

CORRESPONDENCE

Animal pain

SIR — Your editorial on "Protection for laboratory animals" (*Nature* 17 September, p.173) is most welcome. It is no longer enough for universities and research workers to maintain an aloof silence or to claim that they are working within the law. Public opinion will not accept such an attitude. I am sure that there are many scientists who regard themselves as animal lovers, or even just humane people, but believe sincerely in the benefits that animal experiments have brought to mankind and to animals themselves. Perhaps we should begin to speak out and not accept false propaganda on the one hand or the sanctity of all knowledge on the other.

A first step would be to show that scientists do care about animals and do think deeply about what they propose to do, the best way of doing it and just why they are doing it. Your proposal to set up committees at many centres is timely. Indeed, committees of this sort have already been formed at several universities and are under discussion elsewhere. If such bodies were made responsible for approving applications for licences and if necessary interviewing applicants, this alone would help to ensure that the work is not unnecessarily repetitious, that an excessive number of animals is not used and that alternatives have been considered. Such advice would be particularly helpful to inexperienced workers who often receive only very limited and specialized training.

Is it not time that all new licence holders were asked to attend a short formal course on animal welfare, breeding, feeding, preoperative and postoperative care, anaesthesia, use of drugs etc.? After all, if public money can be spent on sending general practitioners to courses on intrauterine memory, would the public not agree that funds should be available for training biologists in the basic practical care of those who are used to benefit mankind but are given no choice in the matter?

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SIR — Your leading article "Protection for laboratory animals?" (*Nature* 17 September, p.173) mentions "widespread incoherence", and may I respectfully suggest that a number of misleading statements have hardly clarified the situation. For instance you say, "Thus the 1876 Act requires that experiments involving pain must be carried out under anaesthesia (and the Home Secretary has not waived this regulation for the past half-century)". Yet, according to Home Office Statistics of experiments on living animals (Great Britain, 1980), 3,730,588 experiments, "calculated to inflict pain", were carried out without any anaesthetic (certificate A); 677,607 experiments were carried out in which the animals were allowed to recover from the anaesthetic (certificate B), and only 171,283 experiments (3.7 per cent of the total) were carried out with anaesthesia for the whole experiment.

Many of the procedures carried out under certificate A must, by their very nature, cause great distress. For example in 1980, 484,849

animals were used in acute toxicity tests, of which the LD₅₀ is an example. In this case a recent government committee¹ conceded, ". . . LD₅₀s must cause appreciable pain to a proportion of the animals subjected to them". Most experiments involving application of substances to animals' eyes, and psychological experiments employing aversive stimuli, are two more examples of procedures carried out under certificate A.

The Council of Europe's discussion of article 8 of the draft convention is *not* concerned with permitting "licensed experiments causing pain without anaesthesia". Rather it is debating the presence of a pain clause which seeks to regulate the severity and duration of pain inflicted during the course of the experiment.

In Britain the pain condition directs that animals suffering pain which is "severe" or "likely to endure" should be painlessly killed "if the main result of the experiment has been achieved". Or if they are suffering "severe pain which is likely to endure", they should be painlessly killed.

Unfortunately no one has ever defined "severe" or "likely to endure". Indeed it is impossible to define "severe" since any assessment is largely subjective. (The LD₅₀ test is allowed to proceed for 14 days, unless death intervenes, but does this contravene the pain condition?) Here lies the central point — *pain cannot be regulated*. Realistically legislation can only license researchers, register premises and prohibit certain procedures. For example, in Great Britain licensees are not allowed to use animals to acquire manual dexterity.

The legislative way forward is therefore to prohibit those procedures which have become unacceptable in an evolving moral climate.

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1. Report on the LD₅₀ Test, Advisory Committee on the Administration of the Cruelty to Animals Act 1876 (Home Office, London 1979).

Anti-social?

SIR — In his address to the British Association¹, Sir Edmund Leach states that he encounters biologists who refer to "primitive" and "advanced" populations, and he goes on to say that these unfortunate individuals inevitably associate the advanced category with the group to which they belong. Later in his address Professor Leach refers to physical anthropology as a "tiny, rather off-beat sub-branch of the general field of anthropology" and that the "variety of human culture" (social anthropology) is "the main concern of anthropologists". Perhaps I am being "astonishingly naive" (an apparent failing of those interested in the trivia of human origins) if I ask whether it was merely coincidence that social anthropology is "the particular human collectivity to which the author himself happens to belong"?

Professor Leach proposes that Wilberforce was essentially correct in seeing an unbridgeable gap between man and ape. The basis for this assertion is the supposed uniqueness of human language. However, the fact that Leach, a social anthropologist,

should use such an important occasion as the 150th BA anniversary to put forward a model of the relationship of man to the primates testifies to physical anthropology being more than off-beat, and to the continuing primacy of Darwinian ways of thought. Is it likely that speculations based on miscellaneous observations of the variety of human culture will be able to solve the problem of how, why and when the divide between humans and apes occurred, let alone define the nature of it? Palaeoanthropology and various branches of biology are in the best position to test such a proposition, especially given that the foundation of human language is ultimately anatomical.

In the early 1970s Professor Leach launched an attack on the archaeologists² largely on the grounds that they were poor social anthropologists. Now it is the turn of the biological anthropologists, although this time the crime is that of not being social anthropologists at all.

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1. Leach, E.R. *Nature* 293, 19–21 (1981).
2. Leach, E.R. in *The Explanation of Culture Change* (ed. R. Frew, C.) (Duckworth, London, 1973).

Incendiary subject

SIR — Perhaps you are right, after all, to describe Dr Rupert Sheldrake's *A New Science of Life* as a book for burning (*Nature* 24 September, p.245). For after seeing the disastrous effect Sheldrake's book has wrought upon the detachment, not to say the common sense, of one with the responsibilities of the editorship of *Nature*, I shudder to contemplate the effect upon the ordinary man.

But perhaps it is the influence of a pulpit from which to denounce scientific heresies that is the danger, rather than the book itself. For surely there is nothing in the book to raise excitement to the point of lumping together "creationists, anti-reductionists, neo-Lamarckians and the rest". For scientists, the worst a book can do is to waste their time. You could have served us better by arranging for the publication of two careful and opposed critical reviews. For non-scientists, unhelpful books abound. Their ability to mystify science is as nothing compared with strenuous attempts to declare an orthodoxy.

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SIR — Before reading "A book for burning" in which Sheldrake's work *A New Science of Life* is criticized (*Nature* 24 September, p.245), I did not think I would have to ask a *Nature* leader writer to read or re-read Milton's *Areopagitica* — "as good almost kill a man as kill a good book. Who kills a man kills a reasonable creature, God's image; but he who destroys a good book, kills reason itself, kills the image of God, as it were in the eye. Many a man lives a burden to the earth; but a good book is the precious life-blood of a master spirit, embalmed and treasured up on purpose to a life beyond life".

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