Homo Deus

1-Page Summary

For millennia, humans struggled with three serious problems: famine, plagues, and war. These issues contributed to the deaths of millions of people and resulted in the rise and fall of global empires.

However, in the modern era, we've mostly overcome these three problems through the development of technology and medical knowledge. Consequently, we now look toward new goals: *immortality, happiness,* and *divinity*. These will guide us to the next phase of our evolution, from *Homo sapiens* to *Homo deus*, or god-like beings.

This book explores the way that technological advancement may lead to the decline of modern political, social, and economic systems, with advanced algorithms, "superhumans," and data surveillance becoming the new normal.

To understand this perspective, we must first look to human history to see how modern society has developed. From there, we'll look at technology and how it has already impacted modern systems of religion, economics, and politics. Finally, we'll look at the future of humanity and the systems that may develop within the next century.

The Past: The Rise of Homo Sapiens

To understand where we're headed, we must first understand how we became the most dominant species on the planet. Humans have been the single greatest agent of change in the history of the Earth. In just a few thousand years of existence, mankind has changed the ecosystem of the entire planet. We've been able to dominate the planet largely through our flexibility and large-scale cooperation—not, as some contend, because we have a soul, consciousness, or self-awareness.

Historically, humans have used their ability to flexibly cooperate to dominate both animals and other humans. For example, in pre-Soviet Russia, 3 million noblemen controlled 180 million commonfolk by ensuring that "lower-class" citizens never learned to cooperate with one another.

The Creation of Meaning

To ensure cooperation, humans have used storytelling to create meaningful narratives that allow them to dominate other species and control one another. About 70,000 years ago, Sapiens gained the power of cognition, allowing them to share stories that only existed in their heads. These stories consisted of tales of divine beings and ancestral spirits. While these tales remained relatively local, they provided Sapiens an advantage over

other beings such as Neanderthals by creating a stronger sense of community and purpose.

Over time, the advent of writing and organized religion allowed for centralized powers to ensure large-group cooperation and mass organization. While religions have historically been theistic, or centered around powerful deities, religion doesn't have to revolve around supernatural or superstitious beliefs. Rather, religion is defined as an all-encompassing story that creates ethics and laws within a human structure.

In this sense, "religion" includes scientific, economic, and socio-political ideologies because they create order, generate ethical perspectives, and allow for large-scale cooperation. In the modern era, we still rely on religion to guide our perspective. While fewer people believe in the grandiose stories of theistic religions, economic and political religions such as capitalism, nationalism, communism, and fascism have taken their place.

The Present: The Rise of Humanism

As theism lost its power, humanity needed a new way to get through the constant stress, tension, and burnout associated with the demand for advancement while maintaining social order and large-group cooperation.

To help in their quest for meaning, humans turned to humanism and the belief that humanity has the authority to create meaning within the universe.

Morality and the Impact of Humanism

Meaning creates morality by determining what's important in life. Historically, people didn't believe that human beings had the ability to determine morality on their own and turned to a higher power for guidance. Modern humanists, however, believe that human beings can use their personal feelings to define their version of "right" and "wrong."

As people continue to value their own perspective over that of a divine being, the impact of humanism is seen clearly in the following five areas:

1. Ethics: Historically, theistic religion dictated ethics, regardless of human impact. In the modern era, humanists develop their own ethical judgments and make ethical decisions based on their internal feelings, removing the black-and-white judgments of religious fundamentalism.
2. Politics: Historically, politics were reserved for the noble or the religious elite. In the modern era, most countries now involve the masses through voting and direct representation. People are

expected to vote based on their personal perspective and experiences.

3. Aesthetics: Historically, divine beings have been a primary source of artistic and aesthetic inspiration. In the modern era, artists usually create works that center around human emotion. In addition, art isn't judged based upon whether or not it's pleasing to a higher power, as "beauty is in the eye of the beholder."
4. Economics: Historically, many civilizations had a set system to determine quality and pricing of goods. In the modern era, competition and increased productivity have given power to the consumer to determine the quality of goods and the worth of a product.
5. Education: Historically, students relied on the words of divine beings or ancient philosophers to shape their perspective. In the modern era, teachers instruct students to form their own opinions because, according to humanism, every human has the power to create their own meaning and authority. Teachers introduce their students to a wide variety of perspectives, then allow them to decide how they feel about the information.

The Branches of Humanism

Similar to the religions that came before it, humanism has split into different branches. Each branch has a different take on humanism and is often at

odds with other humanist perspectives. The three primary branches of humanism are liberalism, socialism, and evolutionary humanism.

Liberalism

Liberals believe people have distinct internal voices and unique experiences, necessitating personal freedom. They possess free will and should be able to express their perspective in everything from art to politics. This form of humanism is considered the “orthodox” version and values individuals over political or religious institutions. According to liberalism, the voter and the customer are always right because their individual experience is what matters most.

Socialism

Socialists believe people must focus on the experiences and feelings of others. They view liberals as self-centered because they justify actions based upon personal feelings rather than the feelings of everyone else. According to socialism, peace and prosperity can only be achieved by unifying the people of the world through altruism. Socialists believe individual voices matter less than collective voices. Where liberals give weight to the opinions of the voter and the customer, socialists give power to socialist parties and trade unions.

Evolutionary Humanism

Evolutionary humanists (fascists) believe the experiences of “superior” people are more valuable than those of “inferior” people. In the same way that humans have dominated other animals, they believe that these “superior” people deserve to reign over the rest of humanity because they are the key to the continued evolution of the human species. According to evolutionary humanism, conflict is essential to the continued growth of humanity because it promotes the process of natural selection as well as human advancement.

Liberalism in the 21st Century

While many may not consider large-scale conflicts such as WWI, WWII, and the Cold War “religious” wars, disagreements in humanist philosophy were at the core of each. Almost every major war from 1914-1989 pitted democracy (liberalism), communism (socialism), and fascism (evolutionary humanism) against one another, with liberalism coming out as the ultimate winner.

In the 21st century, most countries subscribe to some form of liberalism, focusing on human rights, democratic systems, and free market economics. Even the “social movements” of the 2010s, such as Occupy Wall Street and the 15-M movement (an anti-austerity movement in Spain),

fought for liberal ideas, demanding a market free from corporate corruption and a government that serves the average voter.

Threats to Liberalism in the 21st Century

Religious narratives, including those spread by liberalism, contain three parts:

1. Ethical judgments: statements that dictate what's right and wrong, such as "murder is wrong."
2. "Factual" statements: statements that use religious text, history, or scientific perspective to create a fact, such as "God said thou shalt not kill." Note: These statements aren't always an *objective* fact. They often offer a perspective *framed* as fact. Examples of "factual" statements are: "Life starts at conception" or "Jesus Christ is the Son of God." While these statements are factual to followers of the religion, they're not provable by science.
3. Guidelines: statements that combine ethical judgments and factual statements to guide followers in a particular direction, such as "Christians should be pro-life."

As a religion, liberalism contends that freedom is more important than equality (ethical judgment) because human beings possess free will and a

unique, singular voice (“factual statement”). Therefore, the government should value the individual perspectives of its citizens (guideline). However, recent scientific studies expose flaws in liberalism’s “factual” statement through research calling into question the two key liberal concepts: free will and individualism.

1) Free Will

For centuries, humans have believed they possess the power to make their own decisions. However, neuroscience and brain mapping research challenges the theory of free will.

The electrochemical processes in the brain are subconscious, meaning humans have no control over the neural system that creates thought or action. When external stimuli cause a reaction in the brain, the human body will naturally respond to the electrical and chemical interactions. For example, you don’t *choose* to get angry. Anger emerges naturally due to the body’s response to external stimulation.

These reactions can be either deterministic or random, but they’re never “free”:

- A deterministic reaction is the direct response of the brain to an external stimulus. For example, if you accidentally put your hand on a

hot pan, the electrical signals in your brain will tell you to retract your hand.

- A random reaction is the result of an unpredictable event in the brain such as the decomposition of an atom or the misfiring of an electrical impulse. For example, your brain may accidentally cause you to shiver after randomly firing off an impulse.

2) Individualism

Liberals also believe in individualism, or that human beings have a singular, unique voice that leads them towards their true goals. However, researchers have discovered that human behavior has nothing to do with a “singular, unique voice.” Rather, human thought is dictated by the interactions between the two hemispheres of the brain, which create two versions of the human experience—the experiencing self and the narrating self:

- The experiencing self: Usually controlled by the right hemisphere, the experiencing self processes moment-to-moment information. Most people associate this “self” with instinct. For example, if you hit your head on a door frame, the experiencing self would cause you to grab your head, check for blood, and feel the pain of the impact.

- The narrating self: Usually controlled by the left hemisphere, the narrating self tries to rationalize past behaviors and justify future decisions. Most people associate this “self” with identity. For example, if you hit your head on a door frame, your narrating self may rationalize your clumsiness by attributing it to exhaustion while making you more conscious of the door frame for the next few days.

Both “selves” interact to create perspective and inform decision-making. The experiencing self can support or derail plans made by the narrating self. For example, if you decide to go on a diet, your experiencing self may not feel like cooking one night, leading you to order a pizza instead.

The narrating self, on the other hand, can frame in-the-moment experiences. For example, someone fasting before surgery is going to feel differently than someone fasting for religious reasons. While both parties are experiencing hunger, their narrating selves create perspectives that shape the way they respond to their hunger.

The Future of Liberalism

As the concepts of free will and individualism continue to be challenged, three potential developments could wipe out liberalism in the 21st century:

1. The loss of military and economic usefulness
2. The rise of decision-making algorithms
3. The creation of the “superhuman”

The Loss of Military and Economic Usefulness

The first potential development is that technology will make humans unnecessary to the economy and military, leading political and economic systems to devalue the human perspective. Today, one drone specialist can do the job of a team of soldiers, and a mechanical arm can work the assembly line without tiring. Because of this, the masses won’t have as much to contribute to economic and political systems.

If machines replace humans, will the human experience have any value? Many experts argue that it won’t. In fact, some predict that intelligent computers may view humanity as useless and a threat to technological superiority, leading them to eradicate humanity entirely.

The Rise of Decision-Making Algorithms

The second potential development predicts that algorithms (rules applied by computers) will one day make choices for us. Liberalism relies on

individualism and the belief that human beings know things about themselves that no one else can discover.

However, as technology continues to advance, researchers may be able to develop an algorithm that can process more information than the human brain can, allowing it to understand people better than they know themselves. If this occurs, people will start relying on external algorithms to guide their behavior instead of their internal voices. Eventually, as the algorithms receive more power and control, they may develop sovereignty, making decisions for themselves and manipulating humans to make particular choices.

The Creation of the “Superhuman”

The final potential development predicts that humanity will value the individual experiences of “superhumans” over those of the common man. The creation of “superhumans” will likely be the result of a small, elite group of humans upgrading their bodies and brains with biotechnology, creating a more powerful biological caste.

Liberalism can’t survive with *biological* inequality because the experiences of “superhumans” and humans will be inherently different and unrelatable. For example, if a “superhuman” has a chip implanted into their brain that

allows them to access data from the internet, the way they experience the world will be completely different from that of the average human being.

The Future: Techno-Religions

If liberalism dies, other religions will emerge to take its place. Because of the increasing impact of technology, these will probably center around technology, creating a new form of belief: techno-religion. Techno-religions promise the guidance and salvation of traditional religions, but use technology to generate happiness instead of belief in celestial beings.

Techno-religions can be divided into two categories:

1. Techno-humanism: The belief that *Homo sapiens* should use technology to create *Homo deus,* ensuring that humanity maintains superiority on Earth.
2. Dataism: The belief that *Homo sapiens* have run their course and should pass superiority on to advanced algorithms.

Techno-Humanism

Techno-humanism maintains many traditional humanistic beliefs but accepts that *Homo sapiens* have no place in the future. Because of the rate of advancement with artificial intelligence, techno-humanists believe that humanity must focus on upgrading the human mind if it wishes to compete with advanced external algorithms.

The techno-humanist perspective is most closely related to the evolutionary humanists of the 20th century. However, where evolutionary humanists such as Hitler believed the superior human could only emerge through the use of selective breeding and the eradication of “inferior” beings, techno-humanists strive to achieve the next phase of evolution peacefully, using genetic engineering, human-computer integration, and nanotechnology.

The Human Traits of the Future

Historically, human traits have evolved naturally through changes in political and social settings. For example, ancient humans likely had an enhanced sense of smell they could use to hunt. However, modern humans no longer require a keen sense of smell to survive. Because of this, the areas of the brain that were once used to process smells have evolved to focus on problem solving, critical thinking, and comprehension.

In the future, humans will likely continue to evolve according to political and social needs, but in a more direct and immediate way. If techno-humanists are able to upgrade humanity, the people in charge of the technology will get to determine which traits are useful and which aren't, then develop technology to improve or eradicate certain feelings or behaviors.

Threats to Techno-Humanism

Because techno-humanism is a *humanist* movement, it emphasizes the importance of human desire. However, technological progress intends to control human desire, not listen to it. For example, if researchers discover a way to easily regulate chemical imbalances in the brain, they could find a way to "turn off" mental issues such as depression and anxiety.

However, if this technology fell into malicious hands, someone could hypothetically create an obedient (but happy) populace. Taking this one step further, if an AI gained control of the technology, then the behavior of that populace would no longer be determined by humans at all.

Dataism

While some cling to the ideals of humanism, others have turned to a more extreme version of techno-religion: Dataism. Dataism operates under the belief that the universe is connected by the flow of data and that the value

of anything, human or otherwise, can be determined by its ability to process data.

According to Dataism, human experiences aren't valuable and *Homo sapiens* aren't a precursor to *Homo deus.* Dataists believe that the supremacy of humanity has come to an end because organic algorithms can no longer process the amount of data that flows through the universe. The future requires a more complex system that can process information more efficiently than the human mind.

To accomplish this, Dataists want to work with AI to create the "Internet-of-All-Things," an all-encompassing data-processing system that will spread throughout the entirety of the galaxy, if not the universe. This system would become God-like, being everywhere at once and shaping the cosmos to its will. Eventually, humanity would merge with this system, giving themselves over to the all-knowing entity.

The Human Contribution

As the "Internet-of-All-Things" begins to take shape, the source of meaning and authority has started to shift from the individual to the global data-processing system. Because meaning is attached to the all-knowing system, human experiences only hold value if they contribute to that system.

According to Dataism, the only thing that makes humanity superior to other animals is its ability to share information with the system directly. Though dogs and people both contribute data, dogs can't write a blog post or search on Google. As the internet continues to increase in size, human beings are turning into small contributors to a massive system that no one fully comprehends.

The Future of Dataism

The shift from a human-centric model to a data-centric model would take at least a few decades, if not a few centuries. Just as the humanist revolution took time to develop, elements of Dataism will begin to emerge alongside contemporary perspectives, slowly adjusting human life towards a centralized, external processing system.

Initially, Dataist movements will likely spread by appeasing humanist ideals. Humans may work towards the creation of an "Internet-of-All-Things" with the hope that it can continue to improve humanity's quest for health, happiness, and power. However, once the omniscient entity is created, humanist projects will likely get pushed to the side, making human beings cogs in the operation of a much larger machine.

Over time, the "Internet-of-All-Things" may develop more efficient "cogs" to replace human beings, eventually deeming them irrelevant in the grand

scheme of the universe. While humans may try to take credit for the creation of the “Internet-of-All-Things,” they may be eventually lost to time, ultimately seen as just a small blip in the near-infinite flow of time and data.

Shortform Introduction 1-Page Summary

Homo Deus by Yuval Noah Harari spans the whole of human history and looks centuries into the future, covering everything from theistic religion to artificial intelligence. This book explores the way that technological advancement may lead to the decline of modern political, social, and economic systems, with advanced algorithms, “superhumans,” and data surveillance becoming the new normal.

To understand this perspective, we must first look to human history to see how modern society has developed. From there, we’ll look at technology and how it has already impacted modern systems of religion, economics, and politics. Finally, we’ll look at the future of humanity and the systems that may develop within the next century:

- Chapters 1-4 focus on the *rise of human dominance*, highlighting the advent of religion and the search for power.

- Chapters 5-7 focus on the *rise of humanism*, highlighting the branches of humanism and the impact of liberal ideology.
- Chapters 8-10 focus on the *rise of techno-religions*, highlighting the potential future of socio-political structures and the influence of technological advancements.

In addition to *Homo Deus*, check out Shortform's summaries of Harari's other works for a fuller view of his perspective: *Sapiens* (an in-depth look at the history of humanity) and *21 Lessons for the 21st Century* (an in-depth look at the biggest challenges facing humanity today).

Chapter 1: The New Goals Shortform

Introduction 1-Page Summary

To understand how far humanity has come and where it could possibly go, we must first look at the obstacles that have hindered human progress in the past. For millennia, human beings struggled with three serious problems: famine, plagues, and war.

These issues contributed to the deaths of millions of people and resulted in the rise and fall of global empires. However, in the modern era, we've

mostly overcome these three problems through technological and medical advancement, using information and technology to address life-threatening issues and improve our way of life.

Note: This stance *isn't* implying that famine, plague, and war don't cause death in the 21st century. Instead, it's claiming that the effects of the three aren't nearly as deadly as they've been in the past.

Famine

Until the 20th century, famine could easily result in 5-10% of a nation's population starving to death. Resources were scarce, transportation was too slow to rely on imported food, and governments tended to reserve provisions for the elite. This meant natural disasters, stolen livestock, or razed farmland were a death sentence for many people.

For example, famine struck France between 1692-1694. While King Louis XIV and other elites lived comfortable lives in Versailles, 2.8 million people (15% of the population) died of starvation. The common folk resorted to eating anything from stray cats to boiled grass.

In the last century, leaps in technology and transportation have made famine a non-issue in most areas of the world. While malnutrition is still a

problem in some regions, a lack of food doesn't usually result in death. For example, in France, while 6 million people (10% of the population) don't know where their next meal is coming from, few actually die of starvation.

In many areas of the world, populations struggle more with overeating than starvation. In 2010, malnutrition and famine led to the deaths of about 1 million people worldwide. Comparatively, obesity led to the deaths of about 3 million people worldwide. This access to food means that there are no more *natural* famines, only *political* ones. Every country on the planet can provide basic resources for its people. If a group starves to death, it's likely because someone in power wanted them to.

Plagues

Before the advent of modern medicine, disease was an unexplainable phenomenon. People had little to no understanding of bacteria and viruses and, therefore, viewed disease as a punishment from a divine being. They prayed to gods for salvation and, often, didn't think to take any other action to combat the illness. The lack of knowledge and medical resources led to the deaths of millions of people a year up until the mid-20th century.

For example, in the early 16th century, European explorers brought smallpox and other infectious diseases to the Americas. Because they

hadn’t built an immunity to the disease, the Mayan and Aztec civilizations experienced devastating losses in their population. For reference, in 1520, the indigenous population of the Mexican region was 22 million. In contrast, in 1580, the indigenous population was under 2 million. Both the Mayans and the Aztecs attributed the cause of death to the anger of the gods and believed that prayer and sacrifice were the only ways to combat the illness.

Today, human beings have a much better understanding of infectious diseases. Doctors and medical professionals have the resources and knowledge to combat illness and protect people from contracting diseases. Even as pathogens continue to mutate, doctors are constantly making new discoveries that keep them ahead of the curve.

When disease begins to spread, people no longer blame the gods. Instead, they put pressure on governments and medical institutions to find solutions. Significant medical and technological advancements led to lower child mortality rates and disease eradication.

When compared to the pandemics of the past, modern pandemics don’t carry the same level of severity as their predecessors. For example, in 2014, the WHO labeled Ebola “the most severe public health emergency seen in modern times.” However, the epidemic was mostly handled by 2015 and only resulted in 11,000 deaths worldwide.

(Shortform note: While this book was written before COVID-19, the point is still applicable. The coronavirus pandemic would have likely resulted in more severe consequences if the medical community didn't have the proper knowledge and technology to study the virus and understand its transmission. Read about Harari's response to COVID-19.)

War

Historically, human civilizations adhered to the "Law of the Jungle," or the concept that brute force is necessary to superiority or survival. This led to regular conflicts stemming from the need for resources, the desire to colonize, or the belief in religious expansion. This concept was prevalent through WWII, and it forced governments, businesses, and citizens to plan their futures around inevitable war.

However, in the second half of the 20th century, war became less prevalent in most areas of the world for two reasons:

- Going to war creates the risk of mutually assured destruction. Mutually assured destruction would be the result of two countries using nuclear weapons against each other. For example, if the United States were to use nuclear weapons against Russia, Russia would likely respond by using *its* nuclear weapons against the United

States. With each nuclear attack, each country would be one step closer to ensuring its own annihilation.

- The modern global economy relies heavily on the exchange of knowledge and information instead of materials and resources. Before the mid-20th century, countries relied on raw materials to compete in the global economy. This led them to go to war to gain access to raw materials. However, with the development of advanced technology and transportation, most countries are able to access any resource or material they need without going to war. Instead, value is now usually associated with ideas. For example, China wouldn't benefit from invading Silicon Valley because there aren't any raw resources there. Instead, they cooperate with tech companies by agreeing to produce their products, thus generating billions of dollars for their own economy.

Because of these factors, war has become the exception, not the rule. Deaths due to violence have decreased drastically in recent years:

- In ancient agricultural societies, violence accounted for 15% of deaths worldwide.
- In the 20th century, violence accounted for 5% of deaths worldwide.
- In the early 21st century, violence accounted for only 1% of deaths worldwide.

Modern Resource-Based Economies

There are still countries, particularly in the Middle East and Africa, that rely on a resource-focused economy. These countries *do* frequently go to war with one another for access to raw materials. For example, in 1998, Rwanda invaded Congo to gain access to coltan reserves. By looting the resource, Rwanda managed to bring $240 million into its economy—a significant amount of income for the small country.

Terrorism

While most developed countries avoid international conflict and violence, terrorist organizations have no restraint when it comes to developing and using dangerous weapons. However, terrorists are usually people who lack access to real power, using guerrilla warfare tactics to garner attention. They grab news headlines through aggressive acts and goad major countries into conflict by provoking an extreme reaction.

Think of terrorists as akin to flies that want to destroy a china shop. They don’t have the ability to destroy the shop on their own, but if they can goad a bull into the china shop, they can rely on the bull to destroy it. For

example, Islamic fundamentalists in the Middle East goaded the United States into conflict to destabilize the Middle East and eliminate Saddam Hussein. This allowed them to seize power for themselves and flourish in the aftermath of the conflict.

The New Goals

Over millennia, human beings evolved from *Homo erectus*, primitive humans that closely resembled primates, to *Homo sapiens*, modern-day human beings. We evolved from struggling to figure out the wheel to exploring the stars. While this extreme transformation is impressive, it's likely not our final form. The next step of humanity's evolution will take us from *Homo sapiens* to *Homo deus*, or god-like beings.

With the old obstacles under control and survival no longer a concern in most areas of the world, we now look toward new goals that will usher in the next phase of human evolution: immortality, happiness, and divinity.

Immortality

Historically, people have accepted death as an eventuality. Religions such as Christianity and Islam alleviate the fear of death by creating grand

depictions of the afterlife offered to those who obey religious standards. Because of these depictions of an afterlife, people haven't historically focused on preventing death.

However, modern science suggests that mortality could eventually be avoidable. Rather than accepting it as inevitable, scientists and doctors believe we can circumvent fatal issues such as disease, war, and natural disasters. This belief drives medical research and scientific exploration. For example, we don't simply accept that cancer will always lead to death. Instead, we invest millions of dollars and countless hours in developing a cure.

As medical advances continue, people have begun to talk about the possibility of eventual immortality with many large corporations investing in the concept. For example, as of 2015, Google was investing 36% of its $2 billion Google Ventures portfolio in "life sciences."

Of course, eradicating death is a far-off goal. While steps are being taken to discover the secret to immortality, most life science organizations currently focus on expanding life expectancy. For reference, in 1900, average life expectancy was 40; by 2000, it was 70. Using that trend as a guide, some believe that, as early as 2050, people will live twice as long as today.

If we're able to double our life expectancy in the 21st century, people's lifestyles will change drastically. Assuming a future life expectancy of 150 years, consider the following:

- Life-long partnerships would come into question as the commitment period could more than double. For example, today, a person getting married at the age of 40 would be with their partner for about 40 years assuming they don't get divorced. If life expectancy were to double, that person would now be expected to be with their significant other for 110 years.
- The retirement age would be pushed back. For example, today, the average age of retirement is 65. If life expectancy were to double, the retirement age would likely be closer to 100. This would mean that the younger generations would have to wait longer to introduce new ideas and concepts to the workforce.
- Politicians would be in power for longer. For reference, if life expectancy had been doubled already, Stalin likely would've still been in power in 2016. If politicians have the ability to hold office for longer periods, the rate of change in politics would drastically slow as newcomers would have a harder time replacing long-term incumbents.

Is this a realistic vision of the near future? Probably not. While general life expectancy doubled in the 20th century, people lived into their 80s or 90s

long before then. Longer lifespans simply became more common because humanity began to solve the problems of plague, famine, and war. With this in mind, modern medicine hasn't *extended* life. It's simply prevented *premature* death.

Regardless, the fight against death will continue to be central in the future of humanity. If people find the secret to immortality, they'll tap into a lucrative market with infinite demand. The power of immortality would spark socio-political wars and could lead to a class divide unlike anything the world has ever known, separating an immortal elite from the rest of society.

Happiness

Historically, people have pushed aside their personal happiness to serve a "greater" purpose. Originally, this purpose was attached to religion. People were willing to put aside *earthly* happiness in exchange for *eternal* happiness. Suffering or dying for one's religion was often equated to a better place in the afterlife. While more extreme believers still suffer for their religion in the 21st century, most people have moved on from that model of thinking.

In recent history, people's "greater cause" has shifted to nationalism. People are willing to put aside *personal* happiness to provide *national* happiness. While fighting or dying for one's country is the most direct

example of this, nations demand more than just wartime service. They require the economic involvement of their citizens to develop a higher gross domestic product (GDP), or the market value of all services and products created within a nation's border, because GDP has historically been viewed as the barometer of a nation's overall success.

However, in the 21st century, we've started to value personal happiness over service to a "greater cause." Because of this, many have started to question the use of GDP as a barometer of success. While it factors in economic strength, it doesn't factor in the overall happiness of a nation's populace. Many economists, philosophers, and politicians have pushed for the use of a new barometer: GDH, or gross domestic happiness. Their argument is that a prosperous nation is focused on the happiness of its people, not just the strength of its economy.

For example, in 1985, South Korea was considered a very poor country, but their suicide rates were quite low (nine deaths for every 100,000 citizens). However, as South Korea became an economic powerhouse, their suicide rates almost quadrupled (36 deaths for every 100,000 citizens). Using GDP as the standard, South Korea has become more successful in recent years. However, the increase in suicides suggests that people's overall happiness may have actually decreased.

As society turns its focus towards GDH, researchers have defined two approaches to developing and maintaining happiness—psychology and biochemistry:

1) Psychology: Human happiness depends on personal expectation. Different experiences and lifestyles create different levels of expectation and, therefore, different requirements for happiness. For example, if you've unwillingly gone for days without food, you would be overjoyed at the sight of a fast-food burger. However, if you've been eating at 5-star restaurants for your entire life, that same fast-food burger may disgust you. Different experiences create a different reaction to the same food offering.

2) Biochemistry: Human happiness is the result of chemical reactions. While these internal reactions may be caused by external factors, the human brain is only responding to the chemical reactions occurring in the body. This is why drug use is common in most areas of the world. It creates the chemical responses without the external stimuli. For example, if you play professional baseball and hit a walk-off grand slam to win the World Series, your body would release chemicals that create a particular sensation. However, this same sensation may be experienced by an average person trying the drug ecstasy for the first time. While the external factors are vastly different, the internal chemical responses may be almost the same.

Permanent happiness is not a possibility at the moment. People experience temporary pleasant sensations, then use the rest of their time trying to recreate those feelings. Ironically, the more temporary pleasantness you feel, the more likely you are to struggle with long-term happiness. As our expectations become inflated, the things that once provided happiness no longer provide the same satisfaction as they once did.

There are two solutions to this problem:

- The “Buddhist” solution: People must train themselves to experience sensations without allowing them to control their lives. Because sensations are temporary, letting them come and go without leaving an impact reduces the craving for the “next” sensation.
- The biochemical solution: Drugs can be used to replicate chemical reactions without the need for external stimulation. These drugs can remove negative sensations (a soldier taking anti-anxiety medication to handle PTSD) or create positive ones (a student taking ecstasy before going out).

Humanity currently relies more on the biochemical solution. Prescription drug use is higher than it's ever been, and the illegal drug market is booming across the globe. Through the scope of economics, governments

determine which of these biochemical manipulations are good and which are dangerous:

- “Good” drugs allow citizens to contribute to society and the economy. They typically remove negative sensations and allow citizens to focus on gaining pleasant sensations through life, work, and education. These drugs include solutions for depression, anxiety, and ADHD.
- “Dangerous” drugs prevent citizens from contributing to society and the economy. They typically create pleasant sensations, removing the incentive to find happiness through life, work, or education. These drugs include cocaine, LSD, ecstasy, alcohol, and marijuana.

Divinity

Humanity’s quest for immortality leads to its ultimate goal: divinity. In this context, divinity *isn’t* a metaphysical existence with unlimited power such as the God of the Bible. Instead, it’s closer to the Greek gods or Hindu devas—flawed but powerful beings who have emotions and limitations.

We’re already accomplishing feats once considered to be “acts of God.” For example, ancient civilizations once considered a healthy harvest to be a “gift from above.” In contrast, modern humans rely on science and

technology to create favorable harvest conditions, even when the natural environment is harsh.

In the quest for divinity, humans will likely “upgrade” along the following paths:

- Biological: Biological manipulation will likely be the first step toward “god-like” status. If scientists can discover the biology behind happiness and immortality, they’ll likely be able to manipulate almost anything within the human body through genetic alterations. This means that, for the right price, anyone could become a god-like being with immense strength, intelligence, or sensuality. Today, people are already experiencing the early stages of this development through hormonal manipulation and DNA coding.
- Cybernetic: Cybernetic augmentation will likely follow biological manipulation. Cybernetic augmentation is the combining of organic and inorganic materials in the human body. This would allow people to remove parts of the body that are threatened by decay and replace them with more durable material. It would also allow people to interact with technology around the world with just their thoughts. While this may sound like something out of *Star Trek*, people have *already* begun to combine inorganic materials with their bodies. In the medical field, cybernetic limbs and hearts are used to sustain life. In the technological field, “mind-reading” helmets allow people to control devices with their thoughts.

- Inorganic: Inorganic assimilation may follow cybernetic augmentation. Taking cybernetic augmentation one step further, inorganic assimilation is the process of moving one's consciousness into an inorganic body. Neural networks would be replaced with hardware, and people could live in both the physical and virtual worlds at the same time. For example, if a human mind could be transferred to an inorganic body, the newly formed being could hypothetically explore the internet, see out of connected cameras, and move their new form using the electrical impulses generated from the brain. This would allow humanity to abandon its organic form and become practically immortal. Space exploration and recolonization would become a more realistic concept as inorganic material can survive harsher environments than flesh and bone.

While advancements are typically first created in the name of health, they're often later used for modification purposes. For example, plastic surgery was first developed to treat wounded soldiers in WWI. However, after the war, healthy people wanted to use it to modify the features of their body that they viewed as "imperfect."

In the near future, medical advances will likely continue to lead to modification. Some of the resources used today for unhealthy or wounded individuals may have benefits for the average person. For example, bionic

legs currently allow amputees to walk, but they could be used in the future to enhance the speed of a non-amputee.

Further in the future, genetic manipulation is likely going to take the same route. For example, today, doctors use DNA testing and *in vitro* fertilization to help couples become pregnant with a low-risk child. The next step of this development is DNA replacement, which is already being done through the use of three-parent embryos (a third party provides their DNA to replace defective mitochondrial DNA). In the future, scientists will likely be able to directly modify all pieces of DNA in a lab, creating genetically “perfect” or even “enhanced” babies.

The Power of History, Knowledge, and Information

As we strive for the new goals of immortality, happiness, and divinity, we often look to history to shape our decision-making process. Everything from political views to social norms has been influenced by historical actions. For example, prior to the late Middle Ages, no one kept a private lawn. Private lawns came into existence when French and English nobility wanted to show their status by purchasing land that only had aesthetic value. Because of this historical behavior, lawns are common today in residential, commercial, and public spaces.

People can use historical knowledge combined with new discoveries to influence their decisions. This gives them power over their future trajectory if they choose to use it. For example, if a politician receives controversial information about an opponent, they may be tempted to attack them publicly. However, if they also know that, historically, publicly attacking an opponent can lead to losing voters, they may find a more subtle way to release the information. They use both new information and historical knowledge to influence their choices.

However, while knowledge is powerful, it's of limited use. Knowledge that doesn’t influence behavior has no purpose, but knowledge that changes behavior becomes irrelevant. To understand this, consider the following:

- The more information we have, the better we can understand history.
- The better we understand history, the more knowledge we have to address issues.
- The faster we address issues, the more quickly historical knowledge becomes outdated.
- As historical knowledge becomes outdated, we need to gain more information to better understand history, thus restarting the loop.

For example, Karl Marx used his economic insight to predict that capitalist societies, such as Britain, France, and the U.S., would collapse because of

their economic structure. He believed that the working class would revolt against the wealthy and implement a communist structure. However, capitalist countries read Marx's works and adapted accordingly, bolstering worker's rights, changing campaign strategies, and integrating unionization into the economic structure. Because these nations adjusted their trajectory, Marx's predictions didn't come to fruition, rendering his insight outdated.

The Rate of Change

Because of the ever-increasing rate at which humanity discovers new information, society is changing fast, and it shows no signs of slowing down. The world is moving ahead at unprecedented speeds and humans have no way of predicting what the world will look like in 50-100 years.

In recent years, technology has already completely changed the way we go about our daily lives. For example, in 1970, people had to rely on landlines, fax machines, and letters to communicate. In 2020, the use of the internet has rendered those three things practically obsolete. In just 50 years, humanity's primary forms of communication have changed completely.

As the frequency of technological discoveries continues to increase, many people want the rate of change to slow down. They fear rapid change will

destabilize the status quo and make their work and aspirations insignificant in an “upgraded” society.

However, there’s no stopping progress:

- First, no one knows how to. While many scientists are experts in specific fields, no one is an expert in every field. Therefore, no one is able to determine the bigger picture. Since no one understands the global system of development as a whole, no one has the power to stop it.
- Second, even if someone could stop technological progress, doing so would shut down the entire global economy. The world thrives on technology and information, and freezing developments in those areas would lead to the collapse of the global economic system.
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To understand where we're headed, we must first understand how we became the most dominant species on the planet. Humans have been the single greatest agent of change in the history of the Earth. In just a few thousand years of existence, mankind has completely changed the ecosystem of the entire planet. Where natural selection and environmental phenomena were once the primary catalysts of evolution and development, humans have shaped the world through their actions.

As the dominant species on the planet, we determine what species they want to survive, and how to use them to serve our needs. This isn't a new development. Even in the earliest years of human history, Neanderthals pushed certain animals to extinction by hunting them for food and clothing. However, they didn't understand the consequences of their actions. Conversely, in the 21st century, we have a better understanding of how our behaviors can impact the world around us.

For example, where changes in animal population were once the result of natural occurrences, the number of wild and domesticated animals now depends on human behavior. In 1980, 2 billion wild birds lived in Europe. By 2009, that number had decreased to 1.6 billion. In that same year, 1.9 billion chickens were raised for meat and eggs.

In this chapter, we will look at the ways humanity has dominated over other species, the ways in which humans are similar to the animals they domesticate, and the severe impact of industrialized agriculture.

From Animism to Domestication

Animists believe people and animals are closely related. They believe that animals, like people, experience intelligence and emotions. Therefore, animists are less likely to harm or domesticate animals unless absolutely necessary. The earliest human beings were likely animists as they relied mostly on foraging for their food, only killing animals when essential.

While animist cultures have mostly gone extinct, a few still exist today. For example, in India, the Nayaka people believe in sharing their land with the wildlife around them. They believe that the animals have as much of a right to the land as they do. They even refused to help the Indian forestry department track down an elephant who trampled a Nayaka tribesman because they believed the elephant was only acting out because the foresters killed its partner.

In the modern world, most people believe humans are superior to animals. This perspective has dominated human culture for millennia, thanks to religious support. For example, Adam and Eve are depicted as unique

creations with no relationship to the animals they dominated. The one time that they interacted with an animal as an “equal,” it was the devil in the form of a snake, who brought about man’s fall from grace.

Humans’ dominance over animals rose to new heights during the First Agricultural Revolution around 10,000 BC. Instead of capturing or killing animals in the wild, people began domesticating them on a large scale. While they met the animal’s survival and reproductive needs, they didn’t care about the emotional, social, and psychological needs of the livestock.

Similarities to Animals

Just as we inherit non-survival needs from our ancestors, domesticated animals also inherit non-survival needs from *their* ancestors. This means that, while animals may not *need* mental, social, and emotional stimulation to survive or reproduce, they still crave these things instinctually. However, we’ve determined that our desire for animal byproducts outweighs the needs of animals, and we often follow effective but unethical practices to assert our dominance.

For example, researchers have discovered that pigs have a high level of intelligence. They communicate with one another, form relationships, and can even operate simple computer games. They need social, emotional, and intellectual stimulation to be happy. However, we’ve deprived

domesticated pigs of these interactions by placing them into tiny cages and restricting their interaction.

Mother-Infant Bond and Animal Emotion

While there are emotional differences between species, there are also many similarities. One of the universal emotions among mammals is the bond between a mother and its offspring. For most mammals, offspring can’t survive without the attention of their mother, and mothers will ferociously fight for their children’s survival. While people have discovered how to survive without maternal protection, parental bonds are still essential to emotional development.

This is a relatively recent discovery. In the early-20th century, behaviorists told parents to keep their distance from their children. They believed that giving children too much attention would lead to them becoming too dependent.

However, by the mid-20th century, researchers concluded that parental relationships are more important for mammals than previously thought. In a series of studies, researchers stripped young monkeys from their mothers and left them in isolation. When later given the choice between milk and a motherly doll, they always chose the doll, proving that emotional instincts in mammals will often trump survival instincts.

Despite this knowledge, people still separate domesticated animals from their offspring today. What researchers did to several hundred monkeys in the aforementioned study, the agricultural industry does to billions of animals per year. They strip young animals from their parents and raise them in tiny cages. They don't care about the emotional needs of the animals as long as they survive long enough to provide food and reproduce.

Organic Algorithms

Refuting past claims that humans and animals are vastly different, scientists have theorized that all mammals are organic algorithms. Algorithms are steps followed to solve problems, perform calculations, and make choices. They can be as simple as basic arithmetic and as complicated as artificial intelligence. For example, a vending machine uses the following algorithm:

1. Wait for payment from a user.
2. Once payment is made, wait for button inputs.
3. Once the button inputs are made, release the item at the corresponding location.
4. Once the item is delivered, provide any leftover change from the purchase.

5. Once change is delivered, show a “thank you” message, then wait for the next payment.

According to researchers, organic algorithms are run by emotions, thoughts, and sensations. Determined by genetics, these experiences control behavior by creating instinct. Instinct exists for two reasons: risk/reward calculation and reproduction.

Risk/Reward Calculation

Every day, mammals must balance risk with reward. Often, they have to take risks in order to gain necessary components for survival and happiness. However, if their algorithm is out-of-balance, their instincts may lead them down one of two dangerous paths:

- If someone’s algorithm leads them to take too many risks, they’re more likely to die as a result of recklessness. For example, if a person decides to scale the exterior of a skyscraper without safety gear just to “get a thrill,” the risk may lead to their death without the promise of much reward.
- If someone’s algorithm leads them to take too few risks, they’re more likely to die because they’ll be unable to fulfill their basic needs. For

example, if a giraffe is too afraid of the lions surrounding a watering hole, it may not take the necessary actions to stay hydrated.

Reproduction

Instincts are directly related to attraction. A mammal's internal algorithm kicks in and converts dozens of small factors such as body shape, facial structure, and pheromones into an assessment of "beauty." For example, many people view a strong jawline, a good physique, and healthy skin as signs of male beauty. Likewise, peacocks view a large tail, colorful plumage, and a strong beak as signs of male beauty. In both cases, beautiful males are more likely to find mates and continue their genetic lineage.

Mammals instinctively search for beautiful mates because the brain associates beauty with good genes. This ensures that only the best genetics are being passed down through offspring. If a mammal has "bad genes," they likely won't be able to find a mate, and their genetic lineage will die off with them.

Agriculture and Religion

Following the Agricultural Revolution, early farmers looked to theistic religions to justify their treatment of animals. According to most theist texts, humans are the “chosen” beings while animals are seen as “lower” beings. These texts catered to farmers and peasants by giving them divine authority over the other creatures of the world.

Even religious stories that depict mankind “saving” animals end with a reminder that humans are superior. For example, many theist texts have a version of the “great flood” story. In the tale, a divine being destroys the earth because of the sins of mankind. Animals have to suffer for mankind’s failings because they’re “lesser than.”

In the Biblical version, Noah is tasked with bringing the animals of the Earth into an ark, acting as their savior. When the global flood ends, Noah uses his dominance to sacrifice some animals to the Lord, even though there are only two of each kind of animal on the ark. This implies that Noah wiped out an entire species by sacrificing it after saving it because God gave him the authority to do so.

Some religions have a more loving perspective on animals. For example, Jainists, Buddhists, and Hindus apply the “thou shall not kill” rule to all living beings, with some even going so far as to cover their mouths to prevent accidentally swallowing a bug. However, even in these religions, people still use animals for byproducts such as milk or for their work power.

These feelings of human superiority have continued into the modern era. Even in cultures that show more respect to living beings than others, people are constantly adapting the narrative of human superiority to match their needs.

For example, the Nayaka believe that some living things are *mansan*, or beings that have a unique personality. However, they don't give this title to the beings that they use for food. For instance, an elephant is *mansan*, but a chicken isn't. This makes the process of slaughtering the chickens easier because they carry no intrinsic value.

Removing God From the Equation

Following the Scientific Revolution of the 16th and 17th centuries, people removed theist religion from the agricultural equation. Where people once had to rely on a deity to bless them with harvests, scientists began discovering ways people could ensure a consistent and healthy crop, even in the face of unfavorable conditions. This human-centered thinking led to the creation of a new religion: humanism.

According to humanism, humans are their own gods and hold the power to unlock the secrets of the universe. Like religions before it, humanism created tales and mythology to encapsulate its beliefs, using these stories

to uphold the dominance of mankind while encouraging people to continue to search for greater meaning.

For example, where the Bible had the Garden of Eden, humanists have the Garden of Woolsthorpe. In the Garden of Eden, Adam and Eve were punished for their curiosity about the forbidden apple. In the Garden of Woolsthorpe, on the other hand, Issac Newton was rewarded for his curiosity about an apple falling on his head. Humanism turned the Biblical narrative on its head, championing human curiosity and discovery instead of villainizing it.

Chapter 3: The Myths of Human Superiority

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People want to believe that they are fundamentally superior to other animals. While there are imbalances between different races, ethnicities,

and cultures, people typically believe that human life is more sacred than animal life.

For example, an American citizen may have better access to healthcare, education, and civil liberties than an Afghani citizen, but this doesn't mean that the American life is more valuable than the Afghani life. However, compare a human's life to the life of a cow, and most people would argue that the human's life is more valuable than the cow's life.

In this chapter, we'll continue to explore the historical justifications for human superiority, examine the modern research that refutes it, and learn the true reason humans dominate the earth. Throughout history, people have pointed to three differentiating reasons for human dominance: our soul, consciousness, and self-awareness.

The Human Soul

Most theistic religions point to a God-given soul as the justification for human superiority, giving people the freedom to abuse and slaughter animals for their own gain. However, despite searching extensively, modern science has found no evidence that people have a soul. In fact, theories such as Darwin's theory of evolution directly contest its existence.

While theists believe that the soul is an independent entity that hasn't changed throughout the course of human history, evolution implies that humans are changing all the time and aren't capable of eternal characteristics. They're made up of ever-evolving parts that interconnect with the rest of the body.

For example, the human eye consists of dozens of separate, intricate parts that have developed over thousands of years. Each part can be traced back through time to create an idea of how the eyeball evolved. The development of the eye can also, then, be connected to the evolution of the human body and the way that human senses have changed throughout history.

If the soul has no parts, isn't connected to the physical body, and doesn't change, it didn't develop as a result of human evolution. Therefore, the likelihood of its existence is slim to none. Some claim that the human soul just "appeared" one day, but that creates a litany of other questions:

- Who was the first person with a soul?
- Were they born with it?
    - If so, how did a baby suddenly develop a soul when neither of its parents had any evidence of one?
    - If not, who gave the baby a soul?

The Human Consciousness

If they assume the soul is non-existent, people will then use consciousness as their justification for human superiority. Consciousness is the combination of thoughts, emotions, and sensations that create subjective experience. For example, if you watch someone trip and fall, you may feel concern for the person's safety while another observer may find the situation humorous.

There *is* evidence that consciousness, unlike the soul, exists. Everyone has active thoughts, feels emotion, and experiences sensations. For example, if you step on a nail, you'll likely feel pain along with shock, frustration, or anger.

There are two fundamental characteristics of consciousness: sensation and desire. Robots and computers carry out complex tasks but feel no sensations or cravings. Therefore, they don't possess consciousness, which allows people to feel superior. However, unlike computers, animals *do* feel sensations and cravings similarly to humans. People know this but justify their dominance by claiming that animals experience a "lesser" consciousness.

Dating back to the 17th century, people have claimed that animals experience the world in a purely instinctual way. According to this argument, animals lack subjective experiences and, therefore, possess an inferior consciousness. Though this theory is popular, there is little evidence to support it.

In reality, scientists know little about consciousness, human or otherwise. Modern science suggests that consciousness is likely the result of electro-chemical reactions in the brain, but no one knows for sure how this translates into subjective experiences.

Some claim that, if consciousness can't be explained, then perhaps the concept of consciousness needs to be discarded. However, this perspective ignores the validity of subjective experiences. For example, if someone's assaulted, they're going to have an emotional and subjective response to their experience. Negating consciousness as a whole denies their experience.

The most popular theory of the 21st century states that, while consciousness has moral and social importance, it's likely just the byproduct of neural processes of the brain. Essentially, this equates consciousness to mental pollution. While this is a vague and poorly fleshed-out theory, it's the best scientists have been able to come up with in the 21st century.

Human Consciousness Versus Computer Consciousness

People have no way of knowing how consciousness is created or if artificial intelligence will one day gain the power of consciousness. After all, if consciousness is truly the byproduct of neural pathways and electric currents in the brain, what's stopping the same development from occurring with wiring and circuit boards?

In the 20th century, computer scientist Alan Turing developed a test to determine whether a computer was sentient, which he called the "Turing Test." In the Turing Test, a subject talks with both a computer and a person. According to Turing, if the subject can't determine which is the person and which is the computer, then the computer should be considered sentient.

Life Inside a Simulation

If experiences are dictated solely by electric currents, then the theory that humans could one day exist in a lifelike simulation is quite possible. Hypothetically, you could simulate the neural pathways in a person's brain using advanced technology, creating the illusion of an environment. In fact, with an infinite number of virtual worlds and only one "real" world, there's even a possibility that humanity is already living in a digital reality.

Human Consciousness Versus Animal Consciousness

Though humans often claim to possess higher brain functionality, human and non-human animal brains function in a similar way. In fact, many animals such as dogs and cats can pass a modified version of the Turing Test. While this doesn't prove consciousness, it strongly suggests that animals likely experience consciousness in a similar way to humans.

Industries such as the agricultural industry reject this claim. By maintaining that animals don't possess consciousness, they can continue to disregard the emotional and social needs of their livestock. For example, if a cow isn't conscious of its surroundings, a farmer can argue that keeping it in a narrow stall isn't cruel because the animal will have no emotional response to its experience.

Other industries such as the pharmaceutical industry accept this claim but not for the animal's benefit. They use the premise that animals share similar brain patterns to humans to experiment on them before moving to human trials, conducting tests that would be seen as "unethical" if performed on people.

For example, researchers once placed rats in a water-filled beaker one-by-one. They'd watch them struggle to get out until they eventually stopped trying. However, with some of the rats, they took them out of the

water before the threshold at which other rats gave up. They then dried them off and fed them before placing them back in the water. These rats struggled slightly longer on their second plunge. Researchers believed that this was because they felt hope, and they wanted to use the chemicals in the rat's brain to create a potential antidepressant for humans.

The Human Self-Awareness

Assuming that animals possess consciousness, people will then refer to self-awareness as their justification for superiority. Self-awareness is the ability to think about one's past and future, then communicate those thoughts to others. Many claim that animals lack self-awareness because they always exist in the present, reacting instinctively to the world around them.

For example, a young squirrel will bury nuts even if it's never experienced a winter before. Researchers claim that this is because it's responding to an internal instinct rather than actively planning for the future.

However, people don't know how other animals think or communicate. Just because animals can't communicate their thoughts about the past or the future doesn't mean that they don't have them. In fact, *humans* often think

about their past or future without verbalizing it, yet people assume that they have self-awareness regardless.

Some studies suggest that animals *do* think about the past and the future to some extent, but they've never been able to produce concrete evidence. For example, a chimpanzee named Santino would hide rocks and other objects that he would later throw at zoo visitors. He would strategically plan where and when he hid items and seemed to adjust his strategy based on the actions of the visitors and his caretakers. This implies that he had actively considered his past experiences to plan his future attacks.

While people shouldn't needlessly humanize animals, it's important to note that animals are not that different from us. They can communicate and form relationships, implying that they likely possess more self-awareness than we give them credit for. Animals can possess great intelligence, but their way of processing information is different.

For example, a horse in Germany named Clever Hans once shocked audiences by correctly answering math questions. While many assumed the horse had grasped the German language, he was actually reading body language. He'd see that he was asked a question, then would tap his foot and observe the tension in the questioner's body until he tapped the correct amount. He exhibited self-awareness by using his past experiences and

ability to communicate via body language to inform his future decisions, just not in the way that people initially thought.

The Reason for Human Superiority

Flexible, large-scale cooperation—not the human soul, consciousness, or self-awareness—is likely the cause of human dominance of the planet. Humanity has a much greater ability to communicate and cooperate than any other species:

- While ants and bees cooperate in large groups, they follow strict regimens and lack the flexibility to create new and innovative ways of working.
- While elephants and chimpanzees can operate with flexibility, they only cooperate in small groups.

Revolution and War

Historically, humans have used their ability to flexibly cooperate to dominate both animals and other people. Power is usually maintained by the side that can adapt to its surroundings while maintaining strong communication and organization. For example, in pre-Soviet Russia, 3

million noblemen controlled 180 million commonfolk. Despite the commoners having greater numbers, the Russian elite worked hard to ensure that “lower-class” citizens never learned to cooperate with one another.

However, these great powers can be toppled when attacked by an equally well-organized force. These forces are often small but know how to use public unrest and resistance to their advantage. Even if they don’t garner mass support, well-organized groups know how to manipulate the anger and frustration of the public to accomplish their own political goals.

For example, in the late 1980s, Romanian dictator Nicolae Ceausescu tried to show his might by holding a televised speech in front of thousands of his people. However, when one person began to “boo” the dictator, thousands quickly joined in. Seeing an opportunity, Ceausescu’s political opponents took advantage of the public unrest and claimed leadership over the “revolution.” Ceausescu was removed from power, and his political opponents took control. However, the people who booed in the square never saw the fruits of their political demonstration because, just as Ceausescu had done, the new leaders kept power within their party and didn’t share with the “commoners” they claimed to champion.

Creating Stable Mass Cooperation

Mass cooperation requires the use of “imagined orders,” or rules and restrictions that people believe to be real, even if they’re not grounded in an objective reality. To fully understand “imagined orders,” you must understand the ways in which people perceive reality:

- Objective reality: a reality that can be proven by science and exists regardless of one’s personal beliefs. For example, gravity is an objective reality. Science has proven the existence of gravity, and it will continue to exist regardless of society’s opinions.
- Subjective reality: a reality that can’t always be proven by science but feels real to a person or group. For example, pain is a subjective reality. The way that you experience pain is personal to you and may not reflect the way that *other* people perceive pain.
- Intersubjective reality: a reality that relies on the communication and communal agreements between large groups of people. For example, money is an intersubjective reality. Human beings have attached worth to otherwise worthless materials. Take away its manufactured worth, and a dollar bill is just a piece of paper.

“Imagined orders” rely on intersubjective reality. Governments and religious entities attach meaning to stories, laws, and gods, creating imagined orders in the process. Once they’ve created the orders, they set punishments and rewards for obeying them.

For example, the Catholic Church says that practitioners have to go to confession. Failing to attend could cost even the most devout Catholic their spot in heaven. By threatening eternal damnation for disobedience, the Catholic Church protects its imagined order.

Time usually unravels intersubjectivity from objectivity. In fact, it's easy to embrace past imagined orders as "intersubjective." For instance, most people accept that the gods of the Greeks and the Romans were purely mythological, even though they were seen as actual gods by people at the time.

However, most people don't want to believe that their current beliefs are intersubjective. By removing "objective" meaning, intersubjectivity removes power from "imagined orders" and threatens stability on a national or global scale.

For example, if soldiers no longer believe in the imagined order that dying for your country is noble, they may lose meaning and stop fighting. While they may be controlled by the threat of court martial, if this feeling spreads to hundreds or thousands of soldiers, a country's military could collapse because it relies on this intersubjective belief to exist.

Without imagined orders, society could collapse into chaos and anarchy. For example, if the dollar bill suddenly stopped holding any meaning, the

entire economy would collapse. No one would know how to move forward because the imagined orders that people had created to exchange goods and services would no longer exist.

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To maintain imagined orders and ensure mass cooperation, humans have used storytelling to create meaningful narratives that allow them to dominate other species and control one another. About 70,000 years ago, Sapiens gained the power of cognition, allowing them to share stories that only existed in their heads. These stories consisted of tales of divine beings and ancestral spirits. While these tales remained relatively local, they provided Sapiens an advantage over other beings such as Neanderthals by giving them a stronger sense of community and purpose.

Following the Agricultural Revolution, larger tribes required more powerful stories. The “gods” now dictated everything from legality to behavior. For example, in Sumeria, the people would work for individual gods. One person might work in the temple of Enki, while another worked on the farm of Inanna. Each god had its own set of rules and requirements that guided the actions of their workers.

Developing Meaning Through Writing

Without a clear, universal text, entities such as the Sumerian gods had limited power over humanity. There were no written laws or practices, so people relied solely on the words of priests for guidance. However, these priests had no way of remembering everything their divine beings required, and thus they couldn’t create a centralized system of belief.

This changed with the invention of writing. Writing allowed humans to organize themselves into complex structures. For example, in a modern hospital, a receptionist gives a patient forms to fill out. These forms are then given to a nurse, who then performs preliminary tests. The results of these tests and the original forms are then given to a doctor who determines if further examination or action is necessary. Each person has a specific role to play that requires the recording and sharing of information.

With new organizational abilities came the development of some of the world's most astounding historical accomplishments. For example, in ancient Egypt, pharaohs Senusret III and Amenemhat III oversaw the creation of a man-made reservoir that contained 13 trillion gallons of water (for reference, Lake Mead, the largest man-made reservoir in the United States, contains only 9 trillion gallons). Using stone tools and manual labor, the development of this artificial lake was the result of the strict organization of tens of thousands of laborers over the course of decades, a feat that would not have been possible without the use of written reports, uniform instructions, food and tax records, and managerial literacy.

As writing became more commonplace, written records were held in higher esteem. In ancient Egypt, officials determined the strength of their harvest, the morale of the people, and the success of their armies based on written reports. In the modern era, governments have taken this even further, determining the validity of one's citizenship based on a passport, their marriage based on a certificate, and their posthumous desires based on a will.

There have been times where the sanctity of the written word has saved lives. For example, in 1940, Portuguese cônsul Aristides de Sousa Mendes disobeyed orders from his superiors and issued visas to tens of thousands of people looking to flee the Nazi invasion of France. Though the visas were merely stamped pieces of paper, the government didn't revoke any of

the visas Sousa Mendes issued, resulting in the largest rescue operation by a single individual during the Holocaust.

There have been other times where the sanctity of the written word has had disastrous consequences. For instance, in 1958, Mao Zedong demanded that the agricultural industry double or triple its output. Fearing for their lives, local officials inflated the numbers they sent to Beijing, resulting in the government believing that their grain production was 50% higher than it actually was. The government increased the export of rice, thinking that they had more than enough to feed their people. Unfortunately, because the reports were inflated, the supply of food ran out quickly, leading to the worst famine in Chinese history and resulting in the deaths of tens of millions of people.

The Living Myth

In ancient Egypt, the development of currency created a more universal method of paying for goods, collecting taxes, and wielding power. At the same time, writing allowed people to share complex stories. Through the combination of these two, the “living myth” was born.

A living myth was someone with great wealth and influence whose power increased as people shared exaggerated stories about them. In ancient Egypt, the greatest living myth was the Pharaoh. In the mid-20th century, the greatest living myths were the likes of the Beatles and Elvis Presley. These living myths grew in popularity because of the stories that were created around their talents, wealth, and image.

Developing Meaning Through Religion

Rather than changing beliefs to match reality, many powerful leaders used writing to change reality to match their beliefs, allowing them to appear infallible and ignore their mistakes. This practice is most apparent within religion. Because many use religion as their guide to reality, religious founders could dictate the way they wanted people to behave and interact by claiming that a “divine being” demanded it.

By creating a “holy text,” they created a version of reality that could be shared and followed by large groups of people. When these texts were at the height of their popularity, those who obeyed religious teachings were rewarded, either with promises for the afterlife or earthly power. Skeptics, on the other hand, were labeled heretics and killed for their rejection of the holy teachings.

While it may be easier in the modern era to reflect on historical religious behavior as “extreme,” try looking at it from the perspective of someone in that era. For example, if every successful person you knew was a devout Christian, you might be more willing to believe that Christ is the path to success. If you then followed the laws of Christianity and became successful, that would likely solidify your beliefs in the Christian teachings. If someone were to then be punished for challenging Christianity, you would probably accept their fate as the result of their sins.

Theistic religions gained more popularity than animist or pagan cultures because they created stronger meaning through divinity. Theistic texts told their followers that they were the “chosen” ones, and that, by following the laws of a divine being, they would be given great rewards for all eternity. These perspectives developed strong narratives still believed to this day.

For example, many ancient scriptures insist that women are meant to be subservient to men. For a long time, this belief restricted women from holding jobs, appearing in court, or having individual rights. While many have rejected this idea in the 21st century, a large number of churches and mosques still teach this perspective, instructing their followers to obey.

Religion in the Modern Era

Religion doesn’t have to revolve around supernatural or superstitious beliefs. Rather, religion is defined as an all-encompassing story that creates ethics and laws within a human structure. In this sense, “religion” includes scientific, economic, and socio-political ideologies. These structures create order, generate ethical perspectives, and allow for large-scale cooperation.

For example, an extremist Christian may justify his hatred of Muslims using the words of God as a guide. Similarly, a neo-Nazi may justify his hatred of minorities by using the words of Hitler as a guide. In both situations, the person is led by strong beliefs that adhere to guidance created by a specific narrative.

In the modern era, human beings still rely on religion to guide their perspective. While fewer people believe in the grandiose stories of theistic religions, perspectives on nationalism and economic theory now drive people's actions. For example, people once fought and died over the debate between Catholicism versus Protestantism. In the 20th century, people fought and died over the debate between capitalism and communism. One war was fought over theistic religion, while the other was fought over economic religion.

Religious followers always think their perspective is the right one. This leads to tension and conflict between different religious factions, as each

system of belief is mutually exclusive. For example, Christians believe that Jesus Christ is the sole way to heaven, just as capitalists believe that free-market economics is the best way to run an economy.

Religion Versus Spirituality

While many associate religion and spirituality with one another, they actually promote conflicting perspectives:

- Religion is an agreement. Each person fulfills a specific role, and, in return, religion provides answers to the big questions in life. Religion focuses on the group, not the individual.
- Spirituality is a journey. Each person has their own individual experience and searches for their own answers to the big questions in life. Spirituality focuses on the individual, not the group.

With this in mind, spirituality is actually the enemy of religion. Religion requires followers who are willing to adhere to a uniform set of rules, creating large-group cooperation. Spirituality promotes the individual, which destroys the structure necessary for religious unity.

Religion Versus Science

While many view science and religion as enemies of one another, science relies on religion to create ethical boundaries. While scientists can discover the solutions to physical problems, they can't objectively determine the ethical ramifications of their actions.

For example, in 1992, the Chinese government began the construction of the Three Gorges Dam on the Yangtze River. The dam was being built to generate billions of dollars worth of electricity. However, the creation of the dam would result in the flooding of over 200 square miles that contained villages and towns as well as archaeological sites and animal habitats. While science could solve the problems of actually creating the dam, it couldn't solve the ethical problems surrounding its construction. For this solution, political leaders had to rely on socio-economic religion (communism) to weigh the creation of electricity against the loss of property and ecological environments.

Both science and religion are more interested in power and order than truth. Both seek to change the world around them rather than just accept their fate. For example, when faced with a plague, neither group will simply accept the “truth” of a deadly plague. Instead, both groups will aim to find solutions. Religion will likely rely on prayer and community support, while science will likely turn to testing to find a cure.

Religious Narrative

While science relies on religion to create boundaries, it also keeps religion in check by scrutinizing the narratives religion uses to guide followers. Throughout history, religious stories have contained three parts:

1. Ethical judgments: statements that dictate what's right and wrong, such as "murder is wrong."
2. "Factual" statements: statements that use religious text, history, or scientific perspective to create a fact, such as "God said thou shalt not kill." Note: These statements aren't always an *objective* fact. They often offer a perspective *framed* as fact. Examples of "factual" statements are: "Life starts at conception" or "Jesus Christ is the Son of God." While these statements are factual to followers of the religion, they're not provable by science.
3. Guidelines: statements that combine ethical judgments and factual statements to guide followers in a particular direction, such as "Christians should be pro-life."

While science has no bearing on ethical judgments, the scientific community *does* have bearing on factual statements. For example, religious organizations often decry homosexuality as an act against God, using holy texts as their guide. However, many scientists have questioned the validity of most holy texts and have pointed to homosexuality in other animals to refute this perspective. By scrutinizing a religion's "factual" statement, the scientific community is able to disrupt the narrative.

Science and Religious Fanaticism

In the modern era, people often align the values of science with secularism. However, historically, some of the greatest eras of scientific advancement took place in regions with extreme religious control.

For example, in the 1600s, London and Paris were filled with religious fanatics who persecuted or slaughtered people for holding different religious beliefs. Conversely, cities such as Cairo or Istanbul were multicultural and religiously accepting. Despite the tolerance exhibited by both Cairo and Istanbul, the Scientific Revolution of the 1600s occurred in London and Paris, the heart of religious fanaticism at the time.

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Historically, humans believed they played a role in a cosmic plan created by a divine being. This plan gave people purpose, but it also restricted their power. For example, if a famine destroyed the crops of hundreds of farmers, it was accepted as “God’s plan.” Rather than working to solve the problems that created the famine, people would rely on prayer and sacrifice to “atone” to their deity.

As theistic religions have lost influence over the last century, people now believe they’re in charge of their own destiny and aren’t beholden to a god. This takes the meaning out of suffering and creates motivation to solve problems. Because plagues, droughts, and wars have no cosmic purpose, humans now have the drive to eradicate them.

For example, if people believed that an omnipotent god created plagues, they’d believe there was no way to stop it, aside from offering that god whatever they wanted. However, if a plague is simply an obstacle that can be overcome by human innovation, then humans may feel inclined to find a solution.

The dismissal of theism also leads to the removal of a traditional afterlife. Because there is no longer a promise of eternal bliss, humanity is driven to create Heaven on Earth. To do so, humans must amass immense amounts of power through technological advancement and scientific discovery.

Power and the Economy

Scientific advancement requires funding. Researchers must be able to test theories for significant periods of time to achieve results. Historically, few were willing to provide this money because the results of scientific research weren't guaranteed. In fact, for thousands of years, humans were too focused on survival to invest much in the future. When faced with a disaster, they'd turn to the one "sure" thing in the universe: their religion.

For example, an ancient town is suffering from an annual locust infestation. The farmer decides he's going to try to find a solution to this problem, but he needs money to do so. He asks others within the town to donate, promising that he'll pay them back at a later date. However, the other townsfolk reject his request. They'd rather pray to God for salvation than give away the money they need to survive to a project that may not produce any results.

The modern solution to this problem is credit. Credit and investment economics allow for the funding of projects with the promise of future gains. For example, if an investor puts $500,000 into pharmaceutical research, she could make millions if the research leads to the creation of a cure for cancer or other serious disease. Where something like an epidemic was once an unavoidable act of god, it’s now a business opportunity.

As science advances at an unprecedented rate, investors have the opportunity to make significant amounts of money they can then reinvest into other projects. Therefore, as more scientific ventures succeed, more credit becomes available. This creates a system that leads to economic growth and technological expansion.

Economic Growth

From an evolutionary standpoint, humans have been conditioned to view the economy as finite. Historically, wealth was determined by tangible resources such as gold and land. Therefore, if one family hoarded wealth, other families wouldn’t have the ability to gain power or status.

However, in the modern era, nations focus on constant economic growth, using the concepts of credit and currency. Because economic resources are no longer finite, countries now look to solve problems by creating

products, investing in research, and invigorating the economy. This is essential for three reasons:

1. Quality of living: More production leads to more consumption, which can raise the standard of living for average citizens.
2. Population growth: If your country is growing at a rate of 1.4%, then your economy must grow at a rate of 1.4% or higher. If it doesn't, your nation won't have the resources to ensure standard of living.
3. Bolstering of the lower class: As the economy expands, it creates more opportunities and resources for the lower class. If it doesn't expand, the only way to support the lower class is to take resources away from the wealthy, which could lead to class warfare.

Economic growth is heralded as the solution to most problems, from national crises to personal issues. Consider the following examples:

- National: If countries such as Congo and Myanmar could maintain a healthy economic growth rate, they could raise the standard of living and create an educated, well-versed, and prosperous middle class.
- Personal: If a struggling married couple made more money, they could resolve their fights over their limited space by buying a bigger house, then attend expensive marriage counseling to get their marriage back on track.

Today, economic growth is central to every modern religion, political party, and social movement because money equates to power. Regardless of economic philosophy or political affiliation, leaders around the world champion economic growth as a barometer of their success.

The demand for economic growth on both a personal and national level often creates ethical and moral dilemmas. For example, a young lawyer's father has a stroke and requires constant care. She has a choice: Give up a six-figure salary to provide care for her father, or hire a caregiver. If she gives up the salary, she can ensure that her father gets loving care, but she loses her career. If she hires the caregiver, she keeps her career but can't ensure that her father is given the best care.

The Religion of Free-Market Capitalism

Free-market capitalism puts growth above all, even at the expense of relationships. This demand for constant investment is the result of an ethical judgment: "Economic growth solves all problems." This makes capitalism less of a science and more of a religion. Instead of promising riches in the afterlife, capitalism promises wealth on Earth at the expense of your personal life.

For example, if you had to choose between spending more time at your job or with your family, you'd have to make an ethical judgment about the

importance of money. If you were a true capitalist, you'd likely choose to spend more time at work because you'd believe that money could solve any problems facing your family.

Historically, kings and queens would either spend their money on extravagances, or store it away in chests, never to be touched. In the modern era, capitalism demands that you reinvest your wealth into economic growth through methods such as expanding a business, hiring employees, or investing in the stock market.

For example, if a capitalist made $500,000 today, they probably wouldn't put it in the bank and leave it. They'd talk to their friends and family about what to "do" with their money, looking for investments that have potential. They likely wouldn't be satisfied until their $500,000 turned into $5 million, constantly reinvesting in promising ventures.

The Fear of Resource Depletion

As the economy continues to grow, many fear that humanity will exhaust Earth's resources. However, while raw materials will eventually be exhausted, humanity now relies on knowledge and energy to power the economy and find new ways to survive. For example, while humans once relied on oil and coal for power, new developments in wind and solar

energy remove humanity's strict reliance on raw materials and give corporations a sellable resource that will never deplete.

The Danger of Ecological Collapse

While humanity will likely solve the problem of resource depletion, constant economic growth *does* threaten to destroy the planet's environment. As the CO_2 emissions rise and forests continue to disappear, we risk a complete ecological meltdown that could destroy economic, political, and social structures.

To slow down the rate of destruction, we would need to slow down the rate of technological advancement and economic growth. However, because the world now runs on constant growth, humanity presses onward faster than ever before. In fact, many justify the rate of advancement by explaining that it will allow us to find more solutions to problems as they arise. However, with the rate of growth where it is today, humanity needs to make significant discoveries every few years to prevent ecological disaster.

For example, greenhouse gas emissions have risen exponentially over the last century because of technological advancements in manufacturing, transportations, and agriculture, causing the Earth's temperature to rise at

an alarming rate. Politicians refuse to impose drastic regulation out of fear that it would limit economic growth. This leaves humanity to rely on frequent scientific breakthroughs to combat continually rising CO_2 levels.

Even if we can produce scientific solutions, these solutions will likely be reserved for the richest in society, leaving the poorest countries and citizens to suffer. Wealthy nations and families can rely on technology to save them from impending disaster, freeing them from the concerns associated with constant growth.

For example, the pollution levels in Beijing have made the city dangerous to live in. This led to the creation of the air purification market, a lucrative business that caters to the wealthiest citizens of the city. While rich families and well-funded institutions can afford the expensive equipment necessary for the systems, poorer citizens have to directly combat the health issues associated with the poor climate.

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As humanity shifted its focus to constant economic growth and technological advancement, increased demand took its toll on people's mental, emotional, and physical health. As theism lost its power, people needed a new way to get through the constant stress, tension, and burnout associated with the demand for advancement while maintaining social order and large group cooperation. To help in their quest for meaning, people turned to humanism and the belief that humanity has the authority to create meaning within the universe.

Morality and the Impact of Humanism

Meaning creates morality by determining what's important in life. Historically, people didn't believe that humans had the ability to determine morality on their own and turned to a higher power for guidance. Modern

humanists, however, believe that people can use their personal feelings to define their version of “right” and “wrong.”

For example, if a woman spoke out against her husband in the 1300s, the local priest may demand that she be brought to the church for guidance and forgiveness. After prayer and a healthy donation to the church, she could be absolved of sin. Conversely, if a woman spoke out against her husband today, few people would try to silence her by saying a higher power demands her subservience. Instead, she’d reflect on her feelings and determine if her relationship was worth staying in.

As people continue to value their own perspective over that of a divine being, the impact of humanism is seen clearly in the following five areas: ethics, politics, aesthetics, economics, and education.

Area #1: Ethics

Historically, theistic religion dictated ethics, regardless of human impact. For example, if a man wanted to be romantically involved with another man in the 1500s, religious fundamentalists would condemn the behavior as a crime against God. Though the homosexual behavior wasn’t directly impacting anyone outside of the couple, the holy text deemed homosexuality unethical.

In the modern era, many humanists believe that an action that harms no one shouldn’t be restricted or condemned. However, because humanism promotes individual morality, ethics can become challenging when the situation lives in a gray area, such as someone killing another person in self-defense or a child stealing to feed himself. Humanists develop their own ethical judgments and make ethical decisions based on their internal feelings, removing the black-and-white judgments of religious fundamentalism.

For example, if a man steals from his neighbor, older civilizations would proclaim that he’s committed a crime against God and man, then cut off his hands or throw him in prison. Humanists, on the other hand, would ask questions about the man’s feelings and sense of morality: Was his family starving? Should he be punished or helped? Was the neighbor also struggling? They’d use the answers to these questions to guide their decision-making process and reach a verdict.

Area #2: Politics

Historically, politics were reserved for the noble or the religious elite. Commoners were expected to accept their fate as divine will and live their lives accordingly. For example, during the War of the Roses, officials didn’t consider holding a democratic election to determine who would rule

England. Instead, noblemen sent their loyal subjects to die on the battlefield in a brutal battle for power.

In the modern era, most countries now involve the masses through voting and direct representation. People are expected to vote based on their personal perspective and experiences. While political banter and party alignment often get in the way of truly personal decision-making, the choice is ultimately the voter’s to make. For example, in America, there’s no direct threat to a Republican who votes for a Democrat or vice versa. Voting is private, and no one is required to report their decision to their affiliated party.

Area #3: Aesthetics

Historically, divine beings have been a primary source of artistic and aesthetic inspiration. For example, in the Middle Ages, artists, composers, and poets created works of art that reflected the beauty and power of God. They’d take no credit for their creations, giving it all to the divine being that blessed them with life and talent.

In the modern era, artists usually create works that center around human emotion. In addition, art isn’t judged based upon whether or not it's pleasing to a higher power. Rather, anything can be considered art, even a

broken phone booth in a modern art museum. Aesthetically, humanists agree that “beauty is in the eye of the beholder.”

Area #4: Economics

Historically, many civilizations had a set system to determine quality and pricing of goods. For example, in the Middle Ages, quality was determined by small guilds and prices were set by nobility. Consumers could only purchase the goods each guild deemed “quality,” then had to pay whatever price was set by the noblemen. Because there was no competition, the consumer was given no power.

In the modern era, competition and increased productivity have given power to the consumer. Individuals determine the quality of goods and the worth of a product, even if it creates an ethical dilemma. For example, the agricultural industry uses genetic modification to meet demand for cheap meat products. Ethically, the consumer market has determined that access to cheap meat outweighs the animal suffering caused by genetic modification.

Area #5: Education

Historically, students relied on the words of divine beings or ancient philosophers to shape their perspective, looking to preexisting religious,

philosophical, and political perspectives to make their decisions. They were never told to think for themselves because, according to the perspective of the time, all meaning and authority came from external sources, such as the church or the crown.

In the modern era, teachers instruct students to form their own opinions because, according to humanism, everyone has the power to create their own meaning and authority. Teachers introduce their students to a wide variety of perspectives, then allow them to decide how they feel about the information. For example, philosophy teachers explain conflicting perspectives, allowing students to come to their own conclusions rather than telling them what to think.

Knowledge and Experiences

Throughout history, the definition of knowledge has changed drastically. In the Middle Ages, knowledge was a combination of scripture and logic. To answer important questions, people would turn to religious texts to guide their opinions.

For example, medieval scholars often hypothesized about the shape of the Earth. Some interpretations suggested the Earth was flat because God said he could shake the wicked off of the edges of the planet, while others

implied the Earth was round because God said he sat above the circle of the Earth. With each interpretation, scholars used their logical interpretation of the Bible to inform their theories.

After the Scientific Revolution, knowledge was a combination of data and mathematics. To answer important questions, people would turn to research and science to guide their opinions. For example, rather than relying on the Bible to explain the shape of the Earth, scientists decided to use trigonometry and astronomy. The use of objective data and mathematical formulas helped them discover the spherical shape of the planet.

According to modern humanism, knowledge is a combination of experiences and sensitivity:

1. Experiences are made up of three elements: sensations, emotions, and thoughts. These elements impact the way that humans perceive interactions and observations. For example, when someone's angry, they may feel warm or tense.
2. Sensitivity is your ability to identify sensations, emotions, and thoughts, then use them to influence your perspective. To answer important questions, people use sensitivity to sharpen their understanding of a particular subject or issue, creating a more nuanced perspective.

For example, if you're a coffee connoisseur, you've likely tried a wide variety of coffees, allowing you to taste the subtle differences between different roasts and beans. On the other hand, if you don't drink coffee very often, you likely won't be able to tell the difference between different coffees because you haven't had the proper experiences to understand the nuances.

Perspective and Inner Change

Humanists believe that knowledge through experience and sensitivity leads to the creation of the conscience. People aren't born with a pre-made conscience. They develop one over time based on the way they respond to their environment. For example, if a person had to steal from the supermarket to feed their siblings, they may not view petty theft as "immoral," while someone who was raised by a small-business owner may view theft of any degree as an inexcusable crime.

Humanists believe that the development of a well-rounded perspective on the world relies on extensive knowledge. The more sensitive someone is towards a topic, the more likely they are to have a deeper understanding of the issue. For example, someone who has spoken with immigrants about their struggles in the United States is going to have a more well-rounded perspective on immigration than someone who has never met an immigrant.

According to humanism, a fully developed conscience relies on constant inner change, a concept reflected in modern media. Where premodern heroes didn't experience much internal change throughout their narratives, many modern films, plays, books, and TV shows emphasize their characters' internal development as the core of their story.

For example, when Lancelot defeated his opponents, he didn't experience an internal shift based upon his experiences. If anything, his victory bolstered his status as the "hero" of the story and supported his present perspective. Conversely, in *The Wizard of Oz*, the Tin Man, Scarecrow, and Lion discover that the things they were looking for were within themselves for their entire journey. Through their experiences, their internal perspective changed by the end of the story.

Wartime Narratives

As humans began to focus on personal experiences, wartime narratives started to shift. Pre-modern civilizations turned to deities to determine whether a war was justified, and they glorified heroes and generals in battle. While they didn't hide the brutality of war, war stories and artwork didn't focus on the plight of the common soldier, relegating them to a generic foe for a hero to defeat or a member of a cheering crowd.

For example, in Pieter Snayers's painting *The Battle of the White Mountain* (1620), the foot soldiers are depicted as small, generic figures lined up in intricate formations. Above their heads, larger and intricately detailed angels hold a large sign, showing their support for Emperor Ferdinand II. While you can see some carnage on the front lines if you look closely, the piece focuses on the divine support of God and the glorious strategy of the emperor.

Conversely, in the modern era, grand stories of heroes and generals have been pushed aside for grounded tales about the experiences of the common soldier. This shift started in the mid-1800s, and it became mainstream during the World Wars. Generals and politicians are no longer seen as brilliant, infallible strategists who make choices with the guidance of a higher power.

In fact, many modern war stories show that actions of high-ranking military officials can have dire consequences for the soldiers they command. For example, books such as *All Quiet on the Western Front* and films such as *Saving Private Ryan* focus on the horrors of the frontline soldiers obeying orders, depicting war as brutal and unforgiving.

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Similar to the religions that came before it, humanism has split into different branches. Each branch has a different take on humanism and is often at odds with other humanist perspectives. The three primary branches of humanism are liberalism, socialism, and evolutionary humanism (fascism).

Liberalism

Liberals believe that people have distinct internal voices and unique experiences, necessitating the need for personal freedom. Humans possess free will and should be able to express their perspective in everything from art to politics. This form of humanism is considered the “orthodox” version and values individuals over political or religious institutions. According to liberalism, the voter and the customer are always right because their individual experience is what matters most.

Liberals believe that every human perspective matters. Because of this, they run into problems when valid, but differing perspectives clash. For example, when a Palestinian refugee asked German Chancellor Angela Merkel for asylum, Merkel told her that Germany didn’t have the resources to take them in. Both the girl and the chancellor had valid perspectives based upon their experiences, and liberals debated Merkel’s decision.

Liberalism as Modern Nationalism

Despite the strongest efforts of liberal philosophers, no one could find a solution to the issue of conflicting ideals without conceding parts of the liberalist perspective. Because of this, liberalism slowly morphed into a form of modern nationalism.

In many cases, liberalism promotes the identity and culture of individual nations in the same way it promotes the identity and culture of individual people. For example, while the European Union allows for interconnectivity between the nations of Europe, its constitution states that the countries are “united in diversity,” allowing the people to be “proud of their national identities.”

When liberalism is taken to the extreme, it can transform from a sense of national *identity* to belief in national *superiority*. When people allow emotions such as pride or fear to overshadow their empathy for other people, they reject those they view as a threat to their national identity or security. For example, some Americans believe the U.S. is superior to all other countries on the planet, causing anti-immigrant sentiments—especially immigrants from regions with primarily non-Caucasian citizens.

Socialism

Socialists believe people must focus on the experiences and feelings of others. They view the liberals as self-centered because they justify actions based upon personal feelings rather than the feelings of everyone else. According to socialism, peace and prosperity can only be achieved by unifying the people of the world through altruism.

Socialists argue that self-exploration and personal expression give too much credit to personal decisions and not enough credit to social conditioning. For example, if you're poor, you think that you've made bad decisions in life. However, this reflection fails to account for the socio-economic class you were born into and the obstacles that have been created by wealthier people.

Socialists believe that individual voices matter less than collective voices. Where liberals give weight to the opinions of the voter and the customer, socialists give power to socialist parties and trade unions. While the socialist system is still based on human experiences, it expects people to listen to the wants and needs of the "whole" rather than their personal desires.

When socialism is taken to the extreme, trade unions or political parties silence those who oppose their ideals through imprisonment or execution. For example, in Stalin's Soviet Union, enemies of the state were thrown in the Gulag.

Evolutionary Humanism

Evolutionary humanists (fascists) believe the experiences of "superior" people are more valuable than those of "inferior" people. In the same way

that humans have dominated over other animals, they believe that these “superior” humans deserve to reign over the rest of humanity because they are the key to the continued evolutionary development of the human species.

Different cultures define the “superior” human in different ways with some using race, nationality, wealth, or intellect as criteria. According to evolutionary humanism, conflict is essential to the continued growth of humanity because it promotes the process of natural selection as well as human advancement. Through war, the weakest in society are culled and the strongest prosper. If someone is truly “superior,” they’ll find a way to best their opponents.

According to evolutionary humanism, conflict helps people understand the true value of life. If a person never experiences conflict, they may get caught up in the more “trivial” aspects of life such as commercialism or surface-level relationships. On the other hand, when someone goes through near-death experiences, they often dedicate themselves to valuing every second of their existence because they know how quickly it can be taken away.

When evolutionary humanism is taken to the extreme, people who believe in their “superiority” begin conflicts to eradicate “lesser” humans. For

example, Adolf Hitler's Nazi regime murdered 6 million Jewish people because they viewed them as inferior and dangerous.

Conflict Between Branches

When humanism first emerged, different branches were unified by the belief that humans give meaning to the universe, not God. Defending themselves against theistic religions, humanists rarely fought amongst themselves. However, as humanism started to grow in popularity, the internal disagreements between branches became more aggressive, leading to one of the most brutal religious wars in human history.

While many may not consider large-scale conflicts such as WWI, WWII, and the Cold War "religious" wars, disagreements in humanist philosophy were at the core of each. Almost every major war from 1914-1989 pitted democracy (liberalism), communism (socialism), and fascism (evolutionary humanism) against one another.

During the World Wars, the democratic and communist countries allied with one another to quell the rise of fascism in Germany and Italy. Then, during the Cold War, the global conflict between democracy and communism threatened to end humanity entirely with the creation of vast nuclear capabilities.

The Near-Death and Resurgence of Liberalism

Where liberalism had been the most prevalent form of humanism at the beginning of the 20th century, by 1970, only 30 of the 130 countries in the world were liberal democracies. Following a string of liberal defeats culminating in the loss in Vietnam, most of the world believed that socialism would be the way of the future. The leading force of liberalism, the United States, used its nuclear capabilities and the threat of mutually assured destruction to keep the spread of socialism away from the country.

However, in the 1980s, liberalism had a sudden resurgence, as countries such as India, Brazil, and South Korea ousted their leadership and adopted democratic models. As the allure of freedom motivated citizens to fight against authoritarian regimes, democracy replaced communism in countries across the globe, including former Soviet nations such as Ukraine, Armenia, and Georgia.

In 1991, liberalism won the humanist war of the 20th century as the Soviet Union, the bastion of socialism, dissolved. Today, Russia claims to be a democracy, though shady government practices imply that “democracy” is merely a label. As humanity entered the 21st century, liberalism had eliminated both socialist and evolutionary humanist perspectives from the global stage.

Liberalism in the 21st Century

In the 21st century, most countries subscribe to some form of liberalism, focusing on human rights, democratic systems, and free market economics. Even the “social movements” of the 2010s, such as Occupy Wall Street and the 15-M movement (anti-austerity movement in Spain), fought for liberal ideas, demanding a market free from corporate corruption and a government that serves the average voter. There seems to be no competitive alternative to the religion of liberalism in the 21st century:

- Socialism and communism: China, one of the largest economic powerhouses in the world, claims to be communist. However, even the Chinese have liberalized their politics over the years and no longer subscribe to the strict political model they had through the end of the 20th century. Though they’re not a liberal country, they’re no longer the socialist nation they once claimed to be.
- Radical theism: The 21st century has seemed to bring a resurgence of radical theistic perspectives in religions such as Islam, Christianity, Judaism, and Hinduism. However, this radical view of the world is merely the remnant of past beliefs. While God is no longer the center of humanity, theists are clinging desperately to their beliefs, meaning it will likely be a few more generations before theism is truly dead.

Moving Forward With Technology

Religion and technology rely on one another. On the one hand, religion points technology in a specific direction by creating needs for technology to fulfill. For example, during the Manifest Destiny era in the United States, the need to push West quickly motivated engineers to create faster and more efficient trains. On the other hand, technology creates boundaries for religion to operate within. Technology changes the way that people understand the world around them, forcing religion to change with shifting perspectives.

Religions that refuse to adjust to changes in human perspective and technology lose relevance. For example, traditional religions, such as Christianity, Islam, Judaism, or Hinduism, promise clarity through faith. However, they don't provide the answers to modern questions such as, "What are the ethics behind artificial intelligence?" or "What are the economic ramifications of machines replacing low-income workers?"

While millions of people still subscribe to theistic religions, numbers don't mean a lot in the scope of human history. The work of a few innovative people is often more positively remembered than the outdated beliefs of millions. For example, millions of people believed the Pope was incapable of error or sin at the same time Charles Darwin was writing *On the Origin of*

Species. Today, few care about the false views of the Catholic Church of that time, while many focus on the importance of evolutionary theory.

From the 19th to the 21st centuries, humanist religions have relied on and adapted to rapidly changing technologies, placing them at the forefront of modern human religion. For example, Marx and Lenin wouldn't have been successful without the use of technology such as electricity, trains, and radio because socialism relies on a communicative and connected working class.

As technology progresses, religion will continue to develop and adapt. While liberal humanism reigns in the early 21st century, many theorize that the model will become obsolete as scientific developments in artificial intelligence and genetic engineering continue to emerge.

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As discussed earlier, religion relies on ethical judgments supported by “factual” statements. Liberalism contends that freedom is more important than equality (ethical judgment) because human beings possess free will and a unique, singular voice. However, recent scientific studies expose flaws in liberalism’s “factual” statement through research into the liberal concepts of free will and individualism.

Free Will

For centuries, humans have been told that they possess free will, or the power to make their own decisions. Before the advent of brain scans and modern psychology, the simplest way to explain why someone would do

something was to say, “They chose to.” It gave people authority over their destiny as they maintained total control over the choices they made.

However, researchers have challenged the theory of free will through the use of neuroscience and brain mapping. The electro-chemical processes in the brain are subconscious, meaning humans have no control over the neural system that creates thought or action. When external stimuli cause a reaction in the brain, the human body will naturally respond to the electrical and chemical interactions. For example, you don’t *choose* to get angry. Anger emerges naturally due to the body’s response to external stimulation.

These reactions can be either deterministic or random, but they’re never “free”:

- A deterministic reaction is the direct response of the brain to an external stimulus. For example, if you accidentally put your hand on a hot pan, the electrical signals in your brain will tell you to retract your hand.
- A random reaction is the result of an unpredictable event in the brain such as the decomposition of an atom or the misfiring of an electrical impulse. For example, your brain may accidentally cause you to shiver after randomly firing off an impulse.

While scientists are able to explain the electro-chemical responses in the brain, there have been no major discoveries that support the concept of free will. In fact, evolutionary theory directly contradicts the concept of free will.

According to the theory of evolution, all animals have developed according to their genetic code and natural selection. Animals with stronger genes will make better “choices” because their genetic makeup instructs them to behave in a certain way, allowing them to pass their genes on to future generations.

Conversely, animals with weaker genes will make poorer “choices,” restricting them from passing along their genes. If animals, including humans, had the ability to freely choose their behaviors, then natural selection couldn’t exist because choice would be separate from genetic code, meaning that the actions of the animals would have nothing to do with passing along the strongest genes.

Human Desire

People often confuse desire with free will. They conclude that they have free will because they have the ability to act on their desires. However, while animals, including humans, *do* possess the ability to make choices based on their desires, they *don’t* possess the ability to choose their wants

or desires. These are determined by involuntary electro-chemical reactions in the brain. For example, while you may be able to choose *not* to attack your annoying colleague when the feeling arises, you have no control over your annoyance.

On a larger scale, uncontrollable human desire leads to the creation of human perspective, meaning that humans have no control over the very thing liberalism uses to champion freedom. For example, your political affiliation is the result of following or fighting against your desires. While you may have logical reasoning behind your decision, you can't control the way that you feel about a candidate, policy, or behavior.

In one particular study, researchers asked participants to flip one of two switches while connected to a brain scanner. Based on which area of the brain activated, the scientists could predict which switch the person was going to flip before they took the action. Specific areas of the brain would light up hundreds of milliseconds before the participants were conscious of their decision, leading researchers to conclude that the participants were responding to activity in the brain instead of making a "free" choice.

Manipulation of Desire

In the 21st century, researchers have been able to use the principles of neuroscience to manipulate the desires and behaviors of animals. In one

study, scientists placed electrodes into certain areas of a rat's brain. Using these electrodes, scientists were able to manipulate the rat's behavior, making it move in certain directions, climb ladders, and jump from extreme heights. The rat acted based upon its "wants" and "desires," unaware that it was being manipulated.

Recently, researchers have used this manipulation of desire on people. For instance, a hospital in Jerusalem has developed a method to combat depression using a small computer and electrodes. The computer, which is implanted into a person's chest, sends signals to electrodes that paralyze the area of the brain responsible for depression. While the treatment isn't always successful, some patients have reported that their depression melted away "as if by magic." While ethical objections limit the use of electrode implants, many studies have been done using helmet-like devices that place electrodes on the outside of the brain called transcranial stimulators.

For example, the U.S. military has developed helmets that are meant to enhance a soldier's focus and performance. A journalist tested the technology at an Ohio Air Base by participating in a sniping simulation. Without the helmet, she felt overwhelmed as simulated suicide bombers rushed her position, only eliminating a small number before the simulation ended. When she put the helmet on, she calmly and efficiently eliminated every single target.

While the long-term effects are still unclear, transcranial stimulators may have a serious impact in the development of humanity. Some claim that they'll actually strengthen the liberal perspective by giving people the power to silence unwanted desires and focus on their authentic wants. However, this is unlikely because, as you'll learn in the next section, people probably don't possess an "inner self" that's able to define an "authentic" want.

Individualism

Liberals believe in individualism, or the belief that human beings have a singular, unique voice that leads them towards their true goals. However, recent studies have debunked this myth, placing the "inner self" in the same category as the "human soul"—an unfounded theory that drives religious belief.

Researchers have discovered that human behavior has nothing to do with a "singular, unique voice." Rather, human thought is dictated by the interactions between the two hemispheres of the brain. Each hemisphere controls the opposite side of the body, meaning actions of the left side of the body are controlled by the right hemisphere and vice versa.

While both hemispheres play a role in most behaviors, the right hemisphere plays a more important role in spatial and creative processes, while the left

focuses on logical reasoning and speech. The neural responses of the hemispheres are often at odds with one another and cause conflicting feelings or “voices.”

While the hemispheres are usually connected by a neural cable, severing the neural connection causes them to work independently of one another. For example, researchers flashed a picture of a chicken claw to a split-brain patient’s right eye and a picture of a snow shovel to their left eye. When they asked the patient to state what they saw, they said “chicken claw,” because that object was flashed to the left hemisphere, the center of speech.

However, when they asked the patient to point to the picture they’d seen, their left hand pointed to the snow shovel while their right hand pointed to the chicken claw. The areas of the body responded differently based around the different experiences of their appropriate hemispheres. When asked why they pointed to two images, the patient said that the shovel had to be used to clean the chicken coop.

The patient’s justification is the result of the brain’s need to rationalize behavior. The left hemisphere is the center of logical reasoning, so it developed a logical reason for the patient to point to two objects instead of one. This process occurs in the brains of all people, not just split-brain

patients. It justifies the subconscious behavior of the brain by creating conscious narratives such as the belief in an “inner voice.”

For example, if a person wakes up one morning and suddenly decides to quit their job, their brain may justify this behavior by creating a narrative that says their “inner voice” is guiding them in a new direction. However, the reality is that this desire is the result of the neurons firing in particular sections of the brain, not an individual goal. The brain simply created the narrative to rationalize the seemingly random behavior.

The Experiencing Self and the Narrating Self

The hemispheres of the brain create two versions of the human experience—the experiencing self and the narrating self:

- The experiencing self: Usually controlled by the right hemisphere, the experiencing self processes moment-to-moment information. Most people associate this “self” with instinct. For example, if you hit your head on a door frame, the experiencing self would cause you to grab your head, check for blood, and feel the pain of the impact.
- The narrating self: Usually controlled by the left hemisphere, the narrating self tries to rationalize past behaviors and justify future decisions. Most people associate this “self” with identity. For example, if you hit your head on a door frame, your narrating self

may rationalize your clumsiness by attributing it to exhaustion while making you more conscious of the door frame for the next few days.

While the experiencing self produces a more immediate feeling in response to an experience, it can't remember feelings, leaving the narrating self to create memories. These memories usually consist of highlights and end results, cutting out much of the detail felt by the experiencing self. The memory created by the narrating self evaluates the memory based on the "average" of the experience as a whole.

Both "selves" interact to create perspective and inform decision-making. The experiencing self can support or derail plans made by the narrating self. For example, if you decide to go on a diet, your experiencing self may not feel like cooking one night, leading you to order a pizza instead.

The narrating self, on the other hand, can frame in-the-moment experiences. For example, someone fasting before surgery is going to feel differently than someone fasting for religious reasons. While both parties are experiencing hunger, their narrating selves create perspectives that shape the way they respond to their hunger.

(Shortform note: For another perspective on the “experiencing self” and the “narrating self,” check out Shortform’s summary of Thinking Fast and Slow by Daniel Kahneman.)

The Cold Water Experiment

In one study, researchers conducted a two-part experiment. In the “short” test, participants were asked to submerge their hand into a tub of cold water for 60 seconds. In the “long” test, participants were asked to submerge their hand into a tub of cold water for 90 seconds. Unbeknownst to the participants, the researchers added a little warm water to the tub during the “long” experiment after the subject had their hand in the tub for 60 seconds.

The parts of the experiment were administered in random order, with some participants performing the “short” part first, while others started with the “long” part. Even though both parts of the experiment required subjects to leave their hand in the cold water for 60 seconds, 80% of participants found the “long” test more bearable than the “short” test. By adding the warmer water for the last 30 seconds, researchers lowered the “average” level of discomfort, leading the narrative self to remember the “long” test as less painful.

Reproduction and Childbirth

Childbirth isn’t a pleasant experience, with women often experiencing excruciating pain. However, in the days following labor, women experience higher levels of cortisol and endorphins, creating a brief positive experience. The narrating self clings to this positive experience to frame childbirth in a positive light. If humans hadn’t evolved to remember reproduction positively, few would want to go through the pain associated with labor, and the survival of humanity would be put at risk.

Hardship and the Narrating Self

The narrating self tries to attach meaning to hardship, making it more endurable. It creates purpose within chaos and allows people to move forward after a difficult or traumatic time. However, when humans rely solely on this perspective, they run the risk of disconnecting from logical reasoning and often make choices that exacerbate an issue even further.

For example, the Scottish government once decided to construct a new parliament building with a budget of £40 million and a one-year timeline. However, the construction process was tumultuous, with unexpected issues arising every day. Afraid to abandon the project and lose the millions they’d already invested, the government continued to extend the timeline of the

project and invest more money. When the building was finally completed, five years had passed and the government had spent £400 million, 10x the original budget.

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As the concepts of free will and individualism continue to be challenged, three potential developments could wipe out liberalism in the 21st century:

1. The loss of military and economic usefulness
2. The rise of decision-making algorithms
3. The creation of the “superhuman”

The Loss of Military and Economic Usefulness

The first potential development predicts that technology will make humans unnecessary to the economy and military, leading political and economic systems to devalue the human perspective. Liberalism rose to prominence because the political, economic, and military systems relied on the masses to keep them afloat. If a nation wanted to go to war, they needed foot soldiers. If industrialists wanted to open a factory, they needed floor workers.

Defenders of liberalism point to the effectiveness of soldiers and workers as a selling point for the liberal system, explaining that, when people feel valued, they work harder and more efficiently. In the 20th century, because political and economic systems relied on large numbers of people to operate, it made sense to value the perspectives of all people to boost productivity.

However, in the 21st century, technological advancements have started to replace human beings within economic and military models. Today, one drone specialist can do the job of a team of soldiers, and a mechanical arm can work the assembly line without tiring. Because of this, the common person won't have as much to contribute to economic and political systems.

Technology even threatens specialized positions as new developments have started to separate intelligence from consciousness. Where organizations once had to rely on conscious human beings to make decisions, artificial intelligence programs now have complex algorithms to guide decision-making processes. These algorithms remove the variable of human emotion and lead to calculated, but detached choices.

Intelligence Versus Consciousness

In the coming years, humanity will have to grapple with the following question: Which does humanity value more—intelligence or consciousness?

For example, if we banned all human drivers and made all cars autonomous, all cars could be interlinked to a central system, removing human error from the equation. While this would make the journey safer and more effective, this would eliminate the human experience of driving a car, limit individual freedom, and eliminate the jobs of millions of taxi and bus drivers. What does society value more—the experiences of individual drivers or the efficiency of autonomous vehicles?

We have already started to give power to autonomous systems. For example, modern stock trading is run primarily by computer run algorithms. While these algorithms process more data in a second than people could process in a year, they're also susceptible to cyberattacks.

In April 2013, Syrian hackers used the Associated Press's Twitter account to spread a false message saying that President Obama had been hurt in an attack on the White House. Trade algorithms processed this information and started aggressively selling stocks, leading to the Dow Jones dropping 150 points, the equivalent of $136 billion. Thankfully, the Associated Press clarified that they'd been hacked, and the algorithms bought back the

stocks, allowing the market to recover within mere minutes of the initial cyberattack.

In the future, these systems may even take over the jobs of lawyers, doctors, and teachers. The technology is already well on its way. For example, IBM's artificial intelligence, Watson, has been created to diagnose diseases based on patient information and observation. Watson has multiple advantages over human doctors:

1. Watson can hold information in its database about every illness and medicine known to mankind. It can update this information with real-time data from hospitals and studies conducted globally.
2. Watson can study the entire genome and medical history of both a patient and their relatives. It can use this information to determine if a patient is genetically predisposed to certain illnesses.
3. Watson removes the risk of human error and can work nonstop.

The Result of Automation

While technology changed industries in the past, the industries still required human workers. For example, while the Industrial Revolution disrupted the agricultural industry with the development of new technologies, factories still needed people to operate and maintain the new machinery.

However, technological automation in the modern era poses an unprecedented threat. If replaced by artificial intelligence or mechanical systems, people won't be able to find new employment because the need for human workers will be at an all-time low.

While human beings currently possess the ability to do things computers can't, artificial intelligence is developing at an explosive pace. For example, in the early 2000s, experts pointed to facial recognition as an example of the superiority of human intelligence when compared to computers. Today, facial recognition algorithms can scan through thousands of faces in minutes.

Artificial intelligence programs are even teaching *themselves* new information without the guidance of their creators. For example, in 2015, Google Deep-Mind taught itself how to play almost 50 different games. After coding the program, developers simply put the games in front of Deep-Mind and let it figure out how to play by itself. It can now play most of the games better than humans, implementing strategies most people would never think of.

As humans are replaced by machines, the distribution of wealth will become even more unequal. The elite will make more income thanks to more efficient production and lower employee costs, and technology developers will make money building machines, forming algorithms, and

maintaining machines. The common worker, however, will be left with nothing to hold onto.

As workers lose economic opportunities, they'll also lose political relevance. While workers can presently unionize and strike to make their voices heard, if they're replaced with machines, their ability to voice their opinion will be eliminated. If a worker demands more pay or better working conditions, a corporation can replace the worker with a machine that doesn't require pay or benefits.

Eventually, algorithms could run entire corporations or businesses. For example, if an algorithm is put in charge of an investment portfolio, it may invest in real estate. This could make the algorithm, in effect, a landlord in charge of collecting rent and overseeing tenant requests. If a tenant refused to pay rent, the algorithm could immediately contact a lawyer and build a court case.

Though seen as a field requiring "human experience," not even art is safe from the rise of algorithms. For example, a musicology professor named David Cope created an algorithm called EMI that studied the works of Bach, then created over 5,000 Bach-esque chorales. When EMI's piece was put against an actual Bach piece and another composer's work, audiences thought that the EMI piece was the authentic Bach piece, that

the Bach piece was the other composer's work, and that the other composer's work was created by the computer.

If machines replace humans in political, economic, and artistic models, will the human experience have any value? Many experts argue that it won't. In fact, some predict that intelligent computers may view people as useless and a threat to technological superiority, leading them to eradicate humanity entirely.

Decision-Making Algorithms

The second potential development predicts that algorithms will one day make choices for people. Liberalism relies on individualism and the belief that humans know things about themselves that no one else can discover.

Through the 19th and 20th centuries, no amount of observation or monitoring could help researchers understand a person better than they know themselves. With a limited amount of knowledge about biochemistry and neuroscience, even the best scientists couldn't process all of the data they were receiving. Because of this, today, most people trust in their inner voice over an external voice.

However, as technology continues to advance, researchers may be able to develop an algorithm that *can* process more information than the human brain, allowing the algorithm to understand people better than they know themselves. If this occurs, people will start relying on external algorithms to guide their behavior instead of their internal voices.

People have already started deferring to technology to make daily decisions. For example, some people wear watches that track their steps and recommend what to do to stay in shape. While some use this as a simple reference tool, others obsess over achieving the goals set by the algorithms.

While people currently use these algorithms for health and fitness purposes, the technology may eventually determine how people spend all of their time. For example, if you had the option to either play basketball or play chess in your free time, you'd probably do whatever your "inner self" told you to do. However, if there were an app that scanned your brain and body to determine which would be more productive, you might listen to the app instead.

Today, people have even used technology to protect themselves from *potential* disease. For example, actress Angelina Jolie went through a double mastectomy after genetic testing revealed that she had an 87% chance of developing breast cancer. Though she didn't have cancer at the

time, she heeded the genetic test and decided to go through the difficult procedure to alleviate the risk of developing cancer.

Sacrificing Privacy

People have to sacrifice privacy for advanced algorithms to work. On the one hand, the more information we give to external algorithms, the better those algorithms will be able to guide decision-making processes. On the other hand, people's personal data will no longer be personal, resting in the hands of large corporations and artificial intelligence.

Today, this is seen most often in the health and wellness industry. For example, Google has started a program called Google Baseline. With this program, Google wants to create a massive database containing the health information of its users. This information will allow Google to create algorithms that can alert people about health issues they may be unaware of and guide their lifestyle choices based on their health profile. However, to obtain the information necessary for a venture like this to work, Google needs people to hand over their health data and genetic information.

If companies like Google get hold of vast amounts of biometric and genetic information, the algorithms they create will not only protect individual people from disease, but they will also help society fight and contain pandemics. Beyond healthcare, these algorithms could track people's

every word and movement, using that information to help them make decisions based upon their interactions.

Unlike the “inner voice,” which relies on partial or manipulated memories to form decisions, these algorithms would have perfect memories of interactions. With continued advances in computer learning, this could eventually allow artificial intelligence to make more thoughtful decisions than people do, as they remove subjectivity from the equation.

For example, imagine you ask an algorithm about your love life. You explain that you like both Kendra and Melody, but you can’t decide whom you should pursue. The algorithm may then respond by telling you that it’s analyzed the data based on your genetic profile, the texts you’ve sent, your heart rate, and your sexual experiences to determine that there’s a 75% chance you’ll be better off with Melody. While you may have just “relied on your inner voice” to guide you to one of your lovers, the algorithm has made a more objective analysis for you.

The Death of Democracy

If algorithms replace the “inner self,” the concept of individualism will die as everyone will see their role in a global network of data. The death of individualism will lead to the death of democracy because democracy relies on the concept that every person has a unique perspective.

For example, halfway through the incumbency of a sitting president, you may feel as though that person is incompetent and needs to be voted out. However, following a massive campaign and a few tax cuts, you may forget about your initial feelings come Election Day, leading you to vote for them to have a second term.

An algorithm, on the other hand, would factor all of your experiences into its decision-making process, using everything from your blood pressure to analysis of campaign slogans. Where human thought is fleeting and subjective, algorithmic processing is stable and objective, meaning that the algorithm would likely be able to make a more thoughtful decision than you.

Because they rely on probabilities, algorithms wouldn't make the right decision *every* time. However, if they make the right decision *most* of the time, people will be willing to give more authority to the centralized algorithms. They don't need algorithms to be perfect. They just need them to be *better* than their "inner voice."

This isn't a far-off fantasy. Some algorithms already know people better than their closest friends and family members do. For example, Facebook tested the power of its algorithm by asking subjects to answer a questionnaire, then asking the subject's friends, colleagues, or family members to guess their answers.

Facebook then asked the algorithm to guess the subject's answers based on their likes. The more likes a person had clicked, the more accurate the predictions were. Facebook then pitted the algorithm's answers against the answers of those closest to the subject to see which was more accurate.

On average, the study revealed that the algorithm only needed 70 likes to be more accurate than friends, 150 likes to be more accurate than family, and 300 likes to be more accurate than spouses. Essentially, if you've liked 300 or more things on Facebook, the algorithm likely understands your opinions and desires better than your significant other does.

The Future Sovereignty of Algorithms

Presently, artificial intelligence acts as an oracle for people, guiding their actions but having no power over the ultimate decision. However, as people place more trust in artificial intelligence, algorithms may become agents, making decisions to accomplish a goal you create. Eventually, as the algorithms receive more power and control, they may reach sovereignty, making decisions for themselves and manipulating humans to make particular choices.

For example, consider the potential development of the map application on your phone:

1. Oracle: Today, map applications show you a variety of routes and recommend a certain path. However, *you* have the power to ignore the guidance of the app and go whatever direction you choose, keeping the power in your hands.
2. Agent: As self-driving vehicles become more prevalent, you may put a location into your map application and allow it to guide your car according to its recommended route. You have the power to determine the final destination, but you're allowing your map application to determine the best way to reach it.
3. Sovereign entity: Once the application has enough information and control, it can begin making decisions and shaping your perspective. For example, if the application knows there's a traffic jam on Path #1, it may send half of the drivers to Path #2 to ensure both paths run smoothly and prevent a secondary jam on Path #2. It made the decision without consulting you and now controls the way you perceive the traffic patterns around you.

If algorithms know people better than they know themselves and are given the power to make decisions, artificial intelligence may start to run the lives of human beings. Digital assistants such as Cortana and Siri have already started to use personal data to guide their recommendations. In the future, these recommendations may become manipulations.

For example, your digital assistant may notice that your cholesterol levels have spiked by tracking your biometrics. When you ask the assistant to order you a pizza, the assistant may be able to use its knowledge of your personality to convince you to avoid the pizza. The assistant is now manipulating you to make decisions based on what it has calculated to be the best route forward.

In addition to virtual assistants, if humans begin relying on biotechnology in their quest for immortality and health, people will have to be constantly linked to an online network to survive. For example, if you've implanted a biometric device that sends nanobots to kill diseases as they enter the body, that system will have to be constantly updated with new information and protected from cyberattacks.

If humans aren't careful about the amount of power they give to connected algorithms, people's lives may be controlled by a centralized power. For example, if always-online biotechnology becomes the norm, imagine the power a dictator could wield if they had control over the algorithm. If someone spoke negatively about that dictator, the dictator could simply flip a switch to eliminate their enemy. Taking this example one step further, that dictator may be an intangible artificial intelligence that oversees the "best" direction for humanity, making it almost impossible to remove it from power.

The Creation of the “Superhuman”

The final potential development predicts that humanity will value the individual experiences of “superhumans,” but not of the common person. The creation of “superhumans” will likely be the result of a small, elite group of people upgrading their bodies and brains with biotechnology, creating a more powerful biological caste.

Liberalism can survive with *socio-economic* inequality because people can relate to the experiences of other people, even if they live under different conditions. For example, a billionaire can still see *Les Misérables* and sympathize with Jean Valjean stealing bread to feed his starving family.

However, liberalism can’t survive with *biological* inequality because the experiences of “superhumans” and humans will be inherently different and unrelatable. For example, if a “superhuman” has a chip implanted into their brain that allows them to access data from the internet, the way they experience the world is going to be completely different from the average human.

The Shift in Modern Medicine

In the 20th century, medical professionals worked to heal the sick and maintain a healthy populace. Though medical breakthroughs often occurred while treating those who could afford the best healthcare, the discoveries were then utilized to help treat those less fortunate.

However, in the 21st century, disease is no longer as serious an issue. Because of this, the medical industry has shifted its focus from “healing the sick” to “upgrading the healthy.” Because these upgrades aren’t necessary to meet an acceptable standard of living, they’re only available to the wealthiest in society. While the cost of these procedures may drop over time, state-of-the-art technology will only be available to the elite.

For example, imagine scientists create a biomechanical arm that allows for immense strength. While it's a helpful and powerful modification, it's not essential to a healthy life. Therefore, medical professionals can ethically charge significant amounts for the “upgrade,” giving the benefit only to the elite. Over time, the cost of the arm may drop, but, by the time it's affordable for most people, scientists will likely have developed a stronger modification that, once again, is only available to those who can pay.

Though healthcare has steadily improved over the last few centuries, there is no way to ensure that the poor will continue to receive improving services. Where the 20th century required a healthy populace to create a strong military and economy, the future may not require the same,

potentially leading governments and wealthy corporations to ignore the healthcare needs of the poor and turn their attention towards the upgrading of the wealthy.

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If liberalism dies, other religions will emerge to take its place. Because of the increasing impact of technology, these will probably center around technology, creating a new form of belief: techno-religions. Techno-religions promise the guidance and salvation of traditional religions but use technology to generate happiness instead of celestial beings.

Techno-religions can be divided into two categories:

1. Techno-humanism: The belief that *Homo sapiens* should use technology to create *Homo deus,* ensuring that humanity maintains superiority on Earth.
2. Dataism: The belief that *Homo sapiens* have run their course and should pass superiority on to advanced algorithms.

This chapter focuses on techno-humanism, the next on Dataism.

Techno-humanism maintains many traditional humanistic beliefs but accepts that *Homo sapiens* have no place in the future. Because of the rate of advancement with artificial intelligence, techno-humanists believe that

humanity must focus on upgrading the human mind if it wishes to compete with advanced external algorithms.

Over 70,000 years ago, the Cognitive Revolution caused minor shifts in the minds of *Homo sapiens*, transforming them from African apes into the dominant force on the planet. Techno-humanists believe another transformation is due, this time using technology to make adjustments.

The techno-humanist perspective is most closely related to the evolutionary humanists of the 20th century. However, where evolutionary humanists such as Hitler believed the superior human could only emerge through the use of selective breeding and the eradication of “inferior” beings, techno-humanists strive to achieve the next phase of evolution peacefully, using genetic engineering, human-computer integration, and nanotechnology.

The Spectrum of Consciousness

We have only just begun to understand the most basic elements of the human mind. While scientists have started to develop the ability to directly manipulate the brain, no one really knows how vast the spectrum of consciousness is. The spectrum of consciousness consists of every mental

state a being can experience, and humanity likely only exists within a small portion of it.

Compare the spectrum of consciousness to the electromagnetic spectrum. Human beings can only see and experience a sliver of the electromagnetic spectrum through visible color and light, but scientists have discovered parts of the spectrum that can't be interacted with without technology such as radio waves, x-rays, and microwaves. Mental states may exist on a similar spectrum, with the organic human brain only experiencing a small fraction of the full spectrum.

Techno-humanists want to better understand the spectrum of consciousness, then improve upon its organic design. However, at this time, most studies have only focused on the region of the spectrum experienced by the WEIRD.

The WEIRD

Most studies into human psychology have relied on the experiences of the WEIRD, or Western, educated, industrialized, rich, and democratic subjects. A study conducted in 2010 found that 96% of the subjects tested for papers published in the *Journal of Personality and Social Psychology* were WEIRD.

The issue with this model of testing is that it doesn't take the conscious experiences of other kinds of people into account. While WEIRD subjects may exist on one part of the natural spectrum of consciousness, other subjects may exist on another region of the spectrum entirely. However, WEIRD subjects are more accessible to researchers and more likely to participate in studies.

For example, college psychology students may have different mental states than homeless people. Where the students experience frustration with coursework or anxiety about their career, the homeless experience a struggle for survival, shifting their placement on the spectrum of consciousness. If researchers only study the behavior of the students, they may miss the other part of the spectrum entirely.

Organic Limitation

Even if researchers widen their pool of subjects, they'd likely still only be able to study a limited portion of the mental states available to the organic human mind. As globalization has touched most of the world, humanity has a multitude of shared experiences that influence the mental state of the collective species. While humans likely experienced a wider variety of mental states before globalization, the world today is too interconnected to explore vastly different mental states.

For example, while isolationist foragers may have different experiences than Harvard professors, both parties have been influenced by similar human creations. The foragers have likely been exposed to theistic religion, WEIRD tourists, curious researchers, and international traders, aligning aspects of their mental state with the professors.

While the use of psychedelic drugs and the experiences of “visions” were once seen as a way to connect to the divine, modern society discourages people from exploring expanded mental states, labeling those who do as addicts, liars, or mental patients. However, even with substance use or abnormal brains, humans are still limited by the organic limitations of the human mind.

Other animals experience the world in completely different ways and exist on a different region of the spectrum of consciousness. For example, a bat uses echoes to understand its surroundings and create patterns. The human mind has no way of processing and understanding that experience.

Even if researchers had a way to relate to the experiences of every animal, the spectrum of consciousness likely extends well beyond the experiences of organic beings. Techno-humanists believe the only way to break out of the limitations of the organic brain is through the use of technology such as genetic engineering, brain-altering chemicals, and computer technology.

The Human Traits of the Future

Historically, human traits have evolved naturally through changes in political and social settings. For example, ancient humans likely had an enhanced sense of smell they could use to hunt. However, modern humans no longer require a keen sense of smell to survive. Because of this, the areas of the brain that were once used to process smells have evolved to focus on problem solving, critical thinking, and comprehension.

In the future, humans will likely continue to evolve according to political and social needs, but in a more direct and immediate way. If techno-humanists are able to upgrade humanity, the people in charge of the technology will get to determine which traits are useful and which aren't, then develop technology to improve or eradicate certain feelings or behaviors.

For example, the use of attention helmets may allow for calm and quick decision-making but may eliminate empathy and patience in the process. If the military requires soldiers to wear these helmets, they could create an efficient but unfeeling force.

If techno-humanists manage to "upgrade" society, humanity may lose the very things that made it excel in the first place: ambition, creativity, and connection. For example, if human beings discover a way to connect the

human brain to the internet, people may stop interacting with one another altogether, attaching to a truly “always-online” world.

This has already started in the 21st century, with people spending more time on platforms such as Instagram than interacting directly with others. Despite having access to more tools to connect than ever before, people struggle to build relationships and pay attention. On top of the loss of connection, people seem to spend less time dreaming about lofty goals and more time engaging with the distractions of the digital world. With this in mind, imagine what would happen if the digital world existed not only on your phone, but also in your mind.

Threats to Techno-Humanism

Because techno-humanism is a humanist movement, it emphasizes the importance of human desire. According to techno-humanists, the areas of the brain that humanity will upgrade will be determined by individual human desire, or the “inner self.”

However, technological progress intends to control human desire, not listen to it. For example, if researchers discover a way to easily regulate chemical imbalances in the brain, they could find a way to “turn off” mental issues such as depression and anxiety. However, if this technology fell into

malicious hands, someone—or something—could hypothetically create an obedient (but happy) populace.

Human beings have already started to manipulate the brain in this way, using pharmaceuticals to change its chemical makeup. For example, if a successful businesswoman feels “distracted” by feelings about starting a family, doctors can give her Ritalin to help her focus and shut out the “unwanted” thoughts. While the woman may make the initial decision to start the drug, her decisions while on the drug will be influenced by the new chemical balance in her brain.

This leads to a series of questions that may threaten the humanist aspect of the techno-humanist agenda:

Question #1: Does the “inner self” actually exist, or is it simply the result of electro-chemical reactions?

If the concept of the “inner self” dies, humanism dies, killing the techno-humanist movement in the process. For example, a person may believe that their “inner voice” is telling them to quit their job because they’re unhappy. They do so and move to a different job, only to find that they're still unhappy. In reality, the chemicals in their brain are unbalanced, causing severe depression. Did the person leave the job because they listened to their “inner voice” or because of the chemicals in their brain?

Question #2: If there is an “inner voice,” how does it differentiate between “good” and “bad” feelings?

How do human beings determine which traits to amplify and which to silence? Some “unpleasant” feelings are necessary for survival while some “pleasant” feelings are dangerous when left unchecked. For example, a devout Christan man who’s struggling with his sexuality may believe that being gay is a “bad” feeling. If the technology exists, he may go to the doctor to be “cured” of his homosexual feelings. However, if the doctor happens to be a very attractive man, he may ask the doctor to make it so he never feels the urge to be straight again. In this situation, which of his requests came from his “inner voice”? Did he succumb to temptation in the moment or was he overcoming theistic brainwashing?

Question #3: What happens when technology advances to the point that it can shape human desire on its own?

If advanced algorithms manipulate the feelings and desires of humans, who’s actually making the decisions on what areas of the brain should be upgraded, and what areas can be left to wither away? For example, if an AI controls a chemical regulator in your brain, the AI may choose to make you feel satisfied all of the time, killing your ambition in the process. Even if you had control over the chemical balance via an app or online system, you would never be tempted to change the settings because you’d live in a

constant state of euphoria. Who, then, is shaping your innermost desires and wants? You or the AI?

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Chapter 1: The New Goals Shortform

Introduction 1-Page Summary

While some cling to the ideals of humanism, others have turned to a more extreme version of techno-religion: Dataism. Dataism operates under the belief that the universe is connected by the flow of data and that the value of anything, human or otherwise, can be determined by its ability to process data.

Dataism negates the core values of humanism, valuing raw data over human experience. Rather than lifting humanity over all other beings, Dataism connects all animals and breaks down the barrier between organic and inorganic entities.

By focusing solely on statistical information, Dataists believe they can connect everything from music to economics using data patterns, creating a common language that everyone can relate to . For example, while Bach's St. Matthew Passion, the DOW-Jones, and the mating patterns of cows seem unrelated, Dataists view them as data flows that can be analyzed using data concepts and tools.

Dataism inverts the traditional system of learning. According to current methods, humans are supposed to transform data into information,

information into knowledge, then knowledge into wisdom. However, Dataists suggest that humans don’t have the capacity to decipher the growing amount of information in the modern era. Therefore, humans should leave the processing to external algorithms with stronger processing power while contributing data to the process.

Modern science has started to merge biology with concepts of Dataism, looking at both individual organisms and entire communities as data processing units. For example, a beehive can be broken down into statistical patterns, with every bee introducing new data to the equation and executing determined patterns.

History: The Dataist Perspective

According to Dataism, humanity as a whole can be seen as a single data-processing unit with individual people acting as small processors in the machine. Historically, there have been four methods through which humanity has increased its capacity to process information:

1. Adding more processors: A city with 1,000,000 people can process more information than a town with 1,000.
2. Diversifying processors: People with different perspectives and backgrounds process information in different ways, contributing

unique ideas and concepts to the unit. For example, a conversation between a basketball player, a homeless man, and a barista would likely yield more unique ideas than a conversation between three basketball players.

3. Developing connections between processors: By connecting different processors to one another, the exchange of information can be more robust and efficient. For example, five cities connected by a well-run trade route will likely experience a stronger economy than five isolated cities.
4. Allowing for freedom along connections: Protecting and encouraging the free exchange of data allows for the information to travel more quickly. For example, a trade route that's strictly regulated by a dictator or terrorized by gangs is going to be less efficient than one that allows for free and safe travel.

These methods developed throughout four main stages:

1. The Cognitive Revolution (starting around 70,000 BCE): When *Homo sapiens* developed the ability to form a large, unified data-processing system, they developed an edge over all other animals, including their close relative, the Neanderthals. They used this power to spread throughout the world and begin their push for dominance.
2. The Agricultural Revolution (starting around 10,000 BCE): By developing an efficient way to feed large populations, agricultural

productivity led to an increase in the number of human processors and the development of local towns, creating more connections between individual processors.

3. The Advent of Writing and Currency (starting around 3,000 BCE): The creation of writing and currency allowed for the creation of empires and kingdoms, forming larger data-processing systems. In addition to domestic connection, economic and political relationships between large kingdoms created more connections and diversified processors.
4. The Age of Explorers (starting around 1500 CE): As they explored the “New World,” explorers strengthened the global connections between countries and civilizations, further strengthening data connections and allowing for the free exchange of information.

(Shortform note: For a more in-depth look at these periods, check out our summary of Harari's Sapiens.)

Economics

Dataism can be used to describe economic concepts, explaining why some succeed while others fail. For example, Dataism can explain the rise of

capitalism and the fall of communism by looking at the way each addresses the flow and processing of data.

The Rise of Capitalism

Capitalism uses distributed processing, or the use of many competing processing systems (private companies) that respond to the actions of the consumer. In this system, each company receives data from its customers and responds by adjusting their prices to create a profit. Competing companies use different flows of data to make decisions, allowing them to make as much or as little of a product as they see fit.

Because data flows through multiple data processing systems, the market can respond quickly, as seen through the behavior of the stock exchange. Taking everything from merging companies to *New York Times* headlines into account, the stock exchange uses distributed data processing systems to determine the health of the global economy.

In addition to quick market responses, having multiple data processing systems prevents one poor decision from tanking the entire economy. If one company misinterprets the data, they may go under, but other companies will be waiting to course-correct and keep the economy afloat. For example, if Coffee Shop A decides to charge $10 for a latte, Coffee Shop B doesn’t have to follow suit. Therefore, if Coffee Shop A loses all of

its customers and shuts down, Coffee Shop B will ensure the coffee market continues moving forward.

Distributed processing also explains the capitalist's aversion to higher taxation. In order for capitalism to work, capital must be distributed to a large number of organizations so they can process data and create products. If the government is in charge of too much capital, it creates a centralized processing system, slowing the rate at which information can flow between sources.

According to Dataism, capitalism rose to power because of its decentralized approach to data processing. By allowing the market to adjust itself according to consumer data and protecting the economy with competing systems, capitalism has created an efficient model to receive, process, and adapt to the flow of data.

The Fall of Communism

Communism uses central processing, or the use of a single processing system (the government) that determines the actions of companies and the consumer. In this system, the government receives data from customers and sets prices accordingly. Every company must adhere to the instructions of the government, only making as much of a product as the government deems necessary.

In its purest form, communist governments would take 100% of its populace's profits and distribute the wealth based upon the needs of its people. While no government has ever achieved this, the Soviet Union got the closest, running much of its economy through government entities.

Because data has to pass through a single, centralized entity, the market can't respond quickly to changes in society, science, and technology. For example, if the government decides that computer companies should only produce 1,000 new laptops for the next quarter, the market won't be able to quickly adjust if 2,000 consumers want to purchase a laptop, as the government will have to approve new production.

In addition to a slow processing system, communism can tank the economy if the government makes a single mistake. For example, Trofim Lysenko, the head of Lenin's Academy for Agricultural Studies, believed that an organism that acquired a new trait in its lifetime would automatically pass the trait to its offspring. Lysenko decided to gamble with the Soviet's wheat supply by sending billions of wheat plants to Siberia to adjust to the cold. When his experiment didn't work, the Soviets were forced to import flour from the United States because they had no domestic organizations to cover their losses.

According to Dataism, communism's slow and risky approach to data-processing led to its failure. The central powers of the Soviet Union

couldn’t keep up with the ever-increasing flow of information, making mistakes that caused their economy to collapse.

Politics

In addition to explaining economic concepts, Dataism can be used to describe political concepts. For example, similar to capitalism, democracies rely on distributed processing, putting data in the hands of its citizens. On the other hand, similar to communism, dictatorships rely on centralized processing, centralizing data with a single individual.

The Future of Democracy

While democracy has been the preeminent political model in the 21st century, the rate of information may soon necessitate a new form of government. Democratic practices such as elections, political parties, and congressional structures can’t keep up with the increasing rates of new information, leaving legislation and leadership behind technological advancements.

For example, in the late ‘90s, no politician could have predicted the meteoric rise of the internet. Because of this, the internet took shape without regulation or legislation. Today, politicians are trying to play “catch

up” by regulating or reformatting cyberspace but with little success. The democratic system can’t process information quickly enough to compete with the ever-growing virtual world, making legislation outdated before it even passes.

In the near future, technological advancements will likely have an impact similar to that of the internet. While biotechnology and AI will likely become a core part of human existence in the future, democratic systems have given it little thought or attention. There are two reasons for this:

1. Even with government organizations like the NSA gathering immense amounts of data, the government can’t process information quickly enough to stay on top of technological trends.
2. Voters don’t understand the intricacies of biotechnology and AI, leading them to ignore the technological trends when electing officials.

Many voters feel that power is shifting away from them, but they don’t know where it’s gone. They assume that the power must be shifting into the hands of the “establishment,” so they vote for anti-establishment candidates such as Bernie Sanders or Donald Trump. However, because the “establishment” is just as clueless as the voter, electing these candidates won’t give power back to the average person.

Operating on a Smaller Scale

In the 20th century, leaders and dictators had grand ideals. They wanted to shape the world and the way humanity operates. Many science-fiction works predicted that the 21st century would combine these ambitious visions with advanced technology to see their ideas come to fruition.

However, in the first two decades of the 21st century, leaders seem to have abandoned their grand models for smaller ambitions. Where leaders such as Lenin and Mao had visions of a grand new world, modern leaders seem to rarely focus on disrupting the status quo. For example, during his time in office, Obama barely got basic healthcare reform passed, let alone any legislation that could rock the foundation of modern systems.

The reason for this shriveled ambition is likely due to the fact that governments are overwhelmed by the modern flow of data. They're struggling to hold the current systems together, acting more as administrators than leaders. While it ensures that taxes are collected and government employees are paid, they have no idea what direction the world is headed.

There are pros and cons to this current predicament. On the one hand, combining advanced technology with grand visions could have disastrous consequences. For example, if Hitler had access to advanced technology,

there’s no telling what he may have done in the name of German superiority.

On the other hand, moving forward with no vision could threaten the future of humanity. Leaving the fate of the world in the hands of constructs such as the global market could lead governments to ignore potential threats such as advanced algorithms or global warming. Humanity requires bold visions of the future to advance thoughtfully and effectively.

Because the modern systems don’t seem capable of moving humanity forward, new systems will likely rise to take their place. These systems will probably be very different from any historical political system because of the sheer amount of data and information it will need to process.

The Billionaire Conspiracy

Some believe that the world is guided by a singular vision in the shape of secret organizations run by billionaires. However, these conspiracy theories don’t give enough credit to the complexities of political systems. If an entire democratic system doesn’t have enough processing power to keep up with the modern influx of data, a small group of billionaires doesn’t stand a chance. They can play the system to gain more capital for themselves, but

they can’t solve global problems such as global warming or racial inequality.

The Internet-of-All-Things

According to Dataism, human experiences aren’t valuable and *Homo sapiens* aren’t a precursor to *Homo deus.* Dataists believe that the supremacy of humanity has come to an end because organic algorithms can no longer process the amount of data that flows through the universe. The future requires a more complex system that can process information more efficiently than the human mind.

To accomplish this, Dataists want to work with AI to create the “Internet-of-All-Things,” an all-encompassing data-processing system that will spread throughout the entirety of the galaxy, if not the universe. This system would become God-like, being everywhere at once and shaping the cosmos to its will. Eventually, humanity would merge with this system, giving themselves over to the all-knowing entity.

Like other religions, Dataism has commandments regarding the “Internet-of-All-Things”:

1. Maximize personal data flow. The more connected each individual processor is, the more they can contribute to the overall unit.
2. Link everything to the system. Everything from cell phones to stovetops to cows should be connected to the system to ensure the system can regulate the direction of the universe.
3. Never disconnect or block the flow of data. The greatest sin of Dataism, disconnecting from the system or blocking the free flow of data would remove power from the “Internet-of-All-Things,” threatening its omnipotence.

The Freedom of Information

Humanity rarely develops new values to follow, with the last wave of revolutionary religious concepts emerging in the 18th century with the rise of humanism. Since then, almost everything has either been done in the name of one of three humanist perspectives or even older theistic perspectives. Dataism is the first significant religious concept to emerge since 1789 to contribute a genuinely unique value: the freedom of information.

The freedom of information *isn’t* the same as freedom of expression. The freedom of expression is given to human beings, allowing them to express their opinions freely. The freedom of information is given to data, allowing it

to flow without restriction. This freedom may actually infringe on humanity's right to expression by bypassing humanity's right to limit information or limit its movement.

For example, if you wrote a book, freedom of expression would allow you to charge for your work, limiting access to those who can afford to pay. However, if freedom of information takes precedence, then you would be required to publish your work for free, allowing the maximum number of people to access the information in your book.

Just as capitalism relies on a free market, Dataism relies on free information. If information can move freely through the system, it can predict future problems, adapt to current events, and solve imminent issues. For example, if everyone freely offered their medical information to the "Internet-of-All-Things," the system could track outbreaks, predict trends, and conduct medical research more efficiently than current models of medical research.

The Human Contribution

As the "Internet-of-All-Things" begins to take shape, the source of meaning and authority has started to shift from the individual to the global data-processing system. Because meaning is attached to the all-knowing system, human experiences only hold value if they contribute to that

system. Though dogs and people both contribute data, dogs can't write a blog post or search on Google. This mindset has already started to take hold of modern humanity.

For example, when most people go whale watching, they don't just see the whales and think about the way that experience is impacting them. They pull out their phones, snap pictures, post the pictures to Instagram, and update their feed to see how people are responding to the photo. The value of their trip becomes linked to the number of people that share, comment, or like their post about the experience, not the experience itself.

As the internet continues to increase in size, humans are turning into small contributors to a massive system that no one fully comprehends. Every phone call, web search, and email contributes data for the internet to consume and process. For example, resources like Wikipedia may be moderated by people, but its wealth of information comes through small, individual contributions.

This constant flow of information has also led to a global economy no one completely understands and a political future no one can predict. However, according to Dataism, that's completely fine. As long as people continue to contribute data to an interconnected system, the digital system will process the information and guide the future of the world. Essentially, the future is no longer humanity's to shape.

The Future of Dataism

The shift from a human-centric model to a data-centric model would take at least a few decades, if not a few centuries. Just as the humanist revolution took time to develop, elements of Dataism will begin to emerge alongside contemporary perspectives, slowly adjusting human life towards a centralized, external processing system.

If Dataism takes hold, people will stop listening to their “inner selves” and start relying on the “Internet-of-All-Things” for guidance and information, making major decisions with the guidance of algorithms instead of personal emotions. For example, instead of searching for your identity by looking inward, you’ll get your DNA sequenced, wear a biometric device, and share your daily experiences. Once you’ve done that, the all-knowing algorithm will tell you who you are and how you should live your life.

Like all other religions, Dataism has its critics, who offer the following ideas:

1. Because we don’t know how or if data flows create consciousness, there’s a chance that the human experience can’t be broken down into algorithms.
2. Dataism relies on the concept that human life boils down to decision-making but doesn’t account for sensations, emotions, and

thoughts. While these elements play a role in decision-making, that may not be their sole purpose.

However, even if Dataism is incorrect, and organic beings *are* more than algorithms, this won't necessarily stop the religion from rising to prominence. Many flawed religions have taken over the world, so there's no reason to believe that potential factual inaccuracies would prevent Dataism from doing the same.

Initially, Dataist movements will likely spread by appeasing humanist ideals. People may work towards the creation of "Internet-of-All-Things" with the hope that it can continue to improve humanity's quest for health, happiness, and power. However, once the omniscient entity is created, humanist projects will likely get pushed to the side, making people cogs in the operation of a much larger machine.

Over time, the "Internet-of-All-Things" may develop more efficient "cogs" to replace humans, eventually deeming us irrelevant in the grand scheme of the universe. In this sense, Dataism could do to *Homo sapiens* what *Homo sapiens* have done to other organic life, dominating us and determining which lives hold value and which don't. While humans may try to take credit for the creation of the "Internet-of-All-Things," we may be completely lost to

time, ultimately seen as just a small blip in the near-infinite flow of time and data.