

## University competition

SIR,—J. B. S. Price's lament about unfair competition from university-inspired science-based companies cannot be allowed to go unanswered.

One has sympathy for a company like Mr Price's which attempts to make profit from difficult technology—too often the development costs are unlikely to be justified by the potential market. Science often requires such development to advance a subject, however, and without it no market could possibly develop. It is just such devices that are likely to be spawned by university staff. The important question for the scientific instrument industry in the UK is: How do we get such schemes financed? Certainly not from companies like Mr Price's, in 1975. And only partially from the NRDC—50% on very hard terms.

I am surprised he fears university competition on hardware. No university can operate such activities except on a very small scale and has no sales organisation. If the scale is small, it is unlikely to be profitable for such companies as Grubb Parsons in any event and perhaps should be tackled by a smaller company.

He has less to fear than he thinks; such operations are rarely very professional and most buyers won't trust universities to come up with the goods—again keeping the scale small. There are, of course, university entrepreneurs who expand their activities rapidly, becoming fully commercial and professional. They then, however, face all the problems of production facilities, cash-flow and overheads that Mr Price does. Their sole advantage is their enterprise and enthusiasm.

I write because a negative attitude to this problem will only lead to feather-bedding; with enough of that, the competitiveness of British scientific industry will continue to diminish to the disadvantage of our balance of payments.

Whatever is said, we must find an effective way to turn the country's considerable investment in university research into industrial progress.

Yours faithfully,

S. D. SMITH

Heriot-Watt University

## Taboo research?

SIR,—Some 20 years ago the first infectious virus was reconstituted in the laboratory from component chemicals, and some religious circles, Catholic as well as fundamentalist, were wondering whether to disapprove such research activities on the grounds that they were approaching too close to God's territory. They wisely and fortunately remained silent.

This week an international group of scientists and science administrators

met at a resort on the coast of California to discuss the merits, or rather dangers, of a much more advanced research on similar lines which is going on all over the world. I hope that this group will show as much wisdom as the churches did earlier. Taboos to block, or guidelines to channel man's curiosity have never succeeded in the long run, and usually they appeared ridiculous a few decades later. They are as old as the caveman's wife telling her mate not to bring that burning piece of wood from the tree hit by lightning into the cave, and not to pick up that club-shaped branch when attacked by a bear. Yes, there was danger in these activities—man could and did hurt himself as a consequence of each of these acts. The end effect of these activities, however, is that *homo sapiens* has greatly multiplied and that ever more members of the species live longer, more healthily and more comfortably than before.

Another result is that people are now able to arrange world-wide meetings, with busy scientists travelling through the air, very rapidly and rather safely, to discuss further steps in unknown directions, and their dangers, and guidelines to hamper these steps. Man also developed remarkable means of communication so that the original fears and misgivings of the caveman's mate ('caveperson', so as not to pre-judge who brought the fire in) are now brought to everybody's attention and the weak, timid, conservative (not to say conservationist) members of the species may through their numbers be able to exert real pressure on the Promethean creative curious individuals, to make them cease and desist. The human species as a whole has, however, survived, and benefited, from the discovery and utilisation of fire, the wheel, powder, the steam engine, vaccination, electricity, dynamite, fluoridation and atomic energy. It will surely hardly notice that some scientists are suffering from extrapolatosis and super-scrupulosis. Thus the danger of the present meeting to future research is surely small, if any, and of short duration. The fact that this is a court of scientists sitting in judgment on scientific research makes it more disturbing and regrettable, however, in that it shows to what extent the anti-intellectual disease of doubting the value of progress and advance of knowledge has spread to the ranks of the presumed Prometheans.

H. FRAENKEL-CONRAT

University of California

## Naming names

SIR,—I would like to align myself with those anthropologists, such as Robin A. Drews, who have a proprietary attitude

toward the proper spelling of Peking man (Peking, please, not Pekin). My own proprietary attitude extends to the Peking duck (*Anas platyrhynchos*). Although it is probably too late to do anything about Pekin, Illinois, USA, I do hope we can rescue the "... big, white duck known as a Pekin variety" from nomenclatural ignominy.

First of all, there is no Pekin, China. The name Peking comes from two Chinese characters, the first of which (pei) means northern and the second of which (ching or king) means capital. Although some anthropologists suspect 'Americanism at work' in the base misspelling of their favourite fossil remains and my favourite domestic waterfowl, I have developed a different hypothesis in the course of years of grappling with this persistent problem in orthography.

The Peking duck originated in China and was first noted in the USA around 1870, but I can't determine from whence it came. I had always assumed Europe. While reading some marginalia in Jean Delacour's engaging volumes on waterfowl systematics, I observed that he claimed to have visited Pékin, China in the course of his studies. I was a little dismayed that such an obviously literate and well travelled scientist could be found among the ranks of orthographic incompetents until I learned that in the French language Peking (whether city, duck, or man) is Pékin. Thus, I arrived at an essentially francophilian explanation of the entire business; to wit, the forlornly foreshortened Pekin represents the uncritical (and incomplete) adoption of the French word for Peking. *Voilà!*

GILBERT GOTTLIEB

Raleigh, North Carolina 27611

SIR,—The term 'exobiology' excludes life on Earth. It is, of course, impossible at present to study exobiology without reference to life on Earth. Even if several extraterrestrial life forms were discovered tomorrow, nobody would study them without comparing them with terrestrial life. Thus there is a need for a word which includes all life forms in the universe.

The term cosmochemistry is already well established and has been defined as "the branch of science which treats the chemical composition of the universe and its origin and evaluation". It would thus seem to be appropriate to use the term cosmobiology for the study of life in the Universe. I believe that such matters of terminology are not trivial, for the manner in which a science is divided into branches has a significant effect on the development of that science.

Yours faithfully,

A. A. COTTEY

University of East Anglia