only about 400 cases a year and as Clatterbridge does not reach this number, two machines would provide valid data more quickly.

Dr Tobias's negative attitude to neutron therapy is not shared by all. In the United States the National Cancer Institute has extended funding for neutron therapy to 1993, and in France a new high energy cyclotron unit is about to open in Nice. Nor can we ignore the fact that the British government is funding the second cyclotron in Britain with a grant from Treasury funds that would otherwise not come to the health service. We accept this machine at St Thomas's Hospital because we see the importance of contributing to advances in the management of patients with selected tumours that are difficult to treat successfully by conventional methods.

THELMA D BATES

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1 Tobias JS. The cyclotron saga continues. *Br Med J* 1989;**299**: 1294-5. (25 November.)
2 Griffin TW, Pajak T, Laramore G, Davis L. Analysis of neutron therapy treatment complications. *Bull Cancer (Paris)* 1986; **73**:1-5.

Complementary medicine

SIR,—In their speed and passion to object to my criticism of a trial of homoeopathy Dr Peter Fisher and colleagues[1] reverse the two strong points I made.[2] Trials of homoeopathic remedies or any other remedies should be published provided the trials are properly done. As I said, "There is a great merit in publishing pragmatic results without reference to theory or rationale."

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1 Fisher P, Huskinson EC, Turner P, Belon P. Complementary medicine. *Br Med J* 1989;**299**:1401-2. (2 December.)
2 Wall PD. Complementary medicine. *Br Med J* 1989;**299**:1401. (2 December.)

SIR,—The comments by Professor Patrick Wall[1] on the study by Dr Peter Fisher and colleagues on the homoeopathic treatment of fibrositis[2] raise a number of points that require serious consideration. Let us suppose that these authors had performed a study using the identical patients, study design, and statistical interpretations—but instead of a 10^{-12} dilution of poison oak had investigated a new "designer drug." Would the submission and acceptance of that double blind trial have been a "serious error of judgment"? Would its findings, in fact, have been accepted uncritically and without adverse comment? Either the double blind study is a valid and reliable way of obtaining data on the clinical efficacy of a drug, irrespective of its nature, or it is not. If it is not then much of modern therapeutics stands on a very flimsy base indeed. It is clearly imperative that a widely used and time honoured investigative technique should be reliable enough for its results to be taken at face value; the technique should not depend for its acceptance on an established underlying theory or rationale.

It seems that those investigating the so called complementary therapies are in a Catch 22 situation owing to a vicious circle of illogical arguments. Their attempts to establish a rational basis for complementary therapies by clinical trials, usually (as in Dr Fisher and colleagues' case) conducted in a most stringent manner, are severely criticised by the orthodox medical establishment on the grounds that there is no rational basis for complementary medicine. Likewise, when researchers apply for funds to establish a scientific basis for complementary therapies their applications are usually rejected because such therapies are deemed to have no scientific basis.

Why is it extraordinary that the *BMJ* should publish a clinical trial of homoeopathy without comment, and what comment may legitimately be made? The "Benveniste affair" in *Nature*[3] was quite different, being based on in vitro laboratory techniques, and the comment took the form of a short and hostile investigation by, among others, a conjurer—an approach that many scientists, however sceptical of the claims of homoeopathy, considered to be farcical, totally unscientific, and unworthy of such a highly esteemed journal. The essence of the widely held and respected philosophy of Sir Karl Popper is that scientific knowledge advances by a process of formulation of hypotheses from available data and that each hypothesis "stands" until it is refuted and replaced by a semingly better one. Thus a claim or hypothesis is deemed "scientific" if it is open to investigations that could, in principle, lead to its refutation. Only those providing experimental evidence that supports or refutes a hypothesis can make worthwhile comments, always bearing in mind that their own claims are likewise open to refutation.

It is unfortunate that belief and prejudice should obtrude on objective evaluation in any area of medical research. Perhaps this would happen less if a greater interest was taken in the fundamental and philosophical foundations of scientific research methods as applied to the art of medicine.

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1 Wall PD. Complementary medicine. *Br Med J* 1989;**299**:1401. (2 December.)
2 Fisher P, Greenwood A, Huskisson EC, Turner P, Belon PD. Effect of homoeopathic treatment on fibrositis (primary fibromyalgia). *Br Med J* 1989;**299**:365-6. (5 August.)
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Ethnic differences in consultation rates

SIR,—It remains unclear whether the higher general practitioner consultation rate for asthma in Asian compared with white patients[1] is due to increased severity or reduced compliance with long term prophylactic treatment as Dr Jon G Ayres suspects.[2] Increased prevalence of asthma in Asians has been reported[3] but was not found in children.[4] The greater number of Asians admitted to hospital with asthma[5,6] and the higher hospital admission rates for acute severe asthma in Asians[7] are not disputed. Like Dr Ayres we know of no published data regarding the death rate from asthma in Asians, but there is an increased proportional mortality ratio for diseases of the respiratory system (International Classification of Diseases codes 460-519) in women.[8]

We have retrospectively reviewed the notes of all patients admitted recently to Ealing General Hospital with acute severe asthma requiring mechanical ventilation. Our district general hospital serves a catchment area of approximately 200 000 with a population of 60 000 from the Indian subcontinent. Between January 1985 and January 1989, 25 patients were ventilated on 33 occasions. Four died, one of whom was Asian; all had hypoxic brain damage. Twelve of the 16 white and six of the nine Asian patients were attending hospital asthma clinics. Two thirds in each group said that they were taking inhaled or oral corticosteroids, or both, and half of each group were taking theophyllines. Therefore, life threatening asthma occurs quite commonly in Asians. It also seems to occur despite prophylactic treatment and in a similar manner as in non-Asians.

More research is required into the prevalence, severity, and patients' perceptions of asthma as well as into ways of improving communication, education, and treatment in Asian and non-Asian patients alike.

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1 Gillam SJ, Jarman B, White P, Law R. Ethnic differences in consultation rates in urban general practice. *Br Med J* 1989;**299**:953-7. (14 October.)
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Herbal remedies

SIR,—In recent weeks this journal has published two papers describing patients who suffered apparent side effects after taking herbal remedies.[1,2] There were four cases of hepatocellular jaundice[1] and one of photosensitivity.[2] All patients recovered on discontinuing their herbal remedies, although results of one woman's liver function tests remained abnormal.[1] Only in the case of photosensitivity, however, was the association with the herbal remedy proved: that patient took a further dose and reproduced the reaction.[2]

We believe that it is inappropriate to draw general conclusions on the safety of herbal remedies from these cases. Each of the remedies concerned contains a wide variety of potentially active substances, and these patients did not receive identical formulations. It is reported that none of the patients consumed alcohol in excess. Estimates of alcohol intake can, however, be quite inaccurate, and it is not clear to what extent other causes of hepatocellular jaundice were excluded. Furthermore, no information is available on the number of people taking such remedies without adverse effects. Although little has been published on the efficacy of herbal remedies, their undoubted popularity cannot be ignored.

We agree with the conclusion of the authors of both papers that medical practitioners should note any herbal remedies that a patient has taken. Condemnation of these remedies should not, however, follow automatically. It is equally important to note any orthodox drugs taken—whether on prescription or otherwise—as past experience has shown that these too may be the source of adverse reactions. The title of one of the recent papers was "The dangers of herbalism." Would not "The dangers of an incomplete history" have been more appropriate?

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1 MacGregor FB, Abernathy VE, Dahabra S, Cobden I, Hayes PC. Hepatotoxicity of herbal remedies. *Br Med J* 1989;**299**:1156-7. (4 November.)
2 Maurice PDL, Cream JJ. The dangers of herbalism. *Br Med J* 1989;**299**:1204. (11 November.)

AUTHORS' REPLY,—Mr Farrell and Dr Lamb are correct in saying that the principal purpose of our case report was to emphasise the necessity of inquiring about herbal remedies when taking a drug history. They themselves in their letter point out the principal danger of herbal remedies, which is that each product may "contain a wide variety of potentially active substances" and that no two