

# The Potential Role of Local Ethical Committees in the Moderation of Experiments on Animals in Britain

D.P. Britt

*D.P. Britt is with the Department of Veterinary Parasitology, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA.*

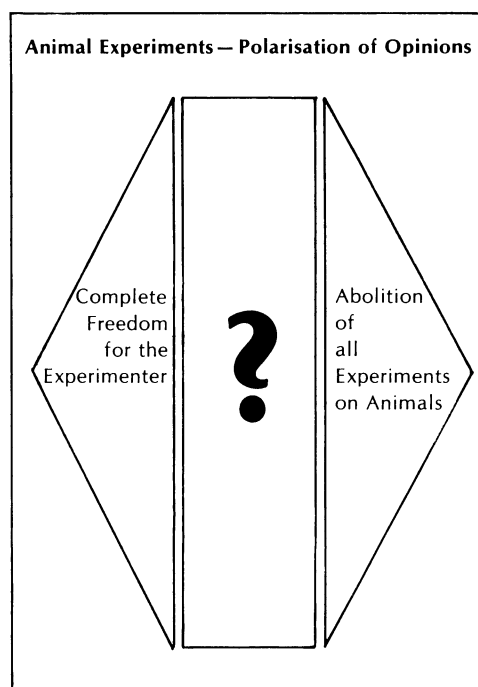
Scientists working with laboratory animals in Britain are made aware forcibly that a serious ethical dilemma surrounds the use of animals in experiments. Certain vociferous sections of the community press the issue on the attention of the general public and media sources tend to propagate views expressed by the most extreme parties, while neglecting coverage of mature, rational opinion. It is, perhaps no bad thing for the scientific community to be frequently reminded to take a responsible attitude to the use of animals but recent overt, even illegal, activity on the part of extremist animal protectionist groups has encouraged a regrettable polarisation of viewpoints with some scientific institutions seeking to withdraw still further from public scrutiny and accountability.

## What Is the Basis of "the Ethical Dilemma?"

On the one hand is the view that scientists should have complete freedom in what they do with animals; on the other that all experiments involving animals should be abolished. The first view treats laboratory animals like any other tool used by the scientists in pursuit of new knowledge or insights. The other ascribes rights and privileges to even the lowliest of experimental animals at least equivalent to those equivalent to those enjoyed by (or meant to be enjoyed by) humans. In between is room for many shades of opinion and the majority of the British public who think at all about such matters would hold views somewhere within this centre field (Fig. 1).

Because "experiments" cover feeding trials and simple observational studies where, arguably, little or no suffering occurs, the concern of the public at large is

FIGURE 1



directed chiefly at experiments in which animals are clearly exposed to pain or distress. In general, the more obvious and severe the suffering, the greater is public disquiet, tempered to some extent by the aims of the experimenter.

The number of scientists in Britain who hold the extreme view that they should enjoy *carte blanche* in the use of animals is probably small. Moreover, there is a growing awareness that good science depends on avoidance of unnecessarily stressful experiments and on maintaining the highest standards of animal care.

The rival extreme view is held by a small but voluble minority.

For holders of either of these extreme views the ethical *dilemma* does not really exist. Animal experimentation is either totally wrong, or always justifiable. Although untroubled by pangs of conscience both groups are frustrated in the realisation of their ideals. Patently experiments with animals are proceeding (more than 4 million animals are used annually in Britain alone) and again in Britain as is widely known, scientists do *not* have complete freedom; they are subject to Government legislation and have to work within laws administered by the Home Office.

The legislation imposes certain restraints.

Experimenters must:

- (i) be licensed (implies competency);
- (ii) be certificated for use of particular procedures/species (implies competency);
- (iii) work only on approved, prescribed premises;
- (iv) keep records and submit annual returns to the Home Office; and
- (v) be subject to inspection by H.O. inspectors.

Is the legislation adequate? Those opposed to animal experiments believe not. A growing number of concerned scientists also recognize the inadequacies in practice. Proposals shortly to be de-

bated in Parliament promise more comprehensive and tighter control of animal usage but better laws and more policing can only improve the situation marginally. For real progress what is required is a shift in attitude so that ethical considerations come to weigh equally with other factors in experimental design and implementation. Dr. S. Vine (1977) formerly Chief Animal Inspector in the Home Office, has stated that the one area in which the inspectorate and the Secretary of State cannot make decisions is in ethical matters. In one sense, indeed, existing legislation acts against good ethical concern, since having received the stamp of approval in the form of a license and appropriate certificates the experimenter may feel that as long as he does not contravene the law he is absolved from further consideration of the ethics of his actions. And in the last analysis what an individual experimenter does or does not do is very largely his own decision.

It is at this point that some people feel that a carefully formulated ethical code should intervene to aid decision making. This code would supersede individual views and, ideally, would reflect the attitudes of the public at large — attitudes which may, of course, change with time.

The points of ethical concern which must be taken into account in any projected work with animals can be summarized in 4 questions:

- (i) Is infliction of pain and/or stress justified?;
- (ii) If yes, how much can be inflicted? (Can it be measured?);
- (iii) What is the basis for justification?; and
- (iv) *Who* decides?

Measurement of pain or stress (in question (ii)) is not strictly an ethical matter but it is a serious practical problem which must be addressed if ethical advice is to be effective.

### *The Swedish Experience of Ethical Committees*

It was consideration of questions like those above that led a group of scientists at the University of Uppsala in Sweden to conceive the idea of a peer review body comprising scientists and others to evaluate proposals involving experimental animals before they were implemented, from the point of view of possible ethical objections.

As a result of the pilot scheme launched in Uppsala in 1976, legislation to make such committees mandatory was passed by the Swedish Parliament only three years later. Thoughts along similar lines in Britain are much influenced by the Swedish scheme.

A significant early step was agreement on a system of categorising experiments in terms of the pain or stress to which animals are likely to be exposed and deciding at what level intervention by the ethical committee should occur. The categories are listed below (Table 1). Experiences to date show that more than 70% of projects involve experiments in categories I and II which are exempt from ethical scrutiny. This is important in revealing to the public that a large majority of experiments inflict minimal suffering and in reducing the committee's work to manageable levels.

Members of the committees are research workers from relevant scientific disciplines, animal/laboratory technicians

or laymen — equal numbers of each. Total membership is large (minimum of 15 persons) but each project is examined by a group of only three members, one from each category.

When presenting a project for ethical scrutiny, the proposer approaches a scientist on the committee with knowledge of his area of work and the scientist appoints the other two members on a rotational basis. They meet together in the proposer's laboratory to discuss the project. Certain criteria of evaluation have to be satisfied but the keynote to success of the scheme seems to be the informality of the process, with the three-man committee offering advice on modifications to the protocol (if they feel this is desirable) without censure. Table II shows the sort of questions which the committee asks.

A similar scheme is now in operation in at least one Australian University (Ross, 1981) and a somewhat different version of peer review is presently mandatory in Canadian institutions. However, there are serious objections to peer review as a measure of control, neatly summarised by M.W. Fox, Director of the Institute for the Study of Animal Problems, Washington, D.C. "Accountability is supposedly upheld via the peer review system for research grant awards and approval, but unfortunately this system is inadequate for many reasons notably (a) professional etiquette (one does not criticize one's peers or superiors, especially

**TABLE 1 Swedish Ethical Committees — Categories of Experiments**

*I	Observational or feeding experiments, injections or blood-sampling.
*II	Acute experiments performed under general anaesthesia without recovery of the animal.
III	Surgical procedures under general anaesthesia with recovery and temporary post-operative pain or indisposition.
IV	All experiments performed on non-anaesthetised animals (except those in Category I).
V	All experiments performed on non-anaesthetised animals curarised or equivalent.

(\*Exempt from ethical scrutiny)

**TABLE II Swedish Ethical Committees – Examination of Projects**

(i)	Is the project scientifically sound?
(ii)	Can the problem be solved without using animals?
(iii)	Can the work be modified to involve experiments of lower category than those suggested?
(iv)	How will the animals be cared for post-operatively?
(v)	What measures will be used to reduce intensity and duration of animal suffering?

since they may some day be reviewing your own research proposal); (b) supposed societal value of performing a given experiment is compounded and confounded by other values which in no way justify animal sacrifice or suffering. These include academic status, tenure, scientific recognition, additional income and prestige for the university or research institution; and (c) the value of adding further knowledge to a particular discipline (no one wants their speciality or life's endeavors de-valued or discredited). This is very different from valuing such knowledge in terms of benefitting society" (Fox, 1981).

It is hard for individuals and even groups from a single institution to ignore the "other values" to which Fox alludes. Probably the true worth of ethical review bodies will only accrue when they reflect a wide spectrum of public opinion in their membership, but this is particularly contentious and it is doubtful if the scientific community in Britain is ready as yet to agree to such major intervention.

### *Ethical Committees in British Institutions*

In 1980, the Universities Federation for Animal Welfare circularised twenty leading research institutions in Britain to sound out attitudes to the idea of local ethical committees (LECs) being promoted in future Government legislation on laboratory animal welfare. The five questions asked (reproduced here by permission of the Director of UFAW) appear in Table 3 below. Answers from the 16 respondents were almost uniformly unfavourable to the idea. In particular, not one answered question (iv) affirmatively.

In spite of this coolness on the part of the scientific community, a number of influential bodies have accepted the potential value of LECs and it remains possible that future Government legislation will favour their adoption.

There appears to have been no determined action to establish such bodies in British universities but a group of scientists in Liverpool has become established with the aim of heightening the

**TABLE 3 Ethical Committees – UFAW Questionnaire, 1980**

#### 5 Questions:

(i)	Do you have a formal scientific planning/research committee?
(ii)	Do you have any internal committee with similar function to LEC?
(iii)	Do you think LECs have a role to play in the planning/control of scientific investigations?
(iv)	Do you think LECs should improve the welfare of animals kept for scientific purposes?
(v)	Can you see any scientific/administrative, etc. objections to LECs?

ethical awareness of all users of animals within the University. Eventually, it is hoped, no new projects will be introduced without due attention having been paid to ethical implications of the proposed work. One way in which this aim may be accomplished is through the establishment of a committee along the lines of the Swedish scheme.

### References

- Fox, M.W. (1981) Experimental Psychology, Animal Rights, Welfare and Ethics. *Psychopharm Bull* 17(2), 80-93.
- Ross, M.W. (1981) The ethics of experiments on higher animals. *Soc Sci Med* 15F, 51-60.
- Vine, S. (1977) "The Welfare of Laboratory Animals" (discussion reported on p. 126) UFAW, Potters Bar, U.K.

### Sentient Spiders?

Some animals including lizards, crabs, spiders, and insects when caught or injured by a predator will shed a tail or limb in order to escape.

It has been reported by Thomas Eisner and Scott Camazine of Cornell University in the June Proceedings of the National Academy of Sciences (no. 11) that some spiders can also detach a limb after being stung by a venomous insect such as a phymatid, honeybee, or wasp. The orb-weaving spider from the genus *Argiope* as well as spiders from three other families are capable of shedding a limb as a defense against poisonous venom. When a spider has been bitten its response of shedding the affected limb occurs within seconds, before the venom can reach the body. Common house spiders do not have this ability.

Spiders are highly sensitive to the venom components serotonin, histamine, phospholipase A<sub>2</sub>, and melittin and it is these components that induce the spider to detach a limb. It is also known that these same components cause pain in humans. It is not known whether the neurological basis for detecting these venoms is similar in both spiders and humans.

The autotomous capability of animals is considered to be a reflex, however, because the same components that cause pain in humans cause spiders to separate themselves from a limb could imply that these animals feel pain or pleasure. One question that can be raised as a result of these findings then is whether or not the spiders detach their limbs consciously, perhaps as a response to pain.