
Naturewatch

Eye on Animal Welfare

The House of Lords report on

Animals in Scientific Procedures

*The report on Animals in Scientific Procedures (ASP), published in July 2002 by a House of Lords Select Committee, is the most thorough-going review of existing legislation since the implementation of the Animals (Scientific Procedures) Act of 1986. It has been welcomed by both scientific and animal welfare communities, as it recognises the need for significant parts of the Act to be upgraded. In part this is because the science has evolved – particularly through genetic engineering. Just as significantly, society itself has also changed: as another recent Lords report noted, ‘People now question all authority, including scientific authority’. Every effort must therefore be made to encourage greater transparency and openness. **We urge the Government to implement the recommendations in the Lord report speedily, since we believe that they are good for animal welfare and good for science in 21st century British society.***

The Act enshrined two sets of principles which are fundamental to animal welfare. One is a cost/benefit analysis: does the benefit to humans outweigh the harm to animals? This means, for example, that procedures of substantial severity may only be performed if they are likely to be of major significance and there are no alternatives. The other is the implicit adoption of the 3Rs – the principles of Reduction, Refinement and Replacement – so that no animal experiment is permitted if there are non-animal alternatives. Any new procedure which is subsequently found to reduce the impact on animal welfare for the same (or greater) scientific yield must be implemented.

Many leading scientists praise the 1986 act. For example, Professor Nancy Rothwell of the University of Manchester said, “I am very pleased to be in a country with high standards of animal welfare and strong legislation”. Professor Colin Blakemore commented that “There is ... universal respect for [the strictness of the legislation]. I do not know of anyone who would want to change that situation.”

This should not be a cause for complacency, however. There is a perception that animal research laboratories often flagrantly abuse the welfare of animals. Les Ward, the Director of Advocates for Animals, voiced a widespread concern: “It would seem that every time an investigator from an anti-vivisection organisation enters a laboratory something is discovered.” The *exposé* of Huntingdon Life Sciences which appeared on Channel 4 in March 1997, *It's a Dog's Life*, is the most notable

example. Ward then asked, “Is that the tip of an iceberg or [are they] just isolated incidents?”

Unfortunately, occasional illegal activities by a few small elements of the animal rights movement are being used as an excuse to justify the secrecy surrounding animal experiments. While the fortress mentality of Huntingdon Life Sciences is an understandable response, it adds to the perception that, behind the barriers, acts of cruelty are being perpetrated on animals which the public must be prevented from ever seeing. This belief is widespread and damaging, and contributes to the growing sense of public unease with the nature of science.

These are the major recommendations of the report:

- **Section 24 of the 1986 act (the ‘confidentiality clause’), should be repealed. (#28)** The presumption should be that information should be made public.
- **A Centre for the 3Rs should be set up, consisting of a small administrative hub which co-ordinates research units in existing centres of academic excellence. (#24)** As a visible commitment by the scientific community towards searching for improvements and, alternatives to animal experiments, it would engender increasing public confidence in the role of scientists within society.
- **The Home Office Inspectorate should be subject to periodic review, by a body other than the Inspectorate itself. (#14)** While the scientific community appears to be happy with the Inspectorate, its failure to prevent or detect the abuses found by undercover investigations shows that a more robust approach to the inspection process is needed.
- **A welfare assessment of all new strains of animals used in experiments ... should be made as a matter of course. (#26)** This is a much-needed response to genetic engineering, and also covers strains from conventional breeding.
- We also emphasise the importance of environmental enrichment. It is a theme in the report which we believe deserves greater priority, both for reasons of animal welfare and for scientific legitimacy.

We examine each of these in turn in the remainder of this briefing.

‘[The Lords] report is extremely sensible and realistic and should be used as the blueprint for future government policy’

Dr. Mark Matfield, Research Defence Society

Repealing the Confidentiality Clause

Section 24 of the 1986 Act states that

A person is guilty of an offence if otherwise than for the purpose of discharging his functions under this Act he discloses any information which has been obtained by him in the exercise of those functions and which he knows or has reasonable grounds for believing to have been given in confidence. [A(SP)A 24]

While commercial confidentiality and the personal security of people engaged in animal experiments are important concerns, the actual usage of the clause has been much more far-reaching (ASP 9.11-9.18). Indeed, the view in the ASP report is that:

We consider the current levels of secrecy surrounding animal experiments to be excessive. [ASP 9.13]

As the House of Lords Select Committee Report on Science & Society noted, this malaise is symptomatic of a wider culture. They comment that

The administrative culture of the United Kingdom is notoriously secretive... This has left the field wide open to allegations of conspiracy and cover-up. [SS 2.45]

Nowhere is this more true than in animal experiments.

This perception is fuelled by comparatively frequent *exposés* by undercover investigations by organisations like NAVS, BUAV and Uncaged. Since this is an era in which the public are increasingly suspicious of authority in general and science in particular, every effort must be made to alleviate the fears.

The confidentiality clause fosters the perception that the scientific community is hiding procedures which are unethical, unacceptable and illegal. Unfortunately, in a few cases – such as revealed by the Uncaged report on the pig-to-primate organ transplants performed by Huntingdon Life Sciences for Imutran – it seems that this is exactly what does happen. If the confidentiality clause effectively cloaks practices which the rest of the Act is designed to prevent, then it undermines both the proper working of the legislation and the confidence of the public in the workings of science.

We therefore fully concur with the findings of the ASP committee, which we quote at length:

We consider that the debate surrounding animal experiments has been stifled for too long, and with damaging results, by the overly restrictive nature of the Act. We consider that the justification should have to be made, by the scientific community, for each class of information which it considers should remain confidential. This may well result in much of the information that is currently confidential remaining confidential. As a point of principle, however, we consider that the "burden of proof" should be reversed.

We recommend that Section 24 should be repealed. Specific justification should then be made for each class of information that needs to be kept confidential, such as the identity of researchers and matters of

commercial confidentiality and intellectual property. [ASP 9.17-9.18; emphasis in original, as later]

Who inspects the inspectors?

The revelations by undercover investigators prompt the question – how much animal abuse is taking place which escapes the attention of the inspectors? The perception from Channel 4's *It's a Dog's Life* is that the Inspectorate is incapable of detecting abuses because its relationship with the scientific community is too cosy. While it is highly commendable that the inspectors are generally well respected for their scientific competence – since without this the system could not function – it is clear that their way of working fails to re-assure the public at large that animal welfare is being protected. Thus the ASP report concludes:

The independence of the Inspectorate is important if the public is to have confidence in the regulatory system....

We recommend that the Inspectorate should be subject to periodic review, by a body other than the Inspectorate itself.

...We consider that the Inspectorate is a trustworthy, professional body.... However, we also recognise that it is important to remove any suggestion of complicity between the local Inspector and the licence holders. [ASP 5.12-5.15]

Their recommendations are likely to benefit the scientific community in more ways than just improving public confidence. Solving the problem of apparent complicity may also address a complaint that inconsistent standards are applied by the Inspectorate across the country. Thus the report continues:

We recommend that designated establishments should be inspected once a year by inspectors from another area. [ASP 5.17]

We at Naturewatch were also impressed by the suggestion of Professor Clive Page, of the Research Defence Society, that lay visitors should work alongside the Inspectorate, as happens in the prison system [ASP 5.18]. However, this will be effective only if members of animal welfare organisations are involved, so that the public can be assured that the inspections are sufficiently robust.

The 3Rs: Reduction, Refinement and Replacement

In 1958, the British biologists William Russell and Rex Burch published a pioneering study on the humane use of animals in scientific experiments. Their basic conclusions are usually summarised as the 3Rs of Reduction, Refinement and Replacement:

- **Reduction** – decreasing the number of animals to the minimum required for a scientifically valid result. A recent – and major – example of this was the ban on the LD50 test (determining the Lethal Dose at which 50% of the test animals would be killed), to be replaced by the far less costly Fixed Dose test.

- **Refinement** – refining the experimental procedures so that animal welfare be optimised from birth until death. This may include environmental enrichments in animal cages such as toys, hiding places and nesting material.
- **Replacement** – replacing animal procedures with non-animal techniques wherever possible. For example, cosmetics testing is now done *in vitro*.

Although far ahead of its time, the 3Rs are now acknowledged throughout the scientific and animal welfare communities as being fundamental to the pursuit of humane science. As well as being foundational for organisations such as FRAME (the Fund for the Replacement of Animals in Medical Experiments), they also appear to receive enthusiastic backing from leading organisations which use animals in experiments. For example, Huntingdon Life Sciences state that “HLS constantly strives to implement the 3Rs... in its R&D programmes”.

Unfortunately, a consistent complaint voiced during the hearings was that the scientific community, while paying lip service to the 3Rs, often reveals a lack of real commitment to its use in practice. For example, Professor Michael Balls, the recently-retired head of the European Centre for the Validation of Alternatives in Medicine said, “I think the support for alternatives is often rather shallow and there is rather little appreciation either of the scientific value of alternatives or of their ethical value”. Professor Robert Combes of FRAME suggested that this is partly due to the natural inertia of people to change what they are doing – “if it ain’t broke, why fix it?” – and also observed that “...alternatives research needs to become more respectable”.

The ASP committee accepted the validity of these views:

We are not... persuaded that enough effort is always made to avoid the use of animals. We are similarly not persuaded that where this is not possible, sufficient effort is always made to minimise the number of animals used, and to minimise the pain and suffering inflicted on each animal. [ASP 7.5]

As a result, they perceived a strong need for additional impetus to 3Rs research.

We recommend that a Centre for the Three Rs be set up, consisting of a small, administrative hub which co-ordinates research units embedded in existing centres of scientific excellence. [ASP 7.18]

The report’s justification and motivation for the centre is worth quoting at length:

The principal justification for such a centre is that all sides of the debate on animal procedures say that animals are highly imperfect models. It will be for the benefit of science, and ultimately of human health, if better methods of research and testing could be developed... Public opinion in the UK is also only in favour of animal research where it is absolutely necessary and suffering is kept to a minimum.

We consider that a Centre will encourage more research into the Three Rs and build on the considerable amount of research which is already undertaken by the scientific community. We also consider that a Centre will demonstrate in the clearest way possible that steps really are being taken to minimise animal use, and minimise the infliction of “pain, suffering, distress or lasting harm”. [ASP 7.25-7.26]

Such a centre would be a visible commitment to the 3Rs and would assure much of the public that animal experimentation is, indeed, only performed when it is deemed to be unavoidable. We would also recommend that the centre be used as an educational resource for the public at large, providing a window on the world of animal experimentation which dispassionately explains the issues to a lay audience.

‘HLS constantly strives to implement the 3Rs... in its R&D programmes’

Huntingdon Life Sciences background memorandum

‘...the support for alternatives is often rather shallow’

Professor Michael Balls, ECVAM

Environmental Enrichment

We particularly welcome the emerging realisation of the importance of environmental enrichment, although we feel that this should have been given greater prominence in the Lords report. It is becoming apparent that animals which are kept in surroundings containing sufficient stimulus, variety and comfort provide better models for use in experimental situations – and that insufficient enrichments may actually compromise the validity of the experimental data.

Environmental enrichments are often inexpensive, so much so that toilet rolls can act as hiding places, shredded paper as nesting material, and table-tennis balls as toys: such items as the chewing block below become multi-functional for the mice.



Photo © Chris Sherwin & the Animal Welfare Institute

We consider that the ASP report is unnecessarily cautious on this:

Refinements are often as simple as incorporating environmental enrichments into existing procedures. However, before such enrichments can be incorporated, more research needs to be undertaken to demonstrate that the enrichment... will not interfere with the results, and prevent comparison with existing data. ... Such studies are

beginning to be done, especially as it is now coming to be recognised that enrichment techniques can improve the validity of animal experiments. We consider that this sort of work needs more encouragement. [ASP 7.15]

Given the almost self-evident improvement to the scientific validity of animal experiments, we urge the Government to actively promote the use of environmental enrichments.

Genetically Modified Animals

The recent dramatic rise in the use of genetically modified animals highlights the need for the 1986 Act to be upgraded. While animal experiments overall dropped in 1999 to 71% of the number in 1992, there was a seven-fold increase in those on GM strains. It is widely recognised that this is likely to lead to an end to the currently falling numbers of animals used.

The use of GM animals is ethically complex (unless one is completely opposed to vivisection). For example, at present the World Health Organisation requires that the polio vaccine be tested on primates, since it occasionally reverse-mutates to cause rather than prevent polio. Recently, a strain of mice which contain the polio receptor has been developed and could thus eliminate the need for the primate tests for this vaccine. This development is to be welcomed.

There are, however, significant welfare implications for all strains of GM animals.

- The number of genetic mutants (251,000 in 1999) is still half that of those that are actually viable. This is an unacceptably large wastage.
- Many GM mice are produced for their susceptibility to human diseases. As such, they are designed not to lead normal lives. One of the best-known examples is a strain which develops the most common of the human genetic diseases, cystic fibrosis.

There are some who argue that GM breeding is more benign than conventional farming techniques. For example, broiler chickens are now clinically lame after eight weeks. If the debate about GM animals leads to a fresh consideration of the welfare of conventionally-bred animals, then so much the better. We therefore wholly concur with the recommendation in the ASP report:

We recommend that a welfare assessment of all new strains of animals used in experiments (whether produced by new technologies or by more traditional methods) should be made as a matter of course. [ASP 8.12]

We ask the Government to treat this with particular urgency given the rise in the use of GM animals in scientific procedures.

Assessing Harm

At present licence applicants need to assess the likely harm to animals in the course of the experiments. For the licences in force in 2000, 39% were classified as

mild, 55% moderate, 2% substantial and 4% unclassified. The ASP committee received evidence that the harm assessments were often subjective and there was insufficient definition as to exactly what constitutes mild, moderate and substantial harm. They concluded:

From the licenses we have seen, we consider that the current system of assessing pain and suffering is already highly misleading. [ASP 9.34]

Part of the controversy over the pig-to-primate transplants for Imutran is that some experiments were classified as being of only moderate harm, whereas they appear to have been of very substantial severity. For the 1986 act to operate as it was intended, harms must be reliably estimated. The ASP committee considered that

quantifying suffering is not an insurmountable problem. Indeed, an effective (if inelegant) method would be simply to list examples of harms which would be classified in each category. [ASP 9.33-9.37]

With the developments in GM technology, we at Naturewatch consider this to be of major importance because of the need for proper welfare assessments in new strains.

While acknowledging, with the ASP committee, that the task is not trivial – for example, the amount of harm to a mouse bred for its susceptibility to cancerous tumours depends partly on the point at which it is euthanased – it is not impossible. It is vital for informed public debate of these issues that harms are carefully assessed. The ASP report concluded:

We recommend that serious efforts should be made to provide better statistics on animal suffering. The Home Office Inspectorate should develop or approve a “scoring system” for animal suffering... [ASP 9.38]

Science and the public

Throughout this briefing we have emphasised the importance of good communication with the public for the benefit of science at large. Transparency and accountability are essential both to the scientific enterprise and to public acceptance of it. It is not enough for those involved in animal experiments to pay lip service to animal welfare: it must be seen to be done. The repeal of section 24, the monitoring of the Inspectorate, the creation of a 3Rs centre, welfare assessments of GM animals and the quantification of harms are all essential to re-building public confidence in science in this most contentious of areas.

The House of Lords Select Committee report may be found on-line at:

<http://www.publications.parliament.uk/pa/ld/ldanimal.htm>

The Science and Society report is located at:

<http://www.publications.parliament.uk/pa/ld199900/ldselect/ldsctech/ldsctech.htm>

The following, from which the image came, is a good resource for environmental enrichments:

<http://www.awionline.org/pubs/cq02/Cq-mice.html>