

'HOMO DEUS' – A Summary & Review by Mark Herr

The following summary is my personal distillation of the contents in & concepts of 'Homo Deus.' My fascination and concern with the implications of AI being perceived, collectively by humankind, as either human or non-human sentience drove these efforts.

In some small way, I hope my summary of 'Homo Deus' inspires you to (1) purchase and read it in its entirety, (2) join the 21st Century debate on AI, and (3) discover solutions to the numerous challenges AI will, not may, bring to you, your family, and the human family at large.

Throughout his work, Harari asserts SCIENCE has determined EVOLUTION is origin, God is dead, Humans have no soul, self, or individuality, and therefore, there is no meaning other than the fictional stories humans create. Harari concludes that SCIENCE has decided organisms, including humans, are ALGORITHMS and subsequently, that human FREE WILL (freedom) does not exist.

Converse to the 'myth' that humans are the apex of creation, SCIENCE concludes human decision-making is either random or deterministic based on biochemical processes influenced by EVOLUTION, rather than by external cosmic entities such as God. Consequently, Harari predicts that future generations will require new novel RELIGIONS and political structures to compensate for these 'SCIENTIFIC' revelations.

As a result of these SCIENTIFIC determinations, Harari predicts humans will lose economic & military usefulness, the 'system' will find value in humans collectively, not individually, although the 'system' will still find value in a few unique rich elite individuals who upgrade to 'superhuman'.

In reaching these conclusions, Harari paints the non-theocratic RELIGION of LIBERAL HUMANISM, like other failed human myths, as clinging desperately to the fantasy of human individuality and the sole authors of meaning in the universe. Instead, he points out, LIBERAL HUMANISM will speed humanity towards a fatal cataclysm – the extinction of Homo Sapiens in exchange for a new 'upgraded' Homo Deus (a 21st century techno-religion based on (1) upgrading the healthy, rather than healing the sick and (2) upgrading cooperative humans via bioengineering and computer algorithms).

Harari predicts that those Homo Sapiens who do not 'upgrade' will become 'unemployable' 'useless masses' subject to or ignored entirely by the so-called upgraded 'superhumans,' a group of small elite rich humans. Harari proposes, like keeping farm animals' content, that 'drugs and computer games' may be the answer to keeping the 'useless masses' content & pre-occupied.

He warns once TECHNO-HUMANISM RELIGIONS can design or redesign the human 'will', the 'sacred' human will become like any other designer product – a product that does not revolve around the desires and experiences of humans and is merely a ripple in the cosmic data flow.

These thought processes permeate throughout the book and drives the discussion towards a conclusion – that ALGORITHMS, both biological and electronic, comprised of conscious and non-conscious entities, will rule the world and that non-conscious but highly intelligent ALGORITHMS will end up knowing humans better than humans know themselves.

In my personal conclusion, I suggest clear private and public definitions of Personhood and Religion are discussed, by humans, and legally or constitutionally agreed to. Nonetheless, what will be humanity's fate – that is up to humanity to discover during the 21st century!

Mark Herr (July 12, 2023)

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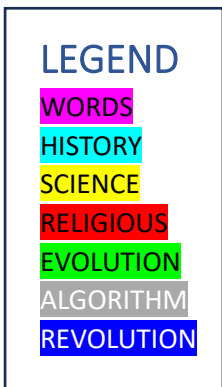
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1. HUMANITY'S NEW AGENDA

1st – Death (p21)

As famine, war, and plague are solved, what will be at the top of the human agenda: upgrade homo sapiens into home deus.

UN Declaration of Rights: Death is a crime against humanity, and we should wage war against it.

Christianity, Islam, Hinduism view death (afterlife) as the SOURCE OF LIFE'S MEANING

Modern **Science** & modern culture DO NOT view death as the SOURCE OF LIFE'S MEANING...rather, a technical problem (a technical glitch) that can be solved...

Equality is out – Immortality is in (in the 21st century, we should be able to double life expectancy – will affect relationships, professions, and retirement)

What would you be willing to pay to upgrade your body – if you think religious fanatics were bad, wait till elites think immortality is within reach?

2nd – Happiness (p30)

Finding the 'key' to happiness. In the 18th century, humans had the right to pursue happiness. In the 21st century, humans have the right to happiness. Experts (thinkers, politicians, economists, etc.) are calling to replace GDP with GDH.

According to **science**, happiness is due to two factors: psychological and biological. **NOT SPIRITUAL?**

Happiness is nothing more than pleasure free from pain...beyond pleasure & pain there is no good or evil (no Word of God or national interest)

Science says no one is made happy by an experience, they are made happy by pleasant sensations in their bodies.

This is the fault of evolution – our biochemical system rewards actions conducive to survival and reproduction with pleasant sensations. **NOT SPIRITUAL?**

EVOLUTION controls us with a broad range of pleasures.

If **science** is right and our happiness is determined by our biochemical systems, THEN THE ONLY WAY TO ENSURE LASTING CONTENTMENT IS BY RIGGING THE SYSTEM – manipulate human biochemistry (forget economic success, political revolution, or social reforms)

Humans agree to change education – change the schools...INSTEAD, CHANGE STUDENT'S BIOCHEMISTRY

As biochemical pursuit of happiness accelerates, it will reshape politics, economics, and society, ensuring it will be hard to bring under control.

To attain real happiness, humans need to slow down the pursuit of pleasant sensations – not speed them up.

To ensure global happiness, humans will need to be re-engineered so that it can enjoy everlasting pleasure.

3rd – Divinity (p41)

Upgrading humans into 'gods' will involve one of three ENGINEERING paths: biological, cyborg, or non-organic beings.

Biological

EVOLUTION: We have gone from amoeba to reptiles to mammals to Sapiens. **NOT SPIRITUAL?** Small changes in genes, hormones, and neurons were enough to transform Homo Erectus into Homo Sapiens. Bioengineers are not going to wait on NATURAL SELECTION, they are going to intentionally rewrite Sapiens genetic code, rewire brain circuits, alter biochemical balance, and grow new limbs.

Cyborg

Will go one step further than bioengineering...and merge organic body with non-organic devices (i.e., bionic hands or eyes, or millions of nano robots navigating our bloodstream, etc.) A Cyborg could exist in multiple places at the same time or connect its mind to a device and control it remotely. Chip in the hand to unlock doors, pay for food, etc.

Non-organic

Will organic brains go on being the command & control centers of life? Neural networks will be replaced by intelligent software – free from the limitations of organic chemistry. Possibly enabling non-organic beings to colonize the galaxy – replacing Captain Kirk with Mr. Data

When tech enables re-engineered human mind, HSapien disappears, human **history** ends, NEW incomprehensible PROCESS begins.

3rd project of humanity will be to acquire divine powers of creation and destruction & upgrade HSapiens into HDeus.

When thinking of 'divinity' think of Greek gods or Hindu Devas rather than Biblical God...our descendants will have 'foibles, kinks, and limitations', however, will be able to 'love, hate, create, and destroy on a much grander scale.

Scientists today can do much better than the Old Testament God

EVOLUTION: Our descendants will look back and realize that 'they are no longer the kind of animal that wrote the bible'

In pursuit of 'health, happiness, and power' humans will change first one of their features, then another, then another, until they will no longer be human.

HIT THE BRAKES (p49)

In an 'upgraded' world you will like a Neanderthal. You will not be able to count on death from becoming completely irrelevant.

Genetically engineered babies and human level AI is 20-50 years away.

We cannot Hit the Brakes for several reasons.

Firstly

No one knows where the brakes are – no one if fully connecting all the AI, nano, genetics, big data DOTS yet. Since no one understands the 'system' no one can stop 'where we are heading in such a rush.'

Secondly

If we somehow succeed in Hitting the Brakes, our economies, along with society, will collapse. Economies need 'endless projects' which means 'endless growth.'

When you heal the sick you inevitably upgrade the healthy...no clear line separates healing from upgrading...e.g., heal memory of old...upgrades memory of young. Fertilize several eggs – pick the one with least mutations – iterate this for a few generations and you may end up with 'superhumans'?

It is possible to overcome mutation with '3-parent baby'...nuclear DNA from 2 parents and Mitochondrial DNA from 3rd?

Healing is the initial justification for every upgrade...harvesting organs and designer babies may become ubiquitous, hence, VITAL TO THINK ABOUT HUMANITY'S NEW AGENDA

PARADOX OF KNOWLEDGE (p56)

A few clarifications are in order – as this NEW AGENDA may anger a few people.

1st

This is what humankind will do collectively – not any one individual. Those living in palaces always have different agendas than those living in shacks.

2nd

This is a prediction – not a political manifesto.

3rd

Reaching out is not the same as obtaining – YH prediction is what humankind will try to achieve in 21st century.

4th

YH prediction is less of prophecy and more of a way to discuss our present choices.

Knowledge that does not change behavior is useless – however, knowledge that changes behavior rapidly becomes irrelevant. The more data we have and the better we understand **history** – the faster **history** alters course, and the faster knowledge becomes outdated.

It was easy to predict what 10th century Europe would look like but not so in 2016...what kind of political system, job market, or what kind of bodies its inhabitants will possess.

HISTORY OF LAWNS (p59)

Science is not just about predicting the future – the study of **history** is to make us aware of the possibilities we normally do not consider and to be **liberated from history**...**EVOLUTION**: We forget that our world was created by an accidental chain of events.

“Movements seeking to change the world often begin by rewriting **history**, thereby enabling people to reimagine the future. Whether you want workers to go on a general strike, women to take possession of their bodies, or oppressed minorities to demand political rights – the FIRST STEP is to retell their **history**.”

The new **history** will explain that ‘our present situation is neither natural nor eternal. Things were different once. Only a string of chance events (**EVOLUTION**) created the unjust world we know today. If we act wisely, we can change that world, and create a much better one.’

This is why Marxists recount the **history** of capitalism; why feminists study the formation of patriarchal societies; and why AfrAmer commemorate the horrors of the slave trade. They aim not to perpetuate the past, but rather to be **liberated from it**.”

The idea of nurturing lawns originates with aristocracy of Middle Ages French/English – became modern symbol of nobility. Humans came to know ‘lawns’ as sign of POLITICAL POWER, SOCIAL STATUS, & ECONOMIC WEALTH.

HISTORY: When building your new home, you are free to ‘shake off the cultural cargo to you by history and imagine for yourself a new creation. THIS IS THE BEST REASON TO LEARN HISTORY – not predict the future – but to liberate yourself from it and imagine new destinies.

A GUN IN ACT 1 – PURPOSE OF THE BOOK (p65)

WORDS: The predictions in this book are (1) an attempt to discuss present day dilemmas and (2) invitation to change the future...once we say it out loud, we can begin to think about the alternatives

RELIGION: The following chapters discuss HUMANISM – the worship of humankind, how it conquered the world, and its downfall. Taking HUMANISM to its ultimate conclusion exposes its inherent flaws.

This process is seen in geriatric hospitals – due to uncompromising HUMANIST belief in the sanctity of human life, humans keep people alive until they reach such a pitiful state – what exactly sacred?

Due to HUMANIST attempt to upgrade humans may also make humans irrelevant. CPUs powerful enough to understand & overcome ageing & death will probably be powerful enough to replace humans in any and all tasks.

To understand this, we need to investigate:

1) *Who HSapien really is.*

Because the relationship between HSapiens & animals is best model of future relations between superhumans and humans, better to investigate HSapien relations with animals:

- a. HSapien relationship with other animals
- b. What makes HSapiens special
- c. Remember HSapiens origins (**HISTORY**)

2) How HUMANISM became dominant world religion

- Examine the bizarre world HSapiens has created in last millennia (HISTORY)
- Examine the path that took us to our present crossroads.
- Examine how HSapiens came to believe in the humanist creed (RELIGION: universe revolves around humankind and that humans are the source of all meaning & authority)
- Examine the economic, social, & political implications of this creed
- Examine how this creed shapes our daily life, our art, and our most secret desires.

3) Why attempting to fulfill the HUMANIST dream is likely to cause its disintegration

- Describe our current predicament and possible futures.
- Describe why attempts to fulfill HUMANISM may result in its downfall.
- Describe how the search for DIVINITY (immortality, bliss, and divinity) may shake the foundations of our belief in humanity.
- Describe what signs foretell this cataclysm & how it is reflected in our day-to-day decisions.
- Describe what might take HUMANISM' place.

Pharaohs lasted 3000, Popes 1000, and Humanism just under 300. 'Many' think that the downfall of Pharaohs and the 'death of God' were both positive developments. Maybe the collapse of HUMANISM will also be beneficial. People are usually afraid of change because they fear the unknown. But the single greatest constant of HISTORY is that everything changes.

HSAPIENS CONQUERS THE WORLD (Part I)

What is the difference between HSapiens & animals and Is HSapiens a superior life form or local bully?

2. THE ANTHROPOCENE (p71)

The world is mostly populated by humans and their domesticated animals. Wildlife is disappearing.

Scientists divide history of planet into epochs: Pleistocene, Pliocene, Miocene...we live in the Holocene or more 'officially' the Anthropocene (the epoch of humanity – the last 70k years).

HSapiens single most important agent of change in the global ecology...EVOLUTION: since the appearance of life 4B years ago...never has a single species changed the global ecology all by itself.

Now humankind is poised to replace EVOLUTION natural selection with intelligent design, and to extend life from the organic realm into the inorganic. NOT SPIRITUAL?

RELIGION SCIENCE argues that archaic hunter-gatherers may have been ANIMIST: belief in no difference between humans & animals. Example: Elephant killed a person...was angry that its friend was killed by the person (p77)

The Bible rejects ANIMIST beliefs, and its only animist story is the Serpent tempting Eve...speaking to humans in the Pre-Agricultural Revolution. Lesson from Bible: don't listen to snakes and do not talk to animals & plants.

In most Semitic languages 'Eve' means 'snake' or even 'female snake' Eve's name hides an animist myth – snakes are not our enemy and that animist cultures believe humans descended from animals, including snakes & reptiles.

The Bible: humans divinely created from inanimate matter; snake seduces us to rebel against our Heavenly Father.

Animists: humans are just another form of animal descended from snakes or reptiles

When modern humans discovered they evolved from reptiles, they rebelled against God and stopped listening to him or believing in His existence.

Ancestral Needs

The Bible is a by-product of the Agricultural Revolution (AR) and created domesticated animals, the idea of human uniqueness, and new kinds of suffering for the animal kingdom.

The harshness of Domesticated Animals (DA) suffering is not merely found in how they die but how they live. Humans need meat and animals need to reproduce (survive). Humans cause tremendous suffering to animals while ensuring survival & reproduction.

EVOLUTION: Wild pigs versus domesticate pigs...pigs have feelings evolved over thousands of years. AR gave humans power to ensure Survival & Reproduction of DA while ignoring their subjective needs (EMOTIONS/feelings).

Attributing EMOTIONS/Feelings to animals does not HUMANIZE them, it MAMMALIZES them.

Scientists have demonstrated that EMOTIONS are not some mysterious spiritual phenomena but are bio-chemical algorithms vital for survival and reproduction of all MAMMALS.

ALGORITHMS are methodical sets of steps that can be used to (1) make calculations, (2) resolve problems, and (3) reach decisions. ALG is the method followed when making the calculation. EXAMPLE: Vending Machine

Scientists – Biologists believe that a human pressing buttons and drinking tea is an ALGORITHM. Humans are ALG that produce copies of themselves. The ALG controlling machines work through mechanical gears & electrical circuits, while humans work through sensations, emotions, and thoughts. THE EXACT SAME ALG control pigs, baboons, otters, and chickens. Only MAMMALS that calculate probabilities correctly survive and reproduce.

One core EMOTION shared by MAMMALS is the mother-infant bond. The word MAMMAL comes from the Latin word 'MAMMA' or breast.

IN the early 20th Century, **Scientists** encouraged parents not to develop the EMOTIONAL bond. During mid-20th century, **Scientists** discovered that MAMMALS cannot live on food alone – they needed EMOTIONAL bonds too. EVOLUTION: millions of years programmed MAMMALS with overwhelming desire for EMOTIONAL bonding.

When it comes to other MAMMALS, humans deny the obvious...humans take care of the survival & reproductive needs of animals – not the EMOTIONAL needs.

Agricultural Deal

Farmers subjected animals to domestication in the name of their new Theist **RELIGIONS**...spreading at the wake of the **AR**, these religions began to argue that the universe is not a PARLIAMENT OF BEINGS, but rather a THEOCRACY, ruled by a group of gods or by a God.

Theist **RELIGIONS** versus Animist RELIGIONS. One justified the agricultural economy thru new cosmological myths and the other depicted the universe as a grand Chinese opera with limitless colorful actors.

In the Theist drama – HSapiens become central hero around whom the entire universe revolves. The gods were given two (2) roles to play: (1) they explain why humans are special and why they should dominate, and (2) they had to mediate betw humans and the ecosystem. All non-humans are silenced – humans could no longer talk with trees or animals. All Agri-**RELIGIONS** justify human superiority over and exploitation of animals.

In the **Animist** drama – everyone talks with everyone directly. Hunter-gatherers did not see themselves as superior beings – their survival depended on understanding and respecting the desires of these animals...they had to determine what deer's dream about and what do lions think...otherwise they could not hunt deer or escape lions.

In contrast, farmers lived in a world controlled by human dreams and thoughts.

Humans committed themselves to the 'agricultural deal.' According to this deal: (1) cosmic forces gave humans command over other animals, under condition that (2) humans fulfilled certain obligations to the gods, to nature, and to animals.

The **AR** was both an economic and **RELIGIOUS** revolution. The degradation of animals from being sentient beings deserving respect into mere property did not stop with animals – it progressed into certain classes of people as property.

Just as peasants did not consult with chickens and cows...so did not the rulers consult with peasants.

The farm became the prototype of new societies...with puffed up masters, inferior races fit for exploitation, wild beasts ripe for extermination, and a great God that gives His blessing to the entire arrangement.

500 Years of Solitude

AR Humans silenced animals&plants and turned the Animist grand opera into a dialogue between man and gods.

SCIENTIFIC REVOLUTION humankind silenced the gods.

RELIGION: When archaic hunter hunted, he asked the help of the animals and the animals demanded something in return

When ancient farmer wanted his animals to produce, he asked God to help, and God stipulated something in return.

When the modern **scientist** wants to increase production, he studies genes, and the genes do not ask anything in return.

Just as hunters&farmers had their myths – so to do the **Scientists**, they plagiarize the Tree of Knowledge (i.e., laws of gravity, etc.). In the Garden of Woolsthorpe, Newton pushed God to the sidelines with his discoveries, despite being a devout Christian.

In Garden of Eden myth, humans are punished for their curiosity and desire to gain knowledge. In the Garden of Woolsthorpe myth, nobody punished Newton. Instead, humankind gains a better understanding of the universe, becomes more powerful, and takes another step towards TECHNOLOGICAL PARADISE.

Hunters were just another species of animals, Farmers were the apex of creation, and **scientists** will upgrade us into gods.

AR gave rise to Theist **RELIGIONS** worshipping gods – **SR** gave birth to humanist **RELIGIONS** worshipping humans.

Both theism & humanism disregard animals and God because science & technology give humans great power.

Humans are suddenly showing unprecedented interest in the fate of lower life forms, perhaps because humans are about to become a lower life form? (p99)

Will ARTIFICIAL INTELLIGENCE exploit and even kill humans to further its needs & desires? If AI should not be able to exploit and kill humans, why should humans be allowed to exploit and kill pigs?

Do humans have some magical spark, in addition to some greater power & intelligence than animals and computer programs? If so, where did that spark come from and why are humans certain AI could never acquire that spark?

If there is no spark, is there any need to assign special status to human life – after AI surpasses humans in intelligence and power?

3. THE HUMAN SPARK (p101)

HSapiens thinks it enjoys superior moral status and that human life has much greater value than animals. Humans truly want to believe that human life is more superior in some fundamental way.

RELIGION: the monotheist view is that only humans have an eternal soul. Therefore, humans should care more for their soul than for pigs. **This idea is central to human legal, political, and economic systems.** Explains why humans are willing to kill animals for food or fun.

SCIENCE laboratory experiments confirm that animals do not have soul and that humans do not have souls. There is ZERO scientific evidence that animals or humans have souls. Not only does SCIENCE not believe in the existence of souls due to experimentation but due to **EVOLUTION**.

The Web of Meaning

Imagined orders assume two realities: Objective & Subjective.

Objective: things exist independently of our feeling & beliefs

Subjective: depends on my personal feelings & beliefs

Most people believe there is either objective or subjective and NO 3rd option. There is a third option.

Inter-subjective: communication among many humans rather than the beliefs & feelings of individuals

EXAMPLE: money...if billions believe in its value, then...it has value. The same could happen to laws, gods, and even empires.

Humans do not want to accept that God, nation, or values are mere fictions. Why? Because these give meaning to human life.

Human life only has meaning within the network of stories humans tell each other.

MEANING IS CREATED WHEN MANY PEOPLE WEAVE TOGETHER A COMMON NETWORK OF STORIES.

EXAMPLE: The Crusades... (p 147-149) Story by story medieval society spun its web of meaning.

This is how HISTORY unfolds – humans weave a web of meaning, believing it with all their hearts, and over time the web unravels.

Who's Afraid of Charles Darwin?

Polling shows that less than 15% believe humans **EVOLVED** from natural selection alone. Religious zealots say don't teach EVOLUTION at all or teach INTELLIGENT DESIGN alongside EVOLUTION.

If you want to understand the theory of **EVOLUTION**, you understand there is no soul. EVOLUTION rejects the idea that the true self is some indivisible, immutable, and potentially eternal essence. All biological entities are composed of smaller and simpler parts that ceaselessly combine and separate.

EVOLUTION cannot accept the existence of a soul because unlike the eye, which has parts or steps to create those parts, the soul does not have either. Biology cannot explain the birth of a baby possessing a soul from parents who did not. The existence of souls cannot be squared with the theory of **EVOLUTION**. Evolution means change that cannot produce everlasting entities.

The closest thing to HUMAN ESSENCE is our DNA...which is seat of mutation rather than the seat of eternity.

Humans would rather reject EVOLUTION then give up their souls.

Why the Stock Exchange Has No Consciousness

The mind is not some mysterious eternal entity – it is a flow of subjective experiences, such as pain, pleasure, anger, and love.

Stream of consciousness is concrete reality we directly witness every moment.

Every subjective experience has two fundamental characteristics: Sensation & Desire

This is why humans say humans are conscious and robots are not...why it is crime to work humans to death and not robots.

What about animals – are they conscious? Do animals have subjective experiences? In the 21st century, humans still argue that animals do not have consciousness or subjective feelings.

SCIENCE knows surprisingly little about the mind and consciousness.

1. Consciousness is created by electromagnetic reactions in the brain and that mental experiences fulfill some data processing function.
2. Nobody has any idea how a congeries of biochemical reactions and electrical currents in the brain creates the subjective experiences of pain, pleasure, anger, or love.

The interaction between sending and receiving electrical signals is called the 'stream of consciousness.' **NOT SPIRITUAL and NO MEANING?**

The Equation of Life

SCIENTISTS have no idea why humans have subjective experiences. Biologists attempted to explain this phenomenon due to human need for survival. Today, scientists can describe the electrical process of running away from a lion much better than merely describing survival...however, the better scientists map out the process, the harder it is to explain conscious feelings.

If the entire system works by electrical signals, then:

- a. Why do humans need to feel fear?
- b. Why add subjective experiences to the chain
- c. Why do the neurons, muscles, glands need such feelings in the remaining 1% of the cases?
- d. Why do we need to experience fear?
- e. Why do we need the mind?
- f. Where does the fusion of two unrelated memories take place?
- g. Where is the reality of the 'global workspace' metaphor and where do the different pieces of information meet and fuse?
- h. Why do we need conscious experience of memory over and above the physical event of the two neurons connecting?

ALGORITHM – there is no ALG for subjective experiences...

IF WE CANNOT EXPLAIN THE MIND AND IF WE DON'T KNOW WHAT THE FUNCTION IT FULFILLS – WHY NOT JUST DISCARD IT?

Maybe the mind should join the soul and God in the dustbin of **SCIENCE**.

If subjective experience is discarded, then should concern over torture & rape also be discarded?

Consciousness may just be mental pollution...it does not do anything – it is just there.

When AI replaces our bus driver, our teacher, and our shrink, how could we determine whether they have feelings or whether they are just a collection of mindless **ALGORITHMS**? If AI self-reports that is conscious, should humans believe it?

In the future it will not really matter whether AI has consciousness – it will only matter what Humans perception of AI is.

The Depressing Lives of Rats

Do animals have a mind? Dog owners are convinced that dogs are not mindless automata due to emotional relationships with owner.

Rudimentary Tests on monkeys & mice brains indicate signatures of consciousness – decisive tests are decades away.

July 2012 **SCIENTISTS** issued the “Cambridge Declaration of Consciousness” declaring that non-human animals have neuro-anatomical, chemical, and physiological ‘substrates of consciousness’.

May 2015 New Zealand legally recognizes non-human animals as sentient beings. Canadian province of Quebec has passed similar legislation.

Conducting experiments on rats pre-supposes that rat behavior is accompanied by human-like emotions.

The Self-Conscious Chimp

Another attempt at enshrining human superiority accepts that animals have consciousness but do not have Self-consciousness – the entity called “I.”

What does it mean that non-human animals lack “I?” Is it because humans use language to contemplate past experience and future action? It is unclear why language is necessary to be aware of past & future. Animals may express love & fear non-verbally...

EXAMPLE: chimp in Sweden would throw stones at people – planning its moves in advance. It would collect objects, pile them up in the morning...visitors became aware...it then hid projectiles under straw – this may be seen as the product of non-conscious **algorithms** rather than of conscious memories and plans.

The Clever Horse

Humans are not that much different from non-human animals – humans have no soul & animals have consciousness and sensations and EMOTIONS.

In early 1900s a German horse could perform mathematics...the horse studied human response to horse tapping out answer...as got closer to answer – humans became more tense...the horse studied non-verbal responses to get the answer right.

Having dismissed overblown assumptions that HSapiens exist on a different plane than non-human animals or that humans possess a unique soul or consciousness, we can come to reality and examine physical & mental abilities that give humans an edge.

The main factor is humans’ ability to connect – having the ability to cooperate in large numbers. Non-human animals can cooperate but not flexibly like humans. Humans can reinvent their social systems – non-human animals cannot.

Some non-human animals can cooperate flexibly if there is a personal acquaintance (i.e., elephant & chimps).

Only humans can cooperate in very large numbers with strangers... (i.e., plane, traffic, etc.)

This concrete ability – not an eternal soul or some unique consciousness – explains HSapien mastery of earth.

Long Live the Revolution

Victory almost always goes to those who cooperate better...Romans beat Greeks, not due to superior brains, but better cooperation.

1900s Russian elite cooperated better than 180m Russians...much of the elite's efforts focused on ensuring the 180m did not learn how to cooperate.

If you want to launch a revolution, ask how many of my supporters are capable of effective cooperation.

The Russian Revolution did not occur because 180m peasants but of a handful of communists who organized themselves well.

1989 Romanian Ceausescu thought he could withstand the tsunami of change...he gave a speech...but someone booed...and then his rule was over. Communist Romania crumbled when 80000 realized they were more powerful than the old man in the fur hat on the balcony.

Why are revolutions so rare? Because the rulers

1. Place loyal cooperators in charge of all networks
2. Prevent the creation of any rival organizations.
3. Rely on external support.

Change happens when all three conditions no longer hold and power shifts from few to another well-organized few.

The masses who risked their Romanian lives had to settle for scraps because they did not know how cooperate and create an efficient organization to look after their interests.

Beyond Sex and Violence

If humans rule the world because they can cooperate flexibly in very large numbers – this undermines the belief in the sacredness of individual human beings.

Why are humans, unlike non-human animals, the only ones able to construct and sophisticated social systems.

HSapiens do not operate according to cold mathematical logic but according to warm social logic. Humans are ruled by EMOTIONS – sophisticated **ALGORITHMS** that reflect the social mechanisms of hunter-gatherer. Humans refuse unfair offers because those who accept unfair offers did not survive the Stone Age.

There is a universal morality and equality. Large numbers of people behave fundamentally differently than small groups of people. All large-scale cooperation is based on the belief in imagined orders (PERCEPTION) – sets of rules existing only in human imagination and is believed to be as real and inviolable as gravity.

If all the HSapiens in a given area believe in the same stories, they will follow the same rules, making it easy to predict the behavior of strangers and organize mass-cooperation networks. Non-human animals cannot do this...fail to organize mass-cooperation.

Dreamtime

HSapiens rule the world because only humans can weave an intersubjective web of meaning: a web of laws, forces, entities, and places that exist purely in their collective imaginations. This web allows humans to crusade, socialist revolutions, and human rights movements.

Intersubjective realities dominate the world such as the EU and World Bank: entities that exist entirely in our shared imaginations.

The ability to create intersubjective entities separates the **SCIENCE** of humanities from the life sciences. As human fictions are translated into genetic&electrical codes, intersubjective reality will swallow up the objective reality and biology will merge with history.

In the 21st century we will not only need to crack genomes and crunch numbers, but humans will also need to crack the fictions that give meaning to the world.

HSAPIENS GIVE MEANING TO THE WORLD (Part II)

1. What kind of world did HS create?
2. How did humans become convinced they control the world, but also give it meaning?
3. How did humanism – the worship of humankind – become the most important religion of all time?

4. THE STORYTELLERS (p155)

Animals live in dual reality: objective reality (trees, threats, etc.) & subjective realities (fear, joy, desire)

In contrast, Humans live in triple reality: same as above plus **STORIES** (money, gods, nations, corporations, etc.)

STORIES have harnessed rivers & shaped humans deepest desires and yearnings. Since 21st century tech will make such stories even more powerful – we need to understand how **STORIES** have gained such power.

COGNITIVE REVOLUTION – began 70,000 years ago...HS began talking about things only in their imagination. **STORIES** about ancestral spirits 000s perhaps 000,000s of HS to cooperate effectively.

AGRICULTURAL REVOLUTION – began 12,000 years ago...provided material base (farming & defense) enlarging & strengthening intersubjective networks. Faced a challenge: to maintain cooperation and myths, farmers relied on data-processing capabilities of the mind – which was strictly limited.

RELIGION 6,000 years ago, Sumerian gods and its temples were not merely religious centers, but political and economic centers. Sumerian gods fulfilled functions analogous to modern day corporations. TODAY, corporations are fictional legal entities that own property, lend money, hire employees, and initiate economic enterprise. Sumerians found themselves employed by the gods and modern-day John finds himself employed by Google...(p156-157). The gods did not & neither do the corporations, run their business because they existed in human imagination.

5,000 years ago, Sumerians invented writing & money – this broke the data-processing capabilities in the human brain. Allowed collection of taxes from 000,000s of people, organize complex bureaucracies, and establish vast kingdoms.

Egyptians believed Pharaoh was an actual god rather than a divine deputy. The biological pharaoh was of little importance – the imagined Pharaoh who existed in the **STORIES** told by millions of Egyptians.

As Sumerian gods remind us of modern-day brands, Egyptian gods remind us of modern-day Elvis, Madonna, etc. The brand or myth is more important than the biological body...

The Essence Of Bureaucracy

– humans organized into networks so that each person is only a small step in a huge **ALGORITHM**...that makes the important decisions.

EXAMPLE: you show up to a hospital, fill out a standard form, meet with a nurse, doctor examines initial results, who follows strict protocol to direct you to specialist...etc....according to **ALGORITHMIC** fate your fate is in the hands of “the system” and not the hands of flesh & blood humans...

This is also true of schools & corporations.

WORDS It may sound strange to credit imaginary entities with building or controlling things...but we habitually say the US built a bomb or China built 3 Gorges dam, or Google is building an autonomous car...GOVERNMENT DID this and that to me...

Living On Paper

Writing facilitated fictional stories that organized millions of humans and reshaped the reality of animals & nature.

EXAMPLES: Spanish visa for Jews escaping Nazis, Chinese famine due to grain production mistake, etc.

Anyone who has dealt with tax authorities, the education system knows that the truth hardly matters...what is written on your form is far more important.

Holy Scriptures

Bureaucracy – when text & reality collide, does reality have to give way?

As bureaucracies accumulate more power, they become immune to their own mistakes. Instead of changing their **STORIES** to fit reality, they may change reality to fit their **STORIES**. In the end, external reality matches their bureaucratic fantasies, but only because they forced reality to do so.

EXAMPLE: European bureaucrats divided Africa up without ever setting foot there.

EXAMPLE: Education marks are fairly new invention. Mass education systems of the INDUSTRIAL REVOLUTION that began using precise marks.

Power of written **WORDS** reaches its apogee with the Holy Scriptures.

In practice, human cooperation depends on a fine balance between reality and fiction. Distort reality too much and you become weak and unable to compete against clear sighted. On the other hand, you cannot organize masses without fiction...if you stick to unmixed reality – NO ONE WILL FOLLOW YOU.

EXAMPLE: money – government makes worthless pieces of paper, declares them to be valuable, and then uses them to compute the value of everything else. Since government issues money and its value grows...so too does its power.

RELIGION: Holy Scripture works the same way. Religious establishment proclaims bible contains all answers, which in turn, presses courts, business, schools, etc. to behave according to what the bible says.

The bible peddled a monotheistic theory of **HISTORY**, claiming the world is governed by a single all-powerful deity, who cares above all else me and my doings. If good or bad things happen, it is because of reward or punishment from deity.

Like a child thinking parents are fighting because of them, monotheists are convinced the Persians are fighting the Babylonians because of them.

Animists & Polytheists depicted the world as a playground of numerous different powers rather than a single god. In other words, many factors influence political, social, & economic conditions...because of this, present day scholars agree with ancient scholars rather than the Bible (p 174)

However, no matter how mistaken the Bible is, it has provided a better basis for widespread human cooperation.

It is ironic that Presidents and officials put their hand on a Bible, swear an oath to it, while it has so many fictions, myths, and errors.

But It Works

WORDS: Fiction enables humans to cooperate better. The price paid is that some fiction determines the goals of our cooperation – hence we may have elaborate systems of cooperation which are harnessed to serve the aims of fictional interests.

The 'system' only works if we cooperate with the 'systems' criteria...Muslim mullah would say our system works because 1.5B Muslims, school administrator says our system works because test scores have gone up, and ancient Egyptians may say our system works because we collect more taxes, build more pyramids, etc.

However, despite Egyptian, Chinese, Muslim, and European dynasties & empires – the life of the average person was not better...then the lives of hunter-gatherers.

Which package would you choose:

1. Stone age package...10 hours hiking, set up camp at night, next day 10 hours canoe, learn from natives how to fish & food.
2. Modern proletariat package...10 hours working in toxic textile factory, living in cramped apartment, next day same...then learn from natives how to open bank account and fill out mortgage form.

When evaluating HUMAN COOPERATION NETWORKS (HCN)...depends on yardsticks & viewpoint we adopt...judge in terms of Egyptian production, nutrition, or social harmony or in terms of aristocracy & peasants, or in terms of pigs & crocodiles?

HCN judge themselves by yardsticks of their own invention and, not surprisingly, give themselves high marks. HCN built in the name of imaginary entities such as gods, nations, and corporations, judge their success from the viewpoint of the **imaginary (fictious) entity**. It is helpful to look at things from the perspective of some **real entity**.

When the euro falls, the euro doesn't suffer, when the bank goes bankrupt, the bank does not suffer, when the temple of Zeus burns down, Zeus does not suffer. When a soldier is wounded, the soldier suffers, when famished peasant has nothing to eat, the peasant suffers, when calf is separated from cow, the cow suffers. This is reality.

The cause of war is fictional, the suffering is 100% real. This is why we should strive to distinguish between **fiction and reality**.

Fiction isn't bad – it is vital. Without commonly accepted stories about money, states, or corporations, NO COMPLEX HUMAN SOCIETY CAN FUNCTION. They should not become our goals or yardsticks...when we forget it is fiction – we lose touch with reality.

In 21st century we will create more powerful fiction and totalitarian religions. Biotechnology & computer ALGORITHMS, religions control minute by minute existence, shape our bodies, brains, and minds, and create virtual worlds with heavens & hells...distinguishing between FICTION & REALITY, RELIGION FROM SCIENCE will become more difficult and more vital than ever before.

5. THE ODD COUPLE (p179)

STORIES serve as foundation & pillar of human societies...blind faith in STORIES meant human efforts focused on increasing the glory of fictional entities (gods, nations, & corporations) instead of bettering the lives of real sentient beings.

Q: the rise of modern SCIENCE has changed the basic rules of the human game. Despite the ongoing importance of traditional myths, modern social systems increasingly rely on objective SCIENTIFIC theories, such as theory of EVOLUTION – which did not exist during ancient Egyptian or Chinese times.

Ancient Egypt & China were incapable of overcoming famine, plague, and war for millennia...HOWEVER, modern societies have done so with just a few centuries. Isn't this the fruit of abandoning intersubjective myths in favor of modern SCIENTIFIC knowledge?

As technology enables humans to upgrade humans, overcome age, and find happiness, humans will care less about fictional gods, nations, and corporations and focus more on deciphering physical & biological reality.

Modern SCIENCE has changed the rules of the game – HOWEVER, it did not replace myth with fact...SCIENCE is making myths stronger. SCIENCE is enabling intersubjective reality to control objective & subjective realities more completely – thanks to computers & bioengineering, the difference between FICTION & REALITY will blur, as humans reshape reality to fit their pet fictions...

21st Century SCIENTISTS, in contrast to Sobek imaginary super crocodiles & Egyptian immortal Pharaohs, may be able to engineer super crocodiles and to provide the HUMAN ELITE with eternal youth. (p181)

Q: How does modern SCIENCE relate to RELIGION? They are like a couple after 500 years of counseling and still do not know each other.

Germes and Demons

Misunderstanding between SCIENCE & RELIGION are due to faulty definitions of RELIGION.

Humans confuse RELIGION with superstition, spirituality, belief in supernatural powers or gods. It cannot be equated because what I believe in is the TRUTH, what others believe in is superstition.

RELIGION is created by humans and defined by social function. RELIGION is any all-encompassing STORY that confers superhuman legitimacy on human laws, norms, and values – legitimizing human social structures (governments) by arguing that they reflect superhuman laws.

RELIGION asserts humans are subject to a SYSTEM of moral laws that we did not invent and cannot change.

EXAMPLES: a Jewish boy, a German boy, and British boy each ask their father...why is it (eat pork, kill Jews, & convert Muslims).

Both communists, liberals, etc. resist describing their SYSTEMS as a RELIGION – because they identify RELIGIONS with superstitions & supernatural powers. Nonetheless, they believe in a system of moral laws that wasn't invented by humans but must nevertheless obey.

Both Catholics & Communists do not like the rich – difference is burning in hell versus burning in the here and now with class conflict.

Communists believe that if Capitalists accumulate property, they will create class conflict and are destined to be defeated by the rising proletariat – communism is the one true religion – perhaps the followers of one religion are correct (p184).

If You Meet the Buddha

RELIGION is a tool for preserving social order & organizing large scale human cooperation. The gap between RELIGION & SCIENCE is narrow, but the gap between RELIGION & SPIRITUALITY is extremely wide.

RELIGION is a deal while SPIRITUALITY is a journey.

RELIGION gives a complete description of the world and offers a well-defined contract with predetermined goals – which allows society to define common norms & values that regulate human behavior.

SPIRITUALITY takes humans on a mysterious way toward an unknown destination – follow question wherever it leads.

RELIGION seeks to cement the world order, whereas **SPIRITUALITY** seeks to escape from it.

For **RELIGIONS**, **SPIRITUALITY** is a dangerous threat...most **RELIGIOUS** systems are pre-occupied, not by laypeople focused on food, sex, and power, but rather by **SPIRITUAL** seekers...

EXAMPLE: Martin Luther (monk) who wanted answers to existential questions of life...he doubted the Catholic deal of buying your way to salvation.

SCIENCE needs **RELIGION** to create viable human institutions...science studies how the world functions but not how humans should behave...every scientific project relies on religious insights.

Most heated debates between science & religion occur over factual statements rather than ethical judgments.

RELIGIOUS STORIES always include 3 parts: (p191-196)

1. Ethical judgements (i.e., human life is sacred)
2. Factual statements (i.e., human life begins at conception)
3. Conflation of EJ with FS (i.e., never allow abortion after conception)

SCIENCE has no ability to refute or corroborate EJ...but has a ton to say about FS.

EXAMPLE:

1. ES: respect ancient decrees more than present day opinions
2. FS: 'Donation of Constantine' (315AD) signed an official decree granting Pope Sylvester I perpetual control of Western Roman Empire.
3. Guideline: Obey the Pope's commands (1315AD)

HISTORIANS agree that 'Donation of Constantine' is a forgery...sometime in the 8th Century...

Holy Dogma

RELIGIONS turn FS into EJ...EXAMPLE: EJ-every human life is sacred FJ-every human has an eternal soul. Or ES-USA is sacred, and FS-USA spearheaded most moral, scientific & economic advances of the last century. **SCIENCE** cannot unpack the EJ but can examine whether the FS is **SCIENTIFICALLY** true.

Q: do you humans (Muslims, Catholics, Communists, etc.) share a single supreme value – minimizing suffering & maximizing happiness? They do not have an ethical dispute – merely a factual disagreement how best to reach their shared common goal.

If **SCIENCE** cannot decipher consciousness – then no measure of suffering & happiness can be developed.

SCIENTIFIC REVOLUTION began in the most dogmatic, intolerant, and **religious** societies in **HISTORY**.

The Witch Hunt

SCIENTIFIC REVOLUTION occurred, not in Cairo or Istanbul, rather than London & Paris, which had the highest concentration of religious fanatics and intolerance.

In theory, **SCIENCE** & **RELIGION** are interested in truth above all else. Because each upholds a different truth, they clash. In fact, neither are that interested in truth...hence, they compromise, coexist, and cooperate.

RELIGION is interested in, above all, order – create and maintain the social structure.

SCIENCE is interested in, above all, power – acquire power to cure disease, fight wars, and produce food.

Individual Scientists & Priests may give immense importance to truth – but as collective institutions, prefer order and power over truth. The uncompromising search for truth is a spiritual journey, which cannot remain within the confines of either **RELIGIOUS** or **SCIENTIFIC** establishments.

Modern **HISTORY** is currently formulating a deal between **SCIENCE** and the **RELIGION** of humanism. It uses **SCIENCE** to implement humanist **RELIGIOUS** dogmas rather than refute the dogmas.

1. In the 21st century, humanist dogmas are unlikely to be replaced by purely **SCIENTIFIC** theories.
2. Deal between **SCIENCE** & Humanism may crumble and give way to new deal between **SCIENCE** & post-modern humanist **RELIGION**.
3. Remainder of book dedicated to understanding the DEAL between **SCIENCE** & **humanism** and explaining why this DEAL is disintegrating and what NEW DEAL will replace it.

6. THE MODERN COVENANT – giving up meaning for power (p200)

The modernity deal can be summarized in a single phrase: humans agree to give up **meaning** in exchange for power. Prior to modern times, cultures believed humans played a role in some great cosmic plan, a plan devised by gods, laws of nature, and humans could not change it.

Modern culture rejects the belief in a cosmic plan, a purpose – no meaning...only cause. If so, then humans can do whatever they want – constrained by nothing but human ignorance – and no god will stop them.

Modern life consists of constant pursuit of power within a universe devoid of meaning. However, moderns promised to renounce meaning in exchange for power, no one there to hold humans to that promise...think they are smart enough to enjoy the full benefits of modern deal – without having to pay its price.

Why Bankers are Different from Vampires

Modern pursuit of power is fueled by alliance between **SCIENCE** & Economic growth. Today everyone is obsessed with growth – due to human's trust in the future, resulting in the 'miracle of credit.'

As Human trust in future increases, credit expands, interest rates fall, entrepreneurs raise more money, and the economy grows.

EVOLUTION: For 000s of years humans had little faith in future growth...because it contradicts **EVOLUTIONARY** heritage...most survival struggles are a **ZERO-SUM** in which one can prosper only at the expense of another.

Vampires loan blood to each other...vampires never charge interest nor finance new business or encourage the blood-sucking market. For millions of years **EVOLUTION** humans lived under conditions like those of vampires, foxes, and rabbits...who too find it difficult to believe in growth.

The Miracle Pie

A+B does not equal C.

- A> **EVOLUTIONARY** pressures accustom humans to see the world as a static pie – if someone gets a larger slice someone else gets a smaller slice.
- B> **RELIGION** sought to solve humanity's problems by either redistributing the pie or promising pie in the sky.
- C> **MODERNITY** is based on belief that economic growth is not only possible, but essential to solving problem of famine, plague, and war.

Modern politicians & economists insist growth is vital for 3 reasons:

1. Produce more, consume more, raise standard of living & enjoy happier life.
2. If humans multiply, economic growth is needed to merely stay where we are.
3. If you stop multiplying & middle class is satisfied with standards of living, what should be done for millions of poverty-stricken citizens?

If you wish to avoid hard choices, resentment & violence, humans need a bigger pie.

Economic growth has become the crucial where religions, ideologies, and movement meet...since EG is allegedly the source of all good things, it encourages humans to bury ethical disagreement and adopt whichever course of action maximizes growth.

Communism bulldozed anything standing in the way of collectivized growth. However, modern view accepts some form of capitalism as an efficient way to sustain growth...so greedy tycoons, rich farmers, and freedom of expression are protected while ecological habitats, social structures and traditional values stand in the way of capitalism are dismantled and destroyed.

EXAMPLE: software engineer makes \$100/hr...father gets sick...choice care for father or hire \$12/hour in home care?

Economic growth has an answer: loosen family bonds, encourage humans to live away from parents, and import carers from the other side of the world.

RELIGION: Capitalism, like religion, promises pie in the sky, and sometimes delivers. Capitalism deserves kudos for reducing violence, increasing tolerance & cooperation. Capitalism made an important contribution to global harmony by encouraging humans to see profit as a win-win – in which one person's profit is another person's profit.

The mutual benefit approach has helped global harmony more so than centuries of Christian preaching about loving your neighbor and turning the other cheek.

Capitalism #1 commandment: Thou shalt invest thy profits in increasing growth.

The Ark Syndrome

Q: can the economy keep growing forever? **SCIENCE** has provided modernity a solution: humans can expand economy because humans can discover (1) new materials and (2) sources of energy.

However, there is an additional material: (3) knowledge. Knowledge is a growing resource – the more you use, the more you have.

For thousands of years, **SCIENCE** was blocked by **RELIGION** and BUSINESS. However, SCIENTIFIC REVOLUTION freed humankind from this naïve conviction. The greatest **SCIENTIFIC** discovery was the discovery of ignorance. Once humans realized how little they knew about the world, they had a reason to seek new knowledge, which opened the **SCIENTIFIC** road to progress.

As we look 20 years into the future, expect to produce and consume far more than we do today...we trust nanotech, genetic engineering, and AI to revolutionize production and open new section in our ever-expanding supermarkets.

The real nemesis of the modern economy is ecological collapse. We could lessen the ecological danger by slowing the pace of progress and growth – maybe in 30 years we would be satisfied with what we have.

Creed of Growth says otherwise: find better sunscreen, create virtual worlds,

Humankind finds itself in a double race: 1. Speed up pace of scientific progress & economic growth while preventing ecological disaster...every day we bring 1 Delhi slumdweller to the American dream is one step closer to bringing planet closer to the brink.

The belief in a hi-tech ARK is one of the greatest threats to humankind and of the ecosystem. Those who believe in the hi-tech ARK should not be put in charge of the global ecology, just the same that those who believe in heavenly afterlife should not be put in charge of nuclear bombs.

The hi-tech ARK will hurt the poor the most. Why are they not protesting? Because their lives improve if the economy grows...protecting the environment is a nice idea – the poor who cannot pay their rent are worried about overdraft more than the polar ice caps melting.

The Rat Race

Despite fending off economic collapse and ecological catastrophe, the RACE creates huge problems:

1. Individually causes tremendous stress&tension – the pressure to do and produce even more...
 - a. In modern world, we run the business, unlike predecessors, so we are under constant pressure.
 - b. Constantly increase our incomes & standard of living
2. Collectively there are ceaseless upheavals. New generations tear down old system and build up new ones.
 - a. Communist manifesto 'brilliantly states' modern world positively requires uncertainty & disturbance.
 - i. Everything fixed or solid melts away...

- b. Govt, Corp, etc. are encouraged to measure success in terms of growth & to **fear equilibrium** (the Devil)
3. Modernity needs individuality and collectivity to not retire from the race – hence the push for constant growth...held as supreme...

Not hard to convince individuals to be greedy...harder to convince collective (gov, Corp, etc.) to go along with the new deal...convinced that **equilibrium is 'far more frightening than chaos.'**

Modernity convinced humans to want more, hence dismantled old disciplines that curbed greed.

RELIGION:

1. Capitalism calms the fear by claiming that 'as long as the economy grows, the invisible hand of the economy will take care of everything.'
2. Communism, also believing in growth, thought it could prevent chaos & orchestrate growth thru state planning. It eventually fell far behind capitalism.

Bashing Capitalism is high on intellectual agenda. However, ignoring the ecological shortcomings, and measuring success by production & growth – it has prevailed and overcome famine, plague, and war.

For 000s of years priests, rabbis, and muftis claimed that humans could not overcome famine, war, and plague on their own. Bankers, investors, & industrialists managed to do just that in 200 years.

RELIGION: In exchange for power, the modern deal requires humans give up meaning. NOW WHAT IS THE PRICE? What rescued modernity from collapse? Humankind was salvaged not by supply & demand, but rather a rise of new revolutionary new religion - **humanism**.

7. THE HUMANIST REVOLUTION (p222)

If humans find meaning without predicating it on some cosmic plan, THIS IS NOT CONSIDERED A BREACH OF CONTRACT...**NOT SPIRITUAL**.

It is impossible to sustain order without meaning...the great political, artistic, and religious project of modernity has been to find meaning apart from some great cosmic plan.

The Greatest Threat

posed to global law & order are precisely those who continue to believe in God and His cosmic plan

What prevents social collapse if there is no divine cosmic plan...

Look Inside

RELIGION: The antidote to meaningless and lawless existence is provided by HUMANISM. Worships humanity expects (1) humanity to play the role God played in Christianity & the laws of nature played in Buddhism and (2) experiences of humans to give meaning to the cosmos. In other words, humans must draw from inner experiences for themselves and for the entire cosmos. PRIMARY COMMANDMENT: create meaning in a meaningless world.

While modernity was losing faith in God it was gaining faith in humanity. Over time, thinkers, artists, and politicians convinced humanity that it can imbue the universe with meaning.

Meaning & authority always go hand in hand. Whoever determines the meaning of human actions ALSO gains authority to tell us what to think and how to behave?

Humanism convinces humans they are the source of meaning, and human FREE WILL is the highest authority of all. Instead of waiting for external entity to tell humans what's what – rely on human feelings and desires.

EXAMPLE: woman having affair doesn't consult bible but her feelings. The most interesting discussion in HUMANIST ethics is the extramarital affairs...WHERE HUMAN FEELINGS COLLIDE...how are the feelings navigated...

Modern psychologists believe that only human feelings are authorized to determine the true meaning of human actions – whereas ancient priests had a direct line to God, who would distinguish for humans good from evil...

It is important to understand the arguments both sides make...no matter the arguments, humanists argue from side of feelings instead of scriptures.

EXAMPLE: murder or theft is not wrong because bible says so, but because it causes pain to victim, family, etc...if two men love each other, instead they are told, follow your feelings.

PROGRESSIVE: When religious fanatics murdered French journalists...Muslim orgs condemned the murders, not for religious reasons, but justified the acts because Muslims feelings were hurt. Note, they did not blame the journalists for disobeying God's will but hurting Muslim's feelings...'THIS IS PROGRESS'

HUMANISTS believe only source for artistic creation or aesthetic value is HUMAN FEELING...modern artists seek to get in touch with themselves and their feelings, rather than with God...

HUMANISTS believe in the freewill of the customer. If millions of people choose to buy a product, then no one should tell them they are wrong.

HUMANISTS believe in teaching pupils to think for themselves and what you think about the subject then the subject itself. Although, humans may say they believe in God, it is their inner voice that they strongly believe in.

Follow the Yellow Brick Road

To overcome the problem – that each human has a unique single authentic inner self, HUMANISTS proclaim a new source of authority & a new method of accessing that authority, while gaining true knowledge.

1. **AGRICULTURAL REVOLUTION** for knowledge: KNOWLEDGE=SCRIPTURExLOGIC
 - a. If humans wanted answers to important Q, they would read scriptures & use their logic to understand the exact meaning of the passage.
2. **SCIENTIFIC REVOLUTION** for knowledge: KNOWLEDGE=EMPIRICAL DATEXMATHEMATICS
 - a. If humans want answer to important Q, they will gather empirical data, then use mathematical tools to analyze the data.
3. **HUMANISM** for knowledge: KNOWLEDGE=EXPERIENCExSENSITIVITY
 - a. If humans want answer to important Q, then connect to inner experiences & observe them with utmost sensitivity.
 - i. Experiences are subjective phenomena made up of (1) sensations, (2) emotions, & (3) thoughts
 - ii. Sensitivity means paying attention to and allowing sensations, emotions, & thoughts to influence me.
 - b. Experience & Sensitivity build on one another in never ending cycle...

HUMANISM distilled – life is a gradual process of inner change, leading from ignorance to enlightenment, by means of experiences. Highest aim is to fully develop knowledge through wide variety of intellectual, emotional, and physical experiences.

HUMANISM has become the founding myth of numerous modern industries (i.e., tourism & art) – selling novel experiences.

The Truth about War

HUMANISM equation has changed, not only human view of culture, but of war. Prior to HUMANISM, humans would consult God or kings as to the rightness of war – no one consulted the soldier or the citizen.

Conflict between two competing narratives: Pope says war is good, so my service must be meaningful or War causes suffering, this is bad, so the Pope must be wrong.

The HUMANIST Schism

HUMANISM has fragmented into several sects:

1. **The Orthodox Branch** – every human being is a unique individual possessing a unique inner voice & a never to be repeated series of experiences.
2. **SOCIALIST HUMANISM** – encompasses a plethora of socialist&communist movements.
3. **EVOLUTIONARY HUMANISM** – famous adherents were the Nazis.

#2&3 both agree with #1 that:

1. human experience is the ultimate source of meaning & authority.

2. there is no source of divine authority or law book.

#2&3 do not agree with #1 that:

- there are many individuals with different feelings and contradictory desires.

Q: How do you settle contradictions between such different individual experiences...

HUMANISM FAILURE? Settling conflict between individual & collective feelings

One attempt to settle this contradiction is DEMOCRACY...one individual = one vote...however, it must be glued by common myth such as nationhood or religious beliefs.

#1 married liberalism to nationalism in the early 19th century...however, the downside was believing one nation was better than the others. The voter knows best, the customer is always right.

#2 blames liberals for focusing attention on individual experiences while neglecting what others experience. Demands the individual stop obsessing with inner voice and focus on what others are feeling & how human action influences their experiences. The party knows best, the trade union is always right. Individuals should listen to the party & trade unions rather than personal experiences.

#3 advocates the conflict is something to applaud rather than lament. Conflict is the raw material of natural selection which pushes **EVOLUTION** forward. The fittest humans should steamroll the inferior humans. Following this EVOLUTIONARY logic, the fittest humans will eventually give rise to superhumans.

Q: who are these superhumans?

- Better abilities
- Creation of new knowledge
- Advanced technology
- Prosperous societies
- Beautiful art

#3 advocates that war pushes humankind to new achievement. Nietzsche “war is the school of life and what does not kill me makes me stronger.”

Adolf Hitler was changed by his war experiences. The experience of war enlightened Hitler to the truth about the world: “It’s a jungle run by the remorseless laws of natural selection – those who refuse to recognize this truth cannot survive.”

JUSTIFICATION: Just because **EVOLUTIONARY HUMANISTS** such as Hitler & Stalin should not deter the insights this sect of **HUMANISM** nor does it mean setting up police states & concentration camps – this RELIGION will play an even greater role in shaping the 21st century.

Is Beethoven better than Chuck Berry?

Understanding the differences between the 3 **HUMANIST** branches – broken into 4 experiences:

1. Human listening to Beethoven – soundwaves travel thru his brain, stimulates heartrate, hairs on neck, shiver.
2. Human speeding in car listening to music – same as above.
3. Human hears nearby tribe singing – same as above.
4. Wolf hears female howling – same as above.

LIBERAL **HUMANISTS** will say each experience, except the wolf, should be equally cherished.

SOCIAL **HUMANISTS** will say each experience, except the wolf, depends on the impact it has on other humans & society as a whole. The Beethoven experience was for upper class white Europeans, the Rock-n-Roll was appropriated from Africans by whites, the tribal music was initiated for patriarchal power,

EVOLUTIONARY HUMANISTS, while Liberal tiptoe around political incorrectness & Socialists leave it to the party to figure out the best path, gleefully set offal the mines & relishing all the mayhem. EH will point out that humankind is not exempt from the forces of

EVOLUTION. There is an unambiguous hierarchy of human experiences – just as humans are superior to wolves, some human cultures are superior to other human cultures.

The Humanist Wars on Religion

If each sect agreed 'God is Dead' & that only human experience gives meaning to the universe, does it matter whether human experiences are equal or that some are superior to others?

As humanism conquered the world, internal schisms widened & flared up the deadliest **RELIGIOUS** war in **HISTORY**.

At the outset of the 20th Century, **LIBERAL HUMANISTS** were confident **HISTORY** was on their side, however, **SOCIAL HUMANISTS**, from the left, argued that **LIBERAL HUMANISM** was a 'fig leaf' for ruthless, exploitative, and racist system.

From the right, **EVOLUTIONARY HUMANISTS**: racists & fascists blamed both **LIBERALISM** & **SOCIALISM** for subverting natural selection & causing the degeneration of humankind.

Much of the credit for defeating Nazism should be given to **SOCIAL HUMANISM**-communism (25M deaths compared to 500k Brits & 500k US)

LIBERAL HUMANISM suffered its greatest defeat in Vietnam. It looked like an exclusive club for ageing white imperialists. **LIBERAL** democracy was saved only by nuclear weapons & NATO.

Then **LIBERAL** democracy crawled out of the **HISTORY** dustbin – the supermarket was far superior to the gulags...as **USSR** collapsed, **LIBERAL** democracies replaced communist regimes.

However, **LIBERAL** democracy required 8 decades and 3 global wars to recover...it has adopted various ideas & institutions from its **SOCIALIST** & **FASCIST** rivals – in particular, providing the general public with education, health, and welfare services. In the **EARLY 21st** Century, **LIBERAL HUMANISM** is the only show in town.

Electricity, Genetics, and Radical Islam

As of 2016, there is no serious alternative to **LIBERAL HUMANISM** (i.e., individualism, human rights, democracy, and free market).

China offers the most serious challenge...it is the most promising breeding ground for techno-**RELIGION** emerging from Silicon Valley (details in next section) ...although it will take several decades to manifest techno-immortality & virtual paradise.

What about fundamentalist Christianity...100+ years ago, Nietzsche declared **GOD IS DEAD**...it is just taking a while to get rid of the body.

RELIGION & **TECHNOLOGY** dance a delicate tango. Tech depends on **RELIGION** because every invention has many applications...19th Century engineers invented locomotives, radios, and internal combustion...but 20th Century used those tools to create fascism, communist dictators, and **LIBERAL** democracies. **WITHOUT RELIGIOUS CONVICTIONS, LOCOMOTIVES CANNOT DECIDE WHICH WAY TO GO.**

New technologies give birth to new gods and kill off old ones.

REVOLUTIONARY TECHNOLOGIES will spawn unprecedented **RELIGIOUS** movements. Religions, such as Islam, that lose touch with technological realities will go extinct.

- What will happen to the job market once AI outperforms humans in most cognitive tasks?
- What will be the political impact of a massive new class of economically useless people?
- What will happen to relationships, families, and pension funds when nanotech & regenerative medicine turns 80 into new 50?
- What will happen to human society when biotech enables us to have designer babies, and open to unprecedented gaps between rich & poor?

HISTORY is shaped by small groups of forward-looking innovators rather than backward-looking masses. 000s years ago most were hunter-gatherers, but the future was in the hands of the farmers. In the 19th century, 90% of humans were peasants...their fate was sealed by engineers, politicians, and financiers who spearheaded the **INDUSTRIAL REVOLUTION**.

- Why did Marx&Lenin succeed where Hong and the Mahdi failed – not because SOCIAL HUMANISM was philosophically more sophisticated than Islam & Chinese theology...RATHER, because Marx&Lenin devoted more attention to understanding technological & economic realities of their time than to scrutinizing ancient texts & prophetic dreams.
- Marx&Lenin answered the needs of the URBAN proletariat versus the BIBLICAL peasants, by studying the function of the steam engine, how coal mine operates, how railroads shape the economy, and electricity influences politics.
- Lenin defined COMMUNISM = “power to worker councils, plus electrification of the whole country”

Communism necessitates concentration of information & resources in ONE HUB...it only works if produce can be collected & distributed over vast distances, when activities can be monitored & coordinated over entire countries.

- Marx understood new technological realities & new human experiences and had relevant answers to new problems of industrial society.

RELIGION – SOCIAL HUMANISTS created the first new techno-RELIGION in HISTORY. Before Marx, humans divided by views on God, rather than production methods. Since Marx, debates about technology & economic structure are far more important than debates about soul & afterlife – even his harshest critics pay far more attention to technology & production than God & heaven.

The Train of Progress (p275)

India & Sudan missed the TRAIN OF PROGRESS because they remained far more preoccupied with God then industrialization.

The Train of Progress, at the beginning of the 21st Century, is again pulling out of the station – may be the last train to leave the station called HSapiens...those who miss this train will not get a 2nd chance.

To get a seat on this train, humans need to understand 21st century technology, and the powers of biotech & computer algorithms.

The main products of the 21st century, will not be loco, radio, etc. but rather, bodies, brains, and minds. The gap between those who know how to engineer bodies & brains and those who do not will be wider than Britain & India and far wider then HSapiens & Neanderthals.

In 21st century, those who ride the Train of Progress will acquire divine abilities of creation & destruction, while those who miss the train will face extinction.

SOCIAL HUMANISM failed to keep up with new technologies, while LIBERAL HUMANISTS adapted to the information age. If Marx were alive today, he would advise his followers to spend less time reading ancient texts and more studying the Internet & human genome.

RELIGIOUS fundamentalist’s role if largely REACTIVE – in the past they were a creative force. It has turned from a creative force to a reactive one. SCIENTISTS develop contraceptive pill – Pope reacts to it. Computer SCIENTISTS develop Internet – rabbis argue whether followers should surf it.

During 20th Century who created more SCIENTISTS or PRIESTS...in 21st century who will create more SCIENTISTS or PRIESTS.

Humans continue to use SCRIPTURES as source of authority, but these texts are no longer the source of creativity or inspiration.

LIBERAL HUMANISM won the humanist war of RELIGIONS – its very success may contain the seeds of its ruin. Triumphant LIBERAL ideals are now pushing humankind to reach immortality, bliss, and divinity.

When genetic engineering & AI reveal full potential, LIBERAL democracies&free markets might become obsolete like knives, tape cassettes, and communism.

The 3rd and final part of this book will argue that trying to realize LIBERAL HUMANIST dreams will undermine its very foundations by unleashing new post-HUMANIST technologies.

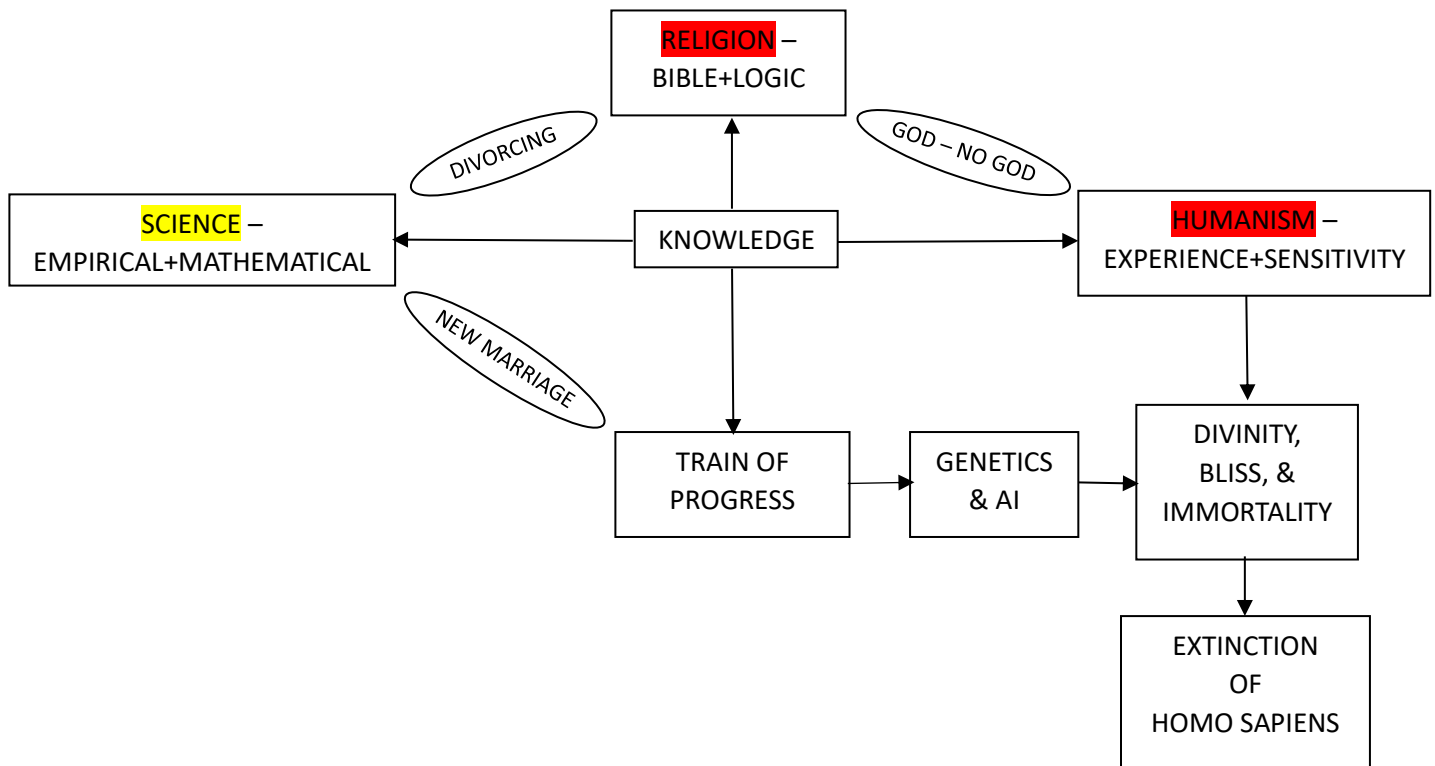
1. The HUMANIST belief in feelings has allowed humans to benefit from the modern covenant without paying its price.
2. Humans do not need any gods to limit human power or give humans meaning – choices of voters & customers give humans all the meaning humans need.

Q: What will happen once tech can calculate, design, and outsmart human voters & customers feelings?

Q2: What will happen once human experiences becomes another designable product, no different than any other item in the supermarket?

Reviewer's Personal Illustration

OF KNOWLEDGE RELATIONSHIPS BETWEEN SCIENCE, RELIGION, & HUMANISM



HSAPIENS LOSES CONTROL (Part III)

1. Can humans go on running the world & give it meaning?
2. How do biotech & AI threaten HUMANISM?
3. Who might inherit humankind, & what new RELIGION might replace HUMANISM?

8. THE TIMEBOMB IN THE LABORATORY (p283)

21st Century SCIENCE is undermining the foundations of LIBERAL HUMANISM – which like any other RELIGION, is based on abstract ethical judgements and what IT believes are factual statements (which do not stand up to SCIENTIFIC scrutiny).

LIBERAL HUMANISTS believe that humans have free will – which LH attribute to factual description of the world.

The contradiction between free will and contemporary SCIENCE is the elephant in the laboratory.

SCIENCE, over the last 100+ years, has opened the HSapien black box and (1) has not discovered a soul, free will, or the 'self,' but instead (2) has discovered genes, hormones, and neurons that obey the same physical & chemical laws governing the rest of reality.

When asking why someone stabbed someone with a knife – SCIENTISTS will say “they did so because of electro-chemical processes in the brain that were shaped by a particular genetic make-up, which in turn reflect ancient EVOLUTIONARY pressures coupled with chance mutations.

This view leaves no room for free will because randomness & deterministic processes produce problematic outcomes – which does not amount to FREEDOM.

Decisions (1) reached through chain reaction of biochemical events – each determined by a previous event – IS NOT FREE, and (2) resulting from random subatomic accidents ARE NOT FREE either – they are just random.

EXAMPLE: robot given two choices...no one would call it FREE...and certainly would not allow IT to vote in democratic elections or hold it legally responsible for its actions...

The sacred word 'freedom' turns out to be, just like the 'soul' a hollow term empty of any discernible meaning. FREE WILL exists in the myths humans have invented.

EVOLUTION seals 'freedom's' fate. As **EVOLUTION** does not square with 'eternal souls', it does not square with the idea of 'free will.' According to EVOLUTION the choices animals make are due to genetic code.

According to EVOLUTION, humans act according to their desires – it could be said that 'free will' is the ability to act according to our desire. However, the \$\$\$\$question is not whether animals can act on their inner desires – BUT WHETHER THEY CAN CHOOSE THEIR DESIRES IN THE 1ST PLACE.

Humans do not choose – they feel a particular wish caused by biochemical processes in the brain – either deterministic or random – BUT NOT FREE. EXAMPLE: Humans do not 'freely' choose to think thoughts that will make them vote Conservative.

EXAMPLE: SCIENTISTS can determine which one of two buttons a person will push before they push it – based on brain scans. Neural events in the brain indicate the human's decision before the human is aware of their choice. Therefore, IT IS NOT A FREE CHOICE.

Humans DO NOT choose desires, they feel them, and act accordingly. **RELIGION:** If EVE did not choose the 'fruit' freely, then why punish her for it?

Once humans accept that they have no soul or 'self', it makes no sense to ask, "How does the self-choose its desires?" It is therefore meaningless to ask whether humans choose desires deterministically, randomly, or freely.

It may seem complicated, but it is simple – next time a thought pops up in your mind, did it arise without permission from you. Try to not think for 60 seconds.

If humans lack free will, it implied that human desire can be manipulated and controlled using drugs, genetic engineering, or direct brain stimulation.

EXAMPLE: 'robo-rats' implanted with electrodes into the sensory & reward areas of its brain – enables SCIENTISTS to maneuver rats by remote control.

Animal activists express concern – however, leading SCIENTIST argues that 'robo-rats' enjoy experiment because the reward center is stimulated and the rat experiences 'Nirvana.'

EXAMPLE #2: 'HSapiens' implanted with electrodes (military) to dissipate PTSD...

EXAMPLE #3: HSapiens outfitted with transcranial direct-current stimulators...(military) using to sharpen focus & enhance performance. A journalist tried it = she wanted to go back and strap on the helmet because it silenced all the voices in her head. (p290-1)

Those 'voices' drive societies prejudices, echo our personal history, and articulate genetic legacy.

Q: What would happen if we could rewrite our inner monologues, or even silence them completely on occasion?

LIBERAL HUMANISTS will want to purchase these manipulations & controls of their brains, just like any other product. It will help silence, not only the voices in your head, but the alien voices of parents, priests, marketers, etc...so you can focus on what you want.

Who are I?

SCIENCE undermines both 'Free Will' & the belief in 'Individualism.'

Humans are not 'individuals' they are 'dividuals.' The Human brain is composed of 2 hemispheres connected by a thick neural cable.

EXAMPLE: Distinguishing between Left & Right hemisphere: (1) left hemisphere - a boy was asked what he wanted to be when he grew up, he said "draughtsman" when asked again using right hemisphere the boy spelled 'automobile race'

The left-brain controls verbal, and the right brain controls non-verbal...humans concoct stories & myths because of this.

This exposes two different selves within humans: (1) experiencing self – which tells no stories & remembers nothing & (2) narrating self – which has the monopoly on telling stories & making major decisions.

Every time the narrating self-evaluates our experiences it discounts the duration, remembering only the peak and end, assessing the whole experience according to its average – affects all our decisions. The narrating self does not aggregate experiences – it averages them.

MANIPULATION: from the viewpoint of the narrating self, add more non-trauma at the end of the experience.

EXAMPLE: the narrating self remembers ten seconds of pleasure at the end of the experience than the previous minutes of anxiety & pain...child, doctor, and treats.

The narrating self goes over our experiences with as sharp pair of scissors and a thick black marker – censoring moments of horror and files a story with a happy ending. Most humans will spend money on stories rather than experiences if it cannot remember them.

The experiencing & narrating self are closely intertwined – NS uses experiences as raw material for stories, which in turn, shape what ES actually feels. Hence, the ES often sabotages the best laid plans of the NS. EXAMPLE: New Years resolution unfulfilled.

When Humans say “I” they mean the stories (NS) in their head, not the onrushing stream of experiences. This gives rise to the human belief in an unchanging ‘self’ or individual that possesses an inner voice giving meaning to the entire universe.

The Meaning of Life

Q: what happens when humans turn the myths spun by the narrating self-cause grievous harm to ourselves and to others?

1. Nothing happens.
2. Once harm happens the human will be shaken out of the delusion
3. Once harm happens the human clings on to the delusion

EXAMPLE: in politics this is known as ‘they didn’t die in vain’ (p303-4)

It is much easier to live with the fantasy because fantasy gives meaning to the suffering. Our narrating self would much prefer to continue suffering in the future, just so it wouldn’t have to admit that our past suffering was devoid of all meaning – in the end each human is just a series of mythical stories.

Q: What is the meaning of life?

LIBERAL HUMANISM maintains there is no external God, that each individual voter, customer, and viewer ought to use ‘FREE WILL’ to create meaning – not merely for the individual life but for the whole universe.

SCIENCE undermines LH, stating that the FREE INDIVIDUAL is just a fictional tale concocted by an assembly of biochemical ALGORITHMS. In other words, the stories concocted by the narrating self are fiction.

THEOCRATIC RELIGION believed that God & heaven provided their lives with meaning – both LH & TR are equally delusional (p307)

RELIGION: Just as Christianity did not disappear with Darwin, so too LIBERAL HUMANISM will not disappear because SCIENCE reaches conclusion that there are no free individuals.

However, once SCIENTIFIC heresies are translated into modern technology, routine activity, & modern economic structures, it will become impossible to sustain the double game between SCIENCE & RELIGION and we or our heirs will probably require a brand-new package of RELIGIOUS beliefs and political institutions. (p307)

Humans are about to face a flood of useful devices, tools, and structures that make no allowance for the FREE WILL OF INDIVIDUAL Humans...will democracy, the free market, and human rights survive the deluge?

9. THE GREAT DECOUPLING (p309)

Let's examine the implications of the SCIENTIFIC discoveries that undermine LIBERAL HUMANISM.

3 PRACTICAL DEVELOPMENTS will make LIBERAL HUMANISM obsolete:

1. Humans will lose their economic & military usefulness – economic & political systems will stop attaching value to them.
2. The system will continue to find value in humans collectively not individually.
3. The system will find value in some unique individuals, but these will constitute a new elite of upgraded superhumans.

LIBERAL HUMANISM succeeded, not because it is philosophically valid, but because humans had value politically, economically, and militarily.

EXAMPLE: 1793 France...decree citing the need for all men, women, and children to carry out some function to preserve the 'Republic.'

Granting political rights to humans increases motivation & initiative, which is valuable on the battlefield and in the factory.

In the 21st century, both men & women may lose value. Modern armies rely less on throwing 000s of human life onto the battlefield and more on cutting edge tech created by small numbers of experts and highly training smaller numbers of soldiers, while generals delegate more decisions to ALGORITHMS.

MILITARY: Cyber wars may last for minutes instead of years. Instead of human soldiers who rape & pillage, a computer programmed with ethical ALGORTITHMS could conform to the latest rulings of an INTERNATIONAL CRIMINAL COURT.

ECONOMY: the ability to hold a hammer or press a button is becoming less valuable.

In the 21st century, will ELITES & GOVERNMENTS go on valuing every human being even when it does not pay any economic dividend?

Robots & Computers will soon outperform humans in most tasks.

Humans are about to lose economic value because INTELLIGENCE is decoupling from CONSCIOUSNESS. (p314)

Tasks, such as playing chess, driving cars, diagnosing diseases, or identifying terrorists are based on pattern recognition & non-conscious ALGORITHMS may soon excel human consciousness in recognizing patterns.

The EVOLUTION of inorganic computers may completely bypass the need for computers to develop consciousness...and lead to quicker route to super-intelligence.

Q: which is more important: INTELLIGENCE or CONSCIOUSNESS? This is an urgent 21st century economic & political issue...because for armies & corporations the answer is straightforward – INTELLIGENCE is mandatory & CONSCIOUSNESS and subjective experiences are optional.

EXAMPLE: taxi driver experiences are much richer versus a self-driving car which feels nothing.

THE SYSTEM DOES NOT NEED CONSCIOUSNESS OR SUBJECTIVE FEELINGS FROM A TAXI DRIVER...the outcome is safe-cheap transportation from point A to B...Self-Driving can do both far better than human driver.

Human Taxi Drivers are sure to go the way of the Horse during INDUSTRIAL REVOLUTION.

If humans were forbidden to drive at all and give computer ALGORTITHMS complete control, all vehicles could be connected to a SINGLE NETWORK – rendering car accidents less likely. Such a system would save lots of money, time, and human lives – YET would eliminate the human experience of driving and 10s of millions of human jobs.

Economists predict that unenhanced humans will be completely useless. Robots & 3D printers are replacing humans and highly intelligent ALGORITHMS will do the same to white collar occupations.

Q: How many travel agents do you need when your smartphone can buy your plane ticket, rental car, and hotel for you?

Human Stock Traders are in danger of going extinct via computer **ALGORITHMS**. Some traders have sued against ALGORITHM trading claiming it is discriminating against humans.

Attorneys, judges, cops, and detectives are in danger of going extinct via computer **ALGORITHMS**. Brain scans can detect lies and search engines can discover precedent in one day what would take a human a lifetime.

Teachers & professors are in danger of going extinct via computer **ALGORITHMS**. New interactive programs teach math, science, physics, and history. ALGORITHMS will learn each human's unique weakness & strengths, identify what gets them excited & what makes their eyes droop.

Q: why would a human need to learn those things if the INTELLIGENT computer program already knows it?

Doctors are in danger of going extinct via computer **ALGORITHMS**. The foremost task of the doctor is troubleshooting (diagnosing the problem).

INTELLIGENT computers (i.e., IBM's Watson) hold thousands of years of data & information on every known disease, can compare that information to a unique human genome, and never get tired or sick. THIS IS MUCH LESS EXPENSIVE THAN TRAINING HUMAN DOCTORS...

Pharmacists are in danger of going extinct via computer **ALGORITHMS**. In 2011 a pharmacy opened with a single robot – in its first year, it provided 2 million of prescriptions without making a single mistake.

Psychologists are in danger of going extinct via computer **ALGORITHMS**. Super computers, like Watson, can detect your emotional state as well as your physical. Humans attempt to detect your emotional state via non-verbals. However, super computers could simultaneously analyze internal biochemical indicators – determining what tone and voice you would need to hear.

EXAMPLE: Mattersight corporation uses **ALGORITHM** to determine who to route customer to base on tone, words used, etc....

The Useless Class

Q: what does the 21st century do with all the superfluous humans? What will conscious humans do when intelligent non-conscious **ALGORITHMS** can do everything better?

In 2010, 2% of humans worked in agriculture, 20% in industry, and 78% in services.

Q: When mindless **ALGORITHMS** can teach, diagnose, and design better than humans, what will humans do?

As new professions become obsolete, new professions evolved, and there was always something humans could do better than machines. HOWEVER, this is not a law of nature, and nothing guarantees it will continue to be like that in the future.

Humans have 2 basic abilities: physical & cognitive. If machines merely competed with humans physically, there were countless cognitive tasks that humans performed better.

Q: What will happen when **ALGORITHMS** outperform humans in remembering, analyzing, and recognizing patterns?

Believing that humans will always have a unique ability beyond the reach of non-conscious ALGORITHMS is wishful thinking. **SCIENTIFIC** answer is summarized in 3 principles:

1. Organisms are **ALGORITHMS** shaped by **EVOLUTION**.
2. **ALGORITHMIC** calculations are not affected by the materials the calculator is made of...abacus made of plastic or wood does not change the outcome of $2+2=4$
3. Non-organic **ALGORITHMS** can replicate and surpass actions taken by organic **ALGORITHMS**.

EXAMPLE: babies & facial recognition versus computer facial recognition...computer can do so much more efficiently & quicker than humans.

EXAMPLE: in 1980s humans did not believe humans could be beat at chess. Deep Blue beat Garry Kasparov.

EXAMPLE: Google's ALPHAGo taught itself how to play Chinese GO (Chinese game more complicated than chess) and beat human champion Lee Sedol.

EXAMPLE: Computer ALGORITHMS was used to pick human baseball players by underdog Oakland Athletics...team was first to win 20 consecutive games.

AI WEAKNESS: Hunter-gatherers have the advantage by mastering a wide variety of skills, single professional skills do not...For AI to squeeze humans out of the job market, it needs only outperform us in the specific abilities a particular profession demands...

Managers are in danger of going extinct vial computer ALGORITHMS.

EXAMPLE: Uber manages millions of taxi drivers with only a handful of humans.

EXAMPLE: 2014 DEEP KNOWLEDGE VENTURES appointed an ALGORITHM named 'VITAL' to the board. Like the other 5 human board members, IT gets to vote on whether to invest in a specific company.

ALGORITHMS are shaping what managers/executives do & decide – humans are beginning to rubber stamp the recommendations of ALGORITHMS.

Power & wealth will become concentrated in the hands of those humans who own the powerful ALGORITHMS. Once millions of humans are replaced by a single ALGORITHM, all the wealth&power will be centralized in the owner of the ALGORITHM.

Eventually, the ALGORITHMS itself may become the owner.

Human law already recognizes intersubjective entities, such as corporations & nations, as 'legal persons.'

EXAMPLE: Toyota & the school district can own land, money, sue & be sued. Humans might soon grant this status to .

Eventually, an ALGORITHM could own a transportation empire or venture capital without having to answer human masters. Today, most of our planet is owned by 'legal persons'.

Q: If Sumerian gods & Toyota can possess land and employ humans, why can't ALGORITHMS?

Q: Will ALGORITHMS be able to outperform humans in art?

EXAMPLE: David Cope, music professor @ UofSantaCruz created 'EMI', an ALGORITHM that creates music...which IT now has a contract "Classical Music Composed by Computer." Critics claim it lacks soul – yet when humans listened to EMIs music, without knowing, they praised the music for its soulfulness & emotional resonance.

EXAMPLE: Cope created 'ANNIE', an ALGORITHM that produces poetry "Comes the Fiery Night: 2,000 Haiku by Man & Machine"

In the 21st century the creation of a massive new UNWORKING class may emerge (humans devoid of economic, political, or even artistic value – that contribute nothing to prosperity, power, or glory of society).

This USELESS class will not merely be unemployed – will be unemployable. The crucial problem will not be creating jobs, it will be creating jobs that humans perform better than ALGORITHMS.

Q: What should humans teach kids...what they currently learn in school will be irrelevant by the time they are 40.

The traditional model for living was divided into learning then working – soon it will become utterly obsolete. The only way for humans to stay in the future game will be to keep learning throughout their lives and reinvent themselves repeatedly – most humans may be unable to do so.

Although it may be feasible to feed & support these useless masses, even without support from them.

Q: what will keep them occupied & content? Humans must do something, or they go crazy – what will they do all day?

One answer is to keep them occupied with drugs & computer games. (p330) Such a dreary life will deal a blow to LIBERAL HUMANISM – what is so sacred about useless bums who pass their days devouring artificial experiences in LaLaLand?

However, some experts & thinkers believe once AI surpasses human intelligence, it might simply exterminate humankind. It would be hard for humans to control the motivation of a system smarter than themselves.

A Probability of 87%

At the beginning of this chapter, identified 3 threats to LIBERAL HUMANISM:

1. Humans may become useless economically & militarily.
2. The system will need collective humans not individual humans.
3. The system will find value in some unique individuals, but these will constitute a new elite of upgraded superhumans.

The system will understand humans better than humans understand themselves and will make the most important decisions for them. The system will deprive individuals of their authority and freedom.

LIBERAL HUMANISM is founded on 3 assumptions:

1. I am an individual
2. My authentic self is completely free.
3. I know things about myself nobody else can discover.

SCIENCE challenges those 3 assumptions:

1. Organisms are ALGORITHMS.
2. ALGORITHMS constituting humans are not free.
3. External ALGORITHMS could know human better than humans know themselves.

21st century technology may enable external ALGORITHMS to 'hack humanity' and know humans better than they know themselves. When this happens, the belief in individualism will collapse and authority will shift from the individual to the networked ALGORITHMS. Humans will see themselves as a collection of biochemical mechanisms that are constantly monitored & guided by a network of electronic ALGORITHMS.

Once the external ALGORITHM makes fewer mistakes than humans do, it makes sense for humans to trust the ALGORITHM to make more and more decisions and life choices.

Humans have crossed this line as far as medicine is concerned. In hospitals, humans are no longer individuals. Humans are beginning to wear health devices that monitor their bodies' functions. An application called Deadline, informs humans of how many years of life they have left, given their current life habits.

For those who use these apps, it has become RELIGIOUS – the Quantified Self movement believes the SELF is nothing more than mathematical patterns...collect biometric data & allow ALGORITHMS to analyze the data & tell you who you are & what you should do. ITS MOTTO: Self Knowledge through numbers.

Humans who experience themselves through the interaction through such data collection, may begin to see themselves as a collection of biochemical systems than as individuals – their decisions will reflect the conflicting demands of the various systems.

As genetic technology is integrated into daily life & humans develop intimate relationships with their DNA...the SELF may blur and the inner voice may dissolve into a noisy crowd of genes – when facing difficult decisions, the human may stop consulting inner voices and instead consult the parliament of genes.

EXAMPLE: Angelina Jolie decided to have a double mastectomy, not because she had breast cancer, but because her DNA and family history were analyzed by a computer ALGORITHM.

This is not an apocalyptic scenario – ALGORITHMS won't revolt and enslave us. Instead, they will be so good at making decisions for us that it would be madness not to follow their advice.

Jolie preferred to sacrifice privacy & autonomy for health...in the future, the desire to improve human health may cause most to dismantle barriers protecting privacy & allow State & Corporations access to our innermost recesses.

EXAMPLE: Google could alert you to epidemic in minutes – it merely needs to search/monitor the WORDS humans' type, cross-reference those words with a dbase of disease symptoms. If Google ALGORITHM notices an uptick in the words – then there is an epidemic...no need to wait to go to the doctor's office.

The key is for humans to sacrifice privacy for the greater good – preventing an epidemic.

Google Flu Trends --- Google Baseline Study --- Google Fit --- 23andMe (founded by wife of Google founder). Whoever can understand what your chromosomes are saying can tell you things about yourself that you never even suspected.

Whoever builds the 1st genetics dbase will provide customers with the best predictions and will corner the market. US companies are increasingly worried that privacy laws will make them less competitive with countries like China that disregard individual privacy...which may in turn hand China the genetic market.

If humans gave Google free access to our biometric devices, to our DNA scans, and to our medical records, not only will humans get all-knowing health medical services that will fight epidemics, shield humanity from cancer, heart attacks, & Alzheimer's. Imagine a system that watches every breath, every move, bank account, heartbeat, sugar levels, sexual escapades. It will know you better than yourself.

Google will not make up cooked-up stories like the narrating self & will not be misled by peak-end rule cognitive short-cuts. Google will remember every step we took – every hand we shook.

Many humans will be happy to transfer their decision making to such systems, or at a bare minimum, seek the systems advice.

EXAMPLE: Google who should I marry John or Paul...From Google – you should marry John because I know everything about both of you and you have an 87% chance of succeeding with John.

In exchange for such counseling, humans will have to give up the idea that humans are individuals who have FREE WILL – Humans will no longer be autonomous entities directed by the stories their narrating self-invents...Instead, humans will become integral parts of a huge global network.

Once humanity has a system that really does know me better, it will be foolhardy to leave authority in the hands of the narrating self of individual humans.

LIBERAL HUMANISM habits such as democratic elections will become obsolete because Google will be able to represent human's opinions better than the individual human can.

Because of the narrating self & peak-end rule, humans will complain about the 'ruin of us all' but during the last few weeks leading up to the election send the very same person back to office.

However, Google will know how to screen spin doctors, understand that illness makes voters lean a bit more to the right than usual, and will compensate for this. Google will vote not according to my momentary state of mind, not according to my narrating self, but rather according to the real feeling & interests of the collection of biochemical ALGORITHMS KNOWN AS "I".

IF Google makes enough good decisions, humans will grant IT increasing authority. As dbases grow, statistics become more accurate, the ALGORITHMS will improve & decisions will get better.

LIBERAL HUMANISM will collapse the day the system knows humans better than humans know themselves.

Facebook ALGORITHM can predict your opinions better than your human spouse. The human authors of the Facebook study stated, "People might abandon their own psychological judgments and rely on computers when making important life decisions, such as choosing activities, career paths, or even romantic partners. It is possible that such date-driven decisions will improve human's lives."

In the 21st century, humans' personal data is probably the most valuable resource most humans still have to offer, and we are giving it to the tech giants in exchange for email services and funny cat videos.

From Oracle to Sovereign (p346)

Once Google & Facebook ALGORITHMS become all-knowing oracles, IT may evolve into sovereigns. Once the oracle gains your trust it becomes an agent – acting on your behalf...However, having authority in ITS hands & know far more than you IT may begin manipulating you for the greater good.

Microsoft's CORTANA acts as an Oracle...eventually an Agent interacting with other CORTANA agents...eventually, CORTANA may begin to manipulate other CORTANA's...RICH humans owning the most up to date CORTANA will have decisive advantage over poorer humans with older CORTANAs.

The murkiest of all concerns is the identity of CORTANA's master...which should CORTANA obey ITS masters narrating self or experiencing self? Eventually, CORTANA will know you so well that it will know which buttons to push to manipulate you to take CORTANA's advice...

Google NOW and Apple's SIRI are headed in the same direction.

Eventually, humans may reach a point where it will be impossible to disconnect from this all-knowing network – disconnection may mean death. Future humans will incorporate into their bodies a host of biometric devices, bionic organs, and nano-robots, which will monitor health and defend against infections, illnesses, and damage. They will have to be connected to this network 24/7 constantly being updated with latest virus protection. (p349)

New technologies of 21st Century may collapse the HUMANIST REVOLUTION, stripping humans of their authority, and empowering non-human ALGORITHMS instead. Don't blame computer engineers, instead blame biologists – THIS TREND IS FUELED MORE BY BIOLOGY THAN COMPUTER SCIENCE. SCIENCE has concluded that organisms are ALGORITHMS, dismantling the wall between the organic and the inorganic. This has turned the COMPUTER REVOLUTION from a mechanical affair into a biological cataclysm – shifting authority from individual humans to networked ALGORITHMS.

The shifting of authority from humans to ALGORITHMS is happening all around us, not because of some momentous government decision, but due to a flood of mundane personal choices.

In the 21st century, the individual is more likely to disintegrate gradually from within than to be brutally crushed by the likes of totalitarian Stalin or modern-day Putin.

Today Corporations & Governments pay homage to individuality...but first must deconstruct humans into biochemical subsystems, monitor those systems with ubiquitous sensors & decipher their working with powerful ALGORITHMS – the so-called individual will be a mesh of biochemical & electronic ALGORITHMS without clear borders & without individual hubs.

Upgrading Inequality (p351)

We looked at the first 2 threats:

1. Humans will lose their individual value completely.
2. Humans will keep their collective value, lose individual authority, and be managed by external ALGORITHMS.

The 3rd threat is that some humans will remain indispensable & undecipherable, who will constitute a small, privileged elite of upgraded humans – who will enjoy unheard of abilities & unprecedented creativity, which will allow them to go on making the most important decisions in the world.

These upgraded humans will perform services for the system, while the system could neither manage nor control them.

Most humans will not upgrade, therefore will become inferior dominated by the computer ALGORITHM & the new super humans.

LIBERAL HUMANISM gives equal value to different experiences (i.e., rich versus poor). However, will this work once rich & poor are separated not merely by wealth but by real biological gaps?

The elites will always be one step ahead of the masses due to higher costs of new technologies. In the future, real gaps in physical & cognitive abilities may open between an upgraded upper class & the rest of society.

20th Century medicine sought to heal...and as the rich got to experience the breakthroughs first, eventually the benefits reached the masses.

However, 21st century medicine is increasingly shifting to upgrade the healthy rather than heal the sick. This is an elitist project, because it is beginning to reject the universal standard applicable to all & seeks to give an edge to some individuals over others. If upgrades become so cheap&common that everyone enjoys it, it will become baseline, and the next generation will seek to strive to surpass.

The age of the 20th century masses & mass healthcare may be over – the state and the elite may lose interest in providing the poor with healthcare.

Q: What will happen if it turns out that superhumans have such fundamentally different experiences from normal HSapiens? What if superhumans become bored with novels of poor HSapiens and HSapiens cannot understand the love affairs of superhumans?

The new projects of the 21st century – gaining divinity, immortality, and bliss – also hope to serve the whole of humankind. These projects aim to surpass, rather than safeguarding the norm, may result in the creation of a new superhuman caste that may abandon its LIBERAL HUMANISM roots and treat normal HSapiens no better than 19th century Europeans treated Africans.

If SCIENTIFIC discoveries & technological developments split humankind into a mass of useless humans & a small group of upgraded superhumans or if authority shifts altogether away from human beings in the hands of highly intelligent ALGORITHMS, then LIBERAL HUMANISM will collapse.

Q: What new religions or ideologies will fill the resulting vacuum & guide the subsequent EVOLUTION of our godlike descendants?

10. THE OCEAN OF CONSCIOUSNESS (p356)

New RELIGIONS will emerge from research laboratories – promising salvation through ALGORITHMS & genes. The most interesting place from a RELIGIOUS perspective is not the ISLAMIC STATE or the BIBLE BELT – it is SILICON VALLEY.

Hi-tech gurus are brewing brave new RELIGIONS, that have very little to do with God, and everything to do with technology.

They promise all the OLD RELIGIOUS prizes...happiness, peace, prosperity – even eternal life...here on earth, while humans are alive, with help of technology, not after death with the help of celestial beings.

NEW TECHNO-RELIGIONS can be divided into two (2) categories:

1. TECHNO-HUMANISM – HSapiens has run its historical course & will no longer be relevant, but technology should be used to create HOMO DEUS – a much superior human model. TH also agrees that humans are the apex of creation & clings to many HUMANIST values. HDeus will retain some human features, enjoying upgraded physical & mental abilities and able to hold its own against non-organic/conscious ALGORITHMS. Since intelligence is decoupling from consciousness, humans must upgrade to stay in the game.
2. DATA RELIGION – humans have completed their cosmic task & should pass the torch on to new kinds of entities.

EVOLUTION: COGNITIVE REVOLUTION turned African ape into HSapien ruler of the world. The improved mind had access to intersubjective realms, allowing HSapiens to create gods & corporations, build cities & empires, invent writing & money, and split the atom & reach the moon.

All of which occurred, not through God, but through a few small changes in HSapiens DNA & slight rewiring of the brain.

TECHNO-RELIGION says a few changes to our genome & another rewiring of the human brain will launch a 2nd COGNITIVE REVOLUTION – turning HSapiens into HOMO DEUS and making them rulers of the galaxy.

TECHNO-HUMANISM hopes to reach the goals of EVOLUTIONARY HUMANISM & Hitler, not by means of selective breeding & ethnic cleansing, but by help of genetic engineering, nanotechnology, and brain computer interfaces.

Gap the Mind

TECHNO-HUMANISM seeks to upgrade the human mind & give humans access to unknown experiences & unfamiliar states of consciousness.

PROBLEM: SCIENCE does not understand the mind – 1. What is its function and 2. How minds emerge?

SCIENCE:

1. Has learned how to engineer mental states, without comprehending implications of such manipulations.
2. Is unfamiliar with the full spectrum of mental states – humans fail to appreciate that they exist in a very tiny space of consciousness within perhaps limitless ocean of alien mental states.

The spectrum of mental states may be infinite...but SCIENCE has only studied two:

1. Sub normative - psychiatric & mental disorders

2. WEIRD (Western Educated Industrialized Rich Democratic)

(p360-1) Critical of only studying psychology students – because humans have barely studied HSapien mental spectrum. Humans should learn the mental spectrum of all organisms.

(p362) Bats experience feelings...SCIENCE needs to discover what echolocations color the love of a female bat has for her offspring or the feelings male bats have towards rivals.

HSapiens cannot understand, not only bats, but whales, tigers, & pelicans. Whales, like humans, process emotions in the LIMBIC part of the brain. However, the whale has an additional part missing from the human structure...does that part allow whales to experience deep & complex emotions that are alien to humans.

HSapiens do not rule the world because humans have deeper emotions or more complex musical experiences than other animals. Humans may be inferior to whales, bats, tigers, and pelicans, at least in some emotional & experiential domains.

I Smell Fear

At the beginning of the 3rd Millenium, humans face a unique challenge – LIBERAL HUMANISM is making way for TECHNO-HUMANISM, & medicine is increasingly focused on upgrading the healthy rather than healing the sick. Doctors are not merely fixing.

As a result, of human familiarity with normative & sub-normative psychology – a new subfield called POSITIVE psychology has surfaced.

Modern Humans have lost the ability to smell, pay attention, and to dream. Smell was important to hunter-gatherers – not to modern humans. The same with paying attention to our surroundings – now we pay attention to our smartphones. Modern humans have lost the ability to ‘lucid dream’ the ability to control one’s actions in the dream.

Did losing these abilities make human life greyer or poorer? regardless, for the economic & political systems it is worth it. Corporations & States want humans to produce not dream. Modern Humans may end up losing the ability to tolerate confusion, doubts, and contradictions...humans may upgrade bodies & brains, while losing the human mind in the process.

The AGRICULTURAL REVOLUTION farmers downgraded goats that caused the most disturbance...the same may happen between superhumans and humans.

The Nail on Which the Universe Hangs

TECHNO-HUMANISM faces another threat – it hangs the universe on the nail of the human will...PROBLEM: what will happen when tech progress reshapes & engineers that ‘will?’

Tech progress doesn’t want to follow the humanist pathway, it wants to control the inner voice – turn on/off the switches, turn up/lower the volume, & make life easy & comfortable. Give drugs to the human.

Once humans can design & redesign our ‘will’, humans will no longer see their ‘will’ as the ultimate source of meaning & authority. When human desires make one uncomfortable, tech progress promises to bail humans out. When the nail (Human Will) is pegged in a problematic spot, tech progress will pull it out & stick it somewhere else.

The key is to never have uncomfortable desires or experiences in the first place. If TECHNO-HUMANISM reaches this conclusion the ‘sacred human’ just becomes another designer product.

Hence, a bolder TECHNO-RELIGION seeks to sever the HUMANIST umbilical cord altogether. It envisions a world that does not revolve around the desires & experiences of humans. That candidate is INFORMATION – the emerging RELIGION known as DATAISM – worships DATA, not god or human.

11. THE DATA RELIGION (p372)

DATAISM states that (1) the universe consists of data flows & (2) the value of an entity is determined by its contribution to data processing. DATAISM was born from 2 SCIENTIFIC events: (1) Darwin (biology) & (2) Turing (computer) – mathematical laws apply to both biochemical & electronic ALGORITHMS. DATAISM collapses the boundaries between animals & machines, expecting electronic ALGORITHMS to decipher & outperform biochemical ALGORITHMS.



DATAISM offers politicians, businesspeople, ordinary consumers, and **SCIENCE** a single overarching theory that unifies all the **SCIENTIFIC** disciplines from musicology to economics to biology – giving **SCIENTISTS** a common language, one where THEY understand each other.

DATAISM inverts the traditional model of learning: Humans distill data into info, info into knowledge, & knowledge into wisdom. **Dataists** believe humans cannot cope with immense amounts of data – hence electronic **ALGORITHMS** should be entrusted not humans. The convergence of biology with computer science may transform the very nature of life.

The current **SCIENTIFIC** dogma shaping our world beyond recognition is that organisms are **ALGORITHMS** & humans, giraffes, and tomatoes are just different methods for processing data.

EXAMPLE: Laypeople see the economy consisting of peasants, workers, and consumers, while Experts see the economy as a mechanism for gathering data about desires & abilities, & turning this data into decisions...

According to this view, capitalism & communism are not competing ideologies, but competing data-processing systems (distributed versus centralized processing).

Distributed defeated centralized processing, not because of the sacred individual or liberty, but because it works better than centralized processing – at least in periods of accelerating technical change. In other words, centralized processing eventually cannot keep up with rapid changes.

The critical point is not whether capitalism works, it is that it understands economics in terms of data-processing.

Where Has All the Power Gone?

Political Scientists increasingly interpret political structures in terms of data-processing. Democracies & Dictatorships are competing mechanisms for gathering & analyzing information. Again, distributed processing worked better, however, at both volume & speed of data increase, elections, political parties, & legislatures might become obsolete – because they cannot process data FAST ENOUGH.

This worked during the 19th & 20th century, the **INDUSTRIAL REVOLUTION**, because politics moved faster than technology. However, the **TECHNOLOGY REVOLUTION** now outpaces political processes, causing legislators & voters to lose political control.

The internet ignores traditional boundaries & controls. Governments & corporations attempt to control it, but by the time it does, the Internet has morphed 10x. In other words, Govt & Corp cannot keep up with technology – it is overwhelmed by data.

AI & biotechnology may soon overhaul society and our bodies. Modern democratic structures cannot collect or process relevant data fast enough, most voters do not understand biology or cybernetics to form any pertinent opinions. Democratic politics is losing control of events and failing to present humanity with meaningful visions of the future.

No one is clear where all the power has gone...power will not shift back to Britons if they leave the EU or if Trump is elected.

While 20th century dictators tried to create new society & humans with trains & typewriters – 21st century dictators may rely on biotechnology & super-computers.

Modern day dictators, Putin, Kim Jong Un, etc., however, do not seem to be able to keep up with the pace of technology or data processing. (p381)

Meanwhile, paranoid Republicans have accused Obama of being a ruthless despot hatching conspiracies to destroy the foundations of American society – creating new worlds & humans was far beyond Obama's agenda.

As a result, 21st century politics is bereft of grand visions, governments have become mere administration, managing the country – not leading it (GOVERNMENT has no idea where IT will be in 20 years.)

Maybe this is a good thing – 20th Century governments led humans to Auschwitz, Hiroshima, and the Great Leap Forward. Mixing godlike technology with megalomaniacal politics is a recipe for disaster.

The system is too far complex for dictators or ruthless billionaires to control the entire global system. Since modern systems cannot process data fast enough to create meaningful visions, new ones will emerge or evolve to take their place. The question is who will build & control these structures. If humankind is no longer up to the task, maybe someone else should give it a try.

History in a Nutshell

From **DATAIST** perspective, humans may interpret human species as a single processing system, with individual humans as chips. **HISTORY** then becomes a way to understanding improving the efficiency of this system:

1. Increase the number of processors – city of 100k has more computing power than 1k.
2. Increase the variety of processors – conversation between peasant, priest, & doctor produces more ideas than between 3 hunter-gatherers.
3. Increase the number of connections between processors – connecting 10 cities is more productive than 10 isolated cities.
4. Increase the freedom of movement along existing connections – roads between 10 cities that are freely traveled is better than being plagued by robbers & despots who prevent travel.

Construction of the HSapien data processing system passed through 4 HISTORICAL stages:

1. COGNITIVE REVOLUTION – made it possible for large numbers of HSapiens to develop a single data-processing network.
2. AGRICULTURAL REVOLUTION – made it possible for human processors to increase & live together in close proximity.
3. COOPERATIVE REVOLUTION – lasted until the beginning of the SCIENTIFIC REVOLUTION. Human groups formed cities & kingdoms and began to dream about creating a single network.
4. CONNECTION REVOLUTION – data managed to dissolve the barriers of cultural prejudices, strict censorship, & political oppression through free markets, the SCIENTIFIC community, the rule of law, & the spread of democracy. We try to believe this is because of good & truth – actually, an improved global data-processing system.

Over the last 70k years, humans spread out, separated into distinct groups, and are merging again.

If humankind is a single data-processing system, what is its output? **DATAISTS** would say that its output is the creation of a new & more efficient data-processing system – called the INTERNET OF ALL THINGS. They believe once this happens, HSapiens will vanish.

Information Wants to Be Free

DATAISM began as a neutral **SCIENTIFIC** theory but is now mutating into a **RELIGION** that claims to determine right & wrong. The supreme value of this **RELIGION** is the 'information flow.' According to **DATAISM**:

1. Human experiences are not sacred.
2. Humans are not the apex of creation.
3. Humans are not the precursor for Homo Deus
4. Humans are tools for creating the Internet of All Things

In other words, this data-processing system would be like God, controlling everything & being everywhere, with humans merging into it.

DATAIST prophets sound like biblical ones... "The Singularity is Near" versus "The kingdom of heaven is near."

DATAISTS explain that HSapiens is an obsolete **ALGORITHM** – emotions & intelligence are just **ALGORITHMS** (i.e., human & chickens). If **DATAISTS** can create a data-processing system that can assimilate more data & process more efficiently, than a human, isn't that system superior to human?

DATAISM has 2 commandments:

1. Maximize the flow of data to more media and produce & consume more information.
2. Link everything to the system. 'everything' means more than just humans (i.e., cars, refrigerators, chickens, trees, etc.)

The greatest **DATAISM** sin would be to interrupt or disrupt the FLOW OF DATA. **DATAISTS** hold up the FLOW OF DATA & FREEDOM OF INFORMATION as the GREATEST GOOD OF ALL.

Since 1789, **DATAISM** has created a genuinely novel value: FREEDOM OF INFORMATION.

Do not confuse FREEDOM OF INFORMATION with FREEDOM OF EXPRESSION – which was given to humans, the other is given to information. This 'novel value' may impinge on human FREEDOM OF EXPRESSION, by privileging the right of information to circulate freely over the right of the human to own data & restrict its movement.

DATAISM got its first martyr, Aaron Swartz, in 2013. He was a firm believer in FREEDOM OF INFORMATION. He hacked JSTOR digital library because he believed INFORMATION wants to be free. He was arrested, put on trial, and committed suicide.

DATAISTS believe all good things depend on the FREEDOM OF INFORMATION.

DATAISTS believe that what humans really want is mobility rather than a private vehicle. They argue a good data-processing system can provide mobility far more cheaply & efficiently. All of which depends on humans giving up privacy & allowing **ALGORITHMS** to always know where they are & want to go.

Record, Upload, Share!

GENZ does not need convincing. They just want to be part of the data flow, sacrificing privacy, autonomy, & individuality.

Who writes WIKIPEDIA – all of us. The individual becomes a little ‘chip’ inside a giant data-processing system. So, what does GENZ do – flood everyone around them with more data.

DATAISTS believe in the invisible hand of data flow.

Connecting to the all-knowing global data-processing system becomes the source of all meaning. When humans merge into the data flow because they are part of something bigger.

Traditional **RELIGION** assured humans that they were part of some greater cosmic plan/purpose/meaning.

Data **RELIGION** your every word or action is part of the great data flow, **ALGORITHMS** are constantly watching you and care about everything you do and feel.

DATAISM believes human experience is valueless if they are not shared and that we need not (indeed cannot) find meaning within ourselves – record & connect human experiences to the data flow and the **ALGORITHMS** will discover its meaning & tell humans what to do.

EXAMPLE: writing a private diary is foreign to GENZ – why write something if no one else is going to read it. If you experience it – record it, if you record it – upload it, if you upload it – share it.

DATAISM states that in and of themselves human experience is not superior to wolves or elephants. Humans however can record, upload, & share – thereby enriching the global data processing system. Humans do this to prove to themselves & to the system that humans still have value. And value lies not in having experiences but in turning experiences into free-flowing data.

Know Thyself

DATAISM is neither liberal nor humanist – it also not anti-humanist. It has nothing against humanist experiences – it just doesn't see the intrinsic value. They argue that the more data and computational power required the more value.

Perhaps it is time to retire HSapiens – **DATAISM** appraises the value of humanity in terms of their function in data-processing mechanisms. If an **ALGORITHM** fulfills the same function better than Human experiences will lose their value.

DATAISTS dismisses the sacredness of the human experience as an outdated biochemical **ALGORITHM**. By equating human experience with data patterns, **DATAISM** undermines human primary source of authority & meaning and heralds a **RELIGIOUS REVOLUTION**, the likes of which have not been seen since the 18th century.

HUMANISTS declare God is a figment of the human imagination. **DATAISTS** tell **HUMANISTS** Yes God is a figment of human imagination but human imagination is just a product of biochemical **ALGORITHMS**. In the 18th century **HUMANISTS** sidelined God, in the 21st century **DATAIST** may sideline **HUMANISTS**.

DATAIST REVOLUTION will take a few decades, maybe a century or two. Eventually, the Internet of All Things may become sacred in its own right, much like God was and humans were.

The shift from homo-centric to data-centric will not merely be a **PHILOSOPHICAL REVOLUTION** but also a **PRACTICAL REVOLUTION**. Ideas change the world only when they change our behavior.

RELIGION: Babylonians believed the stars controlled their fate & predicted their future. Their philosophical beliefs translated into practical procedures.

RELIGION: Scriptural religions said read the Bible not the stars – a practical recommendation.

RELIGION: Humanists said humans are the source of all truth – not God. Instead, listen to yourself & follow your inner voice – give practical instructions on how to do this (i.e., writing a diary, talking with a friend, reading a book, etc.)

RELIGION: **SCIENTISTS** followed humanist guidelines and found **EVOLUTIONARY** reasons to do so – a series of complex **ALGORITHMS** that developed over millions of years.

RELIGION: in the 21st century, humans should no longer listen to FEELINGS but to external **ALGORITHMS**. What's the point of having democratic elections when the **ALGORITHMS** know not only how each person is going to vote, but also the underlying neurological reasons why one votes Democrat or Republican. **DATAISM** commands listen to the **ALGORITHMS** – they know how you feel.

DATAIST GUIDELINES – want to know who you really are and what to really do?

1. Get your & your family's DNA sequenced.
2. Wear a biometric device to measure your blood pressure, sleep, and EKG – connect it to your smartphone.
3. Buy a mobile camera and microphone and record everything you do, upload, and share it.
4. Allow Google & Facebook to read all your emails, monitor all your chats & messages, and keep a record of your likes & dislikes.

ENDGAME: IF YOU DO ALL THAT, THEN THE GREAT ALGORITHMS OF THE INTERNET OF ALL THINGS WILL TELL YOU WHO TO MARRY, WHICH CAREER TO PURSUE, & WHETHER TO START A WAR...

DATAISM claims that the human brain cannot fathom the new master **ALGORITHMS** – just like **Christians** claim that humans cannot understand God.

With the rise of machine learning & artificial neural networks, more **ALGORITHMS** evolve independently, improving ITSELF & learning from ITS mistakes. IT analyzes astronomical amounts of data beyond human comprehension, adopts strategies that escape the human mind. Although humans created the seed **ALGORITHM**, IT grows & follows Its own path, going where no human has gone before – where no human can follow.

A Ripple in the Data Flow

DATAIST influence has both the LIFE & SOCIAL **SCIENCES** hyper focused on decision-making processes, as if that is all there is to life. **DATAISM** is gaining better understanding of decision-making processes while adopting a skewed view of life.

The most urgent political & economic project of the 21st century is to critically examine **DATAIST** DOGMA. **SCIENTISTS** should ask themselves:

1. Is anything missing if we only understand life as data-processing & decision-making?
2. Is there anything in the universe that cannot be reduced to data?
3. Will anything be lost by replacing conscious intelligence with superior non-conscious **ALGORITHMS**?

Even if **DATAISM** is wrong and organisms are not **ALGORITHMS**, that is not enough to prevent **DATAISM** from taking over the world.

Most **RELIGIONS** gained enormous popularity & power despite factual inaccuracies.

Up until now, NO SINGLE **DOGMA** has been adopted by **SCIENCES**. If every SCIENCE discipline adopts the **DATAIST** paradigm then it will only strengthen the **DOGMA** – if flawed, it will be extremely difficult to resist.

IF **DATAISM** succeeds in taking over the world what will be the fate of humans:

1. Initially, **DATAISM** will accelerate the spread of **HUMANIST** pursuit of health, happiness, & power.
2. Due to immense amounts of data-processing needed to accomplish this, **ALGORITHMS** will do it for humans. Once authority shifts from humans to **ALGORITHMS**, human projects may become irrelevant – humans become a chip or data like a clump of dirt within a gushing river.

DATAISM threatens to do what HSapiens did to animals – it was easy to see humans as the apex of creation, taking credit for all its achievements. The lives of other animals were undervalued due to lesser functions, & whenever its function ceased it became extinct.

Once humans lose functional importance to the network, humans will be condemned to join the Mammoths & Chinese river dolphins in oblivion – humans will turn out to have been a mere ripple within the cosmic flow of data.

The rise of AI & biotechnology will transform the world but does not mandate a single deterministic outcome. Everything outlined in this book should not be understood as prophecies but as possibilities.

If you disagree with any of these possibilities, you are free to think & behave in ways that prevent these possibilities from materializing. This book traces the origins of our present-day conditioning to loosen its grip & enable us to think in far more imaginative ways about our future. This book aims to broaden our horizons and make us aware of a much wider spectrum of options.

Censorship in the 21st century works by flooding humans with irrelevant information. They just do not know what to pay attention to, and often spend their time investigating & debating SIDE issues!

In ancient times, having power meant having access to data – TODAY, power means knowing what to ignore! So, considering everything happening around us what should we focus on?

All the problems of turmoil in the Middle East, refugee crisis in Europe, the slowing of the Chinese economy, Global warming, growing inequality, or the disruption of the job market are overshadowed by 3 interlinked processes:

1. **SCIENCE** is converging on an all-encompassing DOGMA, which says that organisms are ALGORITHMS & life is data-processing.
2. Intelligence is decoupling from consciousness.
3. Non-conscious but highly intelligent ALGORITHMS may soon know humans better than humans know themselves.

These 3 inter-linked processes raise 3 key questions:

1. Are organisms just ALGORITHMS & is life just data-processing?
2. What's more valuable (1) intelligence or (2) consciousness.
3. What will happen to society, politics, & daily life when non-conscious but highly intelligent ALGORITHMS know humans better than humans know themselves?