Cloning and ethical issues

Health & Medicine

Essay on cloning and ethical issues that immediatly Subject : cloning and ethics come up when talking about it. Completed: 8/11/2012 Due: 9/11/2012 Numerous articles appeared in the newspapers about one particular sheep, born in 1996. Her name, as you may have figured out, was Dolly. She was special as she was the first sheep to be cloned entirely by humans. The cloning of this sheep raised a lot of questions. The most important ones being " why would we do clone a living animal" and " can we clone humans too".

Of course these questions do not only require a scientific answer, but also an ethical answer as we are talking about living creatures. First of all: how exactly can you clone living organisms? There are three main types of cloning. DNA cloning, reproductive cloning and therapeutic cloning. DNA cloning or recombinant DNAtechnologyis to transfer one piece of DNA into something that can duplicate himself. Bacterial plasmid, viruses and also yeast chromosomes are used for this as they are able to duplicate easily.

The DNA fragment containing the gene which is needed is isolated using enzymes, and after that it will be transferred to the bacterial plasmid using once again enzymes. After that the bacterial plasmid starts multiplying, and the outcome will be one certain fragment. Reproductive cloning was how Dolly came to earth: the nucleus of a donor adult cell is placed in an egg cell without nucleus. This cell will then need chemicals or an electric current to stimulate cell division. If it has indeed started dividing it will need to be placed in a uterus where it continues till the animal gives birth.

Therapeutic cloning, sometimes referred to as embryo cloning, is the production of human stem cells for use in research. This isn't used at all to

create cloned human beings, it's just for the research because Stem cells are quite important. Stem cells aren't specified yet so they can chance into any kind of cell depending on what scientists want to research on. Now you may ask what this has to do with the whole “ can we clone humans” and the ethical and moral issues. Can we clone humans using the DNA cloning? No. But we can use it to create new medicines or vaccines as this method can nly be used for certain parts of DNA and not the whole of it. Reproductive Cloning could, theoretically, be used for cloning humans. In real life however this technique wouldn't be used because it's expensive and has a really low rate of success. There were hundreds of failed clones, several dead fetuses and horribly deformed animals before the scientists had Dolly. Most scientists do not feel that this is good for cloning as it is far to risky and also we do not know a lot about this technique either. Therapeutic cloning can be used for parts of the body containing the same set of cells.

You could for instance and theoretically seen once again, clone a kidney. There are however a lot of risks such as the fetal tissue dying, or tissue rejection if you actually create an organ. It's not possible to clone entire human beings as there is little known about cloning and the human body is just far to complex to be created in a laboratory. So most scientists agree that it is not possible yet to clone entire human beings. Most of these scientists highly doubt that it would be possible in the near future to clone entire human beings, but there are always the “ what if” questions.

What if it was possible, what would happen then? The advantage would be that there are no more donors needed and everybody can live longer and happier. But killing a clone for a transplant, wouldn't that be considered

murder? After all you would kill someone who is composed out of the same DNA as you. This raises another question, how would you treat the clones? The same DNA, the same needs. Should the parents of the child or teenager, or adults themselves take care of their own clone or would the clone be raised by some sort of company?

These are most what if questions and to be quite honestI believethat we shouldn't clone human beings. There are always people who would want to abuse this technology. This abusing can take many forms: people who have access to all information could either sell or keep it, to create a position for themselves which may result in a lot of income inequality. But that isn't the only disadvantages. Imagine that there will be clones, it would surely narrow down the gene diversity which we have created over the years.

Excessive cloning could cause a loss of the diversity and therefore we might be less resistant against bacteria, viruses etc. Not only biological but also the ethical questions show that the disadvantages outweigh the benefits. The benefits of cloning (parts of) humans being that we wouldn't need any more donors, or we could do research on organs without having to use humans themselves. The disadvantages are that we would abuse the power once again. If we could clone entire humans that would be defying the rights to live freely. There would be loss of gene diversity which would be contradictory to all that shaped us.

After all living is survival of the fittest. Victoria Smit (5vf) Sources: http://www. ornl. gov/sci/techresources/Human_Genome/elsi/cloning. shtml http://en. wikipedia. org/wiki/Cloning http://www. geneticsandsociety. org/article. php? list= type&type= 59 http://learn. genetics. utah.

edu/content/tech/cloning/whatiscloning/ http://thefarnsworths. com/science/cloning. htm Movie the fifth element (actually not a source but wort watching!) repo men (about the disadvantages of cloning organs. Also not really a source but worth watching!)