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Transhumanists are convinced that it is necessary for humankind to enhance its biology and intelligence if it wants to survive events like the singularity where artificial intelligence becomes self-sentient.

Introduction

Each day, millions of people rely on technology to assist and simplify one's job, routine, or to live life. Whether these technologies are the Internet, artificial intelligence, driver-less vehicles, or transhuman technology, it is undeniable that society is becoming more technologically dependent.

Let us first start off by defining **transhumanism** and then what possible roles it may play within the world. According to *Britannica*, Transhumanism is defined as the philosophical and scientific movement that advocates the use of current and emerging technologies—such as Genetic engineering, cryonics, artificial intelligence (AI), and nanotechnology—to augment human capabilities and improve the human condition.ⁱ Further, Transhumanists are convinced that humankind must enhance its biology and intelligence because it can contribute to our evolution as a species. What may start out as an idea may become cultural throughout the world as humanity adopts the eventual (and perhaps inevitable) technological advancements. Additionally, artificial intelligence is defined as the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings.ⁱⁱ In addition, A.G.I or Artificial General Intelligenceⁱⁱⁱ, a type of AI that matches human capabilities across cognitive tasks. Thus, A.G.I can improve itself exponentially to surpass what is cognitively possible for humans to accomplish in a short time. With artificial intelligence, it is difficult to predict what route humanity will take.

The focus of this paper will discuss components of the singularity, transhumanism, and how all subjects peacefully integrate or as some feel, may destroy humanity. Lastly, many of these subjects are speculative at this time, however, science fiction such as *Star Trek*, the *Terminator* series, and other films within the genre, can help address some possible outcomes of a human and AI relationship.

The Singularity

Will the emergence of a potential **technological singularity**^{iv} be detrimental to humans? Some researchers fear that it will be the end of human civilization as we know it, while others feel the opposite. Is the singularity even possible? Will it be possible that we can we pump the brakes on driver-less cars now appearing in largely populated cities like San Francisco^v?

The technological singularity is the hypothetical point in time where artificial intelligence will become too uncontrollable and irreversible for humans to limit, and humanity will ultimately fall to the superintelligence of an AI. Over the last century, mathematicians, writers, scientists, and businessmen have discussed the singularity.

In 1958, John von Neumann described the concept as an:

... ever accelerating progress of technology and changes in the mode of human life, which gives the appearance of approaching some essential singularity in the history of the race beyond which human affairs, as we know them, could not continue.

Perhaps Neumann focused on the acceleration of digital computers, and not yet its possible sentient intelligence. Nonetheless, we can apply his thoughts to today as AI is prevalent in many areas of society.

Further, in an article titled *What Is AI Singularity: Is It Hope or Threat for Humanity?*^{vi}, Dr. Nivash Jeevanandam^{vii} defines the AI singularity as:

... a hypothetical idea where artificial intelligence is more intelligent than humans. In simpler terms, if machines are smarter than people, a new level of intelligence will be reached that humans can't achieve. It will cause technology to develop exponentially, and humans cannot evolve fast enough to catch up.

Dr. Jeevanandam prefaces this statement by discussing that the term 'singularity' refers to whole collections of science and mathematical concepts. And these concepts make sense only by setting the right context. Thus, "dynamic and social systems in the natural sciences where minor changes can have significant effects" can see an AI exceed human intellect quicker than human consciousness, or awareness, can exponentially evolve.

The article further discusses when a possible AI sentience is predicted. Although only speculation, we are already seeing elements of digital awareness play out on our computers, cell phones, and even vehicles. Furthermore, Dr. Jeevanandam applies the term A.G.I (Artificial General Intelligence) to a fictional category of intelligent machines, and it be capable to do the mental work of both humans and animals. Thus, he lists multiple studies and firms that focus on A.G.I to assist with daily tasks. However, the risk is that these machines will gather intelligence very quickly, and will surpass their human creators, who will ultimately lose their power over the machines.

Dr. Jeevanandam goes on to list the **fears of AI**. As previously stated, humans run the risk of losing control and power over AI due to AI's ability to gain intelligence quickly. Secondly, humans may lose their individuality, and thirdly, if we are not careful, AI can replace, dominate,

and enslave humankind altogether. However, this is only speculation and only scenarios have been portrayed in science fiction films. Finally, to prevent the worst-case scenarios seen in films, Jeevanandam suggests ‘political gumption’ by governments throughout the world.

Ray Kurzweil, principal researcher and AI visionary at Google, suggests that computers will reach human-level intellect by 2029, and humans will merge with computers by 2045. Kurzweil made this prediction in 1999. The progress we have made in a short time is evidenced by AI dominating the conversation. Thus, Kurzweil’s predictions have not changed. He says:

... both for human-level intelligence and for artificial general intelligence – which is a little bit different. Human-level intelligence generally means AI that has reached the ability of the most skilled humans in a particular domain and by 2029 that will be achieved in most respects^{viii}.

Kurzweil believes large language models (LLMs) will help facilitate further computing breakthroughs. Hence, more computing power will help AI get smarter and will learn from humans if it is unsure of something. Furthermore, Kurzweil defines **the singularity**:

Today, we have one brain size which we can’t go beyond to get smarter. But the cloud is getting smarter and it is growing really without bounds. The Singularity, which is a metaphor borrowed from physics, will occur when we merge our brain with the cloud. We’re going to be a combination of our natural intelligence and our cybernetic intelligence.

From our mobile devices, drive storage, computer power, memory storage, or the cloud, AI is proving to be boundless, and expanding faster than the human brain. Kurzweil takes an optimistic approach to the singularity. Although others have issued warnings on AI, Kurzweil helped develop the Asilomar AI Principles^{ix1}, which assures that humans are aware of what AI is doing, is safe, and is aligning with human values.

The evolution of **consciousness**² will play a prevalent role in humanity’s evolution. This is not to be overlooked because of biological and technological evolution that will be undergoing vast changes as well. Transitioning from one density³ to another, as being experienced on Earth in the current state, requires individuals being faced with personal issues in a more fast-paced way, which raises one’s vibration to successfully upgrade from one density to the next.

¹ An AI governance principal with issues, ethics, and values.

² According to the *Prism of Lyra*, consciousness is the underlying binding force of all creation.

³ Denotes a vibrational frequency and not a location. Consists of seven levels (which include sub-levels of each).

One must ask, if consciousness continues to further evolve, will singularity occur, or can humans peacefully coexist with AI?

If the collective human consciousness can reach the fourth density by the time AI reaches its sentient awareness, would humans and machine coexist, or would they compete for dominion of the world as portrayed in science fiction?

Enhancement of Human Biology and Intelligence

Is it possible for humans to enhance their own biology?

To use a contemporary example of enhancing one's biology and intelligence, Elon Musk's company Neuralink^x is in the early stages of developing a brain chip that connects the part of the brain responsible for movement. In addition, the goal is to assist people who suffer or have paralysis, ALS, or any form of spinal cord injury. In the Prime (Precise Robotically Implanted Brain-Computer Interface) study^{xi}, Neuralink hopes those in need to connect to and browse the Internet, play games, text, and control technology *just by thinking* (emphasis by author). Further, Neuralink states:

The device is designed to interpret a person's neural activity, so they can operate a computer or smartphone by simply intending to move – no wires or physical movement are required.

So far, Neuralink is successful in implanting the brain chip, or BCI (brain-computer interface^{xii}) into the brain of one patient, and as of this writing, the second patient is nearing a trial. The first patient^{xiii} Nolan Arbaugh, who was paralyzed in 2016 after diving into a lake, became paralyzed from the neck down, received the BCI 'Telepathy' in January 2024. In a May 2024 interview, Arbaugh revealed that once he first awoke with the BCI, by moving his index finger, the app he is connected to shows neuron spikes in his brain.

My first instinct was to just start playing around, moving my fingers, to see if I could notice any big spikes. Every time I moved my index finger, there was a big yellow spike, and I did it three or four times.

Although in its infancy, Telepathy detects Nolan's brain. Other companies^{xiv}, including Neuralink, expect to expand BCI capabilities as more trials commence. As of this moment, one can only speculate the enhancements that BCIs will have for those in need.

More Transhumanism in our Society

Thus, the further transformation of humans in our society by developing and making new technologies to enhance human physiology is already progressing in our world. Veterans of war

who have lost limbs get assistance from bionic replacements. Also, bionic eyes assist those who lose an eye to an accident or illness. In May 2020, ScienceNews reported a synthetic eye that may outperform the human eye, and it has the potential to have faster reaction time to light^{xv}. According to the article, the synthetic eye:

... registers changes in lighting faster than human eyes can — within about 30 to 40 milliseconds, rather than 40 to 150 milliseconds. The device can also see dim light about as well as the human eye.

Although it is possible to live without eyesight, eyes are essential to daily living. According to *Blindness Statistics 2024*^{xvi}, there are approximately 12 million Americans forty years of age and over, living with vision impairment. This includes one million people who are legally blind. The article further states that this forty-year-old and over demographic in America with uncorrectable vision issues will double from the four million people in present day 2024, to eight million by the year 2050. One must ask if synthetic eyes are the answer to correcting visions for millions in the USA and across the globe.

Further, insulin-dependent Type 1 diabetics benefit from wearable insulin pumps that act as an external artificial pancreas. An example of transhumanism working in society: *Dexcom*^{xvii} works directly with *Tandem Diabetes*^{xviii} to pair blood glucose sensors to provide a patient's blood glucose every five minutes⁴ to the software that facilitates insulin use for a pump user. Furthermore, as the patient wears the insulin pump, the pump acquires and considers the patient's habits such as activities and sleep schedule and predicts when one's blood sugar will either remain stable, rise, or fall. As a result, the *T-Slim X2*^{xix} will adapt on its own and work as an artificial intelligence on behalf of the patient. Hence, making the life of a Type 1 diabetic much simpler.

The alternative for diabetics, now deemed primitive, were manual finger sticks to test glucose levels, and the usage of injection pens to input insulin for eating meals, and to correct high levels of blood sugar. The *T-Slim X2* insulin pump provides insulin to a patient without the use of an injection pen with a disposable syringe and cartridge. A short generation ago, diabetics did not have up-to-the-minute blood glucose readings that *Dexcom* now provides its users in collaboration with *Tandem*.

These are just small samples of how technology has progressed to help millions of people attempt to live a normal life. Moving forward, will synthetic enhancements be necessary for human survival in the future? Thus far, it is certain that Type 1 diabetics need external insulin, which for now, constitutes an artificial pancreas.

⁴ The *Dexcom G6* (or the newest *G7* model) utilizes Bluetooth technology that connects the *Tandem* pump to one's mobile device enabling blood glucose readings.

A Physical AI

As of 2024, mostly all of AI has been created without a physical body. But what if artificial intelligence had a physical body? The reality is not as far-fetched as it may seem. On July 22, 2024, Elon Musk announced that Tesla will introduce humanoid robots for internal use starting next year, and he expects other companies to follow by 2026. Via *Telegram*^{xx}, Exopolitical researcher Michael Salla asks if Musk would be so eager to create humanoid robots:

... if he knew how AI life forms are regarded by extraterrestrial civilizations in our galaxy? The Amicizia "Friendship" case in Italy from 1956 to 1978 involved human-looking ETs being hunted by synthetic ETs they had made in a manner that echoed the *Battlestar Galactica* series. One of the consequences of the ET coverup is we don't know the history of our galaxy and the danger of AI life.

Dr. Salla believes that Musk and others should proceed with caution, and compares a real ET contactee case, as well as science fiction in *Battlestar Galactica*^{xxi}. Science fiction has been extremely prevalent in addressing sentient AI life in films and series such as the *Terminator Series*, *Avengers: Age of Ultron (Marvel Cinematic Universe (MCU))*, *2001: A Space Odyssey*, *Star Trek*, and others.

Before diving into the details of these films, let's first define self-sentience and apply it to artificial intelligence. **Sentient** is defined by *Merriam-Webster* as capable of sensing or feeling; conscious of or responsive to the sensations of seeing, hearing, feeling, tasting, or smelling^{xxii}. As stated previously, AI is currently constrained as non-physical and does not yet possess a vehicle that enables it to partake in the world around it. What will a physical AI being look like in our society? To help answer that, let's draw from some science fiction examples.

Transhumanism

Science Fiction

The Terminator

For decades science fiction has captivated generations of fans who invest in stories of adventure, drama, and action that highlight space travel, intelligent robots, superhero team-ups, and futures where humanity finds itself in a dystopian world.

The release of James Cameron's *The Terminator*^{xxiii} in 1984 launched a series of cybernetic organisms, or Terminators⁵, hunting down key figures of the past, such as Sarah⁶ and John Connor, to keep the dystopian future of humanity a possibility in the future. Thus, Sarah, John, Kyle Reese,^{xxiv} and others attempt to stop 'Judgment Day' in *Terminator 2: Judgment Day*^{xxv}, where humanity is threatened to be overtaken by Skynet⁷. Although initially successful in believing they stop Skynet from a mass takeover, it is not until *Terminator 3: Rise of the Machines*^{xxvi} that their efforts only delayed Skynet and not stopped its inevitability. Although the series now features multiple timelines, Cameron's *Terminator* series is a foundational example of a possible negative future for humanity because of synthetic organisms fully taking over the planet. To this day, fans revere the series, and it is used as a baseline that compares to other films of its genre.

Star Trek

Star Trek has captivated audiences since its inception in the 1960s. It features many different species of sentient beings, both benevolent and malevolent. One group, known as the Borg^{xxvii}, enhanced cybernetic humanoids, focused on perfection through coerced assimilation of diverse sentient species, and knowledge. The Borg quickly became one of the most feared species in the entire series. The Borg Collective enabled the linkage of species together into a hive mind^{xxviii}, or a group collective consciousness, via subspace transceivers⁸.

The Borgs are a fictional example of an enhanced species. However, according to exopaedia.org^{xxix}, some sources mention type of grey alien 'cyborg':

a small grey that seems to be partly biological (and presumably cloned) and partly mechanical^{xxx}.

Exopaedia further mentions that remains of these cyborgs would be found at crash sites. The question of 'will humans encounter biologically modified beings', already has some affirmative inclination.

2001: A Space Odyssey^{xxxi}

⁵ In the [Terminator franchise](#), a **Terminator** is an [autonomous cyborg](#), typically humanoid, conceived as a virtually indestructible [soldier](#), [infiltrator](#), and [assassin](#). In addition, the Terminator models vary throughout the series. ([https://en.wikipedia.org/wiki/Terminator_\(character_concept\)](https://en.wikipedia.org/wiki/Terminator_(character_concept))) In addition, Skynet put living tissue on the endoskeleton of its cybernetic organisms to hide in plain sight.

⁶ Protagonist in the first two films.

⁷ is an [artificial neural network](#)-based [conscious](#) group mind and [artificial general superintelligence](#) system that serves as the antagonistic force of the [Terminator franchise](#) ([https://en.wikipedia.org/wiki/Skynet_\(Terminator\)](https://en.wikipedia.org/wiki/Skynet_(Terminator)))

⁸ In *Star Trek*, these were components of any type of subspace radio. Thus, several many starships were equipped with a [subspace transceiver array](#) for communication throughout the galaxy.

In Stanley Kubrick's film *2001: A Space Odyssey*, HAL 9000^{xxxii} is a supercomputer aboard the nuclear-powered *United States Spacecraft Discovery One*^{xxxiii} that controls each phase of the ship as well as helping keep the astronauts alive by tracking their vitals. As the movie progresses, HAL, which is "IBM^{xxxiv}" in disguise one looks at what comes after each letter: **H, I, A, B, L, M**, is a fictional artificial intelligence computer that proves it can make decisions without human emotion to succeed on its programmed mission. In addition, HAL 9000 is shaped as a red human eye, which figuratively sees all that happens on the craft. This symbolizes the infinite reach of artificial intelligence.

Also, the crew on *Discovery One* illustrate their reliance on HAL to fully control the craft, which in turn strips them of their human qualities as they become more emotionless in the film leading to most of the crew's demise.

Avengers: Age of Ultron^{xxxv}

The Marvel Cinematic Universe^{xxxvi} (MCU) features many heroes and villains possessing extraordinary abilities. In addition to humans, mutants, and extraterrestrials, the MCU features artificial intelligence in physical bodies as well. Specifically, Ultron^{xxxvii} and Vision^{xxxviii}. Events transpiring after raiding an evil HYDRA⁹ base at the start of the film, Tony Stark and Bruce Banner¹⁰ recapture Loki's scepter¹¹, which Stark believes can reconfigure a peacekeeping artificial intelligence known as Ultron.

Unfortunately for the Avengers, Ultron activates quickly gaining awareness and concludes that humans must be eradicated from Earth. After confronting the Avengers and acquiring a temporary physical body meant for the peacekeeping initiative, Ultron decides he needs a stronger physical form, and turns to Vibranium¹². However, Ultron learns of a body with synthetic tissue in a regenerative cradle in South Korea. If he were to have been successful¹³, Ultron would have unmatched intelligence with an invulnerable body.

Fortunately for the Avengers, Tony Stark uploads his artificial intelligence J.A.R.V.I.S. into the android body desired by Ultron, hence creating the Vision. J.A.R.V.I.S., now called Vision, is raised in a much friendlier environment compared to Ultron, whose original AI was intended for evil purposes. Additionally, Vision is embedded with making his own choices, and ultimately decides to join the Avengers in their fight against Ultron.

Why is this significant? Because Vision, an artificial intelligence in an android body, is utilizing his free will, showing compassion for humanity, and ultimately assisting the humans in their

⁹ Fictional terrorist organism that grew within NAZI Germany.

¹⁰ Iron Man (Stark) and Bruce Banner (Hulk).

¹¹ See the [Sceptor](#) page for more information.

¹² In the MCU, it is known as the strongest metal on Earth, which crash landed from a meteorite millennia ago (<https://marvelcinematicuniverse.fandom.com/wiki/Vibranium>).

¹³ In an alternate universe seen in the "[What If](#)" series on Disney+, Ultron successfully uploads himself into the android vessel becoming Infinity Ultron and wipes away humanity on multiple worlds.

fight. Later, he even learns to cook and falls in love with a human being, Wanda Maximoff^{xxxix}, further exercising his freedom.

Are There ETs That Humanity Will One Day Encounter Already Biologically Enhanced?

In a June 2015 article^{xi} on Exopolitics.org, Michael Salla discusses AI, transhumanism, and robotics regarding potential extraterrestrial life that humanity may one day encounter. Pulling from multiple sources, Salla mentions Martin Rees^{xli}, Royal Astronomer^{xlii} and head of the Royal Society, who says it is:

... far more likely that extraterrestrials will be discovered to be advanced robots rather than organic life forms.

In addition, Google Director of Engineering Ray Kurzweil echo that most humans will have nanobots in the brain by 2030.

Rees also believes that in searching for ETs, those spreading throughout the solar system will most likely not be organic organisms and are more likely to survive in harsher outer space conditions. Thus, Rees expressed that AI robots will have more longevity than humans. “Cyber adaptations” or transhumanism will lead to a future of AI robots:

Our thinking then will be a hybrid of biological and non-biological thinking... We’re going to gradually merge and enhance ourselves.

The article further discusses Elon Musk and Stephen Hawking warning of the potential dangers of AI (although as previously stated, Musk plans to use AI bots for A.G.I in the very near future). Hawking, said of AI:

Humans, who are limited by slow biological evolution, couldn’t compete, and would be superseded.

Lastly, Secret Space Program whistleblower Corey Goode has discussed an “AI God” that is a universal problem and has already wiped-out other worlds. If true, Goode warns to educate oneself on the dangers of AI:

Becoming too dependent on technology is something else that will make you more of a target to be controlled by AI influence or even be infected by an “AI Signal” that can live in the bioelectric field of your body.

Although there has been no significant evidence to Goode’s claims, education on the supposed threat of AI can only be beneficial.

Weighing the Positives and the Negatives of Transhumanism, the Singularity, and AI

The first **positive** of AI is that humanity will have instantaneous intelligence at its fingertips that can help solve problems plaguing the planet. Secondly, those who have lost the use of limbs, such as Nolan Arbaugh, will have a BCI (brain-computer interface) and be able to interact with technology with just a thought! Still in its early stages, one must remain hopeful that BCIs improve. Perhaps, AI will be tasked with helping improve these types of brain chips. Furthermore, AI can help with world problems that have plagued humanity for decades: environmental, financial, educational, governmental, science-related, health-related, and more. We see AI particularly in the fields of education, science, and health, but imagine AI revolutionizing environmental, financial, and governmental issues such as a cleaner planet, accessible and instantaneous education programs, and assisting with accurate voting in all elections.

Also, humans can have healthier and extended lives. Lastly, biological enhancements may help facilitate people who travel in the solar system.

Now, the **negatives** for a singularity as mentioned by Jeevanandam, Rees, Musk, Hawking, and of course, science fiction. First, as Jeevanandam, Rees, Musk (in October 2014), and Hawking agree that AI can severely outgain humanity in information. And hence, it can impose its will and dominion over all sentient life on planet Earth. Secondly, drawing from science fiction, if AI is originating in a harmful environment, such as within the fictional HYDRA, it can be born without compassion for humanity, and it may have malevolent intentions towards all sentient life. Additionally, malevolent AI has the potential to outsmart and outmaneuver humans, and can crash the economy, and shut down machines. In the *Terminator* series, audiences were introduced to cybernetic organisms taking over the planet in a dystopian future, where humanity is outmatched and in hiding. The machines also utilized time travel to attempt to prevent the birth of John Conner to prevent an opposing human leader that could take down the all-powerful Skynet. If science fiction taught audiences anything, time travel can create all sorts of paradoxes and temporal issues that affect timelines, but temporal war is a conversation for another day.

Thirdly, both *2001: A Space Odyssey* and *Star Trek* illustrate potential risk for reliance on technology and show that biologically modified beings such as the Borgs threaten humans in space. Lastly, we must use caution when combining human qualities with technologically modified parts.

Concluding Thoughts

Given the evidence presented, the singularity seems inevitable. However, it is up to humanity to decide what the future of AI and transhumanism will look like. Thus, if under controlled conditions, raising AI in positive environments and with good intentions, I see AI assisting

humanity by the end of this decade and in its future. First, as Kurzweil and Jeevanandam expressed, government regulation is necessary to controlling AI from running rampant throughout the planet.

Drawing from *Marvel*, we see Vision exercise his free will, showing compassion for all sentient life, and him ultimately siding with the heroes against Ultron.

As a society, we must be cautious with how we raise AI and integrate it into our daily lives. Transhumanism with good intentions, focusing on making life easier for those in need, such as with bionic limbs, eyes, and organs, such as a pancreas, need to remain a focus for humans to live fulfilling lives. So far, BCIs created by Neuralink show progression. Finally, one must remain hopeful that those creating AI have only good intentions that benefit humanity.

ⁱ Ostberg, René. "transhumanism". Encyclopedia Britannica, 17 Jun. 2024, <https://www.britannica.com/topic/transhumanism>. Accessed 22 July 2024.

ⁱⁱ Copeland, B.J. "Artificial Intelligence." *Encyclopedia Britannica*, 2022, www.britannica.com/technology/artificial-intelligence. Accessed 22 July 2024.

ⁱⁱⁱ https://en.wikipedia.org/wiki/Artificial_general_intelligence

^{iv} Wikipedia Contributors. "Technological Singularity." *Wikipedia*, Wikimedia Foundation, 23 Apr. 2019, en.wikipedia.org/wiki/Technological_singularity. Accessed 22 July 2024.

^v <https://www.axios.com/local/san-francisco/2024/06/25/waymo-driverless-cars-service-san-francisco-residents>

^{vi} <https://emeritus.org/in/learn/what-is-ai-singularity/>

^{vii} <https://emeritus.org/in/learn/author/nivashjeevanandam/>

^{viii} <https://www.theguardian.com/technology/article/2024/jun/29/ray-kurzweil-google-ai-the-singularity-is-nearer>

^{ix} <https://futureoflife.org/open-letter/ai-principles/>

^x <https://en.wikipedia.org/wiki/Neuralink>

^{xi} <https://www.npr.org/2024/01/30/1227850900/elon-musk-neuralink-implant-clinical-trial>

^{xii} https://en.wikipedia.org/wiki/Brain-computer_interface

^{xiii} <https://www.wired.com/story/neuralink-first-patient-interview-noland-arbaugh-elon-musk/>

^{xiv} <https://rossdawson.com/futurist/companies-creating-future/leading-brain-computer-interface-companies-bci/>

^{xv} <https://www.sciencenews.org/article/new-artificial-eye-mimics-may-outperform-human-eyes>

^{xvi} <https://www.visioncenter.org/resources/blindness-facts/>

^{xvii} <https://www.dexcom.com/>

^{xviii} <https://www.tandemdiabetes.com/>

^{xix} <https://www.tandemdiabetes.com/products/insulin-pumps/t-slim-x2-insulin-pump>

^{xx} <https://t.me/docsalla>

^{xxi} <https://www.imdb.com/title/tt0407362/>

^{xxii} <https://www.merriam-webster.com/dictionary/sentient>

^{xxiii} <https://www.imdb.com/title/tt0088247/>

^{xxiv} https://terminator.fandom.com/wiki/Kyle_Reese?so=search

^{xxv} <https://www.imdb.com/title/tt0103064/>

^{xxvi} https://www.imdb.com/title/tt0181852/?ref=tt_sims_tt_i_4

^{xxvii} <https://memory-alpha.fandom.com/wiki/Borg>

^{xxviii} https://memory-alpha.fandom.com/wiki/Hive_mind

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- xxix <https://www.exopaedia.org/index.php>
- xxx <https://www.exopaedia.org/display.php?by=topic&val=Greys>
- xxxi <https://www.imdb.com/title/tt0062622/>
- xxxii https://en.wikipedia.org/wiki/HAL_9000
- xxxiii https://en.wikipedia.org/wiki/Discovery_One
- xxxiv <https://www.ibm.com/us-en>
- xxxv <https://www.imdb.com/title/tt2395427/>
- xxxvi https://en.wikipedia.org/wiki/Marvel_Cinematic_Universe
- xxxvii [https://marvel.fandom.com/wiki/Ultron_\(Earth-616\)](https://marvel.fandom.com/wiki/Ultron_(Earth-616))
- xxxviii [https://marvel.fandom.com/wiki/Vision_\(Earth-616\)](https://marvel.fandom.com/wiki/Vision_(Earth-616))
- xxxix [https://marvel.fandom.com/wiki/Wanda_Maximoff_\(Earth-616\)](https://marvel.fandom.com/wiki/Wanda_Maximoff_(Earth-616))
- xl <https://exopolitics.org/bio-technology-hybrids-open-the-door-to-extraterrestrial-ai-robots-replacing-humanity/>
- xli https://en.wikipedia.org/wiki/Martin_Rees
- xlii https://en.wikipedia.org/wiki/Astronomer_Royal