

Wrexham 2006

# Teaching ethics – a case study approach

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# Approaches

- Case studies/ scenarios
- Debate and role-play
- Newspapers
- TV programmes, inc. Structured activity based on news footage
  - Clips from other programmes
  - Knowing what's on and when

# Case studies & scenarios

- Case studies allow real-world framing of otherwise abstract ideas
- As such, can have a key role in opening up complex issues for students
- May be genuine or fictional (though latter work best when as close to real as possible)

# Case study (1) – Carl and Julie

Carl is a twenty-one year old builder. He is engaged to Julie, and she has recently discovered that she is expecting their first child. In 2001, Carl's maternal grandfather died from Huntington's disease (HD), a late-onset degenerative disease of the nervous system. HD is inherited in a dominant fashion; if you do have HD, you have a 50% chance of passing it on to your children. Carl's mum has decided not to take the test to find out if she got the faulty copy from her father, but now that he is expecting to be a father himself, Carl is keen to find out if there is any risk that he has passed on the condition.

*What are some of the issues at stake for Carl and Julie? What are the consequences of taking the test, or deciding not to? If you were Carl, what would you do?*

# Genetic screening

Carl can know his status and prepare accordingly

*But* his mum has made a conscious decision not to know, hence potential harm to her

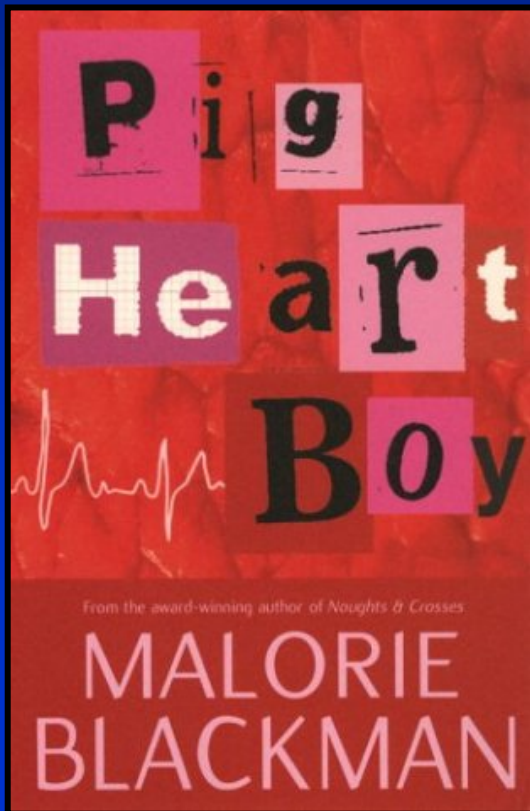
Other consequences:

- Carl's relationship with Julie?
- Carl's relationship with baby?
- Implications for Carl's work?
- Insurance implications, etc

# Case Study (2) - Pig-Heart Boy

Get one of the students to read out a short section of "Pig-Heart Boy" by Malorie Blackman, e.g. First three pages of Chapter 3

Good starter for ethical issues, move on to discuss the science



# Case study (3) - Wendy & Paul

Wendy and Paul Carter have been married for twelve years. They would love to have children. Unfortunately, Wendy had breast cancer when she was 28 and although the chemotherapy has brought total remission from the disease it also caused damage to her ovaries that has made her infertile.

Paul and Wendy have been on the waiting list at their local IVF clinic for a number of months awaiting donated eggs to try and have a baby. At present, however, there are 200 potential mothers seeking each donated egg and the couple know that realistically they may never receive a donated egg via the normal channels.

Researchers at the hospital attached to the IVF clinic have recently gained permission to carry out experimental procedures using eggs harvested from aborted fetuses. The technique is controversial, but for Paul and Wendy it may represent their only chance to receive a donated egg.

# Case study (3) - Wendy & Paul

*What are the issues involved in this case?*

- Feel free to include aspects of the case that are likely to be issues for other people, your contributions need not be limited to your own opinions.



# Case study (3) - Wendy & Paul

- This case
  - content is fictional but based on real ideas and statistics
  - used in Session 1 of 6 in bioethics series
  - used as vehicle to introduce more philosophical aspects

# Case study (3) - example comments

## Deontological (first principles)

- Does a foetus have any rights?
- Does the “mother” have any rights or say in the upbringing of their “grandchild”?
- Should people be allowed to manipulate nature for their own gain?

## Consequentialist (outcomes)

- What would be the psychological effects on the child?
- If the child turns out to be “defective” then who is culpable?
- What is the likelihood of success?

# Making ethical decisions

*Principles of Biomedical Ethics* (Beauchamp & Childress) propose 4 principles:

1. **Non-maleficence** Don't do harm
2. **Beneficence** Do good, act in the best interests of others
3. **Autonomy** Maximise freedom for individual or community
4. **Justice** Treat equal cases equally and unequal cases differently

# Genetic screening

Carl can know his status and prepare accordingly (**Autonomy, Beneficence**)

*But* his mum has made a conscious decision not to know, hence potential **harm** to her

Other **consequences**:

- Carl's relationship with Julie?
- Carl's relationship with baby?
- Implications for Carl's work?
- Insurance implications, etc

# Use of the rainforest

- UN Conference on Environment and Development
- Roles, representatives of:
  - Government in country
  - A logging company
  - Indigenous forest-dwellers
  - Subsistence farmers in the area
  - Cattle ranchers
  - A multinational chemical company
  - UN commission on Sustainable Development

# Other suitable role-play scenarios

- Pre-implantation Genetic Diagnosis - “Saviour sibling”
- Roles, e.g.:
  - specialist doctor
  - sick child
  - parents
  - genetic counsellor
  - pro-life campaigner
- Task set, might be:
  - Write scientifically accurate sketch (as team), or
  - Research role ready for improvised TV show

# Role-play: limitations

- Unlikely to have roles for all members of the class
- Can partly be avoided by giving a non-playing 'role' to the majority, e.g. as ethics committee members or conference delegates who need to make decision
  - involved in debate
- Doesn't work well "off the cuff"
  - need script and/or time to prepare

# TV footage - why?

- Familiar visual medium
- Can be used to:
  - convey information
  - as discussion starters
- Clips save time over full programme



# What sort of programmes?

- Horizon, e.g.
  - Who's afraid of designer babies? (2005)
  - The world's first face transplant (2006)
- Drama documentaries, e.g.
  - Born with two mothers (Channel 4, 2005)
- Other drama, e.g.
  - The Simpsons (e.g. Trash of the Titans)
  - The family man (BBC1, 2006)
- News clips
  - topical
  - pithy summary

# Holby City (BBC1, 6<sup>th</sup> Sept 2006)

- Pete has kidney failure and is being offered the last opportunity of a transplant, using a kidney from a pig
- What **ethical objections** might some people have about this operation?
- What **scientific difficulties** might there be concerning an operation of this sort?
- If you were Pete's friend would you suggest that he accepts the doctor's offer? Why/why not?

# Xenotransplantation

Example comments include:

- “He’s going to die anyway, so why not give it a try”
- “Yuk!”
- “What about animal rights?”

These comments are brought into discussion at relevant point in subsequent discussion

# What is xenotransplantation?

- Transplantation of animal cells, tissues or organs into another species
- Also called xenografting
- Source animals considered for transplants to humans
  - Baboons
  - Pigs
- Xenotransplantation of organs is NOT possible at present

# Arguments for xenotransplantation

- There is a persistent and increasing shortage of human donor organs for transplantation
- People are dying on the waiting lists
- Organs currently become available unexpectedly (e.g. RTA) – xenotransplantation would allow proper planning of operations
- Animal cells, hormones, heart valves etc are already used – what's the difference?
- The patient is going to die anyway – why not give it a try?

# Ethical arguments against

- “Yuk factor”
- Animal welfare
- Economic arguments
- Psychological factors
- Genetic modification

# Scientific arguments against

- Three significant scientific problems
  - Immunological
  - Physiological
  - Risk of infection

# Immunological problems

- The body's immune system is designed to fight "foreign" material
- At least three processes can contribute to rejection of a xenograft
  - Hyperacute rejection (HAR)
  - Acute vascular rejection (AVR)
  - Chronic rejection



# Physiological problems

- Hard to study due to rejection issues
- Although similar in size, pig and human hearts work in different sites, at different blood pressures and temperatures
- The heart is a relatively simple organ, other organs are much more complex, esp. liver
- “The physiology of transplanted cells is likely to present a significant obstacle to the successful implementation of xenotransplantation”

*Dobson & Dark (2002)*

*report on behalf of UKXIRA*

# Infection risks

- Risk of interspecies infection via xenograft
- Would be risk not only to patient, but also to family and wider community
  - Risk assessment is therefore more complex than “He’ll die without it, so we may as well try”
- Particular concern over PERVs  
Porcine endogenous retroviruses

# Knowing what's on and when

For scheduled programmes:

- Radio Times, etc
- [www.trilt.ac.uk](http://www.trilt.ac.uk)

*Television and Radio Index for Learning and Teaching*



The screenshot shows the TRILT website homepage. At the top, there is a navigation bar with links for 'About us', 'News and events', 'Channel profiles', 'FAQ', and 'Search TRILT'. The main header features the TRILT logo (a circular emblem with 'B.U.F.V.C.' and 'T.R.I.L.T.' text) and the title 'TRILT: Television and Radio Index for Learning and Teaching'. Below the header, the main content area is titled 'TRILT: Television and Radio Index for Learning and Teaching'. On the left, there is a 'TRILT Login' section with a link to 'terms and conditions' and a button that says 'Access TRILT -> Click here to search the TRILT database'. The central text welcomes users and provides a list of features: more than 300 TV and radio channels with data from 1995 onwards, autoalert emails, enhanced selected records, highlights, and a million records added annually. On the right, there are links for 'Frequently asked questions' and 'Obtain copies of television programmes for education use via the BUFVC', along with a link to download a PDF of the TRILT publicity leaflet. At the bottom left, there is a link to 'Terms of Access'.

About us | News and events | Channel profiles | FAQ | Search TRILT

**TRILT: Television and Radio Index for Learning and Teaching**

**TRILT: Television and Radio Index for Learning and Teaching**

**TRILT Login**

By using this site, you are agreeing to the [terms and conditions](#).

**Access TRILT ->**  
Click here to search the TRILT database

**Welcome to TRILT**

**You are logged in to TRILT. Click [here](#) to search the database.**

The Television and Radio Index for Learning and Teaching is the best source of UK television and radio data on the web.

- Listings for **more than 300** TV and radio channels with data from **1995 onwards**
- **Autoalert emails** for forthcoming programmes matching your searches
- **Selected records** are **enhanced** with extra information, including credits and keywords
- **Highlights** programmes which are available via the BUFVC's [Off Air Recording Back-Up Service](#)
- Over a **million records added** to TRILT every year
- Data available at least **10 days** before transmission

[Frequently asked questions](#)  
learn more about TRILT and how to use the database.

[Obtain copies](#)  
of television programmes for education use via the BUFVC.

Download a PDF of the [TRILT publicity leaflet](#)

[Terms of Access](#)



University of  
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# Knowing what's on and when

For scheduled programmes:

- Radio Times, etc

- [www.trilt.ac.uk](http://www.trilt.ac.uk)

*Television and Radio Index for Learning and Teaching*

- [www.tvgenius.co.uk](http://www.tvgenius.co.uk)

But, news is not known in advance

- Today programme (Radio 4)
- BBC website, esp. Health and Science/Nature sub-sections

# Getting hold of programmes & clips

- Off-Air Recordings
  - recorded at time of transmission
  - requires Educational Recording Agency licence
- Back-up [www.bufvc.ac.uk/services/offair.html](http://www.bufvc.ac.uk/services/offair.html)  
*British Universities Film & Video Council*

# Using News stories in Bioscience

- Think of as many ways as possible that you might link one or more of the following news stories to your teaching of:
  - (a) basic bioscience and/or
  - (b) bioethics?

Last Updated: Friday, 23 December 2005, 08:29 GMT  
[E-mail this to a friend](#) [Printable version](#)

## S Korea cloning research was fake

Research by South Korea's top human cloning scientist - hailed as a breakthrough earlier this year - was fabricated, colleagues have concluded.



Dr Hwang has been hailed as a hero in South Korea

A Seoul National University panel said the research by world-renowned Hwang Woo-suk was "intentionally fabricated", and he would be disciplined.

Dr Hwang said he would resign, but he did not admit his research was faked.

Hwang cloning scandal

Last Updated: Wednesday, 15 March 2006, 09:52 GMT  
[E-mail this to a friend](#) [Printable version](#)

## Six taken ill after drug trials

Six men remain in intensive care after being taken ill during a clinical drugs trial in north-west London.



The healthy volunteers were testing an anti-inflammatory drug at a research unit based at Northwick Park Hospital when they suffered a reaction.

The six are being treated at Northwick Park hospital

Relatives are with the patients, who suffered multiple organ failure. Two men are said to be critically ill.

TGN1412 drug trial

Last Updated: Wednesday, 30 November 2005, 17:46 GMT  
[E-mail this to a friend](#) [Printable version](#)

## Woman has first face transplant

Surgeons in France have carried out the first face transplant, it has been reported.



The woman had lost her nose, lips and chin after being savaged by a dog.

The operation lasted several hours

In the controversial operation, tissues, muscles, arteries and veins were taken from a brain-dead donor and attached to the patient's lower face.

Face transplant

# Face transplants

## Technical

*Availability of donor face?  
Functionality of transplant?  
Plan B if rejected?*

## Psychological

*For patient?  
For potential patients?  
For wider society?  
Face and identity?*



## Ethical

*Risks v Benefits  
Motivation?*

## Lifestyle issues

*Media intervention?  
Cancer risk?*

## Immunological

*Rejection rates?  
(30-50% over first 2-5 yrs)  
Harmful effects of immunosuppressive drugs?*

# Face transplants

bbc.co.uk Home TV Radio Talk Where I Live A-Z Index Search

30 October 2006  
[Accessibility help](#)  
[Text only](#)


Science & Nature TV & Radio Follow-up

horizon

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You are here: [BBC](#) > [Science & Nature](#) > [Horizon](#) > [Recent Horizons](#) > [The World's first Face Transplant](#)


## Face Transplants - yes or no?



**Isabelle Dinoire** was the first patient to receive a facial transplant. Now a team at London's Royal Free Hospital led by plastic surgeon Peter Butler is preparing for the first facial transplant in the UK.

Is this the right time to be doing face transplants? Not everybody agrees. Find out more about the different viewpoints by watching the clips below and then decide: **face transplants - yes or no?**

 **Dr Nick Parkhouse** 1:57  
Consultant Plastic Surgeon at the McIndoe Surgical Centre in East Grinstead, West Sussex.  
▶ PLAY

 **Dr Peter Butler** 1:54  
Consultant Plastic Surgeon at the Royal Free Hospital in London.  
▶ PLAY

▶ NEXT: Views from people with facial disfigurements

horizon



# TGN1412 Drug trial

## Design of clinical trials

*Phases of a trial*



## Regulation of clinical trials

*Role of the MHRA?  
Role of ethics committees?  
Recruitment of volunteers?  
Location of trial?  
Liability?*

## Science of this trial

*What are monoclonal antibodies?  
What are T lymphocytes?  
What are CD28 markers?*

## Use of animals in research

*Is this an example of the weakness or animal models?  
Would there be lots more disasters without animal expts?*

# Hwang cloning scandal

Science of stem cells



Fraud

Ethics of stem cells research

Research ethics

Peer review and publication

Therapeutic cloning

# Helpful websites

e.g. [www.bioethicsbytes.wordpress.com](http://www.bioethicsbytes.wordpress.com)

## BioethicsBytes

Multimedia resources for teaching bioethics

Home    What are BUFVC and TRILT?    What's BioethicsBytes all about?

### Gene therapy - Horizon "Trial and Error"

October 18th, 2006

The excitement about gene therapy received a serious blow in September 1999 with the death of Jesse Gelsinger. At the time 18 year old Jesse was a participant in a clinical trial for gene therapy to overcome a genetic condition Ornithine Transcarbamylase (OTC) deficiency. This documentary "Trial and Error" from the BBC's flagship Horizon series tells the story of that trial and what went wrong. Although the tone is sometimes unduly sensationalist, it is an excellent introduction to gene therapy. The story is complicated by serious flaws in the conduct of the clinical trial, which can also make this a good vehicle for discussing appropriate procedures in biomedical research.

This episode is from the 2003 season of Horizon. It is frequently repeated on digital TV, particularly the UKTV Documentary channel. It is also available as an off-air recording from the BUFVC (TRILT identifier 001D70CE). Watching the whole episode is time well spent. However, a four and a half minute clip starting at 4:40 with the voiceover "A medical revolution had begun..." and continuing through interviews with French Anderson and Dusty Miller explains the principles of using viral vectors for delivering genes into cells. [A transcript of the programme](#) is available on the BBC website.

No Comments » | [Gene therapy](#), [Clinical trials](#), [TV \(documentary\)](#) | [Permalink](#)

Posted by bioethicsbytes

#### ABOUT THIS SITE

[What are BUFVC and TRILT?](#)  
[What's BioethicsBytes all about?](#)

#### CATEGORIES

- [Animal experimentation](#) (1)
- [Bioethics Briefing](#) (1)
- [Book](#) (3)
- [Clinical trials](#) (1)
- [Euthanasia](#) (1)
- [Film](#) (2)
- [Gene therapy](#) (1)
- [Human cloning](#) (3)
- [Human tissue usage](#) (3)
- [Play](#) (1)
- [Podcast](#) (3)
- [Research Ethics](#) (1)
- [Stem Cells](#) (7)
- [Streamed video](#) (1)

# Helpful websites

e.g. [www.beep.ac.uk](http://www.beep.ac.uk)

The screenshot shows the homepage of the BioEthics Education Project (BEEP). At the top, there is a navigation bar with the BEEP logo, the text "BioEthics Education Project", a search box, and a link to "ADVANCED SEARCH". Below this is a secondary navigation bar with links for "Home", "Teachers", "About BEEP", "Contact Us", "Site Map", and "Admin". The main header features a banner image with a frog, a hand, and a DNA helix, with the word "welcome" in large letters. Below the banner, the text "You are here: Home" is displayed.

**MENU**

- Home
- What is Bioethics?
- The Human Genome
- Genetic Technology
- Human Health
- Environmental Ethics
- Animal Ethics
- Science Ethics
- News Archive
- Teaching with BEEP
- A-Z list
- Glossary
- Search By Syllabus
- Discussion
- Contact us

**Print Friendly Page**

**University of BRISTOL**

**wellcome trust**

## Welcome to the BioEthics Education Project

BEEP is here to support the teaching and learning of bioethics.

**Here students can find:**

- information on a wide range of bioethical issues
- activities and challenges
- online discussion to help you practice argument

**And teachers can find:**

- teaching resources matched to A level syllabi
- peer support through online discussion

**HELP BEEP IMPROVE:**

Give us your feedback on how we're doing

**STOP PRESS!**

Major BBC series on Climate Change

**LATEST NEWS**

- 15-Jun-06 Night flights twice as bad for environment
- 13-Jun-06 Why fast foods are bad, even in moderation
- 13-Jun-06 Alzheimer's vaccine

**START** What is Bioethics?

# Helpful websites

e.g. [www.at-bristol.org.uk/cz/Default.htm](http://www.at-bristol.org.uk/cz/Default.htm)

The screenshot shows the homepage of the CitizenScience at Bristol website. The header includes the site logo, navigation tabs for Home, Events, Teachers, Students, and About Us, and a search bar. A central banner reads "Welcome to Citizen Science" with a sub-header "Citizen Science is designed to be instrumental in engaging young people and teachers in discussion about bio-medical science issues that affect society today". Below this are several featured sections: "About Citizen Science" (with a photo of people), "Teacher resources" (with icons of a book, hand, globe, and mouse), "Events programme" (with a photo of a woman), "Previous events" (with a photo of a poster), "For Students" (with a photo of children), "Keep up to date" (with a form for Name, Age, and School), "Rainforest medicines" (with a photo of eyes), "Alcohol pub quiz" (with a photo of a pub quiz), and "Postcard gallery" (with a photo of postcards). A sidebar on the right titled "What's new?" lists recent updates: "ED05: View our 'Life in the Frame' entry", "Rainforest Medicines", "Explore At-Bristol trail [PDF]", and "CPD for Citizenship teachers". The footer contains logos for the University of Bristol and Wellcome Trust.

CitizenScience  
@ Bristol

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Home Events Teachers Students About Us

Welcome to Citizen Science

Citizen Science is designed to be instrumental in engaging young people and teachers in discussion about bio-medical science issues that affect society today

About Citizen Science

Teacher resources

Events programme

Previous events

For Students

Keep up to date

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Postcard gallery

What's new?

[ED05: View our "Life in the Frame" entry](#)

[Rainforest Medicines](#)

[Explore At-Bristol trail \[PDF\]](#)

[CPD for Citizenship teachers](#)

University of BRISTOL

wellcome trust

# References

- **Blackman M. (1997)** Pig-Heart Boy, Corgi Books
- **Southgate C. (2002)** The use of the rainforest as a test case in environmental ethics, in *Bioethics for Scientists* (Ed: Bryant, Baggott la Velle and Searle)
- **Willmott C. (2004)** Ethics and Bioethics *Bioethics Briefing No. 1* (LTSN/ Higher Education Academy Centre for Bioscience), available online at <http://www.bioscience.heacademy.ac.uk/resources/ethicsbrief.htm>