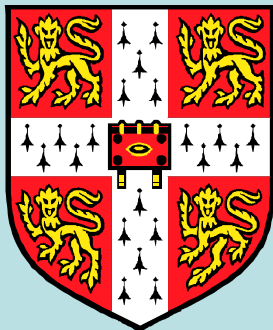


Public and stakeholder needs and expectations for animal welfare education and research



Donald M. Broom

Centre for Animal Welfare and Anthrozoology

Department of Veterinary Medicine

University of Cambridge

U.K.

dmb16@cam.ac.uk

First, a general question. Is most of life about competition with others and do most of our decisions, concerning treatment of people and of individuals of other species, relate to competition?



No, most actions involve:



benefit to,

tolerance of,

benefit from,

or cooperation with others.

Moral systems have evolved, in humans and other species, because cooperation and tolerance are successful strategies.

(Broom D.M. 2003)

Sustainability

A key question about any production system is whether it is sustainable?

A system or procedure is **sustainable** if it is acceptable now and if its effects will be acceptable in future, in particular in relation to resource availability, consequences of functioning and morality of action.

An animal usage system might be unsustainable because it involves so much depletion of resource that this resource will become unavailable to the system.

Or it could be because a product of the system accumulates to a degree which prevents the functioning of the system.

However, the first effect which makes a system unsustainable is one which the general public find unacceptable for any reason.

Which consequences of acts or system functioning could be unacceptable immediately or later?

Harms to the persons involved in production, e.g. injury or other poor welfare.

Harms to other people, for example loss of a resource or poor welfare.

Harms to other animals in that their welfare is poor.

Harms to the environment of people or other animals and plants.

Who are the people or animals for whom some degree of poor welfare may make a manufacturing or animal production system unsustainable?

The public everywhere. Not just stakeholders (financial interest in activity).

Because of increased efficiency of communication, adverse effects on any people or animals in the world can have this effect:

- people poisoned by insecticide in China,
- pollution of a river by manure in Thailand,
- people catching Creutzfeldt Jacob disease from food, initially in U.K.,
- sheep on an Australian ferry dying on the way to Saudi Arabia,
- slaughterhouse cruelty to animals and consumer health risk in the U. S. A.,
- chickens with avian influenza killed by inhumane methods in Indonesia.

All have been headline news in world newspapers - viewed as uncivilised.

What are the consequences of media reports which the public find unacceptable?

Consumers may refuse to buy products from the company or country where the harm has occurred.

Examples of events which led to consumers refusing to buy animal and other products include:

tuna sales drop sharply because dolphins caught in tuna nets,

all French products avoided when calves were kept in small crates.

all Australian product sales drop because of sheep dying in large numbers during transport,



With information about major animal production systems, at present the trend is towards increasing vegetarianism. People also entirely avoid certain products. This has a big cost that the industries involved cannot ignore.

Consumers drive legislation and retail company codes.

E.U. legislation is forced by consumer/voter pressure.

At present in many parts of the world, supermarket companies and restaurant chain companies are being forced by their customers to act in a moral way in relation to:

human health,
animal welfare,
environmental impact of production system,
fair income for poor producers.

Farmers throughout the world who wish to sell to retail companies are having to comply with their production standards.

For example:

pig producers in Brazil have to comply with the standards of Tesco and
egg producers in Thailand have to comply with the standards of MacDonald's.

Quality of food products

The concept of quality of goods that people buy has been changing.

Quality includes:

1. immediately observable aspects
2. consequences of consumption
3. ethics of the production method.

1. In the past, food products were mainly chosen because of price and taste.
2. If they cause people to become sick, the quality is considered poor.
For some consumers, if they make you fat, the quality is considered poor.
For others, if they have added nutrients, the quality is considered to be better.
3. Other factors considered by purchasers include:
the welfare of the animals used in production,
any impact on the environment, including conservation of wildlife,
ensuring a fair payment for producers, especially in poor countries,
the preservation of rural communities so that all do not go to towns.

Quality of food products

Food safety

The public demands that food be safe, i.e. without damaging levels of toxins or pathogens.

In order to achieve this, in the European Union the European Food Safety Authority (EFSA) has been set up.

Part of the work of the scientists who sit on the Panels and Working Groups is risk assessment. One Panel deals with animal disease and animal welfare.

The Member States of E.U., like the U.S.A., have extensive checking schemes for animals before and after slaughter as well as other food products.

Quality of food products

In order to take account of the ethics of the production method, products must be traceable.

Traceability

If foods can be traced, it is less likely that toxins, other poor quality materials or pathogens will be in them.

If animals can be traced, the sources of animal disease outbreaks are more likely to be found and places where injuries, or other causes of poor welfare, occurred are more likely to be found.

Legislation ensuring traceability is important.

Sustainability and food quality: topics to consider

Human health

Human diet

Acceptability of genetic modification

Animal welfare

Environmental effects, 1 pollution
2 conservation
3 carbon footprint

Efficient use of world food resources

Fair trade (considering poor producers)

Preserving rural communities

Here are some examples

Human Health

Salmonella in eggs and meat.

Campylobacter in chicken carcasses.

Avian influenza H5N1, H1N1.

Bovine spongiform encephalopathy - BSE.

The BSE outbreak in Europe and now in North America, was initially mis-managed in several countries, including the U.K. One consequence has been the development of the risk assessment approach.





Human diet

Concern about human diet has large effects on animal production.

In particular, saturated fats increase risks of heart disease and farm livestock are a major source.

As a consequence, fish production is increasing rapidly.

The production of fish which consume vegetable matter, rather than predators like salmonids which have to be fed fish products, is likely to increase the most.

Farmed fish production is already greater in value than open water fish production and will overtake it in weight of fish within a few years.

Acceptability of genetic modification

Genetically modified plants are not accepted in some countries because of ethical concerns (should living things be changed so dramatically?) and because protein changes can cause allergies.

Genetic modifications in animals can:

- benefit the animals, e.g. confer disease resistance,
- help to treat human disease, e.g. blood clotting factor in sheeps' milk,
- develop new products for other purposes,
- increase efficiency of animal production.

Some people accept none of these. Few people accept the last two as sufficient justification for genetic modification. A major reason is that animal welfare may be poorer.

Environmental effects: conservation

Agriculture generally reduces biodiversity.

Where wild or semi-wild areas are cleared for animal production, substantial harm can be done to populations of animals and plants.

However, the creation of significant areas of nature reserve is demanded by the public in most countries and preservation of wildlife can result in greater income through eco-tourism than would have been possible by farming.

Purchase of land to conserve natural resources can often stimulate local economies and lead to a sense of regional pride which would not have existed if low level animal production had continued.

Antibiotic use and use of other medicines can cause health and environmental problems. A recent urgent problem is a cattle medicine killing vultures.

The numbers of vultures in India have declined by 97% in 12 years. This is a consequence of poisoning by the painkiller Diclofenac. The Indian Government recently banned its use.

Pollution resulting from animal agriculture can be harmful in relation to water supplies, loss of plant nutrients, greenhouse gas production and increased human disease.

The animal producer should pay any costs of pollution.

Wherever possible, animal waste should be efficiently recycled.

Efficient use of world food resources

What can be done to exploit existing resources better using animal production?

The most important use of animals for food production is to eat food which humans cannot eat.

Hence grazers are more important than pigs or poultry which may compete with humans for food.

This can be set against any adverse consequences of methane production.

Preserving Rural Communities

Animal agriculture is associated with many traditions and ways of life for people.

Many human communities exist as they do as a consequence.

Animal Welfare

The welfare of an individual is its state as regards its attempts to cope with its environment.

This includes both the extent of failure to cope and the ease or difficulty in coping. Welfare varies over a range from very good to very poor.

Welfare refers to all coping mechanisms: physiological, behavioural, many feelings, responses to pathology.

Most feelings are adaptive.

Feelings, such as pain, fear, eating pleasure, sexual pleasure, etc. are components of the mechanisms for attempting to cope.

Feelings are an important part of welfare.

What is natural does not define welfare. Needs depend on biological function.

Health:

That part of the state of the individual which is to do with pathology and attempts to cope with it.

This refers to body systems, including those in the brain, which combat pathogens, tissue damage, or physiological disorder.

All of this is encompassed within the broader term welfare so health is an important part of welfare, not something separate.

Welfare topics:

Genetic selection of animals

Housing and management

Transport and handling

Stunning and slaughter

Mutilations/ operations

The animal production industry in the United States is belatedly becoming aware of these changes.

One consequence is that producers, consumers and Government agencies are requesting scientific information about animal welfare.

How has the public concern about animal welfare in the United States etc. been received by: the animal production industry,
the retail food industry,
the animal protection societies,
government

I can look at this as an impartial university scientist who has never belonged to any animal protection or animal user organisation.

the animal production industry - until recently, failure to see world change,
the retail food industry - much quicker to act, different standards in
different countries!,
the animal protection societies - good to obtain real information,
e.g. videos of real events, bad to just ‘sling mud’, (at scientists),
government - good information, research, must be independent of industry.

What is now needed in the U.S.A.? A national animal welfare committee.

An impartial group of scientists, including veterinarians, who can provide unbiased information. Role for AVMA if vets can be unbiased.

Veterinary, animal science and biological education has not kept pace with these developments, so there is an urgent need for animal welfare courses to be designed and taught in universities.

Professionals such as veterinarians also need Continuing Veterinary Education courses in animal welfare.

Animal welfare should be taught to veterinary and animal science students in a separate course.

1. Because the scientific subject is interdisciplinary so integrated lectures are needed.
2. The students need guidance on the interrelations of the ethics and the science.
 - Understand deontological and utilitarian approaches.
 - Separate scientific evaluation from ethical judgement.

(Animal welfare is not an evaluative discipline.)

What is the best sequence for courses?

1. An early introduction to some of the problems - year 1 first term.
2. Basic science courses including: sensory, adrenal, brain function, behaviour, immune system function, pathology, animal husbandry systems.
3. Animal welfare course:
 - concepts
 - ethics
 - scientific assessment - the wide range of physiological, behavioural, etc. measures of welfare including pain, fear, other positive and negative feelings
 - integration of measures, long/short-term, magnitude of good or poor welfare
 - species housing, handling, transport, disease, mutilations, slaughter topics
 - effects of: genetic selection, human contact, include fish, wild animals.

David Morton and I have, for 15 years run a two week Animal Welfare Course in Cambridge in September.

Content: science, ethics and law.

Next course: 12th to 25th September 2010.

Contact: organiser Dr Anthony Podberscek alp18@cam.ac.uk

There are research requirements for scientific assessment of all current genetic selection, housing and management procedures that might affect the welfare of animals.

General Conclusions

1. In relation to animal production throughout the world, there will be increasing demand from consumers for the avoidance of adverse effects on human welfare, animal welfare, the environment, fair trade and maintaining the viability of human communities.
All of these aspects are now part of product quality.
2. Increasing the efficiency of production in a socially responsible way can be achieved by developing systems where animals consume plant material, rather than using animal feed that could be food for humans. The feeding of animal material to animals, such as farmed fish, is inefficient and may damage the environment.
3. Genetic selection and management for high productivity may lead to more disease and other aspects of poor welfare.
4. All aspects of sustainability and product quality in its wider sense, should be part of teaching to veterinary, animal science and biology students.
5. No veterinary degree should be accepted unless a full course on the science of animal welfare and relevant aspects of ethics and law has been taught.

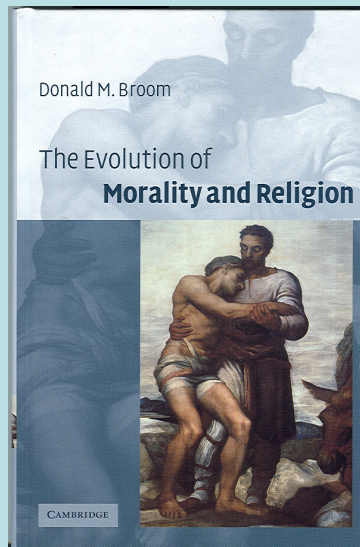
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