

Does industry funding mean biased academic research?

Research, scientific or otherwise, is essentially a matter of logic guided by ethical considerations. Research has been defined as “an endeavour to discover new or collate old facts, etc, by scientific study or by a course of critical investigation”. In a world ruled by business and political interests rather than by ethics and logic, it is almost impossible to divest unbiased reasoning arising from these worldly interests. For a scientist, who is focused on determining truth, this renders investigation extremely difficult.

In the US concerns have been expressed over the relation between academic freedom and the acceptance of commercially involved funds offered by the tobacco industry. The implications are discussed in the 26 January issue of *Science*. It appears that the University of California has recently delayed voting on a plan to impose a blanket ban on research funding from tobacco companies. If the plan is approved it would make the university the

only American university to refuse to accept money made from tobacco dealing.

The issue has been argued through faculty members for four years, the defence of academic freedom being at stake. A representative of the industry, an epidemiologist, has argued that money from tobacco should be used in research, but a bioengineer maintains that the industry's aim in funding the research is to confuse the public, so that the object is defeated. The manipulation actually undermines academic freedom and is against the fundamental mission of a university.

Last year the University of California had 19 active grants from tobacco organisations, totalling \$15.8m, and there is evidence that researchers had been manipulated by the industry into publishing biased results. In such circumstances accepting money was a threat to academic freedom. Grave issues have been aroused by the arguments — evidently ethics and business are beyond reconciliation.

Link between abilities to recall the past and to imagine the future

A note on the connection between memory and imagination appears in the 19 January issue of *Science*. It points out that people suffering from amnesia not only struggle to recall their past but may also require more effort to imagine their future.

Amnesia caused by damage to the hippocampus may cause some people difficulty in foreseeing commonplace experiences that might reasonably be expected to be encountered in the near future. Such findings do not agree with long-held views concerning the nature of memory and the function of the hippocampus, according to a neuroscientist from the University of Arizona.

Five amnesic patients with severe memory defects caused by damage to the hippocampus were studied in London. The subjects found great difficulty in forming new memories and recalling events following their injuries, when compared with 10 healthy individuals matched for age and education levels.

The subjects were asked to imagine and describe ordinary experiences such as meeting a friend or visiting a beach, a public house or a market. Healthy subjects described impressions such as the curve of a beach, the impact of waves and the sensation of hot sand. Amnesic subjects described fewer objects that might be expected from the scene and made fewer references to sensations such as sounds and smells.

The observations suggest that the hippocampus has a broader role in cognition than was previously believed — it binds together elements from remembered scenes to create vivid and coherent memories. The hippocampus is one of the first brain regions to show signs of deterioration with aging and although age enables an individual to draw on past experience the harvest may not be so rich as has been suggested.

Alien plant that threatens our native flora

In the 27 January issue of *New Scientist* is an account of a strange and threatening phenomenon. The Himalayan balsam (*Impatiens glandulifera*), a native of the western Himalaya, was introduced into UK gardens in 1839 but quickly escaped into the wild and colonised damp woodlands and riverbanks. Not content with that feat, it expanded its range across Europe, Canada, the US and New Zealand. It has earned the reputation of being one of the most aggressive weeds in the entire world. But it is also remarkably attractive.

The reason for its spread in Britain is that in its natural habitat several local pests check the plant in its growth. When these are removed it both grows and reproduces without hindrance, reaching a height of 3m and producing some 2,500 seeds. When ripe these are discharged explosively over distances of up to 7m, depending on the wind at the time. The balsam is also popular with beekeepers, since it has a long flowering season and has nectar that is particularly rich in sugars. The plant's attractive appearance also appeals to gardeners.

Unfortunately, the balsam interferes with the growth of many of our native plants with which it enters into competition. Native plant diversity is reduced and when the bulky stalks die down each winter they block watercourses, causing flooding and rendering stream banks denuded and more liable to become eroded.

Remedies are difficult to apply. Pulling up the ripe plant is laborious. Weed killers may be effective but raise new hazards. The whole



process is expensive. It has been proposed to introduce natural predators into the thickets. Searches have been made in the native haunts of the plant in Pakistan. In the mountains there, four insects and three pathogenic fungi have been isolated but to release any of them into the UK habitat might well endanger other plants and animals. If any of them is shown to deal exclusively with the balsam without endangering the native flora or fauna it will no doubt be studied further.

Myths and mankind

“A human society without myth has never been known, and indeed it is doubtful whether such a society is possible. One measure of man's advance from his most primitive beginnings to something we call civilisation is the way he controls his myths, his ability to distinguish between the areas of behaviour, to an extent to which he can bring more and more of his activity under the rule of reason. In that advance the Greeks have been pre-eminent.” — M. I. Finley: ‘The world of Odysseus’ (1954).

And I quote . . .