

## Human and animal rights

SIR — The importance of animal research to human rights is frequently neglected. The atrocities and suffering in the Second World War led to several major agreements that embody an international consensus about basic human rights. These documents include the Universal Declaration of Human Rights (1948) and two related International Covenants (1966), as well as the Nuremberg Code (1949) on moral, ethical and legal principles for human experimentation, and the Helsinki Declaration of the World Medical Association (1964). The Universal Declaration states in Article 27 that "Everyone has the right to . . . share in scientific advancement and its benefits". The International Covenant on Economic, Social and Cultural Rights spells out, in Article 12.1, the more specific "right of everyone to the enjoyment of the highest obtainable standard of physical and mental health".

In seeking to enhance physical and mental health, biomedical and behavioural researchers often employ animal subjects. In part, such research is required by the Nuremberg Code and the Helsinki Declaration, as well as the codes of numerous national and international medical and scientific associations. Both the code and the declaration state (in the words of the Nuremberg Code) that human experiments "should be so designed and based on the results of animal experimentation and a knowledge of natural history of the . . . problem under study that the anticipated results will justify the performance of the experiments". That is, to safeguard human health and wellbeing, experimental procedures to be tried on humans should first have been tested on animals. While it may not be possible to observe this precaution in every case, experience has shown it to be a wise procedure wherever it is applicable. Similarly, many governments require that drugs and food products be tested on animals to assure their safety for human health.

In recent years, concern has increased regarding humane treatment of animals as pets, on farms and in agrofactories, in zoos, and in laboratories, and for the preservation of habitats necessary for the continued existence of endangered species. Scientific and professional groups observe stringent codes of ethics and humane procedures for research with animals. Laws and regulations have been formulated to deal with many aspects of treatment of animals, and some endangered species are protected by international treaties, but there is no formal recognition or general consensus concerning "animal rights".

Efforts to obtain humane treatment of animals are widely supported, but attempts to prevent the use of animals for research come into conflict with human rights, because interruption of research with animal subjects would result in the continu-

ation of grievous human suffering from physical and mental disorders that research could alleviate or prevent. Although some have claimed that all research relevant to human health and behaviour could be done with animal substitutes such as tissue cultures or computer simulations, this is clearly not true: if we could create satisfactory simulations for the human brain, we would already have solved the formidable problems of physical and mental health that face us on every side. Thus, concern for the human right to the highest obtainable standard of physical and mental health calls into question attempts to secure recognition for "animal rights" on a par with human rights.

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## Determination of IQ

SIR — John Hartung's speculations (*Nature* 311, 515; 1984) that the shape of a person's nose determines his IQ are both offensive and inaccurate. The viscosity of moist air is less than that of dry air, while airway resistance is probably more influenced by the nasopharynx than the shape of the nose. Among all racial groups, the prevalence of lung disease is related to socio-economic factors. The increased incidence among blacks in the United States is therefore more likely to reflect their position in society than the shape of their noses. Dr Hartung's hypothesis appears to be a conscious or unconscious attempt to establish spurious grounds for white supremacy. His theory seems to me to be as unsavoury as those based on the shape of people's skulls which were used to justify the extermination of Jews and Gypsies in Hitler's Germany.

Dr Hartung's speculations on the effect of a subject's health on performance in IQ tests are, however, important since some of the hypotheses outlined are readily testable. It should be simple to prove in a controlled trial that allergic rhinitis impairs performance in IQ tests. The outcome would be of interest to all those involved in examinations. Furthermore, definite proof of such impairment would be of consequence in selecting employees for occupations in which a constant high level of alertness is required. Unlike Dr Hartung's experience, subjective and anecdotal evidence suggests no such impairment.

He also postulates that frequent absence from school is detrimental to performance in IQ tests. Two genetic diseases are cited, sickle cell anaemia and cystic fibrosis, as conditions that do not impair brain function. The first results in frequent thrombotic episodes in the brain, while the second is associated with failure to develop normally secondary to malabsorption. In con-

trast, physicians experienced in dealing with children requiring frequent admission to hospital, for instance those suffering from thalassaemia and renal failure requiring dialysis, feel that as a group these two examples are brighter than average.

Intelligent selection of suitable diseases that do not on *a priori* grounds affect brain function should allow the hypothesis that frequent absence from school impairs IQ compared with that of age-matched healthy siblings to be tested.

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## Evolution dogma

SIR — In a review of the Kermacks' book on mammalian evolution (*Nature* 10 January, p.164), the following statement is described as dogmatic or old-fashioned: "Evolution is slow, continuous and imperceptible. The evolution of major taxa does not differ in any fundamental way from the evolution of one subspecies from another." The judicious modern view is implied to be that the evolution of major groups is rapid and involves unique genetic events. I invite your readers to compare Maynard Smith's statement<sup>1</sup> that "the genetic basis of species differences is similar in kind to that within species" with the title of W. Bateson's book<sup>2</sup> before deciding what is dogma, and who is old-fashioned.

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1. Maynard Smith, J. A. *Rev. Genet.* 17, 11 (1983).
2. Bateson, W. *Material for the Study of Variations, treated with especial regard to Discontinuity in the Origin of Species.* (Macmillan, London, 1894).

## Benefits of DDT

SIR — The disaster in Bhopal has provoked a statement that "the process for manufacturing the new pesticide has already done more damage than DDT"<sup>1</sup>. Various estimates have been made of the effects of DDT in India, including the lowering of infant mortality, prevention of 3.7 million cases of malaria in Bombay State alone during 3 years, and great increases in food production<sup>2</sup>. Pal<sup>3</sup> reported that in a 9-year period of use of DDT, the average span of life in India had increased to 47 years as compared with 32 years before the campaign against malaria. It thus seems likely that, ironically, many of the inhabitants of Bhopal actually owed their very existence to the use of DDT.

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1. *Nature* 312, 579 (1984).
2. Simmons, S.W. *Human and Veterinary Medicine* Vol. 2, (ed. Müller, P.) (Birkhäuser, Basel, 1959).
3. Pal, R. *World Rev. Pest Control* 1, 6 (1962).