

Animal experimentation

Surgeons may be involved in experiments using animals by virtue of their expertise and research interests. We have recently analysed, in broad terms, the debate surrounding animal experimentation¹; five major points emerged. First, the argument that animal experimentation represents cruel exploitation of other species is effective because the defence of necessity tends to be inconclusive in the face of determined logical attack. Second, militant extremists cannot make a serious impression without tolerance or support from moderate opinion. Third, the debate must take account of society's much wider exploitation of human, animal and non-living resources. Fourth, the scientific community may be too secretive about its activities which are often no more harsh than good standards of animal management elsewhere. Finally, those who work with animals should be quite clear of the value and ethics of their practices, and should participate conscientiously in, and not be resentful of, external regulation. Achieving this must involve some dialogue with the public at large and with supporters of animal welfare.

The philosophical issues involved in this debate may be used to highlight areas of common ground between the animal welfare movement, the scientific community and the individual research worker. Individual viewpoints need consideration, because within a general philosophical code morality remains an individual concern. Moderate and extreme views exist on both sides. There is little to be gained from an appeal directly to animal welfare militants; one cannot communicate with ethical egotism based entirely on pre-reflective intuition. A better approach to extremists is to isolate them from public sympathy.

Animal experimentation encompasses disparate practices. Some experiments may indeed be indefensible through design or motivation, so our apologetics must be adapted to support only the good. Research activities must be viewed in the context of a wide range of animal welfare concerns. Although animal welfare literature is usually ostensibly unambiguous and against any animal exploitation, suggestions of compromise and inconsistency appear. Regan is only 'unclear' whether a benign use of animals in research is possible² and seems uncritical of hunting if practised in primitive civilizations³; Midgley appears to condone attempts to teach primates sign language⁴, while Singer⁵ dismisses pets from consideration as subjects for 'liberation'.

We must avoid debating 'rights'. This is a contentious issue even amongst animal welfare protagonists. Rights are difficult to work with and tend to be human-oriented and easily devalued, inflated rhetoric leading to increasingly trivial or exotic claims. Sumner⁶ plots a retreat from ethical systems of 'absolute rights' through looser 'natural rights' (of autonomy), both considered intrinsically defective, to insubstantial 'utilitarian rights'. There is no point invoking rights whose very existence is suspect.

Animal experiments are easily portrayed as exploitative and cruel². These terms are emotive; exploitation may imply moral good as well as evil. Cruelty is judged on subjective propositions regarding sentience in animals which are impossible to substantiate. Those who use different estimates of sentience in defence of animal experiments⁷ become no less contrived and unreadable than their opponents. Sentience may in any case be conceded as a characteristic of any animal and the proper threshold for 'cruelty' should be set to include not only pain, but other forms of deprivation and diminished welfare opportunities².

Regan integrates the concept of deprivation into an overall 'environmental ethic'². This puts man in his place among his fellow animals, but proves awkward for animal welfare apologists in that it embraces inanimate objects generally excluded from the rights theories which dominate antiexploitation reasoning. Exploitation of mineral or natural resources constitutes deprivation in this ethic. Deprivation is a natural phenomenon. Although most mammals use only restrained or token violence to settle disputes⁵, it may be overlooked that lost or unsecured dominance in the wild can lead to real, even fatal, deprivation.

It is only in intact balanced ecosystems that species are not harmful to their environments. The dominance that man has established over the environment does

not confer upon him freedom of action². 'If we survive ... we are doomed to agriculture and industry'⁸. We inherit populations of animals domesticated or commensal with civilization. We cannot relinquish the responsibilities of stewardship and should not romantically dream of renouncing our dominance. We must manage – and deprive.

The environmental ethic of our time is relevant to research activity. Progress alters the interpretation of moral codes⁹, not necessarily to become ever more onerous. Biomedical research workers must keep the 'contract' between science and society² under review. The public's legitimate expectation of progress in medicine has to be balanced by animals' legitimate expectation of reasonable treatment. The scientific community must demonstrate that the accusations of *routine* and *unrestricted* harm to animals which pervade the animal welfare literature are untrue. To this end we should be more open about our mostly moderate activities and regulate our practices to extirpate abuses in both laboratories and sources of supply. The motivation for research must be examined more critically; considerations related to career progression of the researcher are not valid reasons for experimentation. The animal welfare lobby accepts research which learns from illness in humans or animals, but the moral boundaries between treatment and experimentation are vague¹.

Openness and self-regulation are not enough. Those who are not involved in research activities may perceive incompletely or inaccurately the nature and consequences of the process. It is essential to ensure that those who are concerned about our activities understand what we do. '(Our) description of the terrain in which we move must be made in terms of the possibilities for movement that it offers – if the description of the terrain is to make our movements in it intelligible'¹⁰. Science is an evolutionary process which builds on existing knowledge by modifying existing systems. Reproducibility in experiments is essential and models are necessary to achieve this. There are intrinsic inadequacies with any model; animals are not humans, organs are not organisms, cultured cells are not like cells *in vivo*. Replacement of whole animal experimentation with other techniques may be appropriate but this is often deceptive as numerous biochemical reagents and tissue culture products are derived from animals. Mathematical modelling is the most animal-sparing of alternatives, but this discipline is embryonic. Murray¹¹ states that 'mathematics can never provide the complete solution to a biological problem on its own' and makes an important observation applicable to models in general: 'If the use of a model stimulates experiments – even if the model is subsequently shown to be wrong – then it has been successful'. To extend the argument further in the context of an overall environmental ethic, even inorganic chemistry and computer modelling lead eventually to animal deprivation by mining, industrialization and environmental contamination. In contrast, it can be argued that the majority of animal experiments are sufficiently non-invasive that the issues at stake are those of animal husbandry common to many other human activities, such as the ownership of pets or agriculture.

In summary we come again to five important points. First, the research community must appeal to the thinking public to isolate extremism from tacit general support. Second, the case against animal experimentation is not absolute or unified. Third, there is a need for a unifying environmental rights ethic, developed with the full participation of the scientific community. Fourth, experiments involving animals must form part of a coherent research programme designed to resolve genuine problems and to cause minimum deprivation within society and nature. Finally, medical researchers must be committed to education, openness and regulation of their activities.

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