

SOCIETY, RELIGION AND TECHNOLOGY PROJECT

Church of Scotland



HUMAN CLONING - The Ethical Issues

Dolly the cloned sheep caused a media sensation. But after the hype subsided, what are the real issues? Why would it be wrong to clone human beings? What about possible medical uses of the technology, like cloning embryos for replacement body cells?

What's the Church doing Here?

Since 1993, the Church of Scotland's Society, Religion and Technology Project (SRT) has looked in depth at the ethics of genetic engineering and cloning in animals and plants with an expert working group. Leading scientists, including Professor Ian Wilmut, leader of the Roslin team that produced Dolly, discussed issues with specialists in ethics, theology, sociology and risk, which culminated in a major book "Engineering Genesis", published by Earthscan in 1998. So when Dolly hit the headlines, in February 1997 the church was already in a position to offer a balanced and informed view on this local Edinburgh issue with global implications. In May 1997 the Church of Scotland General Assembly was one of the first organisations in the world to give a formal view on human and animal cloning, which has been much quoted, for example in a UNESCO declaration. SRT has been deeply engaged in UK, European and international ethical discussions first about cloning, and then also on stem cell issues after the isolation of human embryonic stem cells - which added to the complexity. To help shed light on these confused and often misrepresented issues, we have produced three information sheets: on human cloning, animal cloning and embryonic and adult stem cells. **What is Cloning?**

The word "clone" comes from a Greek word for taking a cutting from a plant. To clone is simply to make an exact genetic copy of an existing organism. It happens naturally in many plants (if you bury a potato it sprouts clones of itself), and even a few animals. Significantly, it does not normally happen in mammals and humans, except for "identical" twins. And as we shall see, this is very different from cloning when it comes to the ethical aspects. Dolly changed all that. She is a sheep created by taking cells from the udder of a ewe and "reprogramming" them to create a new embryo by a process known as nuclear transfer, and implanting the embryo in another ewe. This was a biological revolution. It been thought impossible to grow a mammal from body tissue. And if it was possible in sheep (and now cattle and mice also), could it be done in humans? And if it could be, should it be? **What are the ethical objections to cloning human beings?**

The overwhelming reaction from most people was that it should not be done, but a

fear that someone might try. Statements opposing cloning human beings have issued from numerous national and international organisations, like the UN, the Council of Europe, the European Parliament, the European Commission's ethical advisors, the UK Human Fertilisation and Embryology Authority, many professional medical bodies, and also the scientists at Roslin who cloned Dolly. The UK and many other Governments have now banned it in law. But what exactly is wrong with human cloning? It is not enough that it is unnatural; much medical treatment is also unnatural. The key question is should we respect a biological distinction or celebrate our God-given capacity to override it? Four basic reasons have emerged: control, instrumental use of other humans, risk and relationships.