Chamberlain, who was also Pearce's head of department and editor of the journal, had twice asked for his name to be removed. Of all the abuses of scientific research, gift authorship is the most common and the most lightly regarded. Even the royal college's report, in comments that I disagree with, states that "Mrs Hamid's contributions...in the way of literature searches and writing of introduction and discussion components...justified her acceptance of coauthorship" and "Mr Manyonda's contribution . . . was at an intellectual level with significant contribution to the discussion . . . there is no ground for criticising Mr Manyonda for being a coauthor of the paper. He had accepted the existence of the case on trust from Mr Pearce." This is an unusual attitude to authorship, at variance with accepted recommendations, which if followed will set the clock back.

Many people accept or confer gift authorship, detection is unlikely, and the rewards are obvious: tenure, promotion, research grants, and fame, especially in a society that measures worth by the weight of papers produced rather than their quality. Another reason why gift authorship is so common may be because the recommendations produced by the Vancouver group, an international group of medical journal editors, are difficult to understand[12]: the group should simplify them and also print the masterly table of legitimate and non-legitimate grounds for authorship produced by Ed Huth, a former editor of the *Annals of Internal Medicine* and member of the Vancouver group.[13] Most importantly, however, we should revise our criterion of worth. As recommended by other bodies,[14 15] appointment committees in Britain should follow the longstanding example of Harvard (requiring candidates for a full professorship, for example, to submit copies of only their 10 best articles).

Crucially, however, the Pearce affair raises questions of management. Firstly, we must accept that fraud exists, though with an unknown prevalence: estimates vary from 27% of scientists encountering 2·5 episodes over 10 years[16] through 0·28% in audits of cancer trials[17] to one new case per million population every year (P Riis, personal communication, 1995). Next, the universal lesson is that institutions are not good at policing themselves, so several countries have set up bodies specifically to do this for them, ranging from the Office of Research Integrity in the United States to central committees on scientific dishonesty in the Nordic countries and Austria. The latter committees teach good research practice, advise whistleblowers, are notified of all cases, and may undertake investigations themselves: moreover, they monitor every case and publish annual reports.

A central committee would also seem the most suitable pattern for Britain, particularly as a single body could acquire the necessary experience and skills that more peripheral bodies would lack. On Danish experience, three quarters of the work could probably be handled by the secretariat (disputes about who owns data and authorship, for example), but some would need "due process," and for this reason the presence of a judge on the committee, as in the Nordic countries, would be important. Some link with the General Medical Council, which has statutory powers over doctors, and the statutory bodies would be inevitable. For this time the public outrage that patients might have been put at risk by Pearce's medical frauds means that the subject will not go away. Given its pioneering work, the Royal College of Physicians should seize the initiative again, convene another meeting of interested parties, and implement a workable solution. The time has come for Britain to abandon its lax approach to scientific fraud.

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Vitamin C and vascular disease

Be cautious about the association until large randomised trials have been done

See pp 1559, 1563

Stroke, coronary heart disease, and peripheral vascular disease have many risk factors, or risk indicators, in common, yet some factors are more important for one vascular bed than another. Cigarette smoking is a stronger determinant of peripheral vascular disease than of stroke, high blood pressure is more important for stroke than for coronary artery disease, and a high serum cholesterol concentration has a greater effect on coronary heart disease than on stroke. Other factors may be equally important in all these conditions, and Meade has argued that this is the case for a high plasma concentration of fibrinogen.[1] In this week's *BMJ* Khaw and Woodhouse examine the association between a low vitamin C concentration in elderly people and a high fibrinogen concentration (p 1559)[2] and Gale and colleagues report cardiovascular mortality according to vitamin C intake (p 1563).[3]

Khaw and Woodhouse followed up 96 men and women every two months for over a year.[2] They measured serum ascorbate concentration and plasma concentrations of fibrinogen, factor VIIC, and acute phase proteins at each visit and obtained a dietary history. There was an association between a low vitamin C intake and a high plasma fibrinogen concentration. There are, however, two difficulties in accepting these findings as causally related. Factors that vary with season will be associated for this reason alone, and the low response rate of 45%[4] may have excluded those with more representative dietary patterns. The authors do not present data on either blood lipids or blood pressure, which also undergo seasonal variation.[4] They speculate that vitamin C may protect against cardiovascular disease through an effect on haemostatic factors at least partly through the response to infection. Vitamin C may reduce the incidence of infections and thus lower plasma fibrinogen concentrations, and there is experimental evidence that a large dose of vitamin C increases fibrinolytic activity.[5]

In 1976 Hodkinson and Exton-Smith reported that total mortality was increased after five years in subjects over the age of 65 who had taken part in the Department of Health and Social Security's nutritional survey in 1973-4.[6] Gale and colleagues examine the 20 year survival of 730 of these subjects who had no initial history of vascular disease. Subjects in the highest third of vitamin C intake had a relative risk of death due to stroke of 0·4 (95% confidence interval 0·2 to 0·6) but a relative risk of coronary heart disease of 0·8 (0·6 to 1·2).

The relation between low vitamin C intake and stroke is supported from other epidemiological sources,[7] but the evidence linking coronary heart disease with vitamin C is less strong. Vitamin C may prevent cardiac death, but, if we accept that the relation between low vitamin C intake and vascular disease mainly results in an increase in mortality from stroke, the association may not be mediated by haemostatic factors as a greater impact on coronary heart disease would have been expected.

Could the effect of vitamin C be mediated by a lowering of blood pressure? Two double blind trials have now been published on the effect of vitamin C on blood pressure in elderly people.[8,9] Neither trial produced conclusive evidence of a greater reduction in pressure with vitamin C than with placebo, but the numbers in the trials were not sufficient to detect a small effect. The blood pressure after 0·4-0·5 g vitamin C daily was 3 mm Hg systolic and 0·4 mm Hg diastolic lower than that with placebo in one trial after four weeks and 2·6 mm Hg systolic and 1·2 mm Hg diastolic lower after six weeks in the second trial.[9] Vitamin C probably does lower blood pressure, but the effect may not be sufficient to lower mortality from stroke by 60%. Moreover, the relation between vitamin C and mortality from stroke in the study by Gale *et al* remained after adjustment for blood pressure. We need a long term trial specifically with vitamin C, and in the meantime we mainly have observational data on mortality—with their well recognised limitations.

Experimental data suggest that vitamin C lowers blood pressure by a small amount, that 2 g daily lowers serum cholesterol concentration and prevents oxidation of low density lipoproteins,[5,10,11] and that a similar dose may increase fibrinolytic activity in those with coronary heart disease.[5] However, evidence is required to show more benefit than harm from treatment. Presumably the lack of trial data leads both sets of authors in this week's *BMJ* to a muted support of a high intake of vitamin C in elderly people. We must remember that large randomised trials do not always show the expected benefits. A reduction in total mortality was not observed in a trial of vitamin E and carotene in male smokers.[12]

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Psychiatric services for people with learning disabilities

Specialist knowledge and services are needed

Psychiatric disorder is more common in people with learning disabilities than in the general population. Organic, social, and educational reasons account for this increase. Nearly all adults with severe mental retardation have structural brain disease, and epilepsy is more common in this population.[1] In their study in the Isle of Wight, Rutter and colleagues showed very clearly the association among neurological abnormality, epilepsy, learning disability, and psychiatric disorders.[2] In addition to these organic factors, educational failure; rejection and lack of social acceptance; reduced or no job opportunities, with correspondingly diminished self esteem; difficulties in finding acceptable sexual outlets despite normal sexual drives; and the problems of dysmorphic appearance all combine to increase the liability to psychiatric disorder.[3]

These psychiatric disorders include schizophrenic and paranoid syndromes, although diagnosing them may be difficult.[4] For example, schizophrenia cannot be reliably diagnosed in people with an intelligence quotient (IQ) much below 45. Affective disorders can be diagnosed across the range of intelligence, given in depth knowledge provided by the patient's carer and sensitive observation of changes in behaviour.[5] Senile dementia of Alzheimer type and multi-infarct dementia occur in people with learning disabilities at much the same rate as in the general population, although a well recognised association exists between Down's syndrome and senile dementia of Alzheimer type.[6] In addition, people with learning disabilities experience the gamut of anxiety, neurotic and depressive reactions, states of panic, human unhappiness, loss, and bereavement.

Personality disorder, and particularly psychopathic personality disorder, can have serious forensic implications, and there are a few people with personality disorder with mild degrees of learning disability who may offend repeatedly and are responsible for a disproportionate number of sexual offences and fire raising. They may pose considerable problems of containment and public safety.[7] An estimated 15% of adults with severe learning disabilities have a severe associated behavioural disorder.[8] These behaviours may include self injury, gouging, biting, destructiveness, noisiness, restlessness, stereotypy, aggressiveness, impulsivity, and apparent imperviousness to pain. Such behaviour may stretch the resources of services and carers to their limits.

To address these problems the Department of Health commissioned the Mansell report.[9] It recommended services centred on small, staffed houses and apartments in the community rather than hospitals or large residential homes.