Some aspects of life are inevitable no matter how hard you try to avoid them. Death, toil, sickness, and aging are things each of us will experience. Or at least we have been taught to believe that. But something has changed, so the future might be different for humanity.

Curbing the recent technological developments, transhumanists touch upon the unpleasant aspects of life. People who call themselves humanists are concerned with scientific developments to enhance the conditions of humanity, and they see the unpleasant points of life as challenges to solve. Regarding human existence similar to engineering problems, these people start to find answers to our hardships that have been bothering us since the beginning of humanity.

But are they on the right track? Can their too-good-to-be-true dreams come true? Or are they even desirable? This summary will explore a movement that is ready to change the world.

## Chapter 1 - Transhumanism brings new solutions to centuries-old questions.

Have you ever thought about living forever? Ever wished to have superhuman intelligence or physical power? Or even to come back to life after dying.

The reason why transhumanism is so popular is due to how it answers desires like above. It tries to find answers to the most persistent wishes of humanity.

From the beginning of time, the stories we have heard about humanity have brought visions of supernatural powers and immortality to our minds. And we have resorted to myths and fables to describe the difficulties of life, like death, sickness, or pain.

The oldest written story, The Epic of Gilgamesh, revolves around a king that travels around the globe with the aim of achieving immortality. And that is just one of the many stories.

The Bible explores similar themes. After the punishment of Adam and Eve from the Garden of Eden, humans were condemned to experience death, and to experience hardships that are typical of human life.

Such stories have maintained their importance for millennia. However, as people who have faith have decreased with scientific advances, something has changed. A whole set of new technologies encouraged humans to think that our humane shortcomings could be solved.

And that’s where transhumanism shows itself. The word is relatively new, and its arguments are outrageous for many, but the pursuit for immortality is an ever-present wish of humanity.

Transhumanists argue that it is possible to slow down aging. We would benefit from technology to enhance our minds and bodies; and finally, we would be able to unite our bodies with the advancing technology, resulting in cyborgism. This way, we would be free from the limitations of our genetics.

In some instances, the science behind these goals is contested. In others, they seem plain crazy. These chapters will help you become familiar with the pros and cons of transhumanism so that you can make your mind up about whether transhumanism may be as beneficial as it argues to be or not.

## Chapter 2 - Businesses have started using transhumanists' ideas of resurrection for profit, but the science is yet to prove their validity.

Majority of people who wish to live forever have been depending on the Alcor Life Extension Foundation to make their dreams come true. This foundation provides its clients a discount if they agree to have their heads cut off. The reason behind this is due to the fact that Alcor specializes in cryonic suspension, meaning the long-term preservation of conservation of bodies after they die. And as you can guess, it's much easier to just store the head than the entire cadaver.

The idea is simple. Alcor's founder Max More argues that after clinical death, there is a period before the actual breakdown of the body starts. During this window, before the body starts to decay, Alcor intervenes.

Your body is maintained in a cool place while it is flown to the Arizona headquarters. There, your body undergoes some preparatory surgery. During the surgery, holes are drilled into your skull to be investigated. Besides that, your blood is replaced with a cryoprotectant preservative liquid.

After that, you can be preserved for a long time in liquid nitrogen. This procedure ensures that when the way to revive corpses is found, scientists will be able to revive you back to life since your essence will be preserved.

If that does not happen, More continues, technology will be advanced enough to scan brains to extract mental data. With this technology, he believes, people can use mental data to duplicate minds and run them on a computer.

The problem is that science is yet to prove that these plans are feasible. Michael Hendricks, who is a neurobiologist at McGill University, stated that reanimation and mind simulation is as plausible as the myths that we believe in. The procedures promised by Alcor are beyond what technology can ever achieve. He even believes that people should be mad at those who try to profit from cryonic suspension.

But the thing is, Max More argues that he never guarantees that people will be brought back to life. His argument is that the philosophy of Alcor is giving a chance to the possibility of cryonic suspension.

More's perspective seems to capture the essence of the transhumanist movement. Despite the fact that they pride in relying on science for their ideas, their dogmatic faith in the future of science rivals those of religious people.

## Chapter 3 - Competitive life prolongation treatments are being planned.

A way to evade the potential problems related to reanimation and mind duplication is simple: avoid dying. Aubrey de Grey, an English biomedical scientist and the director of Strategies for Engineered Negligible Senescence (SENS) is a supporter of this approach.

De Grey states that people shouldn't see aging and death as inevitable phases of humanity. He believes that they can be cured like any other illness or medical condition.

De Grey argues that he is developing extraordinary strategies that will help humans prolong their lives forever. He divides his scheme neatly in two. The first part, called "SENS 1.0" will include several therapies that will be developed within a few decades. These therapies will prolong the lives of middle-aged people by up to 30 years.

These claims seem outrageous, but what he has in mind for "SENS 2.0" is even more controversial. Basically, the controversy is about what de Grey refers to as longevity escape velocity. The theory revolved around the idea that our medical treatments will eventually work as natural ways to extend our life expectancies year by year.

What this means is, longevity escape velocity forecasts a setting where the increase of life expectancies will outrun our aging rate, resulting in an extension of life. As de Grey says, such a strategy will help us remain "one step ahead of the problem" of getting old.

Other organizations attempt to prolong our lives as well. Having attended MIT at just 14, Laura Deming founded the Longevity Fund, aiming to gather money to study life-extending technologies.

Laura expressed that seeing the impacts of old age on her grandmother's well-being motivated her interest in the field. She felt astonished that nobody cared about the possible cures for aging. What is worse, aging was not even regarded as an illness.

So, Deming made up her mind to focus on the root of illness such as Alzheimer's, diabetes, and cancer. For her, these diseases were secondary as they were caused by a bigger problem, which is aging. Deming was excited to see that some of the medicine used to treat these illnesses had the potential to extend people's lives. Diabetes treatments in particular were charming options for the Longevity Fund as there was a link between insulin, blood sugar levels, and life spans.

## Chapter 4 - The Technological Singularity is on the way, whether you like it or not.

The Technological Singularity may seem like something you would read in a sci-fi novel, but it is actually a real-life event that is coming.

Fundamentally the term refers to the moment when the intelligence of machines will outshine that of humans, resulting in a drastic change in the history of humanity. But how the situation

will turn out is still a mystery to humanity. What will be the consequences of such an advance in technology? What will it look like in the future?

The idea of a singularity is pretty new. The first actual interest in the idea came from Vernor Vinge, who was a science fiction writer and a mathematician. In 1993, Vinge stated that artificial intelligence would outshine human intelligence within a few decades. He argues that such a time will be the ending point for “the human era”.

Ray Kurzweil, director of engineering at Google and a famed futurist, states his opinion that technology will become both more powerful and more compact. This will begin to influence human evolution. In the predicted future, people will stop “using” devices, he explains. They will rather incorporate the devices into their bodies and will become half-machines themselves.

Kurzweil predicts that by 2045 humanity will achieve the singularity. While some people don’t agree with the idea, he believes that humans should embrace singularity as it will be essential for us to go beyond the limits set by our human genetics. Consequently, he states, the difference between human and machine, or between external and virtual reality will start to vanish.

This idea also remarks the most fascinating and problematic things about the singularity. It challenged our traditional values about what it means to be human. If we become in charge of our mortality and become merged with machines, then what is left of ourselves as human beings?

Kurzweil believes that he knows the answer. He argues that the singularity will not put an end to our humanity, but instead will become the pinnacle of human ideals. It will also find a solution to our biggest obstacle as well: human nature. Kurzweil says that a characteristic of humanity is the unshakable commitment to overcome our limitations. And the biggest limitation for us, he continues, is the frailty of the human body and the limitations of the mind.

## Chapter 5 - Devices with intelligence transcending that of humans create a crucial risk for human welfare.

The pioneer of the idea of an intelligence explosion was the British statistician I. J. Good in 1965. Good directed this question: What would happen when these devices equipped with superhuman intelligence start developing improved versions of themselves?

As machines create more developed successors, artificial intelligence could quickly surpass our imaginations. Intelligence explosion refers to the result of this rapid increase in machine-produced artificial intelligence.

You may get worried when you see a word with such grim detonations as “explosion”. And to be fair, your anxiety is quite valid. Nick Bostrom, a philosopher and former transhumanist, explains that the expectation of a rapid increase in the capabilities of artificial intelligence will have serious consequences for humanity.

These consequences are not necessarily the same as apocalyptic movie settings with stern androids that claim war against their creators. Bostrom says that AI wouldn't show any malice. Rather, its efficiency in completing tasks without thinking about anything would unintentionally result in the destruction of humanity as a byproduct.

Imagine that there is a machine programmed to create paper clips in the most efficient way. Bostrom's argument is that the machine would aim to use all the matter in the world to finish the task given to it. the result would be nothing but paper clips and paper-clip-manufacturing facilities. The example might be out-of-ordinary, he admits, but he believes that it explains what kind of a risk we are dealing with.

Nate Soares, the executive director of the Machine Intelligence Research Institute, tries to hinder such situations from happening. However, his pessimistic views are that the odds are against us.

He believes that the essence of the problem is the fact that humans will have a hard time guessing the behavior of machines with superhuman intelligence. When the intelligence explosion happens, all guesses will be invalid. Due to this, he says, the singularity is "the point past which you expect you can't see."

If we can find a way to avoid being terminated by AI, Soares foresees a great future—an endless stream of scientific breakthroughs. But he's pessimistic about the idea. "I do think," he says, "that this is the shit that's gonna kill me."

## Chapter 6 - Robots are still not capable enough to manage everything—and that probably is a good thing.

Robots have exercised a strong influence over the imagination of humanity for more than a century. However, up until now, their importance was because of their status as cultural icons rather than actually useful machines.

The reason behind this is that the progress of AI has been much faster than that of robots. This phenomenon is called Moravec's Paradox. This paradox explains that even though machines are able to outshine us on high-level cognitive tasks, we still haven't developed robots that can execute basic physical jobs like opening a jar or climbing the stairs.

The author experiences this issue at the DARPA Robotics Challenge. The annual event welcomes groups of robotics engineers who aim to get the million-dollar prize. A set of challenging physical tasks are given to teams, like driving a vehicle or entering a building. And the team whose robot outperforms the others wins the prize.

And the problem is, the majority of the robots simply couldn't perform the tasks. Indeed, most teams helped their robots during the tasks even though it means that they would lose points, rather than the robot being able to perform the task by itself.

Yet, each day we get closer to achieving that goal. Engineers begin to transcend these limitations, and robots are slowly entering the labor market. For instance, Amazon planned its own robotics competition recently. The competition challenged engineers to create robots that can do the job of human stock pickers.

Does this situation imply that we will soon experience a robotic utopia where androids serve humans? Not exactly. As you can gather from this example, the instant influence of high-functioning robots on humans might be negative. Uber's plan to replace drivers with automated cars might result in a scenario where the development of robotics terminates the job opportunities for many low-skilled workers.

There are deeper issues as well. Let's look at the organization behind the annual robotics competition, DARPA. Its full name is the Defense Advanced Research Projects Agency, which is a branch of the Pentagon responsible for the advance of novel military technologies.

After creating robots that are able to open doors and exit vehicles, it might not be long before we try to create robotic supersoldiers. As you can remember the Predator and Reaper drones were deployed for such murderous purposes in Pakistan, ending up with the deaths of hundreds of civilians. These drones were both DARPA projects.

## Chapter 7 - Cyborgism is slowly coming into existence with the aid of a team of committed biohackers.

A defining feature of transhumanists is their emphasis on the future. Indeed, the emergence of the singularity, life-extending technology, and beneficial robots are just a few decades away.

However, the transhumanists at Grindhouse Wetware differ from others; their emphasis is on what can be done now.

In practice, this basically forms the first step toward cyborgism. The leader of the group of biohackers known as Grindhouse Wetware, Tim Cannon, strongly advocates for human improvement. He believes that optimization is inefficient, and our responsibility should be changing our "hardware."

This isn't simply idle talk. Cannon walked around with a device called Circadia implanted in his arm for 3 months. The device was similar to a pack of cigarettes in terms of size and its objective was to calculate biometric measurements every five seconds, which were then uploaded to the internet. Cannon also linked the air conditioning of his house to the device. The device automatically changed the settings to suit his body temperature.

Another device Grindhouse Wetware is working on is named Northstar. The current model is implanted under the skin on someone's hand. The device detects magnetic north and glows red. Grindhouse Wetware plans to create more functions by using gesture recognition, which will help the users open the door of the car simply or similar tasks just by hand movements.

These inventions may not be groundbreaking, Cannon admits. But what is important, is that they are walking in the right direction. After acknowledging that humans are suboptimal machines, he believes, countless things can be done to enhance our situation.

Still, while the futuristic allure of these biohacking devices and the arrogance of the group's ideals, they are still uneasy about the messiness of human life. For instance, talking to Canon, the author gets curious about his ideals of humanity: were they influenced by the hardships he had faced in his life?

Cannon had to battle an alcohol addiction for years, finally being able to become sober with the aid of Alcoholics Anonymous. Is it weird, the author contemplates, that he began to regard humans as fragile creatures that tend to make mistakes during his journey?

## To Be a Machine: Adventures Among Cyborgs, Utopians, Hackers, and the Futurists Solving the Modest Problem of Death by Mark O'Connell Book Review

Humanity is at a turning point. The advance of technology that will change our life is just a few decades away. And transhumanism, despite its inadequacies, depicts an attempt to benefit from these developments. But will this mission ultimately succeed and help human lives, or will it pave the way for the end of humanity? The question is yet to be answered.

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