by changing the stories as myths we tell.
- Because Homo sapiens shared myths were not genetically based, they could adapt and change their behavior as soon as they adapted their new belief. They didn't have to wait millions of years for a genetic change.
- Homo sapiens are the only animals that conduct trade.
- As far as we know, the humans of 30,000 years ago had the same physical, emotional, and intellectual capabilities that we have today.
- Evolutionary psychology claims that most of our psychology was developed during the period before the Agricultural Revolution about 10,000 years ago.
- The instinct to gorge on high calorie food is wired into our DNA.
- Ever since the Agricultural Revolution, there hasn't been one predominant way of life for all humans. There have only been options from a variety of cultures.
- The dog was the first animal domesticated by humans around 15,000 years ago.
- In ancient human groups (over 10,000 years ago) there was very little privacy, but also very little loneliness.
- Most of our ancient ancestors had much wider and deeper knowledge of their physical surroundings than we do. They were not unintelligent at all.
- The human collective today knows far more overall than the whole population of 15,000 years ago. However, at the individual level we are much more specialized today. Ancient foragers were the most knowledgable and skillful people in history.
- It is far easier to pass “unremarkable” genes along today than it was 10,000 years ago.
- Our lack of knowledge about prehistoric religions and beliefs is one of the biggest holes in our understanding of human history.
- Humans traveling across the sea and landing in Australia was one of the most important expeditions in history. It marked the moment humans cemented themselves at the top of the food chain.
- Homo sapiens first made it to America about 16,000 years ago.
- The settling of America – across the Siberian peninsula through Alaska into Canada and the United States down through Mexico and Central America into the Andes and the

Amazon and all the way to the tip of South America – was one of the most rapid and incredible invasions by a single species the world had ever seen.

- Incredibly, the Agricultural Revolution sprang up independently in many different parts of the world.
- There is no evidence modern humans have become more intelligent with time.
- The Agricultural Revolution actually didn't make the life of the average human better at first. It did, however, allow humans to collect more food per unit area and thus the overall population multiplied exponentially.
- Fascinatingly, the first few thousand years of the Agricultural Revolution actually made life harder for humans by creating more work, less leisure, and a ballooning population that created more mouths to feed. Each individual generation didn't see how their life was becoming worse because the small changes were so tiny.
- One of history's few iron laws is that luxuries tend to become necessities and to spawn new obligations. Once people begin to enjoy new luxuries they tend to become expected and then count on them.
- The evolutionary success of the Agricultural Revolution (greater population) was actually cause for much suffering on the individual level. Not just for humans, but for domesticated animals like cows, sheep, and chickens as well.
- The advent of the Agricultural Revolution marked the time when worries of the future became prevalent: the weather, the crop yield this year, etc.
- The myths that surround us and make up our lives dictate so much of what we believe and what we do.
- Like the ancient Egyptians, most people dedicate their lives to building pyramids. It's just that the names, shapes, and sizes of the pyramids change from one culture to another.
- In order to change the imagined order, you must first find a group that believes in a current imagined order. New myths must build upon or evolve from previous myths.
- The main purpose of writing is to record numbers, which our brains did not evolve to manage well. Our brains are much better at remembering biological, zoological, and social information.
- There is an ancient writing system used by the Incas known as a quipu. They are not written words at all, but a series of knots of different colors and strings that represent words and numbers.
- Writing has actually changed the way humans think. We can use writing and record keeping to think far more categorically than ever before.
- Numbers are the world's most prevalent language.
- Social hierarchies, inequality, and so on are human inventions.
- Most rich people are rich because they were born into rich families. Most poor people are poor because they were born into poor families.

- Unjust discrimination often gets worse, not better, with time.
- As of 2006, there were still 53 countries where a husband could not be legally prosecuted for raping his wife.
- When it comes to gender inequality: biology enables, culture forbids. The idea of “unnatural” behaviors is actually a result of Christian theology, not biology.
- If it is possible biologically, then it is natural. From a scientific perspective, two men having sex is natural. Traveling at the speed of light is not natural.
- Why are men valued in many cultures more than women?
- All human cultures are filled with inconsistencies. For example, America currently values individual freedom and equality. But these two ideals don't always play nicely. It is part of the human experience to reconcile them. These inconsistencies aren't necessarily bad. They force us to think critically. Consistency is the playground of dull minds.
- History is moving relentlessly toward unity. The whole planet is moving toward one world culture.
- The creation of money was purely an intellectual revolution. It doesn't exist except in our minds.
- More than 90 percent of all money is just electronic data, not physical money.
- Everyone always wants money precisely because everyone else always wants money.
- Empires have been the world's most common form of political organization for the last 2,500 years.
- In general, empires do not fall because of uprisings. They almost always succumb to outside invasion or splits from within the empower class.
- Most of what we firmly believe is part of “our culture” was actually forced upon us by other empires who conquered our ancestors.
- Despite the obvious negatives of empires taking over a culture, there are many benefits too. Art, music, governance, and more are the result of empires forming. Often, they blended new together with the conquered people to create a new culture.
- It seems obvious that we are moving fast toward a singe global empire. Global markets, global warming, and commonly accepted concepts like human rights make it clear we all need one collective entity, not man states and countries.
- Religion is the third great unifier of humankind, alongside money and empires.
- The Agricultural Revolution was accompanied by a Religious Revolution.
- Interestingly, polytheism is more open and accepting of multiple beliefs even though we often look at it as more barbarian and uneducated than our current beliefs.
- Monotheism seems to push away polytheism, but actually is very similar to polytheistic gods with the use of patron saints. Praying to the patron saints of farmers isn't much different than praying to the god of rain.

- The central tension with monotheism is how to deal with the fact that there is evil in the world while the omnipoten God is believed to be good and caring. If God is good why would he allow evil things to happen?
- Even the rich and famous are rarely satisfied.
- According to Buddhist tradition: the mind naturally craves more in all situations. And all suffering arrives from craving.
- There are a variety of “natural law religions” that are popular today like communism, capitalism, and liberalism.
- Over the last 200 years, science has increasingly revealed that human behavior is determined by hormones, genes, and neurological synapses. If this is true, then for how much longer will we ignore that biology does not agree with the concept of free will?
- To describe how something happened means to reconstruct the series of specific events that led from one point to another.
- To describe why something happened means to find causal connections that led to this particular series of events to the exclusion of all others.
- The deeper your knowledge of a particular area of history, the harder it becomes to explain why one particular outcome occurred and not another.
- It is an inevitable rule of history that what seems obvious in hindsight is impossible to predict beforehand.
- The are level one and level two Chaotic Systems. Level one does not respond to predictions about it, like the weather and weather forecasts. Level two does respond to predictions about it, like the stock market and analyst reports about rising oil prices.
- There is no proof that history is working for the benefit of humans or that human well being increases overtime. It's good for the victors, but is it good for us all?
- The Scientific Revolution started in Europe around 500 years ago. The last 500 years have witnessed an unprecedented growth of human impact.
- One difference between religion and science is that science assumes humankind does not know the answers to many of life's biggest questions. Religion, however, assumes that the important stuff is already known. Science assumes human ignorance.
- Modern culture has been able to admit ignorance more than any previous culture.
- Previous cultures and belief systems compiled their theories using stories. Science compiles its theories using mathematics.
- The story of how Scottish Widows was founded is an awesome example of the power of probability.
- Scientists generally agree that no theory is 100 percent correct. Thus, the real test of knowledge is not truth, but utility. Science gives us power. The more useful that power, the better the science.

- The military arms race drives science forward in rapid fashion. The truth is war prompts many scientific discoveries.
- In the past, the best minds of the day worked on finding ways to give meaning to death. Today, our best minds work on preventing death through biological, hormonal, and genetic means. Science does not take death as an inevitability.
- The economic, religious, and political interests that impact the flow of money into scientific and technological research have a huge impact on the output of science.
- It is not enough to consider science in a vacuum. Economic and capitalistic interests, for example, determine what we research and what to do with the research findings.
- Why did Europeans discover and conquer the Americas? Why not the Chinese or those from India or the Middle East who possessed just as much knowledge and technology as the Europeans? The European ideology to explore the world was the primary difference.
- For most of human history, per capita production remained the same. Since the launch of capitalism, however, per capita production has skyrocketed.
- Modern capitalism has exploded the growth of humankind thanks to the creation of credit, which allows you to borrow money now because we collectively trust that the future will be better than the present.
- Adam Smith's brilliant insight about capitalism in The Wealth of Nations was that increasing private profits is the basis for increasing collective wealth and prosperity. In other words, by becoming richer you benefit everyone, not just yourself. Both parties get a bigger slice of pie. (Note: this only works if profits get reinvested, not hoarded.)
- For capitalism to work, profits must be reinvested in new production.
- The “religion” of capitalism says economic growth is the supreme because justice, freedom, and happiness requires economic growth.
- All credit is based on the idea that science and technology will advance. Scientists ultimately foot the bill of capitalism.
- The annual sugar intake of the average Englishman rose from nearly zero in the early 17th century to 18 pounds in the early 19th century.
- The life expectancy, child mortality, and calorie intake are significantly improved for the average person in 2014 compared to 1914, despite exponential population growth.
- Until the industrial revolution, human behavior was largely dictated by solar energy and plant growth. Day and night. Summer and winter. Everything was determined by man power and animal power, which were determined by food, which is determined by photosynthesis.
- “This is the basic lesson of evolutionary psychology: a need shaped in the wild continues to be felt subjectively even if it is no longer really necessary for survival and reproduction.”

- Harlow's infant monkey studies from the 1950s (and a variety of followup studies) have shown that animals have strong psychological needs as well as purgative physical needs. Note to self: never disregard your psychological needs.
- Each year the United States population spends more money on diets than the amount needed to feed all the hungry in the rest of the world.
- Most people don't realize just how peaceful of the times are we live in.
- In recent years, more people die from suicide each year than from war and violent crime. The same can said for car accidents.
- Live a safe community, drive as little as possible, and love yourself. Violent local crime, car accidents, and suicide are some of the biggest killers of humans.
- War is at an all time low because the costs of war have increased because of nuclear weapons, the benefits of war have decreased because physical resources drive less of the economy and international trade is more lucrative than conquest, and the tightening of international connections because a worldwide culture is less likely to battle itself.
- Our view of the past is heavily influenced by recent events.
- Researchers have investigated nearly all aspects of history, but have rarely have asked whether historical changes have made humans happier.
- Nietzsche: “He who has a why to live can bear almost any how.”
- If happiness is based on pleasurable feelings, then increasing our happiness is a matter of increases biochemical release. If happiness is based on meaning, then increasing our happiness is a matter of deluding ourselves about the meaning of our lives.
- One uncommonly cited benefit of religion: belief in the afterlife gives meaning to your life in the present.
- Buddhism has studied happiness for over 2,000 years. Interestingly, Buddhism shares many viewpoints on happiness with science. Most notably, that happiness results from processes within the body and not from the outside world.
- The Buddhist philosophy of happiness centers around the idea that you are not the events that happen to you, but you are also not the feelings you have. You are not your feelings. They are just feelings. Thus, if you understand this, you can release the needs to keep chasing the need to feel happy or to not feel angry or to not feel sad. In other words, you have to understand yourself.
- For close to 4 billion years, every organism developed according to evolution. But in recent decades, humans have begun to evolve according to intelligent design. In other words, there are people who would have been selected out of the gene pool millennia ago, but not today.
- Genetic engineering is allowing humans to break the laws of natural selection.

- The next stage of human history will not only involve biological and technological changes, but also changes in human consciousness and identity. Changes that are this fundamental will call the very term “human” into question.
- Many people think the question we should ask to guide our scientific pursuits is, “What do we want to become?” However, because we seem to be on the path to genetically engineering and programming nearly every facets of our wants, desires, and consciousness, the real question we should ask is, “What do we want to want?”
- In the past 1000 years, humans have evolved to take over the world and are on the verge of overcoming natural selection and becoming gods. Yet, we still seem unhappy in many ways and we are unsure of what we want. Is there anything more dangerous that dissatisfied and irresponsible gods who don’t know what they want?

What does it mean to be human? In a sweeping narrative spanning two and half million years of human evolution, Israeli historian Yuval Noah Harari weaves insights from science and the humanities together to answer to what it means to be human.
It’s impossible to do justice to the 443 pages of rich insight that make up the bestselling *Sapiens* in just a few lines, but here are our ten top takeouts relevant to anyone researching or innovating for humans.
First though, a word about terminology.

You are human but you are not the only species of human. You are *Homo Sapiens* (“Wise Humans” as we immodestly label ourselves) and just one of a number of different species of human that have roamed the planet together.
It is likely that your *Sapiens* ancestors killed off the *Neanderthal* species of humans about 40,000 years ago, and did so because *“they were too familiar to ignore, but too different to tolerate”* (they also had bigger brains than your ancestors – but perhaps your ancestors had bigger sticks).
Today, Sapiens is the only remaining species of human. However, if you are European or Middle Eastern, then your status as *Homo Sapiens* is more complicated. You are not pure *Homo Sapiens*, but probably the result of interspecies breeding between *Sapiens* and *Neanderthal* (up to 4% of your genes are probably Neanderthal). **So forget mixed race, intersex or other non-binary identities, *you are Interspecies***. And **you are also *Trans***, but you’ll have to read through to insight #10 to find why.

1. **Myth-Makers**. The big idea in *Sapiens* is the thing that sets *Sapiens* apart from other species. And that difference is that *Sapiens* are myth-makers; they use imagination and language to create and communicate new worlds, alternatives and possibilities. The importance of shared myths is that they allow *Sapiens* to cooperate, organise at scale, and dominate the world. Without myths, there is no glue to bind *Sapiens* together. At an

individual level, humans might be *memory-makers*, but as a species level they are *myth-makers.* The genetic mutation that allowed the cognitive powers of speech and imagination to emerge some 70,000 years ago is what Harari calls the ***Cognitive Revolution***.

2. **Intersubjectivity Rules**. The source of human insight is not objective fact nor subjective impression, it lies in 'intersubjective' myths – our shared subjectivity. Powerful intersubjective myths include laws, gods, money, morals, patriarchy and nations that exist neither in the natural world, nor only in unshared imaginations, but in shared intersubjectivity. Understanding humans is not about understanding their differences, it's about understanding the intersubjective myths they share.
3. **Brands are Powerful Intersubjective Myths**. Peugeot (Harari's example) is an example of an intersubjective. It doesn't exist in the natural world (you could kill all Peugeot people, buildings and products, and Peugeot would still exist). Instead, Peugeot exists as a shared myth or 'fiction' in our intersubjective imagination that is powerful because it has the power move humans to produce and consume at scale.
4. **Fictions, Not Facts Explain**. The myths *Sapiens* share define who they are and what they do. Take money, a most powerful shared fiction. Dollar bills are meaningless tokens without the 'shared fiction' that they have value. Endowed with shared meaning, money becomes a unit of exchange, peace of mind, and the measure of our choices. And importantly, it explains behaviour. (For Harari money is also "the apogee of human tolerance" because it is more open-minded than any other shared fiction (language, laws, cultural codes, or religious beliefs) because it does not discriminate on the grounds of ethnicity, religion, age, or sexual orientation.)
5. **Change the Myth, Change the World**. The intersubjective myths that both bind *Sapiens* together and break them apart is the glue that holds culture together. Break the myth and you break the world, leading to dramatic and rapid social change. Break the myth of monarchy, slavery, patriarchy and you change the pattern of history.
6. **Biology Enables, Culture Forbids**. Just as there is nothing so natural as chemicals (they exist in the natural world), anything Sapiens can do is, by definition, natural. Biology opens doors, and it is culture that closes them by proscribing certain behaviours, and labelling them as unnatural. The study of human culture is largely the study of what we prohibit,
7. **The Law of the Few**. History is made by the few, whilst the masses toil at work. For example, the second major revolution in Sapiens' history – the ***Agricultural Revolution*** (around 12,000 years ago) – enabled increased food production and massive population growth, but it forced that average farmer into monotonous hard labour. The fruits of the Agricultural Revolution were enjoyed by a few pampered elites, but who were freed up to make history. For Harari, the Agricultural Revolution was history's biggest fraud.
8. **The How of Happiness**. Human "*happiness does not really depend on objective conditions of wealth, health or even community. Rather, it depends on the correlation between objective conditions and subjective expectations*." This means yesterday's luxuries are today's necessities. And by raising expectations further, mass media and advertising may be depleting the human potential for contentment. However, happiness may be a false god ('fiction') inappropriately elevated from its natural status as a fleeting neurochemical response designed to reward adaptive behaviour. For *Sapiens*, happiness may not be the absence of misery, but the cause of misery driven by the tension, restlessness and dissatisfaction that comes from the pointless, perpetual pursuit of an ephemeral neurochemical response.

9. **Humans are Superhuman**. The third, and possibly final Revolution in human history is underway now and is the ***Scientific Revolution*** that began 500 years ago. Though scientific discovery and technological innovation, the Scientific Revolution has empowered *Sapiens* to transform their environment and themselves, giving them superhuman powers and practically limitless energy. The Scientific Revolution has seen mythical stories replaced by falsifiable theories, certainties replaced by uncertainty, conservatism replaced by curiosity, and perhaps most importantly, words replaced by numbers. But are we any happier?
10. **The Future is Trans**. The story of *Sapiens* is coming to an end (in the next century or so), as the species has outgrown its hominid self. Through science and technology they have the power and intelligence to become gods and create new artificial life and recreate themselves. Sapiens are the new gods of 'Intelligent Design' – they are ***Homo Deus***. Their future is not human, it is *transhuman* as they transition into something new. If they do not destroy themselves first. The problem with Sapiens is that despite their power, they do not know what they want. They do not even know what they want to want. Is there anything more dangerous than dissatisfied and irresponsible gods who don't know what they want?

The BG Take

Sapiens is perhaps not as impressive as the book that inspired it, Jared Diamond's epic and influential *Guns, Germs and Steel*, but it is more accessible and it perhaps more immediately useful for anyone researching or innovating for humans. The big takeout for us at Brand Genetics is that human-centric insight and innovation is about understanding humans as myth-makers as well as memory-makers. Without these twin insights, very little that humans do, makes any sense at all.

As qualitative researchers, we love the idea of researching 'intersubjectives', the shared myths people use to make sense of the world and guide their action. Similarly, Harari's insight that to understand people, you have to understand not what they want or do, but what they are not allowed to want or do, opens up interesting avenues of research. Thinking of brands as shared myths is also a useful starting point for investigation. And the idea that people will be happy with an innovation only when it beats their expectations is, whilst not new, a powerful reminder of the central role of expectations in insight and innovation.

The narrative of *Sapiens* is painted with broad brushstrokes with speculative interpretation that can be, and has been, criticised. For the science-minded, *Sapiens* may seem too interpretivist, whilst for historians, *Sapiens* may appear too scientised. But for those, like us at Brand Genetics, working in human-centric insight and innovation, *Sapiens* provides a wonderful framework and lens for guiding and interpreting what we do.

Summary Notes

An Animal of No Significance

Three important revolutions shaped the course of history: the Cognitive Revolution kick-started history about 70,000 years ago. The Agricultural Revolution sped it up about 12,000 years ago. The Scientific Revolution, which got under way only 500 years ago, may well end history and start something completely different. This book tells the story of how these three revolutions have affected humans and their fellow organisms.

The most important thing to know about prehistoric humans is that they were insignificant animals with no more impact on their environment than gorillas, fireflies or jellyfish.

Just 6 million years ago, a single female ape had two daughters. One became the ancestor of all chimpanzees, the other is our own grandmother.

Over the generations, the people of Flores became dwarves. This unique species, known by scientists as Homo floresiensis, reached a maximum height of only 3.5 feet and weighed no more than fifty-five pounds. They were nevertheless able to produce stone tools, and even managed occasionally to hunt down some of the island's elephants – though, to be fair, the elephants were a dwarf species as well.

Today there are many species of foxes, bears and pigs. The earth of a hundred millennia ago was walked by at least six different species of man. It's our current exclusivity, not that multi-species past, that is peculiar – and perhaps incriminating.

Mammals weighing 130 pounds have an average brain size of 12 cubic inches. The earliest men and women, 2.5 million years ago, had brains of about 36 cubic inches. Modern Sapiens sport a brain averaging 73–85 cubic inches. Neanderthal brains were even bigger.

In Homo sapiens, the brain accounts for about 2–3 per cent of total body weight, but it consumes 25 per cent of the body's energy when the body is at rest.

Archaic humans paid for their large brains in two ways. Firstly, they spent more time in search of food. Secondly, their muscles atrophied.

An upright gait required narrower hips, constricting the birth canal – and this just when babies' heads were getting bigger and bigger. Death in childbirth became a major hazard for human females. Women who gave birth earlier, when the infant's brain and head were still relatively small and supple, fared better and lived to have more children. Natural selection consequently favoured earlier births. And, indeed, compared to other animals, humans are born prematurely, when many of their vital systems are still under-developed. A colt can trot shortly after birth; a kitten leaves its mother to forage on its own when it is just a few weeks old. Human babies are helpless, dependent for many years on their elders for sustenance, protection and education.

One of the most common uses of early stone tools was to crack open bones in order to get to the marrow. Some researchers believe this was our original niche.

...**humankind ascended to the top so quickly that the ecosystem was not given time to adjust**.

Since long intestines and large brains are both massive energy consumers, it's hard to have both. **By shortening the intestines and decreasing their energy consumption, cooking inadvertently opened the way to the jumbo brains of Neanderthals and Sapiens.**

When Homo sapiens landed in Arabia, most of Eurasia was already settled by other humans. What happened to them? There are two conflicting theories. The 'Interbreeding Theory' tells a story of attraction, sex and mingling. As the African immigrants spread around the world, they bred with other human populations, and people today are the outcome of this interbreeding.

The opposing view, called the 'Replacement Theory' tells a very different story – one of incompatibility, revulsion, and perhaps even genocide.

Tolerance is not a Sapiens trademark. In modern times, a small difference in skin colour, dialect or religion has been enough to prompt one group of Sapiens to set about exterminating another group. Would ancient Sapiens have been more tolerant towards an entirely different human species? It may well be that when Sapiens encountered Neanderthals, the result was the first and most significant ethnic-cleansing campaign in history.

The Tree of Knowledge

The appearance of new ways of thinking and communicating, between 70,000 and 30,000 years ago, constitutes the Cognitive Revolution.

But the most important information that needed to be conveyed was about humans, not about lions and bison. **Our language evolved as a way of gossiping**. According to this theory Homo sapiens is primarily a social animal. Social cooperation is our key for survival and reproduction.

As far as we know, only Sapiens can talk about entire kinds of entities that they have never seen, touched or smelled.

But fiction has enabled us not merely to imagine things, but to do so collectively.

Such **myths give Sapiens the unprecedented ability to cooperate flexibly in large numbers.**

Sapiens can cooperate in extremely flexible ways with countless numbers of strangers. That's why Sapiens rule the world, whereas ants eat our leftovers and chimps are locked up in zoos and research laboratories.

Sociological research has shown that the maximum 'natural' size of a group bonded by gossip is about 150 individuals. Most people can neither intimately know, nor gossip effectively about, more than 150 human beings.

Any large-scale human cooperation – whether a modern state, a medieval church, an ancient city or an archaic tribe – is rooted in common myths that exist only in people's collective imagination.

Two Catholics who have never met can nevertheless go together on crusade or pool funds to build a hospital because they both believe that God was incarnated in human flesh and allowed Himself to be crucified to redeem our sins. States are rooted in common national myths. Two Serbs who have never met might risk their lives to save one another because both believe in the existence of the Serbian nation, the Serbian homeland and the Serbian flag. Judicial systems are rooted in common legal myths. Two lawyers who have never met can nevertheless combine efforts to defend a complete stranger because they both believe in the existence of laws, justice, human rights – and the money paid out in fees.

There are no gods in the universe, no nations, no money, no human rights, no laws, and no justice outside the common imagination of human beings.

Unlike lying, an imagined reality is something that everyone believes in, and as long as this communal belief persists, the imagined reality exerts force in the world.

No one was lying when, in 2011, the UN demanded that the Libyan government respect the human rights of its citizens, even though the UN, Libya and human rights are all figments of our fertile imaginations

The real difference between us and chimpanzees is the mythical glue that binds together large numbers of individuals, families and groups. This glue has made us the masters of creation.

A Day in the Life of Adam and Eve

Our eating habits, our conflicts and our sexuality are all the result of the way our hunter-gatherer minds interact with our current post-industrial environment, with its mega-cities, aeroplanes, telephones and computers. This environment gives us more material resources and longer lives than those enjoyed by any previous generation, but it often makes us feel alienated, depressed and pressured. To understand why, evolutionary psychologists argue, we need to delve into the hunter-gatherer world that shaped us, the world that we subconsciously still inhabit.

There are even a number of present-day human cultures in which collective fatherhood is practised, as for example among the Barí Indians. According to the beliefs of such societies, a child is not born from the sperm of a single man, but from the accumulation of sperm in a woman's womb. A good mother will make a point of having sex with several different men, especially when she is pregnant, so that her child will enjoy the qualities (and paternal care) not merely of the best hunter, but also of the best storyteller, the strongest warrior and the most considerate lover. If this sounds silly, bear in mind that before the development of modern embryological studies, people had no solid evidence that babies are always sired by a single father rather than by many.

Many scholars vehemently reject this theory, insisting that both monogamy and the forming of nuclear families are core human behaviours. Though ancient hunter-gatherer societies tended to be more communal and egalitarian than modern societies, these researchers argue, they

were nevertheless comprised of separate cells, each containing a jealous couple and the children they held in common.

The Stone Age should more accurately be called the Wood Age, because most of the tools used by ancient hunter-gatherers were made of wood.

The heated debates about Homo sapiens' 'natural way of life' miss the main point. Ever since the Cognitive Revolution, there hasn't been a single natural way of life for Sapiens. There are only cultural choices, from among a bewildering palette of possibilities.

There is some evidence that the size of the average Sapiens brain has actually decreased since the age of foraging. Survival in that era required superb mental abilities from everyone. **When agriculture and industry came along people could increasingly rely on the skills of others for survival, and new 'niches for imbeciles' were opened up. You could survive and pass your unremarkable genes to the next generation by working as a water carrier or an assembly-line worker.**

Average life expectancy was apparently just thirty to forty years, but this was due largely to the high incidence of child mortality. Children who made it through the perilous first years had a good chance of reaching the age of sixty, and some even made it to their eighties. Among modern foragers, forty-five-year-old women can expect to live another twenty years, and about 5–8 per cent of the population is over sixty.

Ancient foragers also suffered less from infectious diseases. Most of the infectious diseases that have plagued agricultural and industrial societies (such as smallpox, measles and tuberculosis) originated in domesticated animals and were transferred to humans only after the Agricultural Revolution.

The Flood

As they pushed on, they encountered a strange universe of unknown creatures that included a 450-pound, six-foot kangaroo, and a marsupial lion, as massive as a modern tiger, that was the continent's largest predator. Koalas far too big to be cuddly and cute rustled in the trees and flightless birds twice the size of ostriches sprinted on the plains. Dragon-like lizards and snakes seven feet long slithered through the undergrowth. The giant diprotodon, a two-and-a-half-ton wombat, roamed the forests.

Of the twenty-four Australian animal species weighing 100 pounds or more, twenty-three became extinct.

Around 14,000 BC, the chase took some of them from north-eastern Siberia to Alaska. Of course, they didn't know they were discovering a new world. For mammoth and man alike, Alaska was a mere extension of Siberia.

However, around 12,000 BC global warming melted the ice and opened an easier passage. Making use of the new corridor, people moved south en masse, spreading over the entire continent.

By 10,000 BC, humans already inhabited the most southern point in America, the island of Tierra del Fuego at the continent's southern tip.

But no longer. Within 2,000 years of the Sapiens arrival, most of these unique species were gone. According to current estimates, within that short interval, North America lost thirty-four out of its forty-seven genera of large mammals. South America lost fifty out of sixty.

Perhaps if more people were aware of the First Wave and Second Wave extinctions, they'd be less nonchalant about the Third Wave they are part of. If we knew how many species we've already eradicated, we might be more motivated to protect those that still survive.

History's Greatest Fraud

The transition to agriculture began around 9500–8500 BC in the hill country of south-eastern Turkey, western Iran, and the Levant.

Wheat and goats were domesticated by approximately 9000 BC; peas and lentils around 8000 BC; olive trees by 5000 BC; horses by 4000 BC; and grapevines in 3500 BC.

No noteworthy plant or animal has been domesticated in the last 2,000 years. If our minds are those of hunter-gatherers, our cuisine is that of ancient farmers.

Sapiens could dig up delicious truffles and hunt down woolly mammoths, but domesticating either species was out of the question.

Rather than heralding a new era of easy living, the Agricultural Revolution left farmers with lives generally more difficult and less satisfying than those of foragers. Hunter-gatherers spent their time in more stimulating and varied ways, and were less in danger of starvation and disease. The Agricultural Revolution certainly enlarged the sum total of food at the disposal of humankind, but the extra food did not translate into a better diet or more leisure. Rather, it translated into population explosions and pampered elites. **The average farmer worked harder than the average forager, and got a worse diet in return. The Agricultural Revolution was history's biggest fraud**.

The culprits were a handful of plant species, including wheat, rice and potatoes. These plants domesticated Homo sapiens, rather than vice versa.

According to the basic evolutionary criteria of survival and reproduction, wheat has become one of the most successful plants in the history of the earth.

the new agricultural tasks demanded so much time that people were forced to settle permanently next to their wheat fields. This completely changed their way of life. **We did not domesticate wheat. It domesticated us.**

The life of a peasant is less secure than that of a hunter-gatherer.

Cultivating wheat provided much more food per unit of territory, and thereby enabled Homo sapiens to multiply exponentially.

This is the essence of the Agricultural Revolution: the ability to keep more people alive under worse conditions.

Humans, like many mammals, have hormonal and genetic mechanisms that help control procreation. In good times females reach puberty earlier, and their chances of getting pregnant are a bit higher. In bad times puberty is late and fertility decreases.

People tried to space their children three to four years apart. Women did so by nursing their children around the clock and until a late age (around-the-clock suckling significantly decreases the chances of getting pregnant).

But by the time they reach that age, they have large mortgages, children to school, houses in the suburbs that necessitate at least two cars per family, and a sense that life is not worth living without really good wine and expensive holidays abroad. What are they supposed to do, go back to digging up roots? No, they double their efforts and keep slaving away.

One of history's few iron laws is that luxuries tend to become necessities and to spawn new obligations. Once people get used to a certain luxury, they take it for granted. Then they begin to count on it. Finally they reach a point where they can't live without it.

This discrepancy between evolutionary success and individual suffering is perhaps the most important lesson we can draw from the Agricultural Revolution.

Building Pyramids

The Agricultural Revolution made the future far more important than it had ever been before. Farmers must always keep the future in mind and must work in its service.

Until the late modern era, more than 90 percent of humans were peasants who rose each morning to till the land by the sweat of their brows. The extra they produced fed the tiny minority of elites – kings, government officials, soldiers, priests, artists and thinkers – who fill the history books. **History is something that very few people have been doing while everyone else was ploughing fields and carrying water buckets.**

People today spend a great deal of money on holidays abroad because they are true believers in the myths of romantic consumerism.

Romanticism tells us that in order to make the most of our human potential we must have as many different experiences as we can. We must open ourselves to a wide spectrum of emotions; we must sample various kinds of relationships; we must try different cuisines; we must learn to appreciate different styles of music.

Romanticism, which encourages variety, meshes perfectly with consumerism. Their marriage has given birth to the infinite 'market of experiences', on which the modern tourism industry is

founded. The tourism industry does not sell flight tickets and hotel bedrooms. It sells experiences.

Like the elite of ancient Egypt, most people in most cultures dedicate their lives to building pyramids. Only the names, shapes and sizes of these pyramids change from one culture to the other. They may take the form, for example, of a suburban cottage with a swimming pool and an evergreen lawn, or a gleaming penthouse with an enviable view. Few question the myths that cause us to desire the pyramid in the first place.

The inter-subjective is something that exists within the communication network linking the subjective consciousness of many individuals. If a single individual changes his or her beliefs, or even dies, it is of little importance. However, if most individuals in the network die or change their beliefs, the inter-subjective phenomenon will mutate or disappear.

Memory Overload

Between the years 3500 BC and 3000 BC, some unknown Sumerian geniuses invented a system for storing and processing information outside their brains, one that was custom-built to handle large amounts of mathematical data. The Sumerians thereby released their social order from the limitations of the human brain, opening the way for the appearance of cities, kingdoms and empires. The data-processing system invented by the Sumerians is called ‘writing’.

(The Sumerians used a combination of base-6 and base-10 numeral systems. Their base-6 system bestowed on us several important legacies, such as the division of the day into twenty-four hours and of the circle into 360 degrees.)

the first texts of history contain no philosophical insights, no poetry, legends, laws, or even royal triumphs. They are humdrum economic documents, recording the payment of taxes, the accumulation of debts and the ownership of property.

Writing was born as the maidservant of human consciousness, but is increasingly becoming its master. Our computers have trouble understanding how Homo sapiens talks, feels and dreams. So we are teaching Homo sapiens to talk, feel and dream in the language of numbers, which can be understood by computers.

There is No Justice in History

According to a famous Hindu creation myth, the gods fashioned the world out of the body of a primeval being, the Purusa. The sun was created from the Purusa’s eye, the moon from the Purusa’s brain, the Brahmins (priests) from its mouth, the Kshatriyas (warriors) from its arms, the Vaishyas (peasants and merchants) from its thighs, and the Shudras (servants) from its legs.

‘Look,’ said the average white citizen, ‘blacks have been free for generations, yet there are almost no black professors, lawyers, doctors or even bank tellers. Isn’t that proof that blacks are simply less intelligent and hard-working?’ Trapped in this vicious circle, blacks were not hired for

white-collar jobs because they were deemed unintelligent, and the proof of their inferiority was the paucity of blacks in white-collar jobs.

Such vicious circles can go on for centuries and even millennia, perpetuating an imagined hierarchy that sprang from a chance historical occurrence. **Unjust discrimination often gets worse, not better, with time. Money comes to money, and poverty to poverty. Education comes to education, and ignorance to ignorance. Those once victimised by history are likely to be victimised yet again. And those whom history has privileged are more likely to be privileged again.**

Culture tends to argue that it forbids only that which is unnatural. But from a biological perspective, nothing is unnatural. Whatever is possible is by definition also natural. A truly unnatural behaviour, one that goes against the laws of nature, simply cannot exist, so it would need no prohibition. No culture has ever bothered to forbid men to photosynthesise, women to run faster than the speed of light, or negatively charged electrons to be attracted to each other.

Since myths, rather than biology, define the roles, rights and duties of men and women, the meaning of ‘manhood’ and ‘womanhood’ have varied immensely from one society to another.

The most common theory points to the fact that men are stronger than women, and that they have used their greater physical power to force women into submission

First, the statement that ‘men are stronger than women’ is true only on average, and only with regard to certain types of strength. Women are generally more resistant to hunger, disease and fatigue than men. There are also many women who can run faster and lift heavier weights than many men.

women have, throughout history, been excluded mainly from jobs that require little physical effort (such as the priesthood, law and politics), while engaging in hard manual labour in the fields, in crafts and in the household. If social power were divided in direct relation to physical strength or stamina, women should have got far more of it.

there simply is no direct relation between physical strength and social power among humans. People in their sixties usually exercise power over people in their twenties, even though twentysomethings are much stronger than their elders.

Another theory explains that masculine dominance results not from strength but from aggression. Millions of years of evolution have made men far more violent than women. Women can match men as far as hatred, greed and abuse are concerned, but when push comes to shove, the theory goes, men are more willing to engage in raw physical violence. This is why throughout history warfare has been a masculine prerogative.

As men competed against each other for the opportunity to impregnate fertile women, an individual’s chances of reproduction depended above all on his ability to outperform and defeat other men. As time went by, the masculine genes that made it to the next generation were those belonging to the most ambitious, aggressive and competitive men.

In order to ensure her own survival and the survival of her children, the woman had little choice but to agree to whatever conditions the man stipulated so that he would stick around and share some of the burden. As time went by, the feminine genes that made it to the next generation belonged to women who were submissive caretakers.

Particularly problematic is the assumption that women's dependence on external help made them dependent on men, rather than on other women, and that male competitiveness made men socially dominant.

Bonobo and elephant societies are controlled by strong networks of cooperative females, while the self-centred and uncooperative males are pushed to the sidelines.

The Arrow of History

Democrats want a more equitable society, even if it means raising taxes to fund programmes to help the poor, elderly and infirm. But that infringes on the freedom of individuals to spend their money as they wish. Why should the government force me to buy health insurance if I prefer using the money to put my kids through college?

Republicans, on the other hand, want to maximise individual freedom, even if it means that the income gap between rich and poor will grow wider and that many Americans will not be able to afford health care.

If tensions, conflicts and irresolvable dilemmas are the spice of every culture, a human being who belongs to any particular culture must hold contradictory beliefs and be riven by incompatible values. It's such an essential feature of any culture that it even has a name: cognitive dissonance. **Cognitive dissonance is often considered a failure of the human psyche. In fact, it is a vital asset. Had people been unable to hold contradictory beliefs and values, it would probably have been impossible to establish and maintain any human culture.**

Today, we are used to thinking about the whole planet as a single unit, but for most of history, earth was in fact an entire galaxy of isolated human worlds.

One of the most interesting examples of this globalisation is 'ethnic' cuisine. In an Italian restaurant we expect to find spaghetti in tomato sauce; in Polish and Irish restaurants lots of potatoes; in an Argentinian restaurant we can choose between dozens of kinds of beefsteaks; in an Indian restaurant hot chillies are incorporated into just about everything; and the highlight at any Swiss café is thick hot chocolate under an alp of whipped cream. **But none of these foods is native to those nations. Tomatoes, chilli peppers and cocoa are all Mexican in origin; they reached Europe and Asia only after the Spaniards conquered Mexico. Julius Caesar and Dante Alighieri never twirled tomato-drenched spaghetti on their forks (even forks hadn't been invented yet), William Tell never tasted chocolate, and Buddha never spiced up his food with chilli. Potatoes reached Poland and Ireland no more than 400 years ago. The only steak you could obtain in Argentina in 1492 was from a llama**.

Merchants, conquerors and prophets were the first people who managed to transcend the binary evolutionary division, 'us vs them', and to foresee the potential unity of humankind. For

the merchants, the entire world was a single market and all humans were potential customers. They tried to establish an economic order that would apply to all, everywhere. For the conquerors, the entire world was a single empire and all humans were potential subjects, and for the prophets, the entire world held a single truth and all humans were potential believers. They too tried to establish an order that would be applicable for everyone everywhere.

The Scent of Money

In a barter economy, every day the shoemaker and the apple grower will have to learn anew the relative prices of dozens of commodities. If one hundred different commodities are traded in the market, then buyers and sellers will have to know 4,950 different exchange rates. And if 1,000 different commodities are traded, buyers and sellers must juggle 499,500 different exchange rates! How do you figure it out? (Current problem in the crypto space.)

Some societies tried to solve the problem by establishing a central barter system that collected products from specialist growers and manufacturers and distributed them to those who needed them. The largest and most famous such experiment was conducted in the Soviet Union, and it failed miserably. ‘Everyone would work according to their abilities, and receive according to their needs’ turned out in practice into ‘everyone would work as little as they can get away with, and receive as much as they could grab’. More moderate and more successful experiments were made on other occasions, for example in the Inca Empire. Yet most societies found a more easy way to connect large numbers of experts – they developed money.

Money is not coins and banknotes. Money is anything that people are willing to use in order to represent systematically the value of other things for the purpose of exchanging goods and services.

The sum total of money in the world is about $60 trillion, yet the sum total of coins and banknotes is less than $6 trillion. **More than 90 percent of all money – more than $50 trillion appearing in our accounts – exists only on computer servers.**

When a wealthy farmer sold his possessions for a sack of cowry shells and travelled with them to another province, he trusted that upon reaching his destination other people would be willing to sell him rice, houses and fields in exchange for the shells. Money is accordingly a system of mutual trust, and not just any system of mutual trust: money is the most universal and most efficient system of mutual trust ever devised.

The silver shekel was not a coin, but rather 0.3 ounces of silver. When Hammurabi’s Code declared that a superior man who killed a slave woman must pay her owner twenty silver shekels, it meant that he had to pay 6 ounces of silver, not twenty coins.

Counterfeiting is not just cheating – it’s a breach of sovereignty, an act of subversion against the power, privileges and person of the king. The legal term is lese-majesty (violating majesty), and was typically punished by torture and death.

The Indians had such a strong confidence in the denarius and the image of the emperor that when local rulers struck coins of their own they closely imitated the denarius, down to the

portrait of the Roman emperor! The name ‘denarius’ became a generic name for coins. Muslim caliphs Arabicised this name and issued ‘dinars’. The dinar is still the official name of the currency in Jordan, Iraq, Serbia, Macedonia, Tunisia and several other countries.

Imperial Visions

First, to qualify for that designation you have to rule over a significant number of distinct peoples, each possessing a different cultural identity and a separate territory.

Second, **empires are characterised by flexible borders and a potentially unlimited appetite**. They can swallow and digest more and more nations and territories without altering their basic structure or identity. The British state of today has fairly clear borders that cannot be exceeded without altering the fundamental structure and identity of the state. A century ago almost any place on earth could have become part of the British Empire.

Evolution has made Homo sapiens, like other social mammals, a xenophobic creature. Sapiens instinctively divide humanity into two parts, ‘we’ and ‘they’.

In the language of the Dinka people of the Sudan, ‘Dinka’ simply means ‘people’. People who are not Dinka are not people. The Dinka’s bitter enemies are the Nuer. What does the word Nuer mean in Nuer language? It means ‘original people’.

The sun never set on the British mission to spread the twin gospels of liberalism and free trade. The Soviets felt duty-bound to facilitate the inexorable historical march from capitalism towards the utopian dictatorship of the proletariat. Many Americans nowadays maintain that their government has a moral imperative to bring Third World countries the benefits of democracy and human rights, even if these goods are delivered by cruise missiles and F-16s.

Commercial tea farming did not exist in India until the mid-nineteenth century, when it was introduced by the British East India Company. It was the snobbish British sahibs who spread the custom of tea drinking throughout the subcontinent.

The Law of Religion

Religion can thus be defined as a system of human norms and values that is founded on a belief in a superhuman order. This involves two distinct criteria:

Animists thought that humans were just one of many creatures inhabiting the world. Polytheists, on the other hand, increasingly saw the world as a reflection of the relationship between gods and humans.

In fact, most polytheist and even animist religions recognised such a supreme power that stands behind all the different gods, demons and holy rocks. In classical Greek polytheism, Zeus, Hera, Apollo and their colleagues were subject to an omnipotent and all-encompassing power – Fate (Moira, Ananke).

The fundamental insight of polytheism, which distinguishes it from monotheism, is that the supreme power governing the world is devoid of interests and biases, and therefore it is unconcerned with the mundane desires, cares and worries of humans.

The Greeks did not waste any sacrifices on Fate, and Hindus built no temples to Atman.

There are necessarily many of these smaller powers, since once you start dividing up the all-encompassing power of a supreme principle, you'll inevitably end up with more than one deity. Hence the plurality of gods.

The insight of polytheism is conducive to far-reaching religious tolerance. Since polytheists believe, on the one hand, in one supreme and completely disinterested power, and on the other hand in many partial and biased powers, there is no difficulty for the devotees of one god to accept the existence and efficacy of other gods. Polytheism is inherently open-minded, and rarely persecutes 'heretics' and 'infidels'.

In many cases the imperial elite itself adopted the gods and rituals of subject people. **The Romans happily added the Asian goddess Cybele and the Egyptian goddess Isis to their pantheon.**

The only god that the Romans long refused to tolerate was the monotheistic and evangelising god of the Christians. **The Roman Empire did not require the Christians to give up their beliefs and rituals, but it did expect them to pay respect to the empire's protector gods and to the divinity of the emperor. This was seen as a declaration of political loyalty. When the Christians vehemently refused to do so, and went on to reject all attempts at compromise, the Romans reacted by persecuting what they understood to be a politically subversive faction. And even this was done half-heartedly.**

Still, if we combine all the victims of all these persecutions, it turns out that in these three centuries, the polytheistic **Romans killed no more than a few thousand Christians. In contrast, over the course of the next 1,500 years, Christians slaughtered Christians by the millions to defend slightly different interpretations of the religion of love and compassion.**

The Christian saints did not merely resemble the old polytheistic gods. Often they were these very same gods in disguise. **For example, the chief goddess of Celtic Ireland prior to the coming of Christianity was Brigid. When Ireland was Christianised, Brigid too was baptised. She became St Brigit, who to this day is the most revered saint in Catholic Ireland.**

Zoroastrians saw the world as a cosmic battle between the good god Ahura Mazda and the evil god Angra Mainyu.

Gautama found that there was a way to exit this vicious circle. If, when the mind experiences something pleasant or unpleasant, it simply understands things as they are, then there is no suffering. If you experience sadness without craving that the sadness go away, you continue to feel sadness but you do not suffer from it. There can actually be richness in the sadness. If you

experience joy without craving that the joy linger and intensify, you continue to feel joy without losing your peace of mind.

He encapsulated his teachings in a single law: suffering arises from craving; the only way to be fully liberated from suffering is to be fully liberated from craving; and the only way to be liberated from craving is to train the mind to experience reality as it is.

The modern age has witnessed the rise of a number of new natural-law religions, such as liberalism, Communism, capitalism, nationalism and Nazism.

If a religion is a system of human norms and values that is founded on belief in a superhuman order, then Soviet Communism was no less a religion than Islam.

Scientists studying the inner workings of the human organism have found no soul there. They increasingly argue that human behaviour is determined by hormones, genes and synapses, rather than by free will – the same forces that determine the behaviour of chimpanzees, wolves, and ants. Our judicial and political systems largely try to sweep such inconvenient discoveries under the carpet. But in all frankness, how long can we maintain the wall separating the department of biology from the departments of law and political science?

The Secret of Success

This is one of the distinguishing marks of history as an academic discipline – the better you know a particular historical period, the harder it becomes to explain why things happened one way and not another.

Level two chaos is chaos that reacts to predictions about it, and therefore can never be predicted accurately. Markets, for example, are a level two chaotic system.

Most scholars in the humanities disdain memetics, seeing it as an amateurish attempt to explain cultural processes with crude biological analogies. But many of these same scholars adhere to memetics' twin sister – postmodernism. Postmodernist thinkers speak about discourses rather than memes as the building blocks of culture. Yet they too see cultures as propagating themselves with little regard for the benefit of humankind.

The Discovery of Ignorance

But the single most remarkable and defining moment of the past 500 years came at 05:29:45 on 16 July 1945. At that precise second, American scientists detonated the first atomic bomb at Alamogordo, New Mexico. From that point onward, humankind had the capability not only to change the course of history, but to end it.

Throughout history, societies have suffered from two kinds of poverty: social poverty, which withholds from some people the opportunities available to others; and biological poverty, which puts the very lives of individuals at risk due to lack of food and shelter. Perhaps social poverty can never be eradicated, but in many countries around the world biological poverty is a thing of the past.

The Marriage of Science and Empire

Astronomers predicted that the next Venus transits would occur in 1761 and 1769. So expeditions were sent from Europe to the four corners of the world in order to observe the transits from as many distant points as possible. In 1761 scientists observed the transit from Siberia, North America, Madagascar and South Africa.

Many cultures drew world maps long before the modern age. Obviously, none of them really knew the whole of the world. No Afro-Asian culture knew about America, and no American culture knew about Afro-Asia. But **unfamiliar areas were simply left out, or filled with imaginary monsters and wonders. These maps had no empty spaces. They gave the impression of a familiarity with the entire world.**

During the fifteenth and sixteenth centuries, Europeans began to draw world maps with lots of empty spaces – one indication of the development of the scientific mindset, as well as of the European imperial drive. The empty maps were a psychological and ideological breakthrough, a clear admission that Europeans were ignorant of large parts of the world.

The discovery of America was the foundational event of the Scientific Revolution. It not only taught Europeans to favour present observations over past traditions, but the desire to conquer America also obliged Europeans to search for new knowledge at breakneck speed.

The Aztec Empire was an extremely centralised polity, and this unprecedented situation paralysed it. Montezuma continued to behave as if he ruled the empire, and the Aztec elite continued to obey him, which meant they obeyed Cortés. This situation lasted for several months, during which time Cortés interrogated Montezuma and his attendants, trained translators in a variety of local languages, and sent small Spanish expeditions in all directions to become familiar with the Aztec Empire and the various tribes, peoples and cities that it ruled.

The Capitalist Creed

Banks are allowed to loan $10 for every dollar they actually possess, which means that 90 percent of all the money in our bank accounts is not covered by actual coins and notes.

Because credit was limited, people had trouble financing new businesses. Because there were few new businesses, the economy did not grow. Because it did not grow, people assumed it never would, and those who had capital were wary of extending credit. The expectation of stagnation fulfilled itself.

Today, there is so much credit in the world that governments, business corporations and private individuals easily obtain large, long-term and low-interest loans that far exceed current income.

Smith made the following novel argument: when a landlord, a weaver, or a shoemaker has greater profits than he needs to maintain his own family, he uses the surplus to employ more assistants, in order to further increase his profits. The more profits he has, the more assistants

he can employ. It follows that an increase in the profits of private entrepreneurs is the basis for the increase in collective wealth and prosperity.

All this depends, however, on the rich using their profits to open new factories and hire new employees, rather than wasting them on non-productive activities. Smith therefore repeated like a mantra the maxim that 'When profits increase, the landlord or weaver will employ more assistants' and not 'When profits increase, Scrooge will hoard his money in a chest and take it out only to count his coins.'

In order to control trade on the important Hudson River, WIC built a settlement called New Amsterdam on an island at the river's mouth. The colony was threatened by Indians and repeatedly attacked by the British, who eventually captured it in 1664. The British changed its name to New York. The remains of the wall built by WIC to defend its colony against Indians and British are today paved over by the world's most famous street – Wall Street.

In the late 1830s the Chinese government issued a ban on drug trafficking, but British drug merchants simply ignored the law. Chinese authorities began to confiscate and destroy drug cargos. The drug cartels had close connections in Westminster and Downing Street – many MPs and Cabinet ministers in fact held stock in the drug companies – so they pressured the government to take action.

In 1840 Britain duly declared war on China in the name of 'free trade'. It was a walkover. The overconfident Chinese were no match for Britain's new wonder weapons – steamboats, heavy artillery, rockets and rapid-fire rifles. Under the subsequent peace treaty, China agreed not to constrain the activities of British drug merchants and to compensate them for damages inflicted by the Chinese police. Furthermore, the British demanded and received control of Hong Kong, which they proceeded to use as a secure base for drug trafficking (Hong Kong remained in British hands until 1997). In the late nineteenth century, about 40 million Chinese, a tenth of the country's population, were opium addicts.

This is the fly in the ointment of free-market capitalism. It cannot ensure that profits are gained in a fair way, or distributed in a fair manner. On the contrary, the craving to increase profits and production blinds people to anything that might stand in the way. When growth becomes a supreme good, unrestricted by any other ethical considerations, it can easily lead to catastrophe. Some religions, such as Christianity and Nazism, have killed millions out of burning hatred. Capitalism has killed millions out of cold indifference coupled with greed. The Atlantic slave trade did not stem from racist hatred towards Africans. The individuals who bought the shares, the brokers who sold them, and the managers of the slave-trade companies rarely thought about the Africans. Nor did the owners of the sugar plantations. Many owners lived far from their plantations, and the only information they demanded were neat ledgers of profits and losses.

The Wheels of Industry

At first, the idea of using gunpowder to propel projectiles was so counter-intuitive that for centuries gunpowder was used primarily to produce fire bombs. But eventually – perhaps after some bomb expert ground gunpowder in a mortar only to have the pestle

shoot out with force – guns made their appearance. About 600 years passed between the invention of gunpowder and the development of effective artillery.

separating the metal from its ore was extremely difficult and costly. For decades, aluminium was much more expensive than gold. In the 1860s, Emperor Napoleon III of France commissioned aluminium cutlery to be laid out for his most distinguished guests. Less important visitors had to make do with the gold knives and forks.

Two thousand years ago, when people in the Mediterranean basin suffered from dry skin they smeared olive oil on their hands.

To Harlow's surprise, the infant monkeys showed a marked preference for the cloth mother, spending most of their time with her. When the two mothers were placed in close proximity, the infants held on to the cloth mother even while they reached over to suck milk from the metal mother.

carelessly on extravagant luxuries, whereas peasants lived frugally, minding every penny. **Today, the tables have turned. The rich take great care managing their assets and investments, while the less well heeled go into debt buying cars and televisions they don't really need.**

A Permanent Revolution

The Industrial Revolution turned the timetable and the assembly line into a template for almost all human activities. Shortly after factories imposed their time frames on human behaviour, schools too adopted precise timetables, followed by hospitals, government offices and grocery stores. Even in places devoid of assembly lines and machines, the timetable became king. If the shift at the factory ends at 5 P.M., the local pub had better be open for business by 5:02.

Prior to the Industrial Revolution, the daily life of most humans ran its course within three ancient frames: the nuclear family, the extended family and the local intimate community.* Most people worked in the family business – the family farm or the family workshop, for example – or they worked in their neighbours' family businesses. The family was also the welfare system, the health system, the education system, the construction industry, the trade union, the pension fund, the insurance company, the radio, the television, the newspapers, the bank and even the police.

Yet throughout history, such imagined communities played second fiddle to intimate communities of several dozen people who knew each other well. The intimate communities fulfilled the emotional needs of their members and were essential for everyone's survival and welfare. In the last two centuries, the intimate communities have withered, leaving imagined communities to fill in the emotional vacuum.

The two most important examples for the rise of such imagined communities are the nation and the consumer tribe.

In recent decades, national communities have been increasingly eclipsed by tribes of customers who do not know one another intimately but share the same consumption habits and interests, and therefore feel part of the same consumer tribe – and define themselves as such. This sounds very strange, but we are surrounded by examples. **Madonna fans, for example, constitute a consumer tribe. They define themselves largely by shopping. They buy Madonna concert tickets, CDs, posters, shirts and ring tones, and thereby define who they are.**

In the year 2000, wars caused the deaths of 310,000 individuals, and violent crime killed another 520,000. Each and every victim is a world destroyed, a family ruined, friends and relatives scarred for life. Yet from a macro perspective these 830,000 victims comprised only 1.5 per cent of the 56 million people who died in 2000. That year 1.26 million people died in car accidents (2.25 per cent of total mortality) and 815,000 people committed suicide (1.45 per cent).

In 1964 a military dictatorship was established in Brazil. It ruled the country until 1985. During these twenty years, several thousand Brazilians were murdered by the regime. Thousands more were imprisoned and tortured. Yet even in the worst years, the average Brazilian in Rio de Janeiro was far less likely to die at human hands than the average Waorani, Arawete or Yanomamo are, indigenous people who live in the depths of the Amazon forest, without army, police or prisons. Anthropological studies have indicated that between a quarter and a half of their menfolk die sooner or later in violent conflicts over property, women or prestige.8

Yet the Soviet elite, and the Communist regimes through most of eastern Europe (Romania and Serbia were the exceptions), chose not to use even a tiny fraction of this military power. When its members realised that Communism was bankrupt, they renounced force, admitted their failure, packed their suitcases and went home. Gorbachev and his colleagues gave up without a struggle not only the Soviet conquests of World War Two, but also the much older tsarist conquests in the Baltic, the Ukraine, the Caucasus and Central Asia. It is chilling to contemplate what might have happened if Gorbachev had behaved like the Serbian leadership – or like the French in Algeria.

For real peace is not the mere absence of war. Real peace is the implausibility of war. There has never been real peace in the world. Between 1871 and 1914, a European war remained a plausible eventuality, and the expectation of war dominated the thinking of armies, politicians and ordinary citizens alike.

Today humankind has broken the law of the jungle. There is at last real peace, and not just absence of war. For most polities, there is no plausible scenario leading to full-scale conflict within one year. What could lead to war between Germany and France next year?

The Nobel Peace Prize to end all peace prizes should have been given to Robert Oppenheimer and his fellow architects of the atomic bomb. Nuclear weapons have turned war between superpowers into collective suicide, and made it impossible to seek world domination by force of arms.

For most of history, polities could enrich themselves by looting or annexing enemy territories. Most wealth consisted of material things like fields, cattle, slaves and gold, so it was easy to loot

it or occupy it. **Today, wealth consists mainly of human capital and organizational know-how. Consequently it is difficult to carry it off or conquer it by military force**.

What would happen if the Chinese were to mount an armed invasion of California, land a million soldiers on the beaches of San Francisco and storm inland? They would gain little. There are no silicon mines in Silicon Valley. The wealth resides in the minds of Google engineers and Hollywood script doctors, directors and special-effects wizards, who would be on the first plane to Bangalore or Mumbai long before the Chinese tanks rolled into Sunset Boulevard.

It is not coincidental that the few full-scale international wars that still take place in the world, such as the Iraqi invasion of Kuwait, occur in places where wealth is old-fashioned material wealth. The Kuwaiti sheikhs could flee abroad, but the oil fields stayed put and were occupied.

And They Lived Happily Ever After

though the last few decades have been an unprecedented golden age for humanity, it is too early to know whether this represents a fundamental shift in the currents of history or an ephemeral eddy of good fortune.

But the most important finding of all is that happiness does not really depend on objective conditions of either wealth, health or even community. Rather, it depends on the correlation between objective conditions and subjective expectations. If you want a bullock-cart and get a bullock-cart, you are content. If you want a brand-new Ferrari and get only a second-hand Fiat you feel deprived.

This is why winning the lottery has, over time, the same impact on people's happiness as a debilitating car accident. When things improve, expectations balloon, and consequently even dramatic improvements in objective conditions can leave us dissatisfied.

After all, our chimpanzee cousins seldom wash and never change their clothes. **Nor are we disgusted by the fact that our pet dogs and cats don't shower or change their coats daily. We pat, hug and kiss them all the same.**

If happiness is determined by expectations, then two pillars of our society – mass media and the advertising industry – may unwittingly be depleting the globe's reservoirs of contentment.

Suppose science comes up with cures for all diseases, effective anti-ageing therapies and regenerative treatments that keep people indefinitely young. In all likelihood, the immediate result will be an unprecedented epidemic of anger and anxiety.

Some scholars compare human biochemistry to an air-conditioning system that keeps the temperature constant, come heatwave or snowstorm. Events might momentarily change the temperature, but the air-conditioning system always returns the temperature to the same set point.

Take the work involved in raising a child. Kahneman found that when counting moments of joy and moments of drudgery, bringing up a child turns out to be a rather unpleasant affair. It consists largely of changing nappies, washing dishes and dealing with temper tantrums, which nobody likes to do. Yet most parents declare that their children are their chief source of happiness. Does it mean that people don't really know what's good for them?

That's one option. Another is that the findings demonstrate that happiness is not the surplus of pleasant over unpleasant moments. Rather, happiness consists in seeing one's life in its entirety as meaningful and worthwhile.

The scientist who says her life is meaningful because she increases the store of human knowledge, the soldier who declares that his life is meaningful because he fights to defend his homeland, and the entrepreneur who finds meaning in building a new company are no less delusional than their medieval counterparts who found meaning in reading scriptures, going on a crusade or building a new cathedral.

As long as my personal narrative is in line with the narratives of the people around me, I can convince myself that my life is meaningful, and find happiness in that conviction.

What is so important about obtaining such ephemeral prizes? Why struggle so hard to achieve something that disappears almost as soon as it arises? According to Buddhism, the root of suffering is neither the feeling of pain nor of sadness nor even of meaninglessness. Rather, the real root of suffering is this never-ending and pointless pursuit of ephemeral feelings, which causes us to be in a constant state of tension, restlessness and dissatisfaction.

The End of Homo Sapiens

What would happen, for example, if we developed a cure for Alzheimer's disease that, as a side benefit, could dramatically improve the memories of healthy people? Would anyone be able to halt the relevant research? And when the cure is developed, could any law enforcement agency limit it to Alzheimer's patients and prevent healthy people from using it to acquire super-memories?

Imagine another possibility – suppose you could back up your brain to a portable hard drive and then run it on your laptop. Would your laptop be able to think and feel just like a Sapiens? If so, would it be you or someone else? What if computer programmers could create an entirely new but digital mind, composed of computer code, complete with a sense of self, consciousness and memory? If you ran the program on your computer, would it be a person? If you deleted it could you be charged with murder?

When the nuclear age erupted in the 1940s, many forecasts were made about the future nuclear world of the year 2000. When sputnik and Apollo II fired the imagination of the world, everyone began predicting that by the end of the century, people would be living in space colonies on Mars and Pluto. Few of these forecasts came true. On the other hand, nobody foresaw the Internet.

The only thing we can try to do is to influence the direction scientists are taking. But since we might soon be able to engineer our desires too, the real question facing us is not 'What do we

want to become?', but 'What do we want to want?' Those who are not spooked by this question probably haven't given it enough thought.

The Animal that Became a God

Is there anything more dangerous than dissatisfied and irresponsible gods who don't know what they want?