Selling research, and it pays

Bernard Dixon

On first hearing about plans for a "science shop," while visiting the Free University of Amsterdam in the mid-1970s, I thought the idea fine but fanciful. Explained over several increasingly tasty glasses of Amstel beer, the concept was that anyone should be able to walk in from the street to tap the brains of varsity. Environmental, medical, psychological, and other personal and communal difficulties would be the stock in trade. A neighbourhood smell? Simply ask the chemistry department and you'll have an electron capture detector on site within an hour. Suspicious about your fishmonger? Bring in a few of his eels and we'll enumerate their enterobacteria. Trouble with your cardiologist? Here's the name of a better one.

Far from clear at that time was the question of who would finance the projected science shop, which was specifically designed for customers who could not afford more orthodox services. Nor did the enthusiasts seem to have given much thought to the responsibilities they were taking on board, their relationship with the university, potential legal repercussions, or a host of other likely problems. All reservations were swept aside on a wave of populist fervour, and I left feeling slightly ashamed at my unadventurous niggling.

A great success

Fifteen years later the issue is no longer in doubt. They were right and I was wrong. Amsterdam opened its wetenschapswinkel, financed by the Free University, in 1977. The shop proved a great success and has since taken on a formidable variety of work—from trade union inquiries about the safety of ultraviolet light in offset printing to a request from Amnesty International for psychological advice on whether that organisation would gain or lose public support by publishing more explicit evidence about torture. Thousands of such approaches have been handled over the past decade.

Moreover, Amsterdam has been followed by 40 other publicly funded science shops at almost every university in The Netherlands. Every one sports full time paid employees, plus a clutch of postgraduates who either receive small stipends or give their services free. Typical of the work of Dutch science shops is the case recorded by Seth Shulman recently in *Technology Review* (8 July 1988, pp 7-8). A local environmental group went to Eindhoven's wetenschapswinkel with suspicions that metal working factories were contaminating vegetables grown in the region. Helped by campus chemists, the staff

analysed samples of both soil and produce and discovered alarmingly high values of cadmium, a byproduct of zinc refining. In response, the Dutch government has ordered changes in factory practices designed to reduce emissions—and the Eindhoven science shop is monitoring the clean up too.

Now the idea is catching on elsewhere. French universities have spawned seven boutiques de sciences, while West Germany, Belgium, Italy, Switzerland, and most recently Sweden and Finland have opened smaller numbers of shops. The only country not to have joined the movement is Britain, where academic austerity precludes any such thing.

Perhaps more in tune with our own market oriented, stand on your own two feet society is another approach to scientific expertise, one that is now arousing interest and protestation in the United States. First described by Stuart Lind in the *New England Journal of Medicine* (30 January 1986, pp 312-5), "fee for service research" is the offering of experimental medical treatments for those who can afford to pay for them. If you are suffering from cancer, for example, you may contact a company known as Biotherapeutics in Franklin, Tennessee, and have a treatment developed to your own physiological specifications. Assuming that you can put down \$35 000 in advance and are able to wait a year or so while research and development proceeds, Dr Robert Oldham and his colleagues will evolve a strategy involving antibodies directed at your own particular tumour.

The justification for this approach has been well enunciated by Oldham himself as follows: "A private sector enterprise that is created to meet the needs of patients with cancer and their physicians by allowing more access to emerging biotechnological advances may be very useful. If successful, it will provide patients who are unresponsive to standard forms of therapy with scientifically sound experimental options, provide a new source of private funding for cancer research, and help to determine the technical feasibility and clinical efficiency of biological approaches to the treatment of cancer."

Three potential objections

In a remarkable analysis of the case against fee for service science, published in *Perspectives in Biology and Medicine* (summer 1988, pp 589-601), Howard Spiro raises three potential objections—whether such work would be kept secret or contribute to knowledge, whether it marked an ethical

departure from current standards of medical practice, and whether it was offensive because of the "likelihood" that only the rich would be able to afford such personalised research. But Dr Spiro is not taken by these criticisms. The first he dismisses on the curious basis that Biotherapeutics has set up shop in "what might seem to a New Englander an impossibly remote area half an hour from Nashville" rather than "around the corner from the National Cancer Institute." Addressing the second criticism, Spiro focuses on the absence of controls inherent where few people paying \$35 000 up front are likely to take a chance on receiving a placebo instead of their personalised magic bullet. This he answers on a similarly peculiar basis that many trials, which are controlled, still yield results that are contested by participants, sponsors, and editors. The third, Marie Antoinette criticism, he deals with by recourse to arguments such as "even AZT is charged for" and "even in England there is always the recourse to private medicine."

I am not impressed by these intended counters, which seem lamentable in both direction and potency. True, I was wrong about science shops. But the problem then was scepticism about where the money would come from rather than dismay that privileged individuals would be able to spend their money in such an ill advised fashion. Besides, nothing in my initial reaction to science shops had the emotional force of my long lasting childhood memories of the arrival of the doctor's bill. That is the origin of my certainty today that fee for service medical research is a thoroughly bad idea.

ANY QUESTIONS

What oral analgesia is appropriate for children with earache secondary to otitis media when paracetamol has failed to relieve the pain?

In my experience and that of my paediatric colleagues paracetamol in adequate dosage and antibiotics relieve pain satisfactorily in virtually all cases of acute otitis media. The prescription of stronger analgesia should not be encouraged in these children, most of whom are under 5, as other complications would inevitably occur in a few of them. In the rare cases in which satisfactory analgesia cannot be achieved by the above regimen, and perforation does not occur to relieve the pain, admission to hospital should be considered to achieve adequate pain control.—A R WELCH, ear, nose, and throat surgeon, Newcastle upon Tyne