

Cloning

Social Issues & Resources Committee



What is Cloning?

There is some confusion due to the different uses of the word 'cloning'. Most people understand it as meaning 'the creation of a human being(s) who is/are genetically identical to one another'. However there are two types.

Therapeutic Cloning: using cloning techniques to create new cells, tissues or organs for medical treatment and research purposes.

Human Reproductive Cloning: the creation of a new person with the same genetic make up as someone who is alive or has lived.

How does it occur?

Embryo splitting: similar to the process that creates identical twins. The embryo's cells are separated at a very early stage.

Nuclear replacement: take a cell nucleus from one person and put it into the egg of another whose nucleus has been removed. The egg is stimulated electronically to divide and starts the growth of an embryo (e.g. Dolly – 1996).

Why clone?

- To produce cells or tissues to help repair a damaged organ or an organ for transplantation without the complication of them being rejected.
- To overcome fertility problems.
- To produce a sibling who could donate tissue to an existing unwell individual.
- To replace a dead baby or child.
- To enable homosexual couples to have children that are genetically related to at least one of the partners.
- To duplicate a particularly talented individual.

Therapeutic cloning using embryos – some concerns?

- The embryos need to be destroyed to obtain the stem cells (embryonic stem cells) in order to create tissues. There will not be enough 'spare' embryos from current fertility treatments therefore embryos will be created for the sole purpose of research to develop this technology and to be destroyed.
- Using a human embryo as a 'thing' to be used to benefit another. There is little or no moral status afforded to the embryo.

- What if human life begins at conception? If there is any possibility that embryos could be persons then we have a duty to protect them from experiments that would destroy them.
- Created to supply body parts. Could that lead to 'trading' in these?
- It will inevitably lead to human reproductive cloning (the slippery slope). At present the law which bans implantation of cloned embryos into human wombs has many loop-holes not least that it will be hard to police. Recent cases in England and N. Ireland (2004) seem to show that the law has already stepped onto the slippery slope.
- There is ongoing research into other more ethical ways of getting stem cells – using stem cells from the patient themselves (adult stem cells) from e.g. bone marrow, nerve tissue etc.

Human Reproductive Cloning – concerns

- Safety – the clone cell DNA is already many years old (?Dolly's arthritis). We can't know the risks of the procedure and the possibility of damaged cells.
- The status of the embryo.
- Differences with identical twins – they are born at the same time and grow up with neither twin forming a role model against which the other is judged. If 'twins' were born perhaps decades apart would it be harder for the younger to live out his or her own identity?
- It could cause problems within the relationships of the families – may produce more dysfunctional families?
- Sexual reproduction creates genetic variety and stability – mass use of cloning would lead to a damaging loss of genetic diversity.

Relevant Biblical principles

- God is creator of life and He is sovereign.
- We are made in God's image and are unique.
- All human beings, regardless of age or disability, have infinite worth in His sight because they are made in His image.
- Being human requires us to be in relationship with other people who are necessarily different from ourselves. Human diversity is part of His sovereign design.

- Children should be produced within marriage/families.
- The end does not justify the means – Romans 3:18.
- Protection of the weak, vulnerable and disadvantaged.
- Love for our neighbour – we need to treat people as individuals in their own right.
- Suffering (e.g. illness or disability), though not to be sought, can be used by God for His glory and our good.

Why does God allow illness, disability or genetic anomaly?

- We live in a fallen world and experience the results of the fall.
- To show us our brokenness and need of his grace.
- To make us more dependent on each other and on God (2 Cor 12:9)
- To encourage us to serve each other in love
- Increase our desire for heaven (Rev 21:3-4)
- In the providence of God suffering can build Christian character and work out God's purposes for His glory (Jn 9:1-3; Is 48:10-11; Rom 11:33-36)

Some relevant Bible passages:

Genesis 1:3; 9:6-7

Exodus 4:11

Psalms 139:13-16

Job

Isaiah 45:5-9

Romans 3:18; 8:21-22; 14:7-8:12

Formulating a Church Response to Cloning

As the church seeks to formulate a response to the developments of recent years in this area we believe that there are certain challenges facing us.

1. We do need to be better informed about developments but we recognise that this is a complicated area and the pace of development is increasing;
2. Few of us claim to be expert in these matters and we also struggle to apply the Bible to this area;
3. We need to resist the temptation to make emotional cheap shots for instance by illusions to Frankenstein babies etc. Passion is good but distortion is not;
4. We need to resist the temptation to close the door completely on all genetic research as it does appear to potentially hold benefits for mankind;
5. We need to explore morally appropriate ways of using gene technology;
6. We need to speak with reason and love for we are representing God in this debate;
7. We need to show compassion for those for whom these developments seem to be the answer to their problem (infertility, those who have an ill child who might be helped, or one who has died or for those who have an incurable disease e.g. Parkinson's, Alzheimer's diseases).

As we try and apply biblical principles to this area we can perhaps make the following tentative conclusions at this stage.

1. We believe that the deliberate creation of genetically identical human beings (Human Reproductive Cloning) contravenes the Biblical principle that God alone is the creator of individuals;
2. Each individual is unique and cloning goes against this principle. The natural occurrence of 3-4 twins per 1000 births does not for us condone the practice of scientists trying to create identical human beings;
3. Reproductive cloning runs counter to the principle that children should be the result of the genetic inheritance of both a man and a woman. Cloning promotes a sexual reproduction using a single cell and separates procreation from reproduction;
4. Cloning means it is more likely that children would be created outside of the marriage bond;
5. Reproductive cloning can encourage the tendency to view human life as a product or commodity thus undermining the dignity of each individual;

6. We are concerned about the health implications of this new technology. Recent evidence indicates that Dolly the sheep may be ageing prematurely;
7. Reproductive cloning is likely to involve the creation of numerous spare embryos. As a church we believe in the sanctity of life from conception. What happens to these spare embryos? Creation of spare embryos creates ethical dilemmas;
8. With regard to therapeutic cloning we have less difficulty with the principle. However in practice we are against embryos being created solely to provide stem cells. The end does not justify the means. Should individuals be created to be used rather than as an end in themselves?
9. We believe further research could be undertaken to harvest stem cells from bone marrow, living human tissue or other adult stem cells;
10. We believe that therapeutic cloning may be ethically acceptable to heal, restore or repair, but we would have more difficulty with genetic enhancement to create “designer babies”.

Questions for Discussion

1. What does it mean to be made in the image of God?
How might cloning go against this?
2. Is there a moral difference between reproductive and therapeutic cloning?
Should all cloning be banned?
3. If reproductive cloning occurs in the future, how should the church relate to such people?

Further Reading and Resources

'Cloning humans – distorting the image of God' by Denis R Alexander.
Cambridge Papers Vol 10 No 2 (June 2001).

Clones – The Clowns of Technology, Gareth Jones, Paternoster Press 2001.

Genetic Ethics – Eds J Kelner, R Pentz, F Young, Eerdmans

Care web-site: www.care.org.uk/resource.briefing.





