Validity of whaling data

SIR — For many years, scientists have been arguing about the validity of catch data from commercial whaling operations. Some parts of previously secret records from Soviet whaling in the Antarctic were recently made public during the plenary session of the Conservation Status of Marine Mammals at the Society of Marine Mammology's Tenth Biennial Conference in Galveston, Texas, on 12 November 1993. Actual Soviet catch data on right, humpback and blue whales from the 1960s were reported. These data were from one of the four factory ships that operated in the Southern Hemisphere after the Second World War. The catches for right, humpback and blue whales were reported as 717, 7,207 and 1,433 respectively. These numbers are much higher than were previously reported to the International Whaling Commission (IWC). The catches for humpback and blue whales were originally reported as 152 and 156 respectively.

Right whales have been protected under IWC regulations, and some earlier agreements, since the 1930s. However, Best[1] in 1988 reviewed three episodes of illegal exploitation by Soviet whaling fleets operating around Tristan da Cunha in the South Atlantic. These catches have been confirmed by the data presented at Galveston.

There have been constant rumours about illegal large-scale Soviet whaling operations not only in the Antarctic and South Atlantic, but also in the South and North Pacific. When I studied cetacean morphology at the land whaling station on Paramuschir Island (in the Northern Kurile Islands) at the end of the 1950s, I received anatomical materials not only from humpback but also from right whales.

It was also known that in the 1960s a Soviet factory ship illegally operated for a couple of weeks in the Okhotsk Sea and caught several hundred right whales. It was also well known in the Soviet Union that blue whales continued to be killed after they were protected by the IWC[2].

During the Galveston conference, I pointed out in my talk about the IWC that data problems exist with catch records from other countries as well. Kasuya[3] and others have reported that catches of sperm whales were under-reported by both number and sex in Japanese land-based sperm whaling operations.

In these circumstances, it has been impossible to conduct a meaningful comprehensive review of the impact of all past commercial whaling operations. In order better to understand how various species of whales have been over-exploited, it would be highly desirable to investigate all whaling records now available. Such a review would also help us to understand the potential for recovery of all depleted whale populations.

Alexey V. Yablokov
(Special Adviser to the President of Russia for Ecology and Health)
Kremlin, Moscow, Russia

1. Best, P. B. *Biol. Conserv.* **46**, 23–51 (1988).
2. Zemsky, V. A. & Sazhinov, E. G. in *Marine Mammals: Collected Papers* (ed Arsen'ev' V. A.) 53–70. (All-Union Research Institute of Marine Fisheries and Oceanography, VNIRO, Moscow, 1982) (in Russian with English summary).
3. Kasuya, T. *Mar. Mammal Sci.* **7**, 230–257 (1991).

Patent medicines

SIR — Your article ("UK clinical geneticists ask for ban on the patenting of human genes", *Nature* **366**, 391; 1993) makes it clear that the mechanism of patent protection does not work very well when applied to therapeutic products that might arise from the knowledge of gene sequences. As the patent is a creation of human rather than natural law, the answer is surely to devise a new form of intellectual property that would serve the required purposes better.

The most important function of patenting pharmaceuticals is now to protect a company's investment in development costs. The trouble is that, unlike the situation in, for example, mechanical engineering, the protection arises (or fails to arise) before the bulk of these costs is incurred. This means that companies cannot afford to develop drugs whose patentability has been compromised by publication. It also means that holders of some fundamental patents reap rewards out of all proportion to the size of their own real investment.

However, and also unlike the products of mechanical engineering, the sale of pharmaceuticals is controlled by state licensing. Indeed, most development costs of drugs are incurred in order to comply with licensing requirements. I suggest that this investment would be fully protected if the right to quote the results of clinical trials and so on in support of licensing applications became a distinct form of intellectual property.

A. F. W. Coulson
12 Eskside West,
Musselburgh,
Midlothian EH21 6PL, UK

Referee bias

SIR — The controversial reviewing of a paper by expert referees may reflect a psychological built-in bias that characterizes any human judgement. With papers that, in referees' opinions, do not lack adequate experimental and/or theoretical support, it appears that the driving force for their evaluation is their personal feeling.

Many researchers therefore feel aggrieved, because it is not clear what 'scientific' factors hamper publication. A possible answer lies in the fact that a 'controversial' paper raises a point that is source of a debate between opposite 'schools of thought'. Nevertheless, articles from different 'schools of thought' continue to be published, but the authors are seldom unknown. It may be that editors and/or referees are more favourably disposed to the publication of a controversial paper if its authors are authorities in the field. On this basis, authors lacking a 'pedigree' do not seem to be allowed to enter a scientific debate, given that fate has assigned the reviewing process to contrasting referees. We could call this behaviour 'Carneades' syndrome'. Carneades was a minor Greek philosopher, whose thought, even if of some importance, was never enough appreciated. This was underlined in the novel *The Betrothed* by Alessandro Manzoni, an outstanding Italian author from the Romantic Age, with the well-known question "Carneades, and who on Earth was he?"

Anonymity for both authors and reviewers could perhaps limit the risks of this syndrome, even if it is difficult to remove traces of an author's identity from a paper. We feel that new proposals about a reviewing process as devoid as possible of unconscious psychological influence could come from a public debate on this matter.

Giovanni Colonna
Raffaele Ragone
Department of Biochemistry and Biophysics,
2nd University of Naples,
via Constantinopoli 16,
80138 Naples, Italy

Older than that

SIR — Punctuated equilibrium may have come of age (*Nature* **366**, 223–227; 1993) but its age is not 21 but at least 128. It was developed by P. Trémaux in 1865 in *Origine et Transformations de l'Homme et des Autres Etres* (Hachette, Paris), as I indicated in 1989 in *Speciation and its Consequences* (eds D. Otte & J. A. Erdler, Sinauer, Sunderland, Massachusetts). The wonder is that this continental recipe of the mid-nineteenth century should today be relished as innovation of modern evolutionary theory.

G. Nelson
School of Botany,
University of Melbourne,
Parkville, Victoria 3052,
Australia