Ethical Matrix

Introduction

The Ethical Matrix is a versatile tool for analysing ethical issues. It is intended to help people make ethical decisions, particularly about new technologies. It is an aid to rational thought and democratic deliberation, not a substitute for them. This document summarises the philosophy behind the Ethical Matrix, explains how it can be used, evaluates its strengths and limitations and suggests how to find out more about it.

The matrix was devised by Professor Ben Mepham, Director of the Centre for Applied Bioethics at the University of Nottingham and a member of the Food Ethics Council. It has been further developed in several Food Ethics Council publications, including our reports on veterinary drugs, novel foods, farming animals for food and the future of British agriculture.

What is the Ethical Matrix?

The ethical issues that arise in food and farming defy simple resolution. For most people, no single concern such as maximising net benefits to the people concerned, protecting the environment or respecting human rights overrides all others. Indeed, there is often disagreement about whether some of the entities affected by a decision have ethical standing at all. For instance, do animals have rights and does the environment have an intrinsic value, or are they just means to human ends?

The Ethical Matrix sets out a framework to help individuals and groups to work through these debates in relation to a particular issue. It is designed so that a broader than usual range of ethical concerns is aired, differences of perspective become openly discussed, and the weighting of each concern against the others is made explicit. The matrix is based in established ethical theory but, as far as possible, employs user-friendly language.

Philosophy

The Ethical Matrix uses a ‘principled’ approach to ethics. This kind of approach was first developed by two US medical ethicists (Beauchamp and Childress), who aimed to help doctors and nurses deal with the ethical issues they faced in their daily work. The main traditions of philosophical thought sometimes conflict. For instance, the utilitarian imperative to maximise the net benefits of an action may clash with the deontological requirement to treat people with dignity.

An approach resting on prima facie principles recognises that it is difficult, indeed sometimes absurd, to try to make decisions based only on one ethical theory. Instead of arguing that one theory ultimately overrides the others, it translates them into a series of conditional principles. Unlike the out-and-out ‘isms’, these principles allow that a stronger case on one principle may outweigh a weaker case on another in particular circumstances.

The Ethical Matrix is based on three ethical principles, respect for wellbeing, for autonomy and for justice. These three principles are not mutually exclusive and they cannot be said to exhaust every legitimate ethical concern. However, most common ethical concerns can be expressed in terms of wellbeing, autonomy or justice. Arguably, they capture key elements of the ‘common morality’, the norms and assumptions that underpin contemporary society. It follows that the common morality is good starting point for discussing ethical issues in food and agriculture. In a sense, it is the lowest common denominator – because few people would disagree with the principles of respect for wellbeing, autonomy and justice – so it can provide a meeting place for different perspectives. But it is important to note that the common morality is the just the starting point, it is not where ethical reasoning ends. The principles provide reference points against which agreements and disagreements, factual uncertainties and differing assumptions can be identified and tested.

Theory

According to the approach adopted here, respect for wellbeing corresponds to issues prominent in utilitarian theory, which characteristically employs a form of cost/benefit analysis to decide on 'right action'. Most famously articulated in the eighteenth and nineteenth centuries by Jeremy Bentham and John Stuart Mill, it can be epitomised as 'The greatest good for the greatest number'. While this might seem a worthy objective, naive forms of utilitarianism suffer from several defects e.g.:

They depend on predictions of outcome (which might be wrong) and (fallible) assessments of who or what counts in the cost/benefit analyses.

They can be held to justify gross inequality (as long as the majority 'are happy') or even crime (stolen money distributed to the needy).

Goods and harms are often incommensurable (how can we weigh the safety of a hair shampoo against the suffering of animals used to test it?).

Respect for autonomy corresponds to the notion of 'rights' advanced in the eighteenth century by Immanuel Kant, which appeals to our responsibilities and duties to 'treat others as ends in themselves': in essence, the Golden Rule: 'Do as you would be done by'. For Kant, ethics was about respecting others as individuals, not calculating costs and benefits (i.e. in contrast to utilitarianism, irrespective of outcome).

A major defect of this approach taken in isolation is that there is no rule by which to decide how to prioritise duties, e.g. the duties to protect others from harm and to tell the truth - if, as may happen, telling the truth is a cause of harm.

Respect for justice corresponds to Rawls' notion of 'justice as fairness'. Rawls writes in ‘A Theory of Justice’:

"Justice is the first virtue of social institutions, as truth is of systems of thought. A theory, however elegant and economical, must be rejected or revised if it is untrue; likewise laws and institutions, no matter how efficient or well arranged, must be reformed or abolished if they are unjust".

However, there is a problem in defining what fairness means: e.g. does it mean that goods should be distributed according to need, or ability, or effort?

In practice, all these theories are likely to contribute, to varying degrees, to people's attitudes on what should be done in specific circumstances. It seems unlikely that anyone could consistently act as an out-and-out utilitarian; or as an out-and-out Kantian. Instead, each of us blends these theories (consciously or unconsciously) with intuitive responses and cultural influences to achieve what has been termed a 'reflective equilibrium'.

Uses

The three principles of respect for wellbeing, autonomy and justice form the columns of the matrix.

The rows consist of the 'interest groups' caught up with the issue in question. These might include different groups of people, such as consumers and food producers, and also non-humans, such as farm animals or the environment.

Which interest groups are included in the matrix depends partly on the issue at hand. One criterion is that they should possess 'ethical standing'. In other words, they are subjects of ethical consideration in their own right, and not just means to other ends. Of course, there is sometimes disagreement over whether some organisms (like plants) have ethical standing. But if such a view is represented in society, it should be reflected in the Ethical Matrix. Thus, in the common morality, ethical standing usually extends to animals and to plants and the ecosystem.

So, it is appropriate to include a broad range of interest groups in the Ethical Matrix, lest legitimate concerns are ignored. As one works through the matrix, it should become apparent if a particular interest group was agreed to be irrelevant.

But there are practical limits to the number of different interest groups and concerns that can be tackled in any debate or deliberation. This is because the purpose of the Ethical Matrix is to help us consider each interest group in relation to each of the three principles. If there are three interest groups and therefore three rows, then the matrix would have nine cells; if there were six rows it would have eighteen different concerns to weigh up

Given these practical constraints it has usually been found possible to limit the Ethical Matrix to four interest groups. A generic version of the matrix, which can be adapted to address a range of different issues in food and agriculture, is shown below. Each cell specifies the main criterion that would be met if a particular principle (e.g. justice) were respected for a particular interest group (e.g. people in the food industry).

Respect for	WELLBEING (Health & welfare)	AUTONOMY (Freedom & choice)	JUSTICE (Fairness)
PEOPLE IN THE FOOD INDUSTRY	Income and working conditions	Freedom of action	Fair trade laws & practices
CITIZENS	Food safety & quality of life	Democratic, informed choice	Availability of affordable food
FARM ANIMALS	Animal welfare	Behavioural freedom	Intrinsic value
THE LIVING ENVIRONMENT	Conservation	Maintenance of biodiversity	Sustainability

At its simplest, the Ethical Matrix is just a checklist of concerns, structured around established ethical theory. However, it can also be used as a means of provoking structured discussion. The interest groups, the weighting of each cell and even the appropriateness of the principles may all be challenged or modified by those using it. At best, it helps those involved in making a decision to put themselves in the shoes of others. At the very least it ensures that more than the usual narrow range of concerns gets an airing.

Applications

The Ethical Matrix has been used to provide a structure for academic papers and reports, it has been adapted for use as a teaching tool, and it has been used in participatory research and policy processes. Links and references for these uses of the matrix are available on the Food Ethics Council website. www.foodethicscouncil.org.

According to Matthias Kaiser and Ellen Marie Forsberg, who have used the Ethical Matrix in consultations about the future of the Norwegian fishing industry, its main strengths are that it:

Does not constrain users to follow a single ethical theory, such as utilitarianism, or to prioritise one principle;

Focuses deliberation onto key concerns;

Makes abstract principles concrete and relevant to people who may well have little interest in ethical theory as such; and

Highlights the different implications of a particular decision for different stakeholders and helps decision-makers to find a solution in light of conflicts, rather than giving a false impression of consensus.

If the Ethical Matrix were to be used mechanistically – if each cell was scored and the positive or negative outcomes aggregated to determine the decision – then its limitations would be legion. However, when used to assist in deliberation and decision-making, and not substitute for it, many have found it a useful tool.

Resources

There are several detailed examples of the Ethical Matrix on the Food Ethics Council web site. It is central to our reports on veterinary drugs, novel foods, farming animals and the future of British agriculture. Our leaflet on drug use in farm animals provides a very brief example. Hard copies of these reports can be obtained by contacting the Food Ethics Council office (£10, £2 concessions, subject to availability).

The Ethics and Animal Farming web site (www.ethicalmatrix.net) – a collaborative project between the Centre for Applied Bioethics at the University of Nottingham and Compassion in World Farming Trust – is an interactive learning resource based on the Ethical Matrix. It encourages students and teachers to think through the ethics of science within the biology curriculum. It is aimed to appeal to students aged 16-20.

The following is a selection of academic books and papers that refer to the Ethical Matrix or provide useful background information:

Mepham, B (1996) Ethical analysis of food biotechnologies: an evaluative framework. In Mepham, B (ed) *Food ethics*. Routledge, London: 101-119.

Mepham, B (2000) A framework for the ethical analysis of novel foods: the ethical matrix. *Journal of Agricultural and Environmental Ethics* 12: 165-176.

Beauchamp, T L and Childress, J F (2001) *Principles of biomedical ethics (5th edition)*. Oxford University Press, Oxford.

Kaiser, M and Forsberg, E-M (2001) Assessing fisheries – using an ethical matrix in a participatory process. *Journal of Agricultural and Environmental Ethics* 14, 192-200.

Mepham, B (2001) Novel foods. In Chadwick, R (ed) *Concise encyclopedia of ethics and new technologies*. Academic Press, San Diego: 300-313.

Chadwick, R et al. (2003) *Functional foods*. Springer, Berlin.

Schroeder, D and Palmer, C (2003) Technology assessment and the 'ethical matrix'. *Poiesis Praxis* 1, 295-307.

Mepham, B (2005) Bioethics for the biosciences: an introduction. Oxford University Press, Oxford.