

S'MUN2030

SINGULARITY MODEL UNITED NATIONS

W H O

Genetic engineering and
transhumanism: limits to
research



World Health
Organization



SINGULARITY
FOUNDATION

 St PETER'S
SCHOOL
Barcelona

World Health Organization (WHO)
***Genetic Engineering and Transhumanism:
Limits to Research***

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1. Introduction:

- ***Who are we?***

My name is Daniel. I am a first-year architecture student in the UK but have lived half my life in Spain. There I fell in love with tennis, chess and the beaches in Cádiz. The other half I lived in Austria, where I became addicted to skiing, Sacher torte, and questionable forests in Styria. Now in the UK I am learning new things – like salsa – and continuing with things I already did before – like MUN. I was a chair in last year’s SMUN and couldn’t help but come for a second time this year. You will soon see what I mean. Looking forward to meeting you all.



My name is Evan, and I will be one of your chairs during this MUN. Even though I will see you soon I would still like to be able to introduce myself a little bit in order for you all to feel as if you know me to a certain extent once arriving at the conference. I am 17 and in my 1st year of Bachillerato and have been doing MUN’s since I was 12 years old. Furthermore, I do have other interests such as skiing and mountain biking. Now that you know a little bit about me, I hope that this Guideline helps you all out a little bit when it comes to making your position documents. I can’t wait to see you all at the conference and hope that you all have lots of fun and debate to your highest potential.

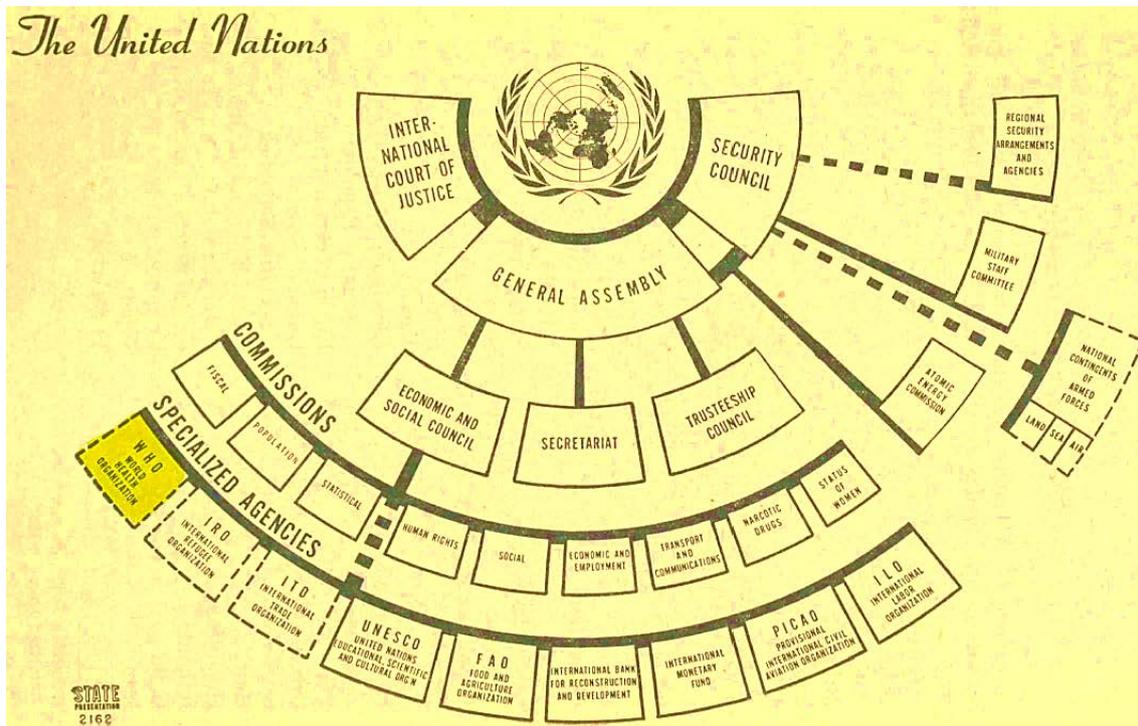


- ***What is the World Health Organization (WHO)***

The WHO is an acronym for “World Health Organization”. As stated in the name, they tackle any concerns regarding people’s health from around the world. In attempts of making the world a healthier place they have committed their organisation to allowing people in poverty to get vaccines that are needed and by creating field hospitals in warzones. These are only a few of the many things that this dedicated organisation does to help people from around the world.

The WHO was established in 1948 as an agency within the United Nations with the sole goal of creating partners from countries all around the world in order to promote health, safety and to most of all protect the vulnerable. Because of this the WHO has been able

to save millions of lives but also has been able to help with the advancement of medicinal technology.



The relative position of the WHO as an agency within the United Nations. It is a specialised agency which falls under the General Assembly and the Economic and Social Council.

The WHO works with 194 member states ranging 6 different regions, meaning there is a main regional office in every continent except for Antarctica. By including over 150 different main operating countries, the WHO has been able to help millions from around the world. Not only do they work with countries, but they also work with civil societies, Non-Profits (The Red Cross). Because of this, the WHO is able to ensure that society is able to well attend to keeping people as healthy as possible.

- **What is Genetic Engineering?**

Genetic engineering is the use of technology to modify the genes of an organism. The intent is to enhance this entity in a desired way. If this life form is a plant, then genetic engineering could be used to make it more resistant to climate or make its fruits last longer in the supermarket shelves.

This technology was originally made to allow crops to be resistant to low cost herbicides which are more dangerous for the plant, due to the fact that they were made with cheap chemicals that were not only harmful to the plant but also to the people who were consuming the plants. After the FDA allowed for these plants to be sold for consumers, they became very popular in developing countries and in very few

developed countries inevitably coming out to having over 120 different GMOs being used from around the world.

However, when this organism is a human, a world of possibilities opens up. Realistically, it could allow for genetic diseases to be prevented. Theoretically, it could also allow parents to choose a “designer baby”, in which all its traits are chosen like items on a menu. These traits could start off as superficial traits, like eye colour, but could eventually extend to important traits, like memory.

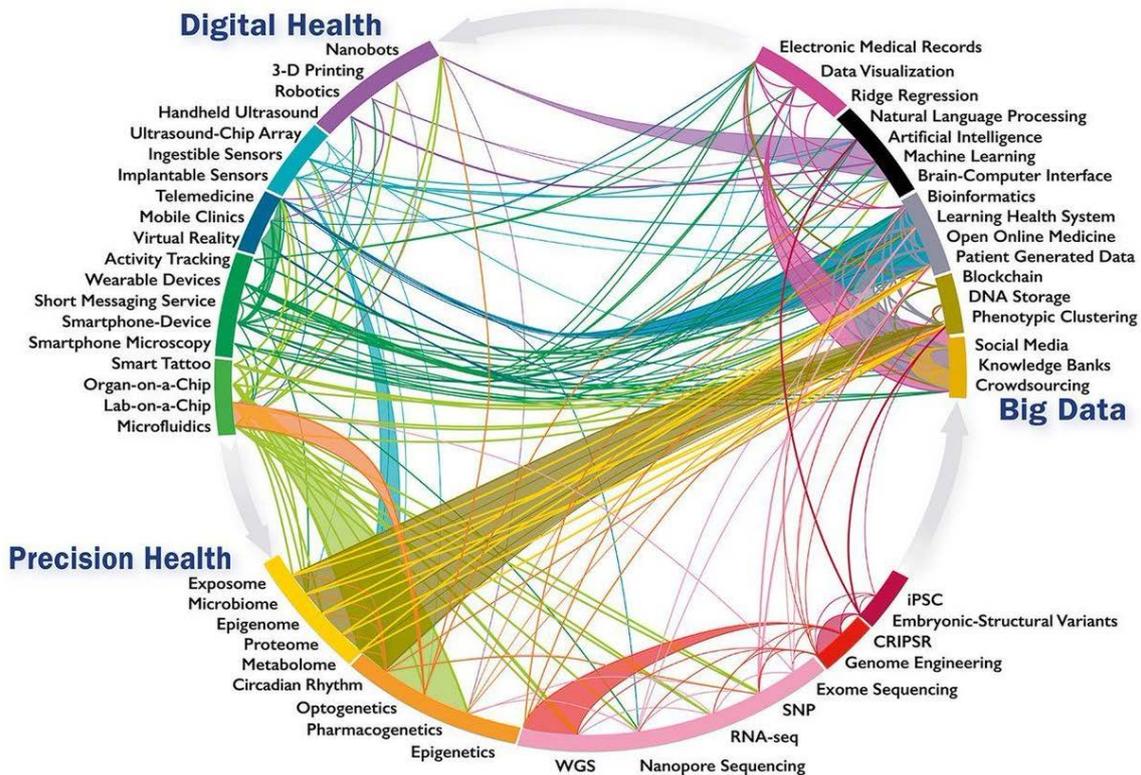
Even though these all sound beneficial without any arising issues, that simply isn't the case. Genetic engineering in humans, even in animals has been illegal in the scientific world for ages, due to the fact that it goes against many of our medicinal morals. This is because when attempting to alter these embryos cells it could cause every single cell in the organism to adjust to the way that the new cells were changed to. Consequently, creating negative effects that could be passed down to its own children. Thus, implementing harm onto these people before they were even born, hence going against everything scientists and doctors swear to never practise.

- ***What is Transhumanism?***

Transhumanism is a movement which supports the enhancement of human beings through technology. The goal is to eventually transform the current human into an improved “post human”.

This could initially involve genetic engineering to boost human traits like strength or intelligence, but could also deal with increasing our life span, or creating a fusion between the human body and a machine. This fusion could take multiple forms. One option is prosthetic body parts. Another option is to connect our minds directly to the internet, thereby allowing us to directly control the world with our thoughts.

It is important to note that transhumanists don't see themselves as the opposing movement to humanism. Rather, they consider themselves to be complementary. Both movements agree on the importance of humans being at the centre of progress. Humanists do so by embracing humans as both our strengths and limitations, whilst transhumanists strive to eliminate all limitations (such as ageing). They claim to do so in the best interest of human beings. Yet, the debate remains on whether merging technology and natural life really is the best option for us.



A diagram which presents a series of fields that fall under transhumanism, organised under the three main pillars of “digital health, big data and precision health.”

Many thinkers agree, though, that this debate shouldn't be about absolutes. Instead, there should be a line drawn in between, accepting some enhancements and rejecting others. Dr. Massimo Pigliucci, a Philosophy Professor at the University of New York Lehman College, explains “it is perfectly acceptable - indeed necessary - for society to have a thorough discussion about what limits are or are not acceptable when it comes to the ethical issues raised by the use of technologies.”

2. Current situation:

The current situation is that there is a gap between what we can practically do (in the present) and what we can theoretically do (in the future). This results in a range of grey areas. Here is where you as delegates need to draw a line to decide on the limit of genetic engineering and transhumanism.

- **What can we practically do in the present?**

The 2010s resulted in a big boom in the field of genetic engineering. It saw the development of CRISPR technology and the first uses of it amongst the scientific community. Despite it being illegal in many countries, experiments with human embryos were launched. These were all non-viable single-celled embryos. Until 2018, when researcher He Jiankui broke the news by announcing he had edited viable

- **What can we theoretically do in the future?**

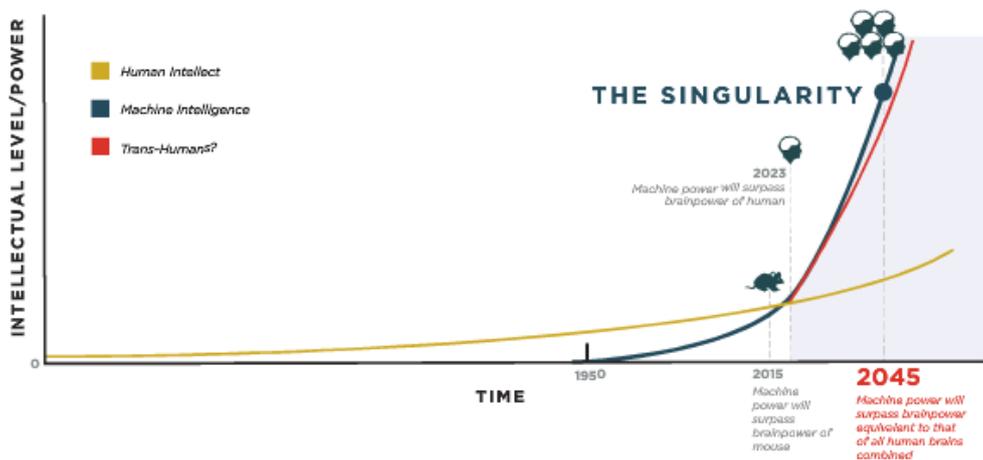
With genetic engineering, the theoretic limit is the sky. There are endless possibilities. This is mainly due to the fact that genes are responsible for so much in human bodies.

Not just traits but also many diseases. Genetic diseases are very common, many leading to disorders. If these can be detected early on in the embryo development, they can be edited out and result in a healthy baby. These kinds of interventions are somewhat accepted by the population, although contention does exist, especially surrounding the ethics behind eliminating disorders. In a time where disorders are finally being accepted in society, one could argue it is a bad time to stigmatise it as “must be removed”.

The next step to diseases would be superficial traits. This would be part of the designer babies, allowing parents to choose eye colour, hair colour, physical strength... of their offspring. The further step would include non-superficial traits as well. Things like memory, mathematical reasoning, musical ability... Here is where things start going uphill, as public and scientific opinion turn against it.

SINGULARITY TIMELINE

Rise in human intellect could be driven by integrating with machines in the future



A timeline which explores the evolution of human intellect, machine intelligence and transhumans. It shows a rapid increase in the machine and transhuman intelligence compared to a slow progress in the human intellect. It presents 2023 as the year Machine power will surpass human brain power.

However, there are still further steps to explore. These would be part of the transhumanism we presented earlier. Replacing body parts with tech prosthetic limbs... controversial. Connecting our minds to the internet... even more controversial... increasing life span to eventual immortality... peak controversial.

With all these steps, you delegates must choose which ones you support as your country and which ones you denounce. How to approach this will be explored in the following section: What to Tackle.

3. What to tackle:

As you all know the topic of this year's debate is about Genetic Engineering and Transhumanism. Because this is such a broad topic, we have compiled a list of what we feel to be the most important for you guys to focus on.

- ***Genetic Engineering***

1. Should there be a universal limit on genetic engineering?

Currently there are many bans set on genetic engineering globally. However, there is no general consensus on the extent to which it is limited. Some countries accept non-embryo modification and ban embryo modifications. Other countries ban both of them altogether. The question is whether countries can reach an agreement on where to set the limit. The other question is whether such a limit is counterproductive. Trying to control a field of research which is booming has its problems. Mainly due to the fact that there will always be some out there who pursue their objectives in spite of legality (as was the case of He Jiankui). So if genetic engineering becomes a clandestine activity, governments worldwide would lose all control, especially in terms of safety.

2. How much would social security cover?

Social security covers expenses which are deemed to be necessary for human health. Genetic engineering will soon be a big component of medicine, as it can be the solution to genetic diseases. The question is how much of these treatments would be covered by social security. If you fail to provide enough genetic engineering to the general population, you will risk having a rich minority whose bodies are superior to the rest. This could create a new kind of hierarchy. Rather than social, it would be biological. Richer people could become smarter than poor people. So does this mean IQ genetic enhancements should be covered by social security too to avoid inequalities?

3. How can we control the testing of human beings?

Here the morality and safety behind keeping living genetically altered people in laboratories is put in question. How can we make sure that testing is conducted in a proper way in every lab of every country? Playing with genetics is problematic as it could permanently damage a human being. Especially if it is done as early as an embryo. What regulations can be put into place to avoid major dysfunctions or possible deaths in the process?

- ***Transhumanism***

1. How safe is it to implant a chip into our bodies?

When talking about chip implanting, there are two major concerns. First of all, how the chip gets in. And second of all, what it does when it is inside. The first part has problems related to health. Inserting a foreign technological object into our bodies is dangerous as our body won't see it as friendly at first. The second part is related to hacking. Any technological gadget is at risk of being manipulated by external agents. The problem of this situation is that hacking an implant could cost a human being their lives. Or, alternatively, it could turn them into something they are not.

2. Should transhumanism be allowed in warfare?

As mentioned earlier, the US Defense Agency has started researching this field. Many other countries follow in their steps. This could be the start of wars fought between transhumans. The playing field would then not be level anymore. Some countries will be more developed in this field than others. So, wars will be even more unfair than they are right now. How can this be prevented? Should transhumanism in warfare be completely banished, or should it be promoted at an equal rate amongst all armies of the world? Should there be some kind of treaty to establish this balance? Should it be similar to the Treaty on the Non-Proliferation of Nuclear Weapons?

3. How can we control the actions of dictatorships?

Treaties signed internationally can be effective but have a weak link: dictatorships. These tend to act in untransparent and non-predictable ways. If they have such a powerful weapon in their hands, chances are that they are going to develop it, despite international regulations. This is especially the case of warfare in countries such as North Korea. What special measures can be put in place to ensure that these dictatorships follow the rules?

4. Sources:

- **To read**

WHO website:

<https://www.who.int/>

Ethical portion of Genetic Engineering:

<https://link.springer.com/article/10.1007/s11948-016-9861-3>

NeuraLink Website:

<https://neuralink.com/>

Nature article on the medicinal use and the non-medicinal use of genetic engineering:

<https://www.nature.com/scitable/topicpage/genetic-inequality-human-genetic-engineering-768/>

Insider perspective of what transhumanism is:

<https://whatistranshumanism.org/>

Outsider perspective of what transhumanism is:

<https://www.britannica.com/topic/transhumanism>

- **To watch**

Beautifully illustrated videos about the past, present and future of genetic engineering:

<https://www.youtube.com/watch?v=jAhjPd4uNFY>

Genetic engineering in plants, animals and humans explained in an entertaining way:

<https://www.youtube.com/watch?v=R6RoGAFXBeA>

A video to understand how CRISPR actually works scientifically:

https://www.youtube.com/watch?v=6tw_JVz_Ic&t=7s

5. Vocabulary:

CRISPR: a recent discovery that revolutionised the scientific community. It is the most accurate and cheap gene editing tool at the moment. It is so versatile that it has prompted scientists to start imagining even the craziest of gene editing possibilities. In fact, He Jiankui used CRISPR to edit the first genetically modified babies.

Designer babies: involves gene editing human embryos to be able to pick and choose desired traits for a baby. It poses several ethical concerns, as well as safety concerns if the tools used aren't developed enough. It has been coined by some scholars as a form of eugenics.

Eugenics: It is a controversial school of thought that promotes the perfecting of the human being through the selection of genes which are deemed to be superior. Genetic disabilities and certain ethnicities would be cut off to ensure that future generations don't inherit them, but rather inherit the so-called "superior genetic traits". As you can see, it has a close connection to racism and supremacism. It is now being connected to genetic engineering as well; when designing "perfect babies", some traits could be favoured over others, thus leading to minorities being discriminated against and, eventually, led to extinction.

Social security: Benefits schemes run by governments to cover the costs of certain necessities in the general population. One of these necessities is health. In the context of genetic engineering, social security becomes a controversy. Where does one set the line between what genetic modifications would be covered by social security and which ones wouldn't? Would all medicinal uses be covered? Would some extra uses be covered as well – like enhanced memory – to make sure that there is no unfair genetic advantage for the richer classes? Important to consider delegates, especially in relation to your country's position.

Posthuman: Posthuman or post-human is a concept originating in the fields of science fiction, futurology, contemporary art, and philosophy that means a person or entity that exists in a state beyond being human

Congratulations on getting here. You're now a big step closer to being fully prepared. We recommend checking out some of the sources we provided and then preparing some bullet points on your country's position on the topic. Enjoy the prep and see you soon.

- Daniel and Evan