

Human Embryology Position Paper

Prepared by the Linacre Centre for Healthcare Ethics

This position paper is intended for those trying to understand the position of Christians, including Catholics, who respect the human embryo from the first moment of its existence. In particular, the paper includes:

- A critique of the ‘14 day’ position outlined in the Study Resource for Leaders of Church Groups
- An outline of Christian arguments for the human status of the embryo
- Information about the latest developments in stem cell technology, which significantly undermine the argument that embryo research is ‘necessary and desirable’
- Further resources for discussion and study.

When is an embryo an individual?

A line of thought has been developed by some, including many Christians, to the effect that early embryos (typically up to 14 days) are not individuals and so do not have full human status. In recent times, this has been used to justify the destruction of embryos, from abortifacient ‘contraception’ to IVF, PGD (genetic screening after IVF), the selection of ‘saviour siblings’, with others discarded, and embryonic stem cell research (see Ethical Alternatives section).

However, this line of thought is certainly questionable, creating, one can argue, a class of ‘sub-human’ human beings, whom it is acceptable to kill.

An embryo is an individual from the moment of fertilisation. It is unquestionably a living whole, a biologically unique member of the human species, with identifiable parents from that moment on. These are not religious or philosophical claims, but biological facts. From fertilisation (or conception), the embryo, as an organism, embarks on a seamless biological process of growth and development. It does not ‘start to become an individual’; rather, in terms of biology, it *is* a coherent and discrete individual. Right from fertilisation we have not a potential human being, but rather a human being with potential. This living human individual has interests in his or her future, and human rights, which need to be protected - particularly since the embryo is such a vulnerable member of our society.

Some claim that the high percentage of ‘fertilised eggs’ i.e. embryonic human beings that are lost naturally (some estimates reach as high as 70%) means that they are not fully human. However, in the past and even today there are situations where child mortality is above 70% and we do not question the individuality or humanity of those children. It would be absurd to claim that this ‘natural loss’ means these children could be killed in research.

Why 14 days?

The primitive streak develops at around 14 days, but its importance is often overestimated. The development is part of a continuous process which an individual embryo goes through. Just like developments which happen later on in life, like breathing for the first time, or saying our first word, it is something that happens to us, rather than something that marks our origin. Our first nine months do not start at 14 days—or even 5 days, the time it takes the embryo to travel to the womb. This journey does not change the identity of the embryo, but only its location.

Nor is it relevant that the embryo’s shape changes over time, or that the embryo develops organs like the placenta discarded after birth. Like other living things, human beings look and behave differently at different stages of development.

Some claim that the possibility of twinning (said to occur until about 14 days) means that the individuality and humanity of the pre-14 day embryo is in question. The argument is that we can’t be sure the embryo is an individual if it could possibly develop into two individuals, neither of whom is identifiable as the earlier embryo. But if we think of this process as one identifiable embryo ceasing to exist in the production of two new embryos, or as one embryo ‘budding’ another embryo, the problems about identity dissolve.

Cloning is effectively another kind of identical twinning, but does this mean the adult who is cloned is not an individual? Rather, both the adult and the clone embryo are individuals, whether the clone embryo is destined for birth (‘reproductive’ cloning) or for destructive research (‘therapeutic’ cloning).



Christian Resources - see especially www.linacre.org/atheol.html

Each human being is a uniquely precious gift from God, made in His image. It may seem obvious, but the commandment which prohibits killing innocent human beings is also relevant to embryo destruction, especially in the light of scientific evidence for the humanity of the embryo.

Many Bible verses mention prenatal life, from Psalm 139 to the Gospel of Luke, where Our Lady conceives of the Holy Spirit and St John leaps in his mother's womb at the presence of a very young Jesus. The Incarnation is revealed at Our Lord's birth, but this begins at the Annunciation (see www.linacre.org/atheol.html), and since Our Lord is like us in all things but sin (Hebrews 4:15), it follows that our humanity begins at conception too.

It's not just embryos that have and need to be treated with special dignity, but human procreation itself is inherently dignified, and should not be subverted by taking it out of the context of marital sexual intercourse. Many of the procedures in question do this, debasing procreation and human embryos with procedures that 'manufacture' human beings and manipulate them as commodities.

"Jesus reveals the humanity especially of the needy and those who have been overlooked. Concern over the fate of embryos destined for research is inspired, not only by the narratives of the Annunciation, the Visitation and the Nativity, but also by the parable of the good Samaritan and the parable of the sheep and the goats: Just as you did it to one of the least of these little ones you did it to me.' Matthew 25.40" (from www.linacre.org/atheol.html)

Ethical Alternatives

Adult stem cells, unlike embryonic stem cells, are already used successfully in many human treatments. One very promising development is the creation of iPS (induced pluripotent stem) cells. The process has been developed in the last couple of years by teams around the world (most famously by Professor Yamanaka in Japan), and involves re-programming adult cells into embryonic-like 'pluripotent' (super-flexible) cells. Heralded by *Science* magazine as the scientific breakthrough of the year in 2008, iPS cells will avoid the ethical objections since embryos aren't destroyed and will also avoid rejection problems because the cells are taken from and re-introduced into the same patient. So, along with the already successful adult stem cells, iPS cells mean there will no longer be a 'need' for embryonic stem cell research.

Some may be concerned that the position outlined in this paper means challenging the ethical acceptability of more common practices such as IVF, and this is correct, since embryos are created outside the proper context of marital sexual intercourse, and those embryos are treated as objects or commodities, and may well be discarded or destroyed. There are however, ethical alternatives for treating many forms of infertility. Naprotechnology is one such alternative. It works with the natural cycle of the woman and has very high success rates. The Linacre Centre is available to give ethical advice on these and similar issues.

Further Roman Catholic Resources

Dignitatis Personae – on certain bioethical questions. Available at: http://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_con_cfaith_doc_20081208_dignitas-personae_en.html

Donum Vitae – on respect for human life in its origin and on the dignity of procreation. Available at: http://www.vatican.va/roman_curia/congregations/cfaith/documents/rc_con_cfaith_doc_19870222_respect-for-human-life_en.html

Catholic Bishops' Conference of England and Wales and Linacre Centre for Healthcare Ethics Joint Response to the Human Tissue and Embryos (Draft) Bill - available at www.linacre.org/topics.htm

On the place of the human embryo within the Christian tradition and the theological principles for evaluating its moral status – prepared by Professor David Jones, and submitted to the House of Lords Select Committee on Stem Cell Research by an ad hoc group of Christian theologians from the Anglican, Catholic, Orthodox and Reformed traditions. Available at <http://www.linacre.org/atheol.html>

The Soul of the Embryo by David Albert Jones, published by Continuum

Cloning by Anthony McCarthy and *Infertility* by Agneta Sutton, booklets published by the Linacre Centre and CTS and available from the Linacre Centre

The Linacre Centre for Healthcare Ethics is a national resource founded with the aim of helping Catholics and others to explore the Church's position on bioethical issues. For more information see www.linacre.org, or call 01865 610212 or 020 72667410.

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