ARTIFICIAL INTELLIGENCE: A PILLAR OF THE MODERN SOCIETY

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What is AI?

[1] Artificial engineering is a branch of computer engineering which deals with the study and creation of intelligent computer programming. It refers to the concept of using computer intelligence in a similar way as human intelligence works which does not have to be bounded by any biological processes. Rather than studying people or animals, AI refers to the study of problems the world faces in terms of intelligence. AI is used to solve the errors and defects than exist in the system. AI helps in developing a more luxurious lifestyle. AI researchers are provided with complete freedom to use any method that are not observed in people or which are strenuous for human intelligence. AI researchers are provided with the problems in which they can develop a certain AI system which will help in solving the issue. The use of human intelligence to create and amend AI system is core of the development of AI system. [2] Artificial intelligence in a way is the evolution of thinking process which can be achieved through computational techniques. AI is not bounded by any general behavioural pattern associated with any mental faculty, it calculates all possible paths to the results and generally doesn't stick to ways that human intelligence takes. AI works on facts rather than emotions, this helps in the development of a more rational system. [3] The emergence of Artificial intelligence in the modern times is considered as the fourth industrial revolution. Artificial intelligence is made to process huge amount of data so as replicate human intelligence in a vast scale. Programmed intelligence made by computational systems are more efficient and accurate in the society. According to certain studies, systems fused with AI software are seen to be more efficient.

History of AI

[4] Ever since the end of WWII, independent works on intelligent machines increased rapidly. Alan Turing an English mathematician was the first to get this started. In 1947 he delivered a lecture on it. The idea of AI being better researched by programming computers than building machines may have been decided by Alan Turing. The number of AI researchers flourished by the late 1950s and most of them based their works on programming computers. [5] The game chess is an enterprise that involves a lot of thinking process. The machines built to play chess, especially "the Turk", was presented as intelligent machines which managed to fool people into making them believe that the machines played autonomously. In a newspaper column, Samuel L. Clemens ("Mark Twain") wrote that the Turk has to be machine as it played so well! During the early years of AI establishment, for the study of inference and representation mechanisms, chess was considered as a driving force for it.

Growth of AI

[6] The advancement of evolutionary algorithms was highly significant in the last decade in such a way that in many areas of science and engineering, human-competitive results were able to be

achieved which included evolution in the design of antennas, photonic crystals, search heuristics and quantum computer algorithms. With the incorporation of deep understanding of recent biological advances most of these results were achieved. Whenever a certain issue is addressed in a problem, further upgradation of the system is done to improvise it, this leads to the advancement of the system and the algorithm which it uses. As AI evolved over the course of time, people became more and more interested in it, this led to further research of this field. The use of human intelligence to develop an AI system which is more effective than the human intelligence is the main motive of the AI researchers. [7] In order to tackle global crisis, there is a necessity of an AI system that can stabilise the inter sectoral system which can build an effective bond between the planning entities. Economic law's reflection is involved during the construction of such a system. Introduction of AI with these measures to the strategic planning system will clear a path in the reproduction of a national economy, an easing quantitative policy or a stimulant method can lead to an undue of capital present in the sector, etc. The successive establishment of many individual start-ups in this field has led to better economy as well as people begins to take more interest in the field.

AI in Healthcare Appliances

[8] Health care system is being rapidly changed by artificial intelligence. With the help of comparison of big data and strong machine learning methods developers have begun to introduce more tools in the field of clinical care to advanced medica research to improve their efficiency. Programs created from former health care data which helps in predicting and recommending advanced data rely on the different algorithms. But most of the times these algorithms are too complex to be explained easily. Such algorithms are sometimes termed as "Black-box". [9] Some of the research study suggests that AI is as efficient or more efficient than humans at major healthcare events, including diagnosing a disease. In today's time algorithms have already surpassed radiologists in identifying malicious tumours, and suggests methods on how to build cohorts for expensive clinical trials. Though, for a lot of reasons, it will take many years for AI to replace humans in the domain of healthcare which consists of wide medical processes. In machine learning, the most complex form is deep learning or called neural networking. It involves a number of variable as well as different levels which predict the correct outcomes. In such models, there exists many different kinds of hidden features which can be uncovered with the use of many different graphic processers and cloud-based architectures. The deep learning system is used in the radiology images, where cancerous lesions can be discovered. The fusion of deep learning and radiology provides better accuracy in the analysis of radiology images. Deep learning or neural networking system is also used in the speech recognition.[10] The usage of robotics has drastically increased in medical all over the world. The non-invasive technology is highly supported by the robotics, which Is the major reason why robotics is so efficient in the surgical rooms. In other domains, because of their demanding accuracy rates surgeries with the help of robotics can be aid to be minimally invasive, on the other hand human surgery compels doctors to create notch which may take a long time to heal and it can be painful. Unlike human specialists, robots are capable of using miniaturized surgical equipment. A surgeon will be able to control all these machines with the help of AI from a console.

AI in Manufacturing and Production

[11] with the help of omnipresent strong computing networks, modern production and manufacturing systems can be highly supported. Inside these networks, a high amount of data is generated with the help of people, system, machines, smart devices, and sensors. These data is being

analysed at high speed, more widely, and with more depth than before with the advancement in computational capabilities. Smart factory or Industry 4.0 is termed as the new age of industry because of the advancement in AI technologies. [12] within the intelligent manufacturing system, AI is applied into this field. It does not make sense of AI being used beyond intelligent manufacturing system. Intelligent manufacturing system most of the time is characterized through learning, cognition, analysis, interconnection, control, decision making, autonomous intelligent sensing and the implementation of human, environment, material, machine and data about the whole system. The system contains a lot of domains such as security management, cloud computing, resource layers, as well as a well-established service platform. [13] In terms of the manufacturing industry, innovation along with adaptation are two aspects which play a very important role. This kind of evolution using the modern technologies will lead to sustainable manufacturing of goods. In order to promote sustainability, intelligent production execution technology of global views is required for smart production. Because of intensive research methods in the domain of artificial Intelligence, a large number of AI consisting methods, for example machine learning, to achieve sustainable manufacturing in the industry these methods have already been adopted. The process of innovation and adaptation with the help of AI has more efficient.

AI in Security and Surveillance

In the recent years the senior leaders have already expressed that the cyber domain is a field which contains a prominent potential usage of AI. On October 2016, Michael Rogers the director of National Security Agency (NSA) stated that their agency sees artificial intelligence as "foundational to the future of cybersecurity". Roger made his remark two months after the Cyber Grand Challenge which was hosted by the DARPA, which is a head-to-head competition between machines of the cyber domain. In the event each system was able to discover and exploit each other cyber vulnerabilities while overcoming its own vulnerabilities and protecting its own system from external cyberattacks automatically. The DoD was impressed from the tournament and launched a new program named Project Voltron, in order to develop and execute cybersecurity systems which can scan and fix any vulnerabilities from the U.S. military system. The major challenges of the counterillicit-financing's can be solved with the help of AI since it is more efficient than human intelligence. In the past the systems only used human intelligence. This led to many threats and crimes go unsolved or undiscovered.[15] Human intelligence is incapable of processing huge amount of data while on the other hand AI is capable of doing it in a more efficient manner. AI has a huge scope for optimising the fight against crimes and uphold the national security. Human intelligence is biased and favours emotions over facts. In a situation where a fast and steady decision is to be made due to the accumulation of unimaginable information, making the use of AI would solve the problem. There are a lot of time-consuming processes such as drafting of verified decisions, multivariate events, rapid processing of large data, forensic science, counterintelligence, and creation of plans to counter the problem. AI's use can significantly increase the time efficiency required for these processes and can lead to detecting and preventing crimes in a faster manner. [16] With the introduction of Artificial intelligence, cybersecurity is of the field which will be benefited largely. In the events where conventional security will be insufficient, techniques of artificial intelligence can improvise the total security system's performance and efficiency by protecting the system from a large number of autonomous cyber threats.

AI in Education

[17] The domain of education is largely concerned of the development of Artificial Intelligence techniques to facilitate the study based human teaching and systems of engineering. Questions which existed for a long term are addressed by this field such as, how will the system facilitate the learning process and measure the progress of learning. Within the discipline of engineering, 'intelligent tutoring system (ITS)' is a term which is frequently used. AI activities like dialog management, explanation, control, planning, knowledge representation and acquisition, and cognitive modelling is supported by the computational methods. Alternate theories related to learning are also explored and evaluated using computational models. Advanced teaching systems with vast knowledge about the field, advanced ability to note the behavioural pattern of students, increase in the reason ability regarding the selection of topic and the generation of all kinds of responses are the factors which motivates the research of the domain of artificial intelligence in education.[18] Over more than 20 years computer are largely used in the domain of education. Computer-based training (CBT) along with computer aided instruction (CAI) were one of the first such systems which were developed as a computer teaching instrument. In these systems, the instructions were not recommended according to individualized needs. Both CBT and CAI are effective in computational learning but it doesn't provide individual attention to students. This led to the establishment of Intelligent tutoring system (ITSs). ITSs provides an extra edge by responding to the idiosyncratic needs of the students. This provides higher versatility by upgrading the interaction session with students. [19] Artificial intelligence (AI) is perceived as a solution to the current existing problems in the field of education. Even though some of the sociologists gives deterministic arguments about this, AI solutionists are gaining an over hand on the issue. Through the methods of knowledge graph, bourdieusean theory and novel technique of sociology, educational stakeholders and technologists are valorising artificial intelligence. Considering all these, an argument can be made that the mobilization of AI is done in the educational domain in a problematic manner and we can advocate for another ordered sociological system and improve the domain so that it can account for the society's better improved structure.

Advantages of AI

[20] Organizations which rely on a person or a group of people, AI provides an edge by continuing the circulation of knowledge even if a person retires or the organization is no longer available. To reelevate the application and to extend its life period, AI can be utilised to the development of the learning capabilities. "Reinforcement learning" is a tool that enables AI learning from the success and failures in real life and the increased use of this tool has increased its reliability too. The significant amount of time taken by the staff can be minimised in an agency in process which includes decision making with the help of AI applications. [21] The fact that AI makes its decision based on facts and not on emotion is a major advantage it provides. No matter what we do, it is a fact that decisions made by humans ends up effecting in a negative manner because of our emotions. Artificial intelligence is a step above in terms of efficiency of the work done. AI does not need the requirement of sleep to easy themselves, on the other hand human intelligence has a certain limit to continuously it can work. The process of making a machine learn a certain task with the help of AI is pretty easy, we just have to copy the training data into it. [22] AI can be relied on to the work chich may be too complex and stressful for human mind and body. Most likely the tasks done by AI can be done pretty much faster than what could have been done with the help of human intelligence.

AI can be used to research on areas which are too difficult for human body to reach, such as the outer space. The chance of getting an error or defect is less in can of AI. The functions which can be made is infinite and it is not bounded by anything.[23] With the deployment of edge nodes in 5G network systems, the process of edge computing has gained the advantage by the reduction of work load and backhaul pressure, though edge-based devices still face the problem of real time processing. The emergence of edge cognitive computing system has led to being recognised as a new paradigm. With the more applications of more intelligent cognitive services, the process of creating and predicting the new data can speed up for the intelligent machines, thereby interpreting the available information in the cyberspace. [24] For the seismic risk assessment, the realistic prediction of earthquakes is very critical for the prevention of major damage by providing safe design for the important structures. It is a really challenging task to correctly identify the response of the earthquake due the complex nature of the seismic events. AI has been used as a powerful tool as it provides a statistical advantage over the issue. This task involves the processing of massive collected data with the help of several noise enhanced processes. AI helps in identifying data which may be unknown to the human intelligence in order to correctly pinpoint the accurate data for the seismic activity. [25] In these times the greatest example of advantage of AI is smartphones. With the help of many different AI assistants in smartphones these days the workload on humans has decreased. AI helps in the reduction of risk for human life, in the scenarios of an earthquake or a fire brokage, modern machinery with the help of AI can react to the situation in a way that is risky for humans with ease. The everyday life of humans has become more luxurious with AI. According to a research it has been found that AI helps in the prevention of depression among people by providing them with some sort of entertainment.

Challenges or Dis-advantages of AI

[26] In the article by Van Zuylen, one of the major criticisms towards AI is regarding the black boxes which only merely attempt to seek a relationship between the input and the output, and they are solely based on training data manual. AI-based searching methods have another limitation which focuses on genetic algorithms rather than colony optimisation, is that it never guarantees to reach for a "Optimal solution". Also, it is often difficult to gain the true insight and nature of the problem which it faces, and it is possible during for example while using mathematical programming techniques. Also, AI is unable to correctly respond to a sensitive analytical task. [27] It is really not an easy task to develop machines which are favourable to our requirement as it is a bit expensive. It may sometimes require a ton of money to just repair or remodel. Also, it is a tedious task to repair robotic machinery. Robotics moulded with AI causes a large amount of unemployment and leads to the downfall of national economy. It is a matter of fear of people as they might lose their jobs in the coming times. AI also leads to an unhealthy lifestyle for the society. [28] AI in the field of medicine is quickly grasping its grip. In December of 2016, a report made by Gulshan et al on the validation and development of an algorithm for the detection in retinal fundus of diabetic retinopathy was circulated. After that an editorial was published by Wong and Bressler, which pointed out the limits of the above-mentioned report, it required further more validation and surety of safety. And it was also difficult to make people believe on a black box. [29] The adoption of AI is assessed in many different contradictory ways in the public sector. There is only a little amount of data to substantiate the benefits while there are a lot of reports on the demerits of AI in this sector. In China, many different stakeholders of different sectors have come together to claim certain empirical based

challenges in the public sector by providing an idea of 4 sets of guidelines which the government have to monitor for the adoption of AI into the public sector.[30] In order to improve the quality of the processing industry smart manufacturing is an essential necessity. In the sector of smart manufacturing, it is a common practise to adapt to different new kinds of technological reforms, due to large amount of usage for dangerous chemicals which leads to the implications of strict safety precautionary laws. The emergence of AI has results in the more problems in this sector as it causes certain errors in the assessment of different hazardous tasks in the industry.[31] A simple error in a code can led to a big problem in its creation. In a complex code consisting of many functions and algorithms, a single text error can stop the entire coding process. Also, the detection of these small errors in the code is a tedious task which requires a lot of time. In the modern times where humans are busy in their own work, AI requires a lot of attention for its creation. AI is incapable of self-processing, an input is required to begin the process, AI is not able to select the most appropriate input from a set of inputs. The creation of AI with the help of another AI is also a complex task. It most of the times leads to malfunctioning of the process.

Conclusion

According to the conducted research, AI can be considered to be an essential tool for the advancement of the human society. In the past AI has helped human kind in tackling many difficult tasks which deemed to be impossible with only the use of human intelligence. AI aided a helping hand by decreasing the time taken for advancement. Human intelligence working along side with artificial intelligence can be seen as the foundation of the modern society. AI helps in pointing out the defects or problems in a domain which leads to the creation of many other AI software. In the field of medicine AI has helped in the detection of cause for diseases also it has helped in the efficient production on medicines and medical machinery. AI has helped in visual education for people. With the introduction of AI in the industry, the rate of production and manufacturing department has skyrocketed. The fusion of AI in the security and surveillance has provided better efficiency. With the further advancement of AI software in the future, it can be said that the future of the human kind will advance in higher manner.

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A PATH TO IMMORTALITY THROUGH CRYONICS

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Introduction

In ancient times birth and death were solely controlled by nature. But the advancement in the scientific and medical field currently has made it possible to manipulate birth and death by extending life spans. Now science is evolving in such a way that it could probably change the idea of death. Scientists have come up with an enthralling theory of cryonics in which death can be entirely controlled by humans. "Cryo" is a Greek word referring to "icy cold" or "frost". Cryonics is the process by which a human, animal, or any living organism is preserved with the purpose of future revival. The theory of cryonics came into the modern world when the physics professor Robert Ettinger put forward the idea of immortality in his book, "The Prospect of Immortality", which involved preservation by freezing.

Cryopreservation is achieved by freezing the species at extremely low temperatures (as low as 196° C) by encasing them in liquid nitrogen. The low temperature slows down or temporarily halts the chemical reactions in the species which helps in the preservation of tissues in the body. Ice formation, which could be a disadvantage of this process can also be prevented by using vitrification mixtures. Cryonicists hope that in the near future, the biomedical advancements will reach a point where it can cure the species of the conditions that pose a threat to its survival and resuscitate it. Cryonics at first glance might seem like something humanly impossible, but it is completely feasible under biomedical confinements of death. Implementation of this technique has begun and research centres like NASA are currently working on it. Although it requires an extensive amount of research and monetary funds for development, it opens up a wide range of career opportunities for all aspiring minds of the world.

Literary Survey

The concept of cryonics originated from this remarkable book written by Dr Robert C.W. Ettinger, "Prospect of Immortality". Ettinger believed that everyone is going to die and some would die before reaching old ages due to some menacing disease and so to achieve rejuvenation, he came up with the idea of one being suspended in a transient state from which he could be revived again. Technically, the patient is not sleeping, only his metabolic reactions have stopped. When rejuvenated, he will have no idea about the passage of time. The idea of cryonics has itself brought optimism for many people including the researchers and it is expected that the average life expectancy is going to increase by a huge number by the starting of the 22nd century.

Medical science has advanced to an extent where today, we can afford to preserve the body of the dead by rapid cooling of temperature that surrounds him, and reanimate or revive it in the future when the cure for the particular disease has been discovered. This is called cryonics. The process can be started only after the person has been declared "legally dead". Cryoprotectants like glycerol can control the formation of ice in the brain. The main aim of the whole experiment is that later in the future, these "subjects" can turn into epitomes of "Reversible Death". Their normal body temperature can be restored; damage caused by cryoprotectants can be cured. Similar experiments have been carried out on rabbits and have been successful.

Glycerol was the first chemical used for the purpose of cryopreservation. Robert Ettinger in his the book suggested that glycerol can be used as a cryopreservant. This observation was made when glycerol showed positive results, in the preservation of sperms and tissues. Ettinger asked Dr Dante Brunol to produce a protocol for cryop, reservation. Brunol explains that a body after legal death should not undergo immediate freezing. Reason for this statement given by Brunol is that water after immediate pressurised freezing forms glass and cannot rearrange into crystals. For better cryopreservation purposes, Brunol suggests that a cryonic suspendee after legal death should be augmented with an artificial airway and high fraction of inspired oxygen. Another suggestion made by Brunol in the protocol is that the cryonics patient must be immersed in a tub filled with ice and 10% DMSO in water when mechanical CPR is being carried out.

Cryonics is more of a theoretical crisis than a practical one. The first practical step to cryonics was suggested by Dr Thomas K Donaldson. Donaldson, a cryonicist, was a brain tumour patient. He believed that he could have a life without a tumour in the future and for this, he needed to kill himself. If he waited for longer, more of his brain tissues would have gotten damaged due to the continuous growth of a tumour. Donaldson's arrangements for his cryonic suspension started in 1975 but had to stop as otherwise, his tumour would have grown to a large extent that it would prevent circulation in the brain. Eventually, he died in 2006 without undergoing the procedure. Later, James Bedford, an American professor, became the very first person whose body was cryopreserved after legal death. A person can have chances to survive cryogenically, only if their brain structure remains unaltered. Recent day technology seems to be able to do this, which was not considered possible in the past. Nanotechnology is a dream come true for cryonicists as it is considered to be a key for revival. It not only alters the hazardous effects caused by freezing but also helps in curing the disease that lead to the death of the person.

Since cryonics is done in low temperatures, damages are caused to the body due to ice formation. Such damages can be prevented by a process called vitrification, which involves the usage of cryoprotectants and agents to prevent the formation of ice. Cryoprotectants must not only be powerful but also non-viscous and completely non-toxic. Any cryoprotectant used in vitrification has the toxicity of varying levels which over a period of time can damage the body tissues, neurons, blood vessels, etc. DMSO, glycerol, ethylene glycol, propylene glycol and some other polyols were found to be effective cryoprotectants. But these agents contain toxic reagents which cause harmful side effects such as kidney failure, cardiopulmonary failure, etc. Cryoprotectant toxicity, according to the ongoing research work, could be due to denaturation of the proteins in the body. Understanding the cryoprotectants at a molecular level is very important to find out the reason for its toxicity. Mending it would be a big step in the research field of cryogeny. Their toxicity can be reduced at low temperatures and can even become negligible if the temperature is low enough, but unfortunately, the viscosity of the agent is extremely low at these temperatures and thus cannot diffuse into tissues which render it ineffective.

Cryoprotectants are chemicals which prevent cells, tissues or organs from the damages caused by freezing. Its main purpose is to make a dehydrating atmosphere for the preservation of the body. The vital problem associated with this process is cryoinjuries and these commonly occur during

post-thawing and pre-freezing. Generally, cryopreservation is done in isobaric conditions. Despite that, it has some disadvantages. To overcome these problems, isochoric conditions are preferred. Carrier solution (maintains stability within cells) and ice blockers (prevents ice formation) are two major components used in vitrification. Recently, methods have been developed for freezing organs which proves to be better than vitrification.

Benjamin P Best explains in detail the biological aspects of cryopreservation. Ischemia is one of the problems faced in cryopreservation. It is the deterioration of blood vessels and the tissues of the body due to lack of the necessary blood flow. Such damage can cause oedema in blood vessels and various other effects which are detrimental to the cryonics patient. If reperfusion is done within a few minutes of the cardiac arrest of the patient, his body tissues and blood vessels can recover due to the re-establishment of gases and nutrient exchange. But a delayed reperfusion can cause more harm to the body tissues and blood vessels than what would have been caused if there was no restoration at all. A lot of the damage causing oxidants are produced during the ischemic period, and thus this period should be reduced to a minimum. Neurons do not die immediately after the beginning of ischemia but do die out during reperfusion prior to a while of ischemia. Introduction of calcium into neurons can help prevent neuron death. Hypothermia is used to reduce the damage of ischemia to a very large extent, but also has various side effects like cold shock, chilling injury, etc.

Daniel R Spector highlights the factors that hinder the possibility of future revival of a cryonics patient. He mentions that the freezing techniques of the present are not perfect. They do cause deterioration of the body of the dead patient. He also emphasises on the fact that such a revival is based on the assumption that future biomedical advancements can not only cure the cause of death of the individual but can also amend the damage caused to the individual due to freezing. Death is defined legally by the biological standard used by doctors. It is considered to be something natural and ineluctable, but cryonics may change the definition of death to being a disease which can be cured. Now the word 'death' should be re-interpreted legally in such a way that it is no longer considered absolute and also those who are frozen are put in a category different from those who are dead. If in a very far future, cryonic patients are revived, it can be said that they no longer possess their former identity and this would create a lot of legal complications as they would have a new legal record and would not be penalized for anything they have done in their 'past life' which would be unfair.

To evaluate patient's priority either before suspension or after suspension, a cryonicist should definitely consider biomedical ethics which were established by Childress and Beauchamp. The biomedical ethics for cryonics include respect for autonomy, beneficence, justice and non-maleficence. Considering all these principles, cryonicists need to face the sturdy and actual responsibility to ensure the cryopreservation of patient. Ethics of cryonics includes justice, meaning everyone has the right to undergo cryopreservation but the enormous amount of money for the process makes it possible only for the big shots. This money can be utilised in many more resourceful ways like saving the lives of those living in the present. Nonetheless, a question about who has the right to live arises. Some may choose the person who can benefit the future better. Others may choose the wealthiest and most popular persons. The people resuscitated in the future would face problems with their identity, adjusting in a society with different social norms and customs. This will affect them physically and psychologically.

Nature is something beyond human understanding. But the intellectual human race always strives to prove impossible deeds of nature into possible. Such desires of humankind lead to major

accomplishments in the world of science. People are not interested in theoretical science. They are interested in desires that motivate research. The man started his war against time so that he can destroy all the boundaries created by nature. This lead to the proposal of cryonics. Cryonic freezing is considered to be an alternative to death. People consider cryonics as a great accomplishment because of the hope that they would be able to see a better world sometime in the future.

Findings

Cryonics is a developing idea that may or may not work out as expected in the future. The idea emerged from the concept of hibernation and diapauses of the living organisms. It started with the preservation of organs for transplantation and now it has gone to an extent of preserving humans for future revival. Cryopreservation is a process which uses chemicals like glycerol to preserve the body, but these do have their own disadvantages. The process can ensure the prevention of ice formation and continuation of the body circulation but have a lot of side effects such as injuries due to cryoprotectant toxicity. Current medical progress does not have a way to reverse the state of the cryopreserved body and thus we are completely dependent on the possibilities of the future. Under the current rate of progress in the field of nanotechnology, it is predicted that in future, it would be able to cure the damages caused by the disease and also find the antidote for the disease which is considered incurable till date. The procedure is also very expensive and cannot be accessed by those who are underprivileged. It opens up a new field of study with a lot of career opportunities in the research field for all the young and enthusiastic minds.

Recommendations & Conclusion

Dying is something no one would wish for, the solution for this could be cryonics. The success of cryonics would bring about a great revolution in the field of medical science. It has many applications such as space research, the solution to natural disasters. But every coin has a flip side and so does cryonics. Cryonics slows down the cell metabolism but this does not necessarily mean that the ageing of the cell is slowed down or stopped.

This can mean that the suspendee might continue to age even while being cryonically preserved. Also, in this process, we are defying a natural process called "Death" which marks the end of one's life. This way, if the procedure turns out to be successful, there would be a hike in the world's population which would be economically and environmentally hazardous.

The procedure of cryonics just gives a person hope and not an assurance of life extension. Thus, if you want to undergo this procedure, it will definitely be useful in the field of research but may or may not be fruitful for you.

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