

THE SINGULARITY AND THE LAW: EXPOUNDING TRANSHUMANISM, EXPONENTIAL TECHNOLOGY AND THE INCIPIENT LEGAL, ETHICAL AND POLITICAL CHALLENGES

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INTRODUCTION

Transhumanism is a socio-political philosophy which advocates the use and development of technology that enhance the human condition by improving things like cognition, intelligence, physique and longevity (life extension). Some trans humanists also believe that humans will overcome their mortality in the 21st century with the help of technology .The transhumanists plan to do it through technologies like biotech, nanotech, ai, neurotechnology and quantum computing. The development of these technologies they believe will be so sophisticated and advanced that at some point in the 21st century their development will become uncontrollable and irreversible resulting in runaway technology or what is also popularly known as the ‘technological singularity’. The singularity is pegged to take place in 2029 according to the futurist and inventor Ray Kurzweil who has won the national medal of technology and innovation; the highest technology award given by the US government. He also has honours from three different U.S presidents, 21 honorary doctorates from different universities and along with that he occupies the hall of fame of the U.S patent and trademark office. It’s worth noting here that Mr.Kurzweil in 2005 had predicted the year of the ‘singularity’ to be 2045 but in recent times has changed his stance. He claims that advances made in quantum computing will aid the development of emerging technologies more exponentially making the ‘singularity’ possibly happen by the end of this decade at which point machines will become smarter than humans .A lot of people may dismiss all of these predictions to be science fiction but the credentials of Mr. Kurzweil cannot be overlooked and it should also be taken into account that Mr. Kurzweil success rate in his future predictions is 86 percent according to various research and media organizations .The world’s richest men are already pouring billions

into biotechnology to cure and reverse aging. Some of them notably are Jeff Bezos, Peter Thiel, Sergey Brin and Larry Page (Founders of google).The companies that they have invested in aim to do it through technologies like cell rejuvenation/cellular reprogramming, gene therapy and genetic engineering.

The eccentric billionaire Elon Musk is obviously not behind but according to tech-experts he plans to do it a bit differently. It's said that he will deploy brain-machine interfaces through his company neuralink which will possibly allow humans to 'upload' their consciousness into machines. Taking note of all these developments Ray Kurzweil and other 'trans-humanist' prediction certainly don't seem to be a stretch and it can be safely said that Science fiction might turn into reality this century and certain glimpses of the 'Brave new world' which the famous Novelist/Philosopher Alduos Huxley speculated are not far away.

These technologies bring along with them a whole set of political and legal challenges many of which I will be presenting here.

CAN THE STATE STOP A PERSON FROM LIVING INDEFINITELY?

No one person can stand up and announce that they have lived forever. This is obviously not possible, but with the technologies of today. Is there a possibility of living indefinitely? The answer to that would increasingly be yes. Different jurisdictions and states will have different answers to this question but I will try and layout what might be the general answer of common law jurisprudence .The right to life is guaranteed by the Indian constitution under article 21 and is generally a common provision under all common law constitutions. The legalization of living indefinitely hinges on the interpretation of the right to life principle. As for the Indian constitution, the right to life provision does include the right to do his or her will freely. Going by a strict constructionist approach, the right to do one's will even if that will is living forever is something that would have to be legally allowed by the state. The interpretation of this provision through a naturalist or a moralist lens is where things would get interesting. Should a person be allowed to live forever given that there is a resource crunch on the planet already?(There is already a dispute between anthropocentrists/ capitalists and the environmentalists regarding whether the planet really has a resource crunch).What if 90 yrs. olds in a jurisdiction with resource scarcity decide to extend their lifespan indefinitely? This situation is more probable as wealth accumulation of a person increases as they get older and

thereby they would have more wealth to afford life extension technology. The resource consumption of the wealthy immortalists in a zero-sum scarcity situation would affect the ability of generations younger than them to live with right to basic requirements of life like food, water and shelter etc. Deciding on these issues require heavy-duty ethical and moral examination. It is widely maintained in the common law tradition that one has complete autonomy and independence to exercise one's right as long as they don't impinge on someone else's legal or political right. How this provision/principle will be interpreted within the context of the broader rise of transhumanism? This is something that we will get to see in the 21st Century. There is also a wide agreement and a general consensus that voluntary death is unethical and immoral, 20 jurisdictions/countries have also declared suicide to be illegal. If in the future there is wide spread availability of life extension technologies for societal use, there would remain a broader ethical issue. How will refraining from living indefinitely be any different from committing suicide? Will the state legislate to make the usage of life extension a compulsion or will the choice of not using life extension tech be deemed as euthanasia? An entirely new body of human rights jurisprudence will have to be created owing to the rise of transhumanist technologies.

The general scientific consensus of the day is that the path to curing aging is also essential to conquering diseases like cancer, alzheimers as these diseases are a by-product of aging and decay. Since curing aging although technologically infeasible is not possible yet. The path to curing cancer is near and it deploys the same technique and technology which is speculated to halt aging. It is that of genetic manipulation and engineering which aims to amplify certain genes as well as manipulate them in the body. Certain biotech companies have made claims to patent genes and here I will be laying out relevant case laws, legislations and ordinances to explain where the legal situation on gene and DNA patenting, gene engineering stands internationally.

ASSOCIATION FOR MOLECULAR PATHOLOGY VS MYRIAD GENETICS, INC.

Issue

Myriad genetics is a biotech company which was the first company to identify BRCA1 and BRCA2 genes which were responsible for diagnosing an elevated risk of breast and ovarian

cancer. Along with that Myriad had also found Cdna which mirrors the coding section of the BRCA genes. The company claimed that these genes were modified, isolated by them and were hence patentable.

Rule

General Intellectual property jurisprudence with regards to patent is that the patent should have a useful purpose, has patentable subject matters, is novel and is non obvious. The patent could cover a composition, production process, machine, tool, new plant species, or an upgrade to an existing invention. Patents in the United States are governed by the Patent Act (35 U.S. Code), which established the United States Patent and Trademark Office (the USPTO). The most common type of patent is a utility patent. Utility patents have a duration of twenty years from the date of filing, but are not enforceable until the day of issuance. Design patents protect ornamental designs. Plant patents protect new varieties of asexually reproducing plants.

Analysis

The case first got heard in southern district court of New York. Those who argued for the patent to be recognized made the case that the patents would encourage investment in biotechnology and innovation in genetic research by not keeping technology in secrecy. The opponents argued that patents would stifle innovation by preventing others from conducting scientific research in the same area. It would create a monopoly where cancer patients only have one place to carry out genetic testing. Myriad appealed to the USAFC.(Circuit federal court of appeal).The federal circuit after hearing the case ended up ruling that isolated DNA does not exist alone in nature and hence can be patented and the drug screening was valid even though myriad's claims were unpatentable. On appeal, the SC vacated and remanded the case for Federal circuit to reconsider in the light of Prometheus. On remand Federal circuit held that Prometheus didn't affect the outcome of the case. The ACLU along with the public patent foundation filed a petition for Certiorari. The SC granted certiorari and unanimously invalidated myriads claim to isolated genes. The Supreme Court held that merely isolating genes do not make them patentable.

CONCLUSION

There have been over 2000 cases of gene patenting in the US and it's quite clear that with technological acceleration there are going to be more bio-technology related cases like the one presented above. The US judicial system made it clear that anything which is the product of nature cannot be patented and naturally found genes are products of nature. But with the rise of more sophisticated technology there will soon come a time when certain genes would be engineered in the lab. Only time will tell the kind of jurisprudence that arises with respect to engineered genes.

W.H.O GUIDELINES ON GENETIC ENGINEERING, GERMLINE EDITING AND CRISPR

He Jiankui was a scientist in China who in 2018 edited the germ line of a girl in China to make her HIV resistant. He was jailed and sentenced to 3 yrs in Prison for illegal medical practice/medical malpractice.

The event was also followed by an uproar in the scientific and medical community worldwide because of the manner in which the genome editing took place. Without any notice the scientist ploughed ahead with the process. The editing of genes represents

a quantum leap for humanity and in the absence of any law on gene editing, what the scientist did was completely immoral and opposed to Chinese public policy. He paid the price for his act and landed in jail.

The fiasco was followed by the establishment of the expert advisory committee on Developing global standards for governance of human genome editing which examines the legal, ethical, social and political ramifications of this developing technology.

The UNESCO panel in 2019 called for a complete ban on the technology but in 2021 two reports released by WHO provide global recommendation to help establish human gene editing as a tool for public health with emphasis on safety, effectiveness and ethics.

WHO also provides governance framework that identifies specific tools, institutions and scenarios to illustrate practical challenges in implementing, regulating and overseeing research into the

Human genome. The governance framework offers concrete recommendations for dealing with specific scenarios such as:

A hypothetical clinical trial of somatic human genome editing for sickle cell disease proposed to take place in West Africa.

Proposed use of somatic or epigenetic genome editing to enhance athletic performance.

An imaginary clinic based in a country with minimal oversight of heritable human genome editing that offers these services to international clients following in vitro fertilization and preimplantation genetic diagnosis.

The important question with regards to application of this technology is this. How many countries will pay heed to the advice of WHO? It is noted that Eastern Religions such as Hinduism, Jainism and Buddhism will be more accepting to trans-humanism as they emphasize the transcendence of the human condition more than abrahamic religions. For example, in Christianity there is a very central idea which says that God created man in his own image and the central figure Jesus Christ is also very human-like who doesn't do supernatural stuff, whereas in Hinduism God's are transcendent-supernatural beings like Brahma, Hanuman who are more than human.

Buddhists and Jainists both maintain that human suffering needs to be brought to an end and transhumanists also believe in the same doctrine.

Buddha - "May all that hath life be delivered from suffering."

Transhumanist declaration- "We advocate the well-being of all sentience, including humans, non-human animals, and any future artificial intellects, modified life forms, or other intelligences to which technological and scientific advance may give rise."

So, one can hypothesize that trans-humanism will take shape differently in different parts of the world as well differently within different religions.

This will pose problems and issues for International laws as well as for human rights. I will try on my own and list out what some of them might be-

If some people don't want to transcend their bodies. How will the law treat both set of groups, the humans and the tranhumans? Would it be even possible to have uniform laws given that there will be different kind of sentient beings in society? For example for individuals who have radically extended their life. Will the law affix the same level of criminal liability for their murder vs. murder of normal human beings?

Now let's imagine an even worse scenario. It's clear that these technologies will cost a lot of money to begin with and it's certain that class inequality is going to amplify as the upper classes are going to be able to afford these technologies better. Will the government allow this for ethical and legal reasons? Legal reasons because will we have different laws for different societal groups and groups in this case is economic Class-(the rich person species and the poor person species in the future?). If the government bans genetic editing. Will it be a violation of right to life for a certain class of people because it doesn't really allow them to be 'transhuman'?

If certain countries don't allow its people to use emerging technologies due to cultural and ethical reasons. What will be the laws regarding procreation among people in countries which allow trans humanism vs. the one's which don't allow

transhumanism? How will immigration play out? Will a person from the transhuman country be allowed to immigrate to a non-transhuman country that prohibits enhanced humans on account of marriage? Will there be new international laws with regards to family matters and will the UN globally enforce them?

There are innumerable scenarios one can imagine but the most prominent ones that I thought were these.

DIGITAL IMMORTALITY, BRAIN MACHINE INTERFACES AND LEGAL ISSUES

The concept of digital immortality is different from biological immortality. Brain-machine interfaces as mentioned above are what technologists and futurists believe will be used in the future for mind-uploading.

As of now, BMI'S are only used for creating assisted living devices for Individuals with motor or sensory impairment. BCI will also enable its users in the future to interact with computers by means of brain-activity only. There have been quite a lot of attempts in the past to have BMI's work successfully and some of them have succeeded, but the latest foray of tech-titan Elon Musk is where exponential development is projected to happen. Musk's 'neural lace' technology involves implanting electrodes in the brain to measure signal. This would allow getting neural signals but requires a brain surgery. Recently he also stated that brain-computer interfaces are needed to confirm human's supremacy over artificial intelligence and his attempt to deploy these technologies

In addition to that Musk has also said in a podcast that that these BMI's will also serve as multi-media technology where a person may be able to 'replay' his memories back .It's obvious that the BMI market will also be highly competitive in the future.

In my estimation the legal issues with respect to BMI's will be pretty similar to the issues that come along with mobile hacking and data privacy.

However, the criminal liability for literally hacking the brain of an individual will have to be extremely higher than what it is for hacking a mobile or a computer. When someone starts hacking into one's brain it will not only be a violation of his/her privacy but also a violation of his/her dignity. The person will be controlled just like a computer is after he/she is hacked. This may result in technological slavery. The right to freedom is also violated as the right to one's own will is endangered. This means that a person can be directed to do whatever the controller wants it do. Wide-spread assault on human rights as result of BMI hacking is one of the things around which security and legal policies should definitely be formulated as extreme danger lurks with this type of hacking. Scenarios such as hacking directed murder, violence etc. is a probability that is not far-fetched. The U.S pentagon has reported many times that its nuclear launch codes were closed to being hacked and then used. If the most powerful IT infrastructure in the world can be penetrated with such ease, a commercial technological product is nothing in comparison to it.

CONCLUSION

Emerging technologies are very promising and have tremendous potential to do good for human society and civilization as has always been the case. However there are two sides to every coin and it's the same with high technology. Untrammelled and mindless development of atomic technology resulted in the atomic bomb which brought about unparalleled suffering to mankind in the 20th century. Comparisons of the atomic bomb to the singularity or the technological super-convergence of ai, nanotech, biotech and neuro-tech have been made by a lot of intellectuals, industrialists and academics. It's high time that policymaker take note of the dangers that these technologies present as well and learn from history to make sure that the technological catastrophes of 20th century like Hiroshima or Chernobyl doesn't get repeated with the singularity and technological-super convergence.

