



Part of a report from *Teaching Ethics to Bioscience Students*, 1st November 2006, Wrexham

In the second of the parallel sessions attended by 12 delegates, John Bryant and Dónal O'Mathúna facilitated the discussions, which were focussed mainly around the following topic areas:

- ☐ Ethical theory/philosophical background
- ☐ Assessing student performance
- ☐ Class sizes
- ☐ Responses to the embedding of ethics in school curricula

Ethical theory/philosophical background

Participants shared their views and experiences of the place of ethical theory and philosophy in teaching ethics to bioscience students:

- All contributors were in favour of including discussion about the processes of making ethical decisions. Without this it was felt that ethical decision making would appear to be simply a range of opinions rather than the reaching of a defensible position. It was recognised it was appropriate for students to learn how to argue and to think critically, and they would need support in developing these skills.
- Ethical frameworks would enable individuals to put a name to the basis for the decision making and this would make it more likely they could apply the same process in different situations.
- A small number expressed some concern about whether ethical theory can be put across effectively by biologists. It was suggested that biologists make it explicit to students that they are being introduced only to an overview of ethical theory. It was also said that if ethical theory is introduced by biologists then appropriate parallels with natural law can be made, which students should find helpful.
- Some felt that staff needed to have a deeper knowledge of ethical theory than would be required by students.
- Many participants outlined their use of case studies as a useful pedagogic tool, providing contexts through which different ethical theories and positions can be exemplified and made explicit. *The [Bioethics Briefings](#) provide a small number of cases studies but there is the potential for much greater sharing of suitable case studies and details of the ethical theories they illustrate) via the [Teaching Ethics to Bioscience Students Special Interest Group](#) (Ethics SIG) – the Centre for Bioscience will seek to facilitate this.*

- Others has experience of philosophy experts contributing to teach – in some cases this had worked very well (particularly when courses were first developed), in other situations it had worked less well. If 'experts' are employed they must be capable of engaging with Bioscience students, using relevant examples and not being too abstruse.
- Might biologists also contribute to philosophy?

Assessing student performance

- Some concerns were raised that there was a tendency for product rather than process to be assessed when it comes to ethics and bioethics. For example, if students have been asked to provide a presentation or poster on ethics then it was more likely their communication skills were assessed rather than their critical thinking or ethical decision-making; although the consensus was the latter would be preferable in the majority of cases.
- A number of examples of current assessment practice were aired, these included:
 - Essays
 - 700 word broadsheet style article /1000 word broadsheet style article
 - 1 page summary article of a case study presenting the arguments and including 3 references they have made use of
 - Group presentations

An element of peer-assessment had been incorporated in some of the above

The broadsheet style articles were reported to be very good at discerning critical thinking (and effective communication).

Again the Ethics SIG could provide a suitable mechanism for examples of effective assessment to be shared.

Recommended resources:

BEEP BioEthics Education Project: Teaching Argument

Accessible at <http://www.beep.ac.uk/content/282.0.html>

This page outlines the use of Stephen Toulmin's model (1984), which has become popular in supporting school students' argumentation skills.

Cottrell, Stella (2005) *Critical Thinking Skills: Developing Effective Analysis and Argument* (Palgrave Study Guides). Palgrave Macmillan, 208 pp. ISBN: 1403996857

Class sizes

There was some evidence of changing practice/modification of assessment as result of increasing class sizes.

It was suggested that increasing numbers tend to dictate that ethics is embedded more-widely across the curriculum as well as/ instead of specific ethics modules. It may be preferable for

ethical thinking to be covered early on in a programme so students are prepared when they encounter ethics later on (perhaps via the tutorial system, where this capacity exists). The likelihood is that more bioscience staff will need to become involved in ethics teaching - this raises a related issue of staff confidence in their ability or preparation to teach ethics, and potentially therefore, a need for specific training. Changes in schools (below) may mean future students are familiar with ethical decision-making when they enter university.

Responses to the embedding of ethics in school-level curricula

- Changes to GCSEs and A levels in 2006 and 2008 respectively, will place greater emphasis on thinking critically and scientifically (at the expense of biological content). Also, differences in the knowledge and experience of public school educated pupils and pupils educated at grant-maintained schools are set to become greater as a result of public schools tending to opt for the International GCSE ([IGCSE](#)) and the International Baccalaureate Diploma ([IB Diploma](#)).

It was agreed these would have implications for university level ethics teaching and the situation would need monitoring closer to 2010 when these pupils enter university.

Some school students currently encounter ethics/bioethics within citizenship classes. Some teaching of the skills of argumentation is also appearing in schools.

Discussions also briefly touched on ethics and sports science.