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TO CLONE, OR NOT TO CLONE?

Cloning is a topic, which provokes loud debates among scientists and ordinary members of the society. Fantastic pictures created by many generations of the fiction writers came to be more real than they have expected. Cloning isn't a term from the fiction novel any more but a reality we have to meet and react accordingly. Rapid development of new technologies in this field put the question of cloning from the plane of mere moralizing to more practical plane. We have our first real clones, though they are not human beings — yet.

Scientists and ethicists have debated the implications of human and non-human cloning extensively when scientists at the Roslin Institute in Scotland produced Dolly.

The gene revolution began in 1997, when British scientists from Edinburgh University produced the first cloned sheep, Dolly. Since then scientists have cloned mice, cows, dogs and pigs.

No direct conclusions have been drawn, but compelling arguments state that cloning of both human and non-human species results in harmful physical and psychological effects on both groups.

Human cloning is the creation of a genetically identical copy of a human. The term is generally used to refer to artificial human cloning, which is the reproduction of human cells and tissue. It doesn't refer to the natural conception and delivery of identical twins. Now human reproductive cloning is illegal.

Two commonly discussed types of theoretical human cloning are: therapeutic cloning and reproductive cloning. Therapeutic cloning involves cloning human cells for use in medicine and transplants, and is an active area of research. Reproductive cloning involves making an entire cloned human, instead of just specific cells or tissues.

There is a wide variety of cloning methods. Here are basic ones:

- Somatic cell nuclear transfer ("SCNT").[2]
- Embryo twinning.
- Induced pluripotent stem cells ("iPSCs"). [1] [4]

Cloning is an experimental and not well understood method. It has a lot of dangers:

- About one out of 100 cloning attempts ending in a viable animal.
- Cloned animals also have poor health and don't have ability for normal development.
- Many animals are born with abnormally large organs and as a result they often die early or need to be euthanized.

As a big ethic problem cloning has a lot of outcomes. Human cloning is an intervention in being of Big Mystery. We know a lot about genes and mutations, but this knowledge useless on practice. It was mentioned about dangers of human cloning. Main religious representatives have negative attitude to cloning, especially Muslims.

To my mind, human shouldn't be as a production of manufacturing. Many people don't know nuances of clones' consciousness. They think, what`s the matter with trying to clone Attila or Tamerlane? But clone has only genotype of this person. Character will depend on external environment and education.

We have scared about opportunity of growing clones for organs. It is connected with many moral aspects and lowed status of this clones.

Other outcomes are:

- Illicit cloning: there is also the potential for someone to clone you illegally.
- Raising the dead: a lot of dead people can "rise from grave".
- Rendering biosignatures useless: facial and fingerprint recognition would pull multiple matches.

Science fiction has used cloning, due to the fact that it brings up controversial questions of identity.

Most popular examples of using this theme are [3][6]:

- In Aldous Huxley's Brave New World (1932), human cloning is a major plot. There we have world "from bottle". People are split into five castes, hatched by the state to fill preset positions in society. The lower castes, which are clones, are treated with chemicals to arrest their mental and physical development. Children are treated by a process which gives them only information appropriate to their caste.
- In the futuristic novel The House of the Scorpion, clones are used to grow organs for their wealthy "owners", and the main character was a complete clone.
- Star Wars portrays human cloning in Clone Wars, Star Wars Episode II: Attack of the Clones and Star Wars Episode III: Revenge of the Sith, in the form of the Grand Army of the Republic, an army of cloned soldiers.[5]

In conclusion, we must say that cloning of a human being is a big ethic problem. To clone, or not to clone… That is the question… Now we have two sides of the problem. On the one hand, cloning is a rude interference into the natural process of procreation. On the other hand, some people think that potential benefits outweigh the potential harms of cloning. Cloning would be probably used by infertile people who use donated sperm, eggs, or embryos now. It may provide a way for completely sterile individuals to reproduce.The dilemma is very complex. So, human cloning cannot proceed without crossing numerous ethical boundaries and therefore all existing social and legal pros and contras should not be set aside.

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