Forum: Youth Assembly Issue: The issue of human cloning Student officer: Amalia Krosdorf Position: Co-head

INTRODUCTION

In our days, there have been numerous efforts to ensure that every human alive has a qualitative life, without any discriminations towards their origin, sex, religion and especially their external appearance. Despite this claim, there are still people, whose long-term aim is to reproduce exact copies of some humans, without considering how that could affect stereotypes and individuality.

"Clone" is a term, mostly used in Biology to describe and specify DNA molecules, cells, whole plants, or animals that have the same genetic structure. After some

biologist have conducted research, it is now clear that clones are not replicants of one another but contain identical genetic material. Taking this into consideration, J. B. S. Haldane was the first person to present the idea of human cloning to society. Different kind of reactions occurred, mostly against the further introduction to this idea. Still, it rapidly developed and became a widespread discussion all over the world.



It is essential to remember that the parents of the "original" take the parenting responsibility of the clone.

Mainly when we are referring to cloning of humans, it is extremely vital to consider the health issues and risks that would come along with the procedure, that can lead to significant problems, both for the clone itself and the 'original'. After some expierence in cloning in general, scientists can now say that only a few human cloning attempts would be successful. Having that in mind, scientists are continually trying to figure out if it is worth it. Even with a survival of the clone, it would likely come to life, having to put up with severe congenital disabilities. One of the main issues, which bothers most people about this procedure is, that it can be painful and it can often result in mental and physical damage. Cloning, as a matter of fact, also means quite a

few health risks, such as arthritic or brain problems, or even an early death. Issues like these, may have to be faced at an early age.

But this negative outcome is only one of the reasons, why this issue is so doubted. Another problem is that clones created for medical purpose would have deplorable living conditions, as tests would constantly been conducted on them. The first human beings to get cloned will be tested upon their whole lives. It is widely believed that people are not alive to be stuck in a labory unwillingly. When examining the pros and cons of human cloning, people continually ask the more profound questions that may not have answers at all. Such as, but not limited to, if the copies would have a soul, or if consciousness does

transfer into the new body.

DEFINITION OF KEY-TERMS

Clone

It is an exact copy of a gene, for example animal genes and in this case it refers to the copy of a human's DNA, which is transmitted to a new body.

Embryonic induction

Embryonic induction describes the embryonic process in which one group of cells, the inducing tissue, directs the development of another group of cells, the responding tissue. Induction directs the development of various tissues and organs in most animal embryos; for example, the eye lens and the heart.

"somatic cell nuclear transfer" (SCNT)

SCNT is a specific way of cloning in the biology. It was also how Dolly the sheep was cloned.

STEM CELL

"A stem cell is a cell with the unique ability to develop into specialised cell types in the body. In the future they may be used to replace cells and tissues that have been damaged or lost due to disease."

BACKGROUND INFORMATION



<u>History</u>

The history of cloning takes us back to the year 1935, where Hans Spemann, a German embryologist was awarded a Nobel Prize in Physiology and Medicine for his discovery of the embryonic induction, which has primarily led to the development of groups of cells into particular tissues and organs. He and his student, Hilde Mangold, pioneered in performing somatic-cell nuclear transfer using amphibian embryos in 1928. This is now known as one of the first steps towards cloning. Cloning started in the 1970s, where frogs and toads were experimented upon. Researches are conducted with plants and animal embryos the last decades. The sheep "Dolly" was the first fully grown animal to be cloned in 1996. Dolly was discovered by using the DNA coming from a single cell taken from the mother's egg, which is fused with the mammary cell. This cell then developed into an embryo, which was implanted in a "surrogate" sheep. It took 434 attempts until the attempt was successful. The embryo grew into a lamb, which was genetically identical to the donor sheep. That is how the first grown animal clone succeeded. Even after these further experiments were done, "Dolly" still remained the most popular clone.

Then, in 1969, the idea of J. B. S. Haldane of human cloning was considered seriously. After Dolly, it became a huge debate topic around the world. Even though some scientist claimed that they would achieve human cloning within the year, it never happened. In 1998 a hybrid cell developed into an embryo, but it was destroyed after 12 days. In January of 2008, Dr. Andrew French and Samuel Wood the first five mature human embryos using SCNT. After that, a lot of reports of success had been published over the years. In 2018, the birth of Zhong Zhong and Hua Hua (a pair of identical, crabeating macaques/ monkey) was announced. Hopes are held high since then.

In 2018, 70 counties, including the UN, implied the law that human cloning is prohibited.

<u>Biology</u>

Scientist and biologists have proven that cloning works by taking a genetic part of an organism and recreating it in another place. The process of cloning simply involves taking a cell from one's body and turning it back into an embryo. From there on, there are two options. Either the embryo develops into a human being, such as the scientists have thought all these years, or it turns into a stem cell. In terms of cloning, what is produced is an identikit cell - a cell which was personalized for a specific person. This means that it can get round some of the issues, for example, of having an immune reaction. It is known that professors are still working on further expanding these methods.

Still, it does not matter which method would be used, health risks are not out of question. It is shown that the cloning procedure can interfere with genetic functions, which would supposedly lead to a negative outcome. Dr Jean-Paul Renard, of the national institute for agricultural research near Paris, made a study concerning the

dangers of human cloning and warned the society to ban the idea of reproducing human being. Otherwise, the results will most likely lead to serious long-term health problems, such as, but not limited to heart and blood problems, as well as a death shortly after the birth. Moreover, the conditions would deteriorate, due to a rapid depletion of red and white blood cells. Attempts can be downright dangerous, taking into consideration, that the immune system would not be in a place to develop properly after birth, so errors in the DNA genetic reprogramming during the cloning process could occur. Severe abnormalities could be the result of the failure of developing normally. It is sure that the loss rates will be high, which has also raised fresh fears. But beneath all, the most dramatic fact is that human clones are due to suffer from deep pain, including mental health problems.

Evolution

Taking into consideration, that nowadays Technik develops rapidly, it is very possible that human cloning could function in a short time period. However this could affect the nature of society. If there would exist copies of all the famous people around the world, the values would shrink. In the short run, cloning reduces inequality. In the long run, it creates a perfect society where all people of the world have top abilities. There would not be anything special anymore and ordinary people would underestimate themselves, extraordinary people would become more and more regular. People tend to believe that life has its flaws. People have their flaws. However that is how nature destined humans to be. Life would be perfection, which seems beneficial at first, but after all it would be boring. Some life mysteries are better left unknown. Other than that, cloning stops the development. People would be stuck in the same personality and body for thousands of years. The nature of reproduction would be taken away. Cloning comes one step closer to taking away natures power over life. It would be like a circle, in which the world would be trapped in. For example, if cloning would exist back in the years where Simians and monkeys had not developed to people yet, then humans would never exist. Time would stop. The question is if science is that powerful to stop evolution. Or if we even do need to stop evolution.

Financial aspect

As well as other big projects, human cloning comes along with a lot of financial costs. Furthermore, because many attempts would fail; many argue if it is worth investing in such a controversial issue. Most scientist and sociologists are of the brief opinion that the possibility of producing exceptionally talented clones with correspondingly high incomes might make it profitable, and thus turn cloning into a form of financial investment. Marketing would supposedly grow, once the process of human cloning is clear. Nevertheless, this statement does not make people feel right about this procedure.

Moral and ethical issues

The most controversial issue about this topic remains if it is morally and ethically correct, to reproduce a human being. The majority strongly opposes the realization of this idea, for human reasons. The question is whether it is right to copy a human being just to develop society.

It is claimed that human cloning contributes to taking away a person's individuality. More and more people find arguments that human cloning would be intrinsically wrong. Most of the reasons contain that it involves producing and multiplying a person, instead of just creating or reproducing one the way nature destined it to be. Additionally, many believe that it is unacceptable to take away the right that individuals have, to be biologically unique. The identity of every human alive is a quality that should not get lost after all. Cloning itself has the potential to destroy and undermine the sense of individuality. Cloning opposers ask if living with clones between us, would make us question what it is to be unique and individual. Daniel Callahan, a specialist of bioethicists, writes:

"For all off its haphazard qualities, there is one enormous advantage in the current lottery: save for the occasional natural twinning, it gives each of us our own unique identity. There is no one else in the world like us. This is a precious gift of nature. It allows us to become our own person, to have some of our parents' genetic traits, but to have even more of our own. Nature does not make us in our parents' image; it makes us in our own unrepeatable image. Cloning would deprive the products of an engineered conception of that gift."

Furthermore, it is considered, that cloning would limit the values or worth of human beings in general. Most likely, it would create a world where nobody is special

anymore. Big stars and celebrities would disappear in the crowd of ordinary people. Especially the ones who are not cloned, would feel left out and not good enough to participate in society. Problems like that could arise. Therefore, this process is undermining society and values of peoples' "irreplaceable



value" to a great extent. Thus, it would be extremely hard for a clone to adjust and to

have freedoms constructing their own lives. It would possibly be hard as a person to live, knowing that they are just a double and that they are replaceable. Clones could never live as a real human being. They would always be different and that would show at their mental health stability. It does not matter how many years would pass, a clone would most likely not be able to live a normal life, without complications. People dread to imagine being a perfect copy of someone, because they would not be counted as a person on their own by the majority. It would be impossible for a clone to embrace their character, to have features, no one else has, or more importantly, to be able to live a life of their own. Sadness would probably come along with depression. People shout out that it is unacceptable, altering the existing lives in a form that could theoretically destroy and play into existing patterns of patriarchal power. It is the first-time scientist's experiment with the qualities and predictability of us. Inside and outside features of someone are taken and applied to another human being. The moral here might be that whilst manufacturing people, we devalue them; The majority of this planet's residents, consider something they do not understand, often as fake, unrealistic and not worth living. That has been this way since forever. This generation tends to not accept people who are different. So, people would treat clones as objects to be designed rather than someone capable of making their own choices. Let us assume that clones would be accepted, they most likely would still not be treated like every other human being. It is plausible that clones would feel weird about their situation. Even if this feeling would be likely to occur, it is not a sufficiently morally serious reason to ban cloning - something more serious would need to be presented, and that is hard to find in an argument for protecting the value of uniqueness. That is why psychologists have strenuously voiced concerns, on how to prove that cloning is wrong.

Religious aspect

The idea of human cloning has turned out to be believed as totally disrespectful, especially towards god. Religious people started supporting the ideas of Paul Ramsey, a pioneering bioethicist. He claims that God has created us, with the purpose to continue developing through love. Love should be the reason as well as have the responsibility to respond to nature. Religious people have the ingrained idea that it is meant to be this way, without exceptions. Human cloning is considered, to be breaking the rules of church and nature.

Expectations

This topic throws up many of questions. Everyone wants to live a perfect life and the community does not accept whatever other than that. Human cloning would set standards high. People would know that they can clone, so they would not care about their real biological child if there is the option to have a clone, but still a perfect child. That is why people would perform more abortions because their ideal expectations of the child are proven wrong.

Positive aspects

On the other hand, much negativity comes along with the idea of human cloning. Maybe society is just afraid of something new, or maybe afraid of failure. There is so much we do not know about cloning, though most of the people tend to think bad about it. Maybe society is scared, of being left behind and of being history.

As it is clear, the most psychologists resist the idea of human



cloning. Although, it cannot be forgotten, that the environment of a person while growing up influences a personality. Additionally, even if two people would have the exact same genes, they would have their own experiences and obstacles in life. This is able to affect the clone and "help it" develop a unique personality, which means that it is most likely, that human cloning may undermine our genetic uniqueness, but not our full individuality.

For example, identical twins have the same genes, but they are not the same person.

Human cloning may give hope to couples who are not able to have kids of themselves, but still want to have some. The gene could stay the same, so the cloned child could really be related to the family. Couples often go through physical and emotionally painful procedures for a small chance of having children. Human cloning would make this so much easier. It would make so many couples happy.

Another beneficial factor is that human cloning could help with health situations. Therefore, we should bear in mind, that the role of scientists is to break the laws of nature. Cloning humans could lead to new advances in medical science. Preventions or cures for life-threatening diseases could be found, via using the genetic material of a clone and creating a duplicated individual. Going further, it could create a new line of research that is equal to what we see now with embryonic stem cell therapies.

MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED

<u>Canada</u>

Canada prohibits all the human cloning procedures, even though they still doubt if it is the right thing to do. Therefore, surrogate mothers are still in the legal zone.

Donation of sperm or eggs for research purposes is allowed as well. It is also permitted to donate human embryos and stem cells, but only for purposes of research.

The European Union and the Council of Europe

Both strongly oppose the idea human reproductive cloning, and thus they prohibit it in general. They are in a dilemma, as they believe in the positive affection on healthcare, but also have to consider why it would be ethically unacceptable. Still every country of Europe has its own regulations.

India

India is one of the countries that does not have a specific law regarding human cloning. India was a long time in favor of human cloning, especially after their success of cloning a buffalo back in 2009. A few years later they started doubting whether it is correct towards their god. They created a guideline, that human reproductive cloning is prohibited, but therapeutic cloning and stem cell for research is allowed.

<u>Russia</u>

Vladimir Putin has signed a moratorium back in 2002, where he permits the implementations of human cloning without a time limit. This has confused many people, since most of the residents are again the idea of implementing human cloning.

United States of America

It is not clear whether the US supports human cloning or not. At first this country promoted the idea, especially sperm cell for research. Then, after the big breakthrough of Dolly the Sheep, they wanted to create a law, but the attempt did not pass. After that, 15 American Stated banned cloning completely and 10 prohibit the reproduction for childbirth but permit embryo destructions.

World Health Organization

It is important to remember that the World Health Organization tries to respect all the aspects of the issue, especially the morals and ethics. They call out that religious countries should decide what they think about the idea. Still, they can see how it could help the medicine. Thus, they are keener on the idea of stem cell research, as it could help to solve several health issues.

DATE	EVENT
1996	Dolly, first mammal was cloned

TIMELINE OF EVENTS

30.9.2003	UN legal committee tackles proposed
	treaty banning human cloning
22.10.2003	UN legal committee chairman looks to
	solve battling views on cloning
6.11.2003	General Assembly legal committee
	postpones cloning debate for two years
21.2.2005	UN committee approves international
	declaration against human cloning
8.3.2005	General Assembly approves declaration
	banning all forms of cloning
13.10.2008	General Assembly ban on all human
	cloning to be reconsidered by UN ethics
	panel

RELEVANT RESOLUTIONS

The 8.3.2005, and after many conferences, a resolution passed in the GA of the UN, where is was approved that human cloning should be banned, due to the fact that the majority of the countries showed their disapproval of the idea as a whole.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Even though cloning was experimented upon a lot in the past, scientists did only manage to achieve the reproduction of animals. Human cloning was tried before but each attempt has failed until now. Other than stem cell transplantations, it has not been a success. Not a long time ago, monkeys were cloned, which brings professors one step closer to human cloning. In 1998 a hybrid cell developed into an embryo, which was destroyed after 12 days. In January of 2008, Dr. Andrew French and Samuel Wood declared the first five mature human embryos using SCNT. After that, a lot of reports of success had been published over the years.

POSSIBLE SOLUTIONS

The general truth is cloning would be effective for expanding the medicine. As an alternative, countries could invest money in more complicated treatments, that are respectful towards the human dignity. Other than that, it should be drawn attention to the fact that the treatments, in which human cloning would help, are not essential for our existence.

Another fact is, as mentioned above, that couples who do not have kids could easily get one this way. Experts propose continuing adoptions, like in the previous decades. This way not only would a happy family be created, but the kids at the orphanage would not have to stay there forever. If there are more kids than families available, then it is only fair to give these children a chance to belong somewhere. Another reason to continue adoption and ban human cloning is that it would help in the elimination of overpopulation.

One more solution would be to stop using embryo stem cells for research in order to avoid the destruction of the embryos. Instead, adult stem cells could be used. They can be found in many parts of the human body, so nothing must stop function just for the research.

Another consideration is to take the stem cells of miscarried babies. This method would have two pros. First, the life which was lost would be used for a good cause. If the transplantation would work and the new embryo would grow into a baby, it would not be able to be a copy of anyone.

The last thing I suggest, is to make laws in the religious countries, where they still must figure out how god affects their decision.

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