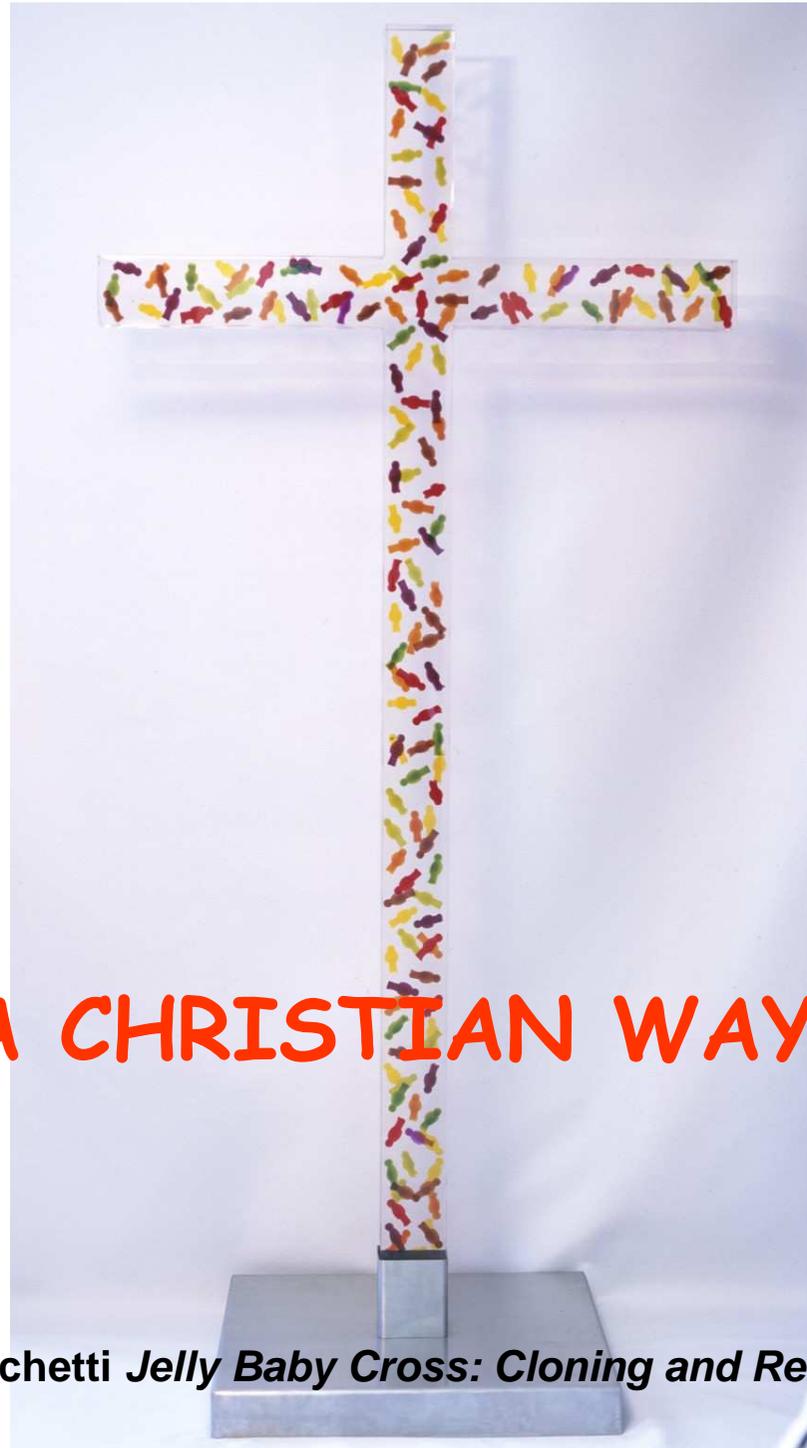


MORAL MAZES IN BIOETHICS

John Bryant



IS THERE A CHRISTIAN WAY THROUGH?

Mauro Perucchetti *Jelly Baby Cross: Cloning and Religion* 2002

DISCUSSION POINT 1

- One cause of infertility is the inability to produce gametes
- There is a severe shortage of donated ova for use in fertility treatments
- Female foetuses accumulate a life-time's supply of oocytes
- It has been suggested that aborted female foetuses could be used as sources of ova for fertility treatments

HOW DID WE REACH OUR DECISION?

- Morals
- Ethics
- Can we apply ethics to the biological world?
- 'Yuk - that's awful - it's not natural - it should be banned'
- Mary Warnock 'The pub bore must be defeated'

HOW DO WE MAKE MORAL CHOICES?

- Muddling through
- Deontological systems (Kant)
- Consequentialist systems - utilitarianism
- Virtue
- Rights-based ethics
- Natural law
- The 'Yuk Factor' (repugnance)
- The Bible and the Holy Spirit

National directive: 'Life science graduates ... knowledge of social and ethical aspects ...'

- Why?
- Do the Biosciences especially raise ethical issues?
- Are we facing 'unprecedented choices'?
- Or are we dealing with old issues in new guises?
- Has the 'social climate' changed?
- Is science value-free?

**WHAT ETHICAL PRINCIPLES
CAN WE EMPLOY HERE?**

MEDICAL ETHICS

- Doing good
- Not doing harm
- Autonomy
- Justice

DISCUSSION POINT 2

- Three labs in the UK have been granted licences to work on embryonic stem cells and their potential for tissue repair. Two of those labs are licensed to produce embryos by cloning (i.e. by nuclear transfer)

- What conclusions do you reach concerning these issues?
- How did you arrive at your conclusion?
- Is ethical theory relevant to these issues?
- Does ethical theory help us to think?
- Can we find specific or general help in the Bible?

WHAT IS IT TO BE HUMAN?

'We are stardust

We are golden

We are billion year old carbon'

Joni Mitchell

Biologically we are mammals – we
differ from mice in only a few
hundred genes

Specifically human features

- Higher level cerebral activity
- Rationality
- A high level of self-consciousness
- Moral awareness
- Spirituality
- Made in 'The image of God'

STATUS OF EARLY EMBRYO

Two views

1. Early embryo is a human person (and for Christians, that includes carrying the image of God)
 - Destroying an embryo is regarded in the same light as abortion – and is opposed with equal vigour ('pro-life')

STATUS OF EARLY EMBRYO

2. Early embryo is not a human person (but has potential to become one)
 - Some people holding this view are nevertheless opposed to abortion (difference in status between pre- and post-implantation embryos)

QUESTION

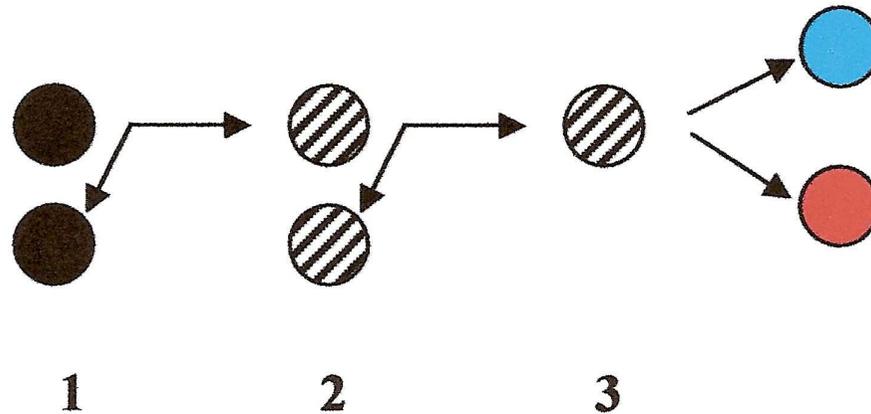
- Does our mandate to heal include the creation of embryos to be sources of stem cells?
- Your answer will partly depend on what you think about the early embryo

- Our religion / worldview / personal philosophy may affect our decision
- But it's not a case of Christian versus non-Christian: there are differing views amongst Christians
- Some of those differences stem from different ways of interpreting the Bible, *eg* Psalm 139
- Private versus public morality

RECENT DEVELOPMENTS MAY
HELP TO SOLVE THE DILEMMA

ADULT/NON-EMBRYONIC STEM CELLS

- Located at specific sites in the body
- Function is to replace/repair specific types of tissue
- Potential limited to a small range of cell types



1. Stem cell divides to give one new stem cell and one precursor cell
2. Precursor cell divides
3. One precursor cell divides to give two new (differentiated or partly differentiated) types of cell

Cartoon to show a very simple sequence from stem cell to precursor cell to two differentiated cell types.

ADULT/NON-EMBRYONIC STEM CELLS

- Limited potential *in vivo* suggests limited range of applications
- However, some adult stem cell types may *transdifferentiate*.
- Clinical trials
- June 2006: stem cells from testes
- Oct 2006: 'liver' from cord cells

QUESTIONS

- Will the use of adult / non-embryonic / amniotic stem cells eliminate the need for embryonic stem cells?
- Opponents of the use of embryonic stem cells certainly hope so
- Should we specifically support this research?
- ‘Watch this space.’

AND HERE'S ANOTHER DILEMMA

- Stem cell experts seek licence to create human-rabbit embryo

The Guardian October 5, 2006

- Human-cow chimeric embryos for stem cell research

PHGU Newsletter November 7, 2006

- HFEA decision: applications rejected for the time being, pending public consultation and full review

www.hfea.gov.uk January 11, 2007

EXERCISE

- Think of some more moral mazes in Bioethics.
- Where do we find guidance to help us think Christianly about them?

TAKE YOUR PICK!

- Food and crop GM
- Cloning - non-human and human
- Human fertility
- End-of-life issues
- Human genetics
 - Testing
 - Screening
 - Selection
 - Modification

HUMAN GENETICS

- Testing (and selection)
- Screening (and selection)
- Modification

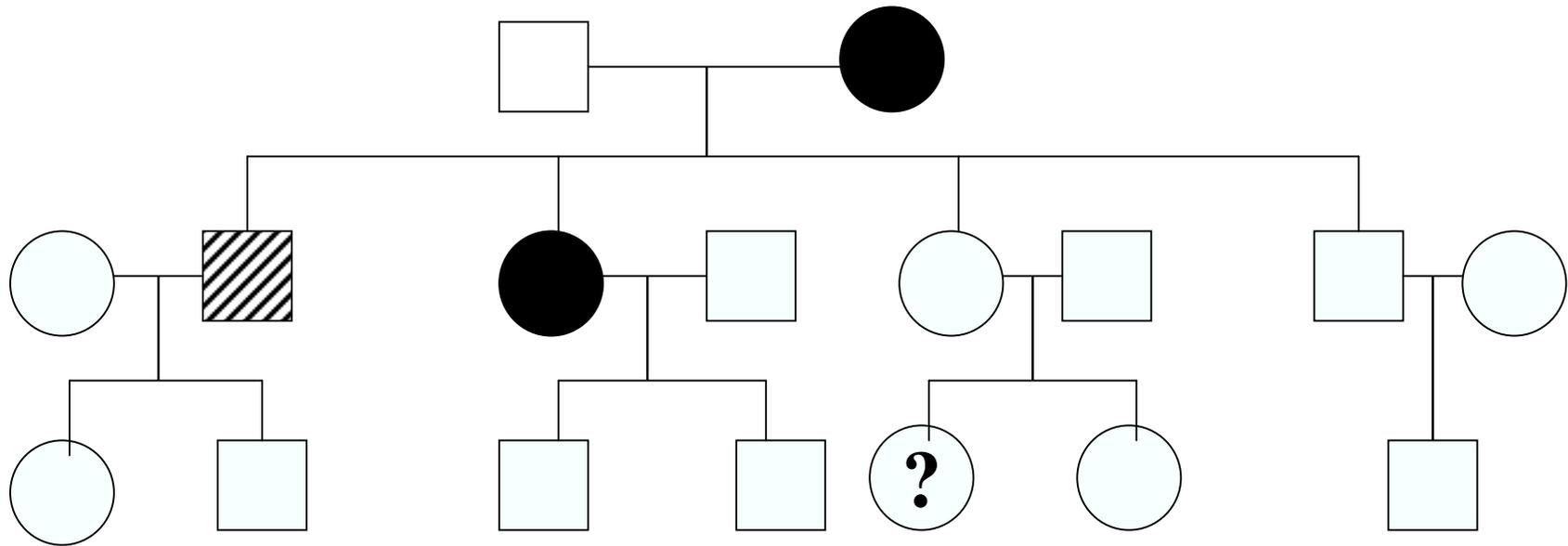
GENETIC TESTS

- *Ca* 950 tests for individual genetic conditions
- *Ca* 300 more at research stage

GENETIC TESTS

- **Adults**
 - Diagnosis; 'Pre-patient'; Carrier status; Family / marriage planning
- **Children**
 - Diagnosis; Family 'dynamics'
- **New-borns**
- **Foetuses**
 - More requests for termination
- **Pre-implantation embryos**

AUTOSOMAL DOMINANT PEDIGREE



TESTING EMBRYOS

- Genetic disease
- Saviour siblings
- Positive and negative selection

MORE QUESTIONS

- What else should we be allowed to select?
- Are there shades of eugenics?

SCREENING

- Testing of groups or populations, eg all new-borns
- 'Bar-code' babies
- *Gatacca*

GENETIC DIAGNOSIS AND TESTING: SOME ISSUES

- 'Geneticisation' of medicine
 - Especially in pregnancy
- Attitudes to disabled
 - Concepts of normality
 - Discrimination
 - Marginalisation

GENETIC DIAGNOSIS AND TESTING: MORE ISSUES

- Philosophical attitudes
 - The ‘gene for’ fallacy – the false idea that Genes_{us} – genetic reductionism
- Commercial attitudes
 - Insurance
 - Employment

GENETIC INFORMATION

- Privacy
- Confidentiality
- Who should know?
- What about children?

GM OF HUMANS

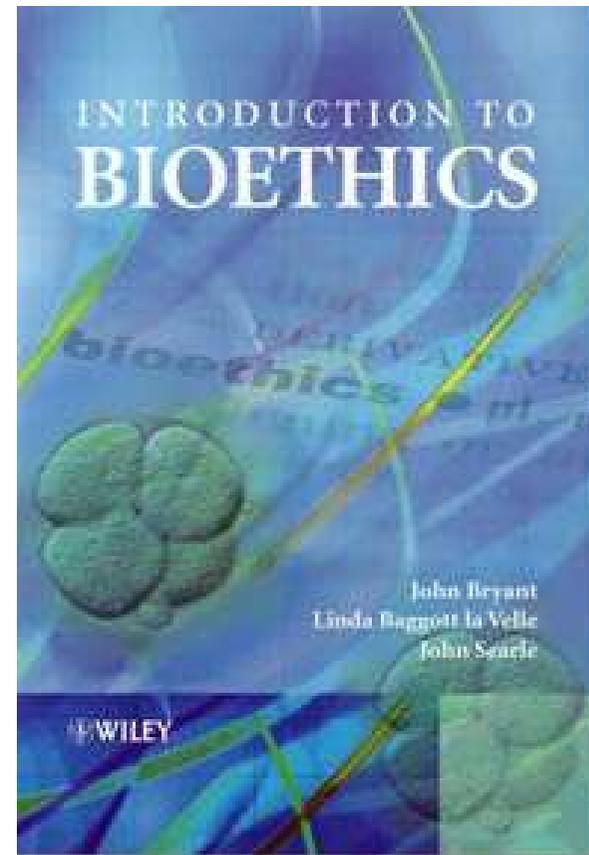
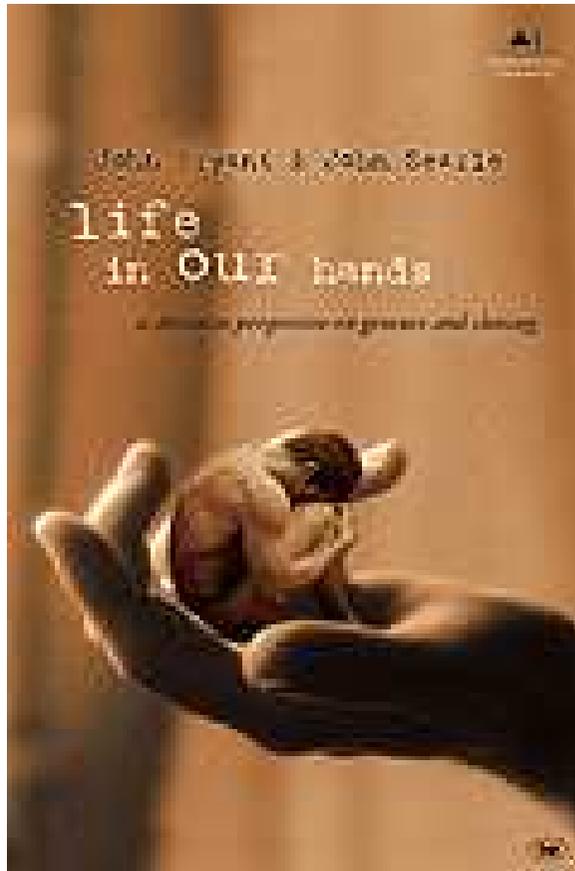
- Somatic (non-heritable) gene therapy
- Germ-line (heritable) gene therapy
- Gene 'doping'
- Genetic enhancement
 - Borderline between therapy and enhancement may be hard to discern
- Designer babies

AND THE FUTURE ... ?

'We live in a political world'

THE CHALLENGE

- To live authentic Christian lives, based firmly on Biblical principles, in this changing world
- To think Christianly about the issues of the day
- If appropriate, to become involved in influencing the decision-makers



Suggested website:
www.bioscience.heacademy.ac.uk/resources/ethicsbrief.htm