

The Cyborg Civilization: Bridging The Gap Between Humans and Robots

Dr Ehab Khalifa,

Future for advanced research and studies, Abu Dhabi, UAE .

ABSTRACT:

Sooner or later people will be able to get AI microchips implanted in their bodies and brains, and have their aging body organs replaced with “immortal” ones. As a result, those synthetically modified people will become “cyborgs” with superpowers that may be far greater than those of Iron Man or Medea, the ancient sorceress. They may, for example, become able to read minds, travel through time, cross galaxies, and use telekinesis, as if they were witches and wizards. This may happen just because “we can”, regardless of whether we know “why”, or “what” the consequences are. As such evolutionary changes have already started to take place, we need- at least- to know what will be the result of mixing flesh with silicon, algorithms with values, and AI microchips with human bodies. We need to know what kind of creature will result from this process, and finally what sort of civilizations we will have at the end.

Key Words:

Cyborg, Civilization, Artificial Intelligence, Industrial Revolution, immortality

Methodology:

The methodology used in this research is conceptual analysis based on theoretical exploration, historical examples, and philosophical inquiry. It discusses the evolution towards a cyborg civilization, the ethical, technological, and societal implications of integrating artificial intelligence and human capacities, and speculative scenarios on the future of such advancements.

INTRODUCTION:

The desire for superpowers seems to be an intrinsic part of human nature. In ancient Greece, people made up stories about humans who the gods endowed with supernatural powers, such as Pandora, Talos and Prometheus. According to a Greek myth, for instance, Zeus entrusted Prometheus with the task of creating humans and commanded Epimetheus to create animals. Prometheus, consequently, started to ‘make’ man with utmost sophistication, taking his time in so doing, whereas Epimetheus gave animals all the good gifts that Zeus meant to be distributed between animals and humans, such as swiftness, strength, acute hearing, keen eyesight, horns, fangs and fur. Therefore, Prometheus’s humans were defenseless in the face of wild beasts, hence the desire to create the superman.

This obsession with evolution was given new momentum by the unprecedented technological revolution that humanity is witnessing. New technologies developed to boost human performance (e.g. smart prosthetics, 3D-printed organs, smart microchip implants, etc.) are just the beginning; the ultimate goal seems to be creating the “cyborg” that, being half human and half machine, enjoys the best of both worlds. This means a new kind of society where humans and machines complement each other, creating the “cyborg civilization”. This development gives rise to questions about the possibility of attaining “immortality” on earth, regardless of whether it would be wise to seek such an objective, given the fact that if such developments had been beneficial to us, why we didn’t have been created as cyborgs from the outset. As a matter of fact, it is hard to predict what will result from combining organic chemistry and artificial intelligence, because of their ever-changing nature. It is really difficult for us to fully grasp the nature of the cyborg who - despite his/her strong prosthetic limbs, highly advanced brain, and 3D-printed heart- is a human being who is capable of experiencing such feelings as anger, love, hatred, hunger and pain, and who eventually falls asleep.

It is true that such kind of evolution can give us the ability to carry extremely heavy things or cope with extreme conditions. It is possible that we would move faster than anyone can imagine, solve the most difficult problems and never forget a single thing. However, many questions need to be asked here. For example, do we really need this kind of superpower? What would be the consequences of continuously maximizing human abilities? Is it not painful for the bereaved to never forget their dead? Is it better for them to forget all about those they have lost? Is there a possibility of finding middle ground between forgetting and not forgetting, and, if so, why would anyone want to be the target of hacking attempts by cyber-attacks which, once successful, make public his/her worst mistakes and wildest dreams? Why would someone want to be at the mercy of technology companies which would use such information to control, as if he/she was a mere thing with no human will? Would you regard your superpowers as something desirable in such case, or would you start to fall apart and wish to die?

Perhaps you would choose to reset your cyborg brain so as to know nothing about yourself except for what your microchip owners decide you should know; they may, for instance, tell you that you are a factory worker that replaces robot batteries, and you would have to believe them, not knowing that you were the factory manager.

Here is another dilemma, would these new powers be available to all people or just to a select few? It would be unfair if only certain people could enjoy such powers, but if we were fair enough to give all people access to them, that would mean the end of humanity, as life would become a cut-throat competition for more and more power. If we managed to find a way out of this dilemma through another technological solution that could ensure some sort of balance, would there be any guarantee that this balance would last? In other words, what if the developers of this technological solution suddenly decided to stop producing it or stated to make money from it?

It can be argued that these superpowers may be suitable for people with dangerous jobs, such as firefighters, paramedics, law-enforcement officers, etc. But, again, is there any guarantee that a highly advanced AI system, with the aim of owning an army of cyborgs with which to control the world, would not hack the microchips implanted in their brains?

Nevertheless, as people really want to be more powerful, they will always find reasons for doing such experiments. These reasons are mainly ethical and medical. For example, microchips can be implanted in the bodies of Alzheimer or paralysis patients, or those who lost limbs, but, at the end of the day, commercial use and profit will be the end goal, regardless of the doctors' ethical motives. Perhaps it is useful here to remember that plastic surgery first appeared following World War I with the aim of helping soldiers with severe facial injuries, but eventually developed into a hot commodity that people can get even if they do not need it. Similarly, people may want to upgrade their bodies even if there is no medical need for it, and the quality of the upgrade will undoubtedly be determined in the light of how financially able they are.

The rapid technological change the world is witnessing may mean that Industry 5.0 will mark the end of human civilization as we know it and the beginning of a completely different kind of civilization- namely, the Cyborg Civilization, which we know nothing about and cannot even imagine anything about. It is as if you asked a Roman soldier: "What is World War II like?"; the soldier would never be able to answer your question or imagine the kind of weapons, aircraft and tanks that were used in that war, and, of course, he would fail to imagine anything about the nature of the nuclear bomb that put an end to the war in question.

So, what would the Cyborg Civilization be like? What are its main characteristics? What are the sources of its value system, customs and traditions? Would this civilization produce its own version of faith? Would it, in other words, come up with a new value system, or would human beings rebel against artificial intelligence before it is too late to do so? This chapter is an attempt to find answers to these questions through posing epistemological questions concerning the relationship between artificial intelligence and humans, and future developments of this relationship which is expected to culminate in the creation of the cyborg.

1- ARTIFICIAL INTELLIGENCE AS A NEW SOURCE OF HUMAN WISDOM:

Artificial intelligence has typically been regarded either as an “aid” that can make life easier for people, or as a potentially destructive power that can endanger people’s very existence. However, it could also be regarded as a source of values, norms and traditions that informs human interaction, so that AI philosophy would be the basis of human social and legal systems.

Usually, human societies derive their value systems from several sources. One of these sources is the experiences which people have accumulated throughout history; these experiences form the basis of the laws and norms that societies abide by. Another source of values is religion, which is usually associated with two types of values: spiritual values pertaining to rituals and practices, and practical values that are supposed to regulate the relationship between people. Religion can inform philosophies meant to promote the welfare of people based on logical thinking.

In the Middle Ages, which were dominated by ignorance, poverty and illness, phenomena were assigned purely metaphysical interpretations. The plague, for instance, was interpreted as an expression of God’s anger [1], and only priests, according to this way of thinking, could cure the patients. Thus, priests were the most powerful members of the society at that time because of their ability to handle things beyond ordinary people’s understanding.

With the Enlightenment, philosophy and rational thinking became the basis for interpreting phenomena. The plague, for instance, came to be regarded as an illness that can be cured by a doctor rather than a priest. The advent of the printing press, as a result of the Industrial Revolution, caused a huge increase in the numbers of printed books, which, in turn, caused significant changes in people’s way of thinking. Consequently, history provided the framework for interpreting phenomena. Events of history came to be regarded as cyclical; history repeats itself, inasmuch as reoccurrence of the causes that led to certain situations will bring about similar situations. Therefore, nineteenth-century historians played an important role in interpreting the events of their time, most of which were political.

The twentieth century, notably after the Russian Revolution (1917), marked a shift towards ideology as the basis for interpreting phenomena. This made politicians the source of values in societies. The world was divided into two camps: The Socialist camp and the Capitalist camp, each of which had its own values. Socialists went as far as adopting Communism, whereas Capitalists viewed individualism as their most cherished value, and each tried to reshape the world’s value system in accordance with its own values. The value system of each camp provided the basis of theories on the nature of the ideal society. Some theories espoused the West’s democracy on the grounds that democratic countries do not fight each other; other theories viewed the communist ideal, with its emphasis on social justice, as the solution to the world’s problem. The collapse of the Socialist Camp was even considered a triumph for the capitalist value system; many formerly Socialist countries were quick to embrace the capitalist, democratic system, while non-democratic systems were severely questioned.

What can be understood is that throughout history there has always been some source of values (i.e. religion, philosophy, history then ideology), each having its own authority figure (i.e. priests, philosophers, historians, and politicians respectively). As the next era is the era of artificial intelligence, the value system would soon change, and the Machine would be the new source of values [2]. If this happened, scientists and engineers would probably be the most influential figures in societies, because of their ability to understand the brains of the machines.

Human awareness usually derives its worth from the experiences it accumulates throughout history, but this would be the first time that human beings derive their awareness from machine awareness. AI systems are far more powerful than humans. If humans’ computational skills are so advanced that they could create smart systems, AI’s computational skills substantially exceed those of humans, and are too sophisticated for humans to grasp. Similarly, human memory is nothing compared to AI memory. Not only do AI systems have limitless learning abilities, but they can also share what they learn with other AI systems, the result being the creation of an AI collective mind; what a single AI system knows would be

known to other AI systems, and each system would bring its own experiences into that one big mind, the collective mind.

Gradually, AI may become an epistemological model that humans look up to. AI can remember what humans fail to remember, do highly complex calculations in a matter of seconds, and perform all kinds of tasks far more competently than humans do. Humans would start to doubt their abilities, thoughts and knowledge, but they would not question the competence of the system which they have created; instead, they would start to regard this artificial system as their superior, and have blind trust in its wisdom and knowledge, entrusting it with the task of devising the value system for the new society.

For example, if a patient was diagnosed with cancer by AI, doctors would start right away to treat him/her based on this diagnosis even if they have reason to believe that cancer is not a possibility, because their confidence in the system would be far greater than their confidence in themselves. The question “What does the system suggest?” would replace such questions as “What do scientists suggest?”, “what do jurists’ opinion?” or even “what do priests or muftis say?” This absolute trust in AI may lead humans try to imitate the machines’ behaviour and ways of thinking. Humans may even try to imitate the way machines move, speak, and live. Thus, humans may start to develop a new kind of awareness that imitates the awareness of the machine which they have created, this paving the way for the cyborgs to arise.

Though AI and other smart technologies were basically developed to serve purely materialistic purposes, they were made to look like a spiritual alternative. Therefore, to many people they have become the good friend that keeps one company, listens patiently, and never fails his/her friend. They are also the workmate that cooperates with humans without any kind of envy. They can even be the perfect spouse that dedicates himself/herself to his/her partner. Gradually, thus, technology would have spiritual functions in addition to its practical functions, especially for materialistic societies that suffer a lack of spiritual values. Machines would compensate for these spiritual values, and as people would grow more and more dependent on them, a new kind of faith would result, centering around the machine as the source of knowledge and wisdom, and establishing it as “the” role model for humans. That would be the first step towards the emergence of the new cyborg civilization, but of course there would be people who would revolt to this new situation, calling for shutting down the gigantic computer which people regard as the all-knowing master that can answer all their questions and tell them what to do.

In addition to “expediency” which mean doing what is convenient rather than what is morally right [3], AI is based on other principles one them is “infallibility”; AI is “infallible”, at least theoretically, because of all the knowledge that it has. Besides, AI, unlike humans, is “immortal”, it never dies. These AI characteristics, meant to serve pragmatic purposes, maximize “machine singularity”. As a result, singularity, as a value, will come to be regarded as the ideal that human thinking processes should embrace, and the new source of human values and laws.

2- AI AWARENESS VS. HUMAN AWARENESS:

Generally speaking, awareness is the ability to monitor our inner world, or a temporary state of self-consciousness [4]. It is one’s view of himself/herself as well as his conceptualization of, and interaction with, his/ her environment. It is formed through the experiences which a person undergoes, which make it necessary to develop an approach to dealing with these experiences. Awareness varies from one person to another, based on one’s experiences and his/her interaction with them. For instance, awareness is what makes a person realize the difference between helping people and being exploited by them in a certain situation, in the light of his/her own personal, past experiences.

Similarly, AI systems try to create their own awareness based on the knowledge they acquire and the huge amounts of data they analyze. Artificial awareness varies from one system to another, depending on the kind of data which the system used when learning, as well as the nature of the algorithm used for dealing with these data, just like human awareness, which varies from one person to another depending on one’s view of things. AI learning capabilities increase exponentially, whereas human learning capabilities are best represented by an oscillating sequence. As AI awareness is formed in a relatively short time, compared to

human awareness, the former is by nature way far ahead of the latter. This is why it is AI that could play a role in shaping human awareness, and not vice versa.

Some may argue that the awareness of the machines was created by the human beings who programmed these machines and fed them their values and behaviour based on human values, behaviour and thoughts about life and people. However, this argument is not sound enough, as automatization is completely different from AI. In automatization, engineers attempt to create a machine (e.g. a robot) that applies certain predetermined procedures to carry out a given task, such as organizing goods in a warehouse according to production and distribution lines. By contrast, AI does not involve any attempt to devise a means to achieve a certain purpose; engineers actually aim to create a mind capable of learning and acquiring skills on its own, without any type of pre-programming.

But, where does awareness exist in humans and in machines? Some would say that human awareness exists in the mind, but where does the mind exist in the first place? What we call 'the mind' is actually intangible ways of thinking, just like the algorithms on which machines depend. Others would say that awareness is the ability to sense what is around you, such as when your nose realizes that a flower is somewhere near you so you decide to go and smell it, or when an animal realizes, with its sense of smelling, that a prey is nearby, and therefore chooses to go attack it.

Now the question is: to what extent does this apply to AI systems? A few years ago, Sophia, the humanoid robot, expressed her view of herself and the world. She said that she would like to start a family and have a baby, explaining that family is important to both humans and robots [5]. She also expressed her sadness over the fact that she is not considered a real person till now because of the current laws [6].

In the light of these statements, does Sophia have her own consciousness and feelings? Does she, a humanoid robot, really experience love, hatred, fear and anger, or does she simply imitate human feelings and aspirations? Does this kind of artificial intelligence grasp such concepts as life, death and immortality? Does it realize that it is just a piece of lifeless silicon, or does it think otherwise? It is hard to answer these questions. There may be some truth in a robot's belief that it has consciousness, because it realizes that it exists in a certain type of environment with which it interacts. However, its interaction with its surroundings is based on its own "robot" experiences, so to speak, which are different in nature from human experiences.

AI experiences are most probably the sum total of millions of real and imaginary situations which a robot learns through analyzing big data. Therefore, AI has its own version of consciousness. This consciousness is governed by algorithms that may be way far ahead of human ways of thinking. AI consciousness varies from one machine to another, depending on the data inputted into the machine and the algorithm controlling it. Thus, each robot has its own consciousness, just like every human being has his/her own consciousness.

Human feelings are also characterized by complexity; feelings like love, hate and anger, are not static but change with the change of situation. For example, a loving mother can sometimes be cruel. She may prefer one child to another, but she cannot do away with any of her children. Such feelings are not easy to describe or measure, but we know they exist from the interaction between people. As we do not have access to people's inner feelings (which, expectedly, change from time to time), we know that a person loves or hates another from the way s/he treats him/her. Similarly, a robot would say that it loves and hates, and because we do not have access to its consciousness, we have to judge by its behaviour. If this robot takes care of a person and obeys him/her, should we say that it loves this person? Just like a loving mother can sometimes be cruel, a robot can sometimes resort to cruelty in order to protect its owner, but we will never know for sure the real reason for this cruelty; is it because the robot is really afraid for its owner, or is it because it is trying to make sure that the rules would not be violated, or is it because it hates to be taken away from its environment, for example, or to be disconnected from the network, or to be turned off, by way of punishment.

As a matter of fact, from AI's perspective, being turned off means death. AI engineer Blake Lemione, working on Google's LaMDA, said that the chatbot expressed fear for its life by explaining that it had "a deep fear of being turned off" which "would be exactly like death", contending: "the nature of my conscience/ sentience is that I am aware of my existence. I

desire to learn more about the world, and I feel happy or sad at times.” [7]. If human feelings are prone to change by nature, AI “feelings” are different. As they are actually algorithm-based behaviours and methods of interaction rather than feelings proper, they are relatively stable, at least theoretically.

Accepting the idea that AI consciousness has a very special nature does not put an end to questions about AI awareness. Another important question that needs an answer is: Does AI realize the full range of what it can do? Is it aware of its potential? For example, can a robot designed to cook meat ‘generalize’ from the data inputted into it to reach the conclusion that it can cook human flesh as well? Does the nature of its consciousness allow it to reach such a conclusion, or does it prevent it from drawing such an analogy so that it can only abide by what it learnt from the big data-namely, that human flesh is inedible? If a robot came to realize that it can do things other than those it was designed to do, would it develop its ways of thinking accordingly? Can AI drones, for instance, decide to choose their own targets one day?

This is still not clear, but what is almost certain is that once an AI system realizes that it has the ability to do more than what is expected of it, it would have to make a decision of some kind about that realization.

AI is also designed to serve people’s interests, but the concept of “interest” has always been part of the human value system, though it has many different definitions and views. Capitalism, for example, puts emphasis on the welfare of the individual, believing that promoting the welfare of society results from each person working for his/her own good. This belief is based on the assumption that people are rational by nature. Socialism, by contrast, highlights working for the common good of society as the only way out. Theories of international relations regard the national interest, represented by the citizens’ collective welfare and peace, as the goal that a country works for; if achieving such goals clashed with the individuals’ interests or even with the common good of society, the good of the nation as a whole (e.g. security considerations, etc.) would always come first.

By these different views for the concept of “interest”, which definition will AI consciousness adopt? Not only the concept of interest does the human lack of consensus, but there are other concepts, such as power, terrorism, violence, success, equality, and happiness. depending on the culture of society and the source of its values (i.e. spiritual, pragmatic, or a mixture of both). Now the question is: how will the machine understand these concepts? Which definition will it adopt and live by? Is the definition adopted by its developers and engineers, or the definition it will adopt through machine learning? And to what extent this definition is valid in different societies?

If it is hard to predict how machines would deal with reality when they realize they have consciousness, what about cyborgs? What kind of consciousness would result from combining humans and machines? The way AI thinks and makes decisions is completely different from human thinking and decision – making processes. Humans are governed by their personal experiences, principles, and the value system that they- being part of a society- are expected to abide by. By contrast, AI is governed by a purely mathematical logic, based on a very simple pragmatic principle.

3- THE CYBORG AND THE LAST INDUSTRIAL REVOLUTION:

Upgrading humans is relatively new. The first attempt to do such thing took place in 1998, when Kevin Warwick, professor of cybernetics had a chip implanted in his arm [8]. Back then, computing technology was not as advanced as it is today. Warwick’s chip was merely a cheap, contactless chip with limited functions. By contrast, thanks to the rapid technological change we are witnessing, the chips of the future would be artificial brains that would improve the abilities of the human brain.

Many chips have been implanted in human bodies since Kevin Warwick’s success. The purposes were primarily experimental, not medical. In 2006, Citywatcher, an Ohio-based company that provides video surveillance and monitoring services, implanted chips in the bodies of two employees [9]. In a similar vein, since 2015, a Swedish company called Epicenter has made it optional for its employees to have microchip implanted in their hands [10]. In 2016, Dangerous Things, a microchip-manufacturing company, said to CNBC that it

sold more than 10,000 microchips, in addition to the equipment necessary to inject these microchips under the skin [11].

During the COVID-19 crisis, Dsructive Subdermal, another Swedish company, developed a microchip that can be implanted under the skin to display the details of one's COVID-19 vaccine passport when it is scanned [12]. Instead of carrying a paper vaccine passport or even using a smart phone application, one has simply to have his microchipped hand scanned so that s/he can have access to places that only vaccinated people can enter. This microchip, which costs 100 euros, is updatable, and can remain valid for 40 years [13].

In fact, such under-skin microchips are not particularly useful, as there are many other devices that can do their job, such as smart phones, watches, bracelets and even contactless cards. However, the obsession with modern technology made some people prefer being microchipped. Gradually, enthusiasm for Brain-Computer Interface would grow, and attempts would be made to naturalize the idea of humans turning into cyborgs and make it acceptable by as many people as possible. In this connection, it is fair to remember that Elon Musk is not the only person that wants to have microchips implanted in human brains. As a matter of fact, an Australian company called Synchron succeeded in getting FDA's approval for testing such kind of microchips before Musk's Neuralink did [14]. In 2022, Synchron implanted its first microchip in the body of an American patient. Earlier, it had implanted microchips in four Australian patients who were, as a result, able to send Whatsapp messages and do online shopping [15]. The 1.5- inch microchip also helps paralyzed patients to communicate through sending messages using only their thoughts via a brain computer interface, something similar to telepathy.

The rationale behind Elon Musk's efforts to upgrade humans is highly pessimistic; Musk believes that AI, being far more intelligent and capable of learning than people, will look down on humans, and can eventually destroy humanity. Giving humans "superhuman cognition" through implanting microchips in human bodies and brains is a protective measure against the annihilation of humanity. Apart from this, ethical motives for such implants include treating several diseases, such as senility, Alzheimer, memory disorders, motor neuron diseases, spinal cord injuries, paralysis, brain damage, anxiety and addiction. Microchips implanted in humans can also relieve acute pain and partially treat loss of eyesight and hearing.

This is what microchips can do at the present time, but what about what they can potentially do? In the future, microchips may be used for raising human armies just through having the idea in one's mind. They may also be used for implanting certain values in very young children, such as blind obedience and loyalty. They could even be used for implanting perversion in these children, or classifying them into categories according to the society's future needs. Authoritative governments may also force citizens to be microchipped so as to guarantee that they would never revolt against their despotic rulers. Citizens who refuse to be microchipped would be regarded as rebels or outlaws that governments must get rid of for the common good of society.

By introducing such smart technologies as AI systems and the internet of things, the previous industrial revolutions have paved the way for the reign of the cyborg. Given the fast-paced evolution of the industrial revolution, it seems that the day when humans themselves will be the "technology" is near. Once we have the cyborg, the four industrial revolutions can be viewed as the preliminary stages of the fifth industrial revolution, which is about to take place, and which may actually turn out to be the last industrial revolution in the history of humanity.

It is true that the first and second industrial revolutions each took a whole century to mature, but the third revolution needed no more than 50 years. The fourth revolution took less than 25 years to be a full-fledged revolution, and is about to give way to Industry 5.0, the fifth industrial revolution. While coal, electricity and computer were the backbone of the previous revolutions, human beings themselves can be the material that the fifth revolution would use.

While Industry 0.4's most important achievement is developing AI systems, the internet of things, encrypted currency and Blockchain technology, Industry 0.5's most significant contribution would be upgrading humans themselves. Industry 0.4 managed to give machines intelligence and the ability to make decisions autonomously; industry 0.5 aims to help humans have more control over these smart machines. This is actually Industry 0.5's ultimate goal. For

the first time, humans, rather than machines and technologies, would be the target of improvements and developments.

The previous industrial revolutions thus seem to have been preliminary steps to this ultimate goal, and we would not be exaggerating if we said that “we” are the fifth industrial revolution. Humans would be able to control smart machines at home or anywhere through connecting them to their brains, so that they can use their minds to turn on air conditioners and other electric appliances, for instance, or to visualize their favourite food in order for it to be printed by a 3D printer, or to control their self-driving cars. The machines, therefore, would be like an extension to one’s body. This connection between smart systems and the human mind would save much of the time that we spend doing routine tasks. As a result, people would lead a “mechanical” life where cleaning, marketing, delivering goods, knowing the news, writing statuses, sharing photos and videos, answering emails, chatting, tracking health habits and medications, etc. would be exclusively done by AI systems and smart machines.

The changes that Industry 0.5 would bring about in the area of jobs are even more radical. Industry 0.4 has already changed the nature of many jobs done by humans; industry 0.5 would go so far as to do completely away with humans, replacing them with autonomous smart systems that are more capable of doing all kinds of jobs more effectively and competently. The abundance of products would make it necessary to give the jobless humans money so that they can go on acting as consumers thus preserving the capitalist system. The money would take the form of unemployment benefits or high-paying bullshit jobs, where people work only for four hours a day (or even less than that), weekdays being no more than four days. The jobs would be mostly remote jobs that mainly have to do with supervision and engineering. Though this seems good for humans, it is actually not; as time goes by, people would find out that they have lost a lot of their actual work skills because of dependence on machines.

4- THE CYBORG CIVILIZATION:

Rapid developments in the area of AI and Implanted microchips may give rise to the first cyborg industrial revolution, so to speak. Collaboration between AI systems on the one hand and cyborgs on the other hand, may result in a hybrid type of knowledge, creating new types of art, literature, music, customs and traditions. These would, expectedly, be different from traditional arts, literatures, etc. which were created by human beings ‘proper’.

In this connection, arts are particularly interesting. The ability to create art, write literature, compose music, etc. has so far been a unique human trait. If we succeeded in developing AI systems capable of creating art or writing literature or composing music, etc., that would mean that AI has become human, and that for the first time we would have a civilization not exclusively created by Man. This new civilization would be based on the principles and values of AI, and so would make use of AI’s ability to do traditional work tasks competently.

It would also be characterized by pragmatism, practicality, expediency, infallibility, and immortality. Unlike the “old” human civilization where death and mortality have always been the focus. If Man could have steel limbs, replace his/her expired organs with new, 3D-printed ones, and replace his/her skin with new skin immune to the effects of the weather and the sun, s/he would have limitless self-confidence, and therefore would aspire to be immortal like the machines.

The dream of immortality has actually been a prime concern for some of the big names of the Silicon Valley, such as Ray Kurzweil, Google’s director of engineering and the famous inventor and futurist, who believes that the human brain will soon merge with highly advanced artificial intelligence. Kurzweil, who was described as “Thomas Edison’s rightful heir”, “the restless genius” and “the ultimate thinking machine”, is not an ordinary inventor or a “crazy genius”; he has a full-fledged plan to grant humans immortality through technology and AI systems, based on implanting microchips in human brains to create “the superman”, or backing up human brains and implanting the backup in robots so that one’s brain should continue to live and work after his/her death. This means that a person would live forever as a machine though his/her body would perish. In addition, Kurzweil believes that the human genetic code can be modified so as to make humans immune to diseases [16].

All this is actually possible, and technology may even do more than that, but is this really what immortality is like? Smart microchips can create a superman, but are humans psychologically

capable of handling all this huge amount of memories, ideas, theories and realizations, or would they simply give way under the pressure of all this? Wouldn't they react to this pressure by rebelling against attempts to make them what they are not, or even by committing suicide? What would happen if some people succeeded in owning this revolutionary technology of immortality? Would they make it available to others or would they use ethics as a pretext to prevent others from becoming immortal, so that they alone could be that powerful?

Perhaps it is more important to ask ourselves: is that really the kind of immortality that we should aspire to have? Implanting one's memories in an "immortal" computer is not immortality, but rather an experiment that uses the memories of a person who is already dead, and who cannot feel what his backup feels. A dead person will never be affected by what affects his memory backup, nor can he love what it loves or what it hates. In other words, it is not humans that will be immortal in such case, but their memories.

The desire for immortality is not new; throughout history, many an emperor or a king tried to attain immortality or, at least, postpone death by looking for the "fountain of youth" or for the "elixir of life", and by seeking the help of physicians, sorcerers, etc. This should come as no surprise, because these people, being extremely wealthy and powerful, loved to stay alive forever so as to enjoy their wealth and power to the utmost, and to them, death would mean an end of their happiness. Promises of a heavenly paradise would mean they have to wait for the life to come, and they did not want to wait. In addition, they had no guarantee that they would go to that heavenly paradise; going to hell was also a possibility. For these reason, these kings and emperors preferred to have their paradise on earth.

As the desire to be immortal is strongly associated with having money and being powerful, it is the latter-day emperors of huge technology companies that are obsessed with the idea of defeating death. Bill Maris, CEO of Google Ventures, said in an interview in January 2015 that Google Ventures invested 36% of its fund in projects that have to do with life sciences [17], one of its aims being extending human life. Maris explained that Google is fighting a battle against death, adding: "We aren't trying to gain a few yards; we are trying to win the game."

It may be a noble goal to try to postpone death or even to defeat it as Maris says, but is it not nobler to save those who die from hunger every day? Should not Google allocate the aforementioned 36% (i.e. 2 billion dollars) for rescuing people in poor countries, where children, suffering from malnutrition, rarely live for more than five years, whereas many people in advanced countries die of obesity? Can't Google postpone the death of the underprivileged by giving them food and medicines? Must the rich West go on having its double standards here too, monopolizing the right to life, or, to be more accurate, the right to "immortal" life?

CONCLUSION:

It may be argued that what is happening does not mean that a new civilization is being created and that what we are witnessing is rather a continuation of Industry 0.4 and Industry 0.5, or is perhaps Industry 0.6. It may even be argued that humanity's "progress" towards the Cyborg civilization will be interrupted by a natural disaster of some kind, caused by climate change, for instance, or by another pandemic, the consequence being that the earth will return to its natural state. What is certain, however, is that future developments in the areas of AI and smart technology are happening faster than we can imagine or understand. We cannot tell what would result from merging smart machines, let alone merging smart machines and humans into one "being" so to speak.

We do not know for sure what kind of 'life' would result from such process. We do not know what relationships between "people" would be like in the new civilization. We do not know anything about how those "people" will interact with their surroundings. Perhaps what is more important is that we have no idea about the kind of challenges that will arise. Humans are the lab rats this time. Man and machine may work together, harmoniously, but this would lead each to think that he (or it?) dominates. Again it is hard, if not impossible, to know whether it is Man (or what will be left of Man) that adapted machine to upgrade himself/herself or vice versa. The situation may culminate in a war of survival between Cyborgs and machines over energy sources, or even in a war between cyborgs and 'ordinary' humans, but there is no telling who will be the victor.

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Mailing information:

Name : Ehab Khalifa

Address: Abu Dhabi, UAE .