

Cloning

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Executive Summary

People think cloning organs is BAD, but cloning organs isn't really that bad. If we cloned organs we could make people live longer. Doctors would take part of a person's stem cell from the organ that has problems and clone it to see what is wrong and how to fix it. The body would most likely accept the newly cloned organ. Infertile people could also benefit from cloning. They could have their own biological children. People with degenerative diseases like Parkinson's disease and Alzheimer's disease could eliminate or slow down the process of the disease through the cloning of nerve cells and brain cells.

Although Americans oppose cloning by 54% to 38%, cloning continues to offer hope for the hopeless. In Great Britain, 55% of the population supports cloning. Cloning has been around since the 1940's. In 1952 a frog was cloned. In 1985 a pig was cloned. In 1996 a sheep and a monkey was cloned. Researchers are making advances in the cloning process improving the likelihood that humans will be cloned.

Introduction

Cloning is the process of genetic copying of cells or organisms to create a duplicate. One problem that occurs in cloning is that both beings, or units can be almost identical but small differences can mean a big problem. These can be summed up as a mutation reproduction or a social environmental issue. We are concerned mainly with what the effect of cloning would be on the United States population if cloning were to become legal. Will cloning increase the life span of individuals with degenerative diseases? Is cloning really a possibility in our future society assuming there is a need for it? Can we make body parts without creating an entire human? Would that be morally acceptable in life?

In this report we are hoping to answer every question in a scientific manner as well as show the pros and cons and to discuss any possible outcomes with the help of our StarLogo program.

We are grateful for this opportunity to show what we have learned and discovered from our references and the gift of a non cloned brain.

Description

Mutation reproduction consists of two different techniques of cloning; the natural reproductive cloning and the artificial reproductive cloning. The natural reproductive cloning takes place everyday. Worms separate to create an exact duplicate genetically of its prior ancestor. We can add bacteria, algae and plants to this list. Humans when giving birth to twins or triplets have formed a naturally identical clone without any outside effort. This is all basic mutation cloning. When a naturally reproduced clone grows up in a separate environment, their personalities change to meet the social requirements of the region.

Artificial cloning is already liberally used in our society. We use it in growing plants, trees, vegetables and animal duplication generally, but artificial cloning in humans is at the cutting edge currently—a very complicated subject. We are using artificial cloning technologies by making an embryo and splitting it. Suddenly some people believe we begin to play God.

Cloning will have a huge effect on the population and life span of an individual. We have found that it is possible to create an entire army of people with the potential to become slaves, worker bees, or not valued as a human. This would increase the population density causing food shortage, land and property shortage, depletion of natural resources and habitats for animal life. It could cause pollution and the destruction of our many cultures and civilizations on our planet.

In our StarLogo program, we are hoping to show what would happen if a certain amount of clones were produced each year in the United States. We are assuming that their life span would be half that of a non cloned individual because it has been proven

that they age faster. The original cloned animal, Dolly, aged faster than her duplicate and was half as healthy, and died within half a life span. We believe in our virtual reality demonstration that the clones will be more susceptible to diseases, and their reproduction ability will also be weakened.

As we move on, we are forced to look into cloned body organ production as opposed to a full human creation. We see many good advantages to cloning organs in an effort to prolong life. Doctors would take part of a person's stem cell from the organ that is having problems and clone it. People with degenerative diseases like Parkinson's or Alzheimer's could eliminate or slow down the process of the disease through cloning of nerve cells and brain cells. We could save extinct species by cloning them. We could provide help for childless individuals. The waiting list for heart, liver transplant patients would be cut in half, or non-existent. We need to understand that the power to do good or bad would lie in our hands, and the responsibility that comes with it.

In our StarLogo program, we hope to show what would happen if a given number of humans lived longer and got a new burst of energy just as they were going extinct. How long would they live in the new environment and what effect would that have on the population around them. They have received new organs and get to experience things in life that previously would have been impossible.

Conclusion

At the end of this program, we would like to say that cloning is the ability to duplicate any portion of our world and destroy or enhance our environment. A piece of good fortune and every little cloning miracle could become a great disaster. Natural mutation and cloning reproduction is all around us in nature and in the environment. Artificial cloning is very much a part of our lives now and a phenomenon in our world of food programs and mass feeding abilities. Individuals are created by their society and cultures. The population and life span of our generation is directly effected by our scientific knowledge and discovery of cloning. There will be a long standing debate about the advantages and disadvantages of cloning. We are the youth who will make a difference for the nation and must stand up and take our place with pride and with good intentions. We need to make the correct moral decisions for our children of tomorrow.

References

Human cloning the How to Page:

http://www.biotech-info.net/opinion_divided.html

Public Opinion:

<http://psci-com.org.uk/browse/detail/13304100d3cc433177d742685cf958cc.html>

U.S. Public Opinion Divided Over Biotechnology?

<http://bookd.nap.edu/books/0309076307/gifmid/41.gif>