bacteriologist) attending the meeting to appeal for our support that he might get financial help from the trust (Sir Farquhar Buzzard was our chairman) to carry out some investigations. He described his objective—to find something that could be used to check or even prevent the scourge of gas gangrene in war wounds. He had noticed in the literature a paper by Alex Fleming, etc, etc (as you so well explain). He wanted to follow this up first of all. He pointed out that work had been done by Carl Browning and others to show that drugs injected into the body could have selective action on bacteria in the body. Of course, we all agreed enthusiastically to support this appeal but were somewhat sceptical of the result of his research.

A few meetings later at Oxford I was sitting at dinner with Hugh Cairns, the brain surgeon, and he described to me his first experience of using the penicillin extract submitted to him by Florey in brain infections. He reckoned it "would do him out of his usual job" because his busiest occupation was dealing with infection within the skull.

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Choice of treatment in operable lung cancer

SIR,—I feel that I should comment on the letter from Mr J R Belcher and Dr Maxwell Caplin (5 May, p 1212) concerning the choice of treatment in operable lung cancer.

About 30 years ago I developed a malignant ulcer in my left main bronchus. I was advised that I had "just a chance" and should not undergo surgery or radiation of any kind. It was the best advice conceivable and, though the struggle for healing lasted for seven years, it was completely successful.

Perhaps it might be well for Mr Belcher and Dr Caplin not to be too dogmatic.

VICTORIA H KING

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SIR,—I cannot let Mr J R Belcher and Dr M Caplin's letter (5 May, p 1212) regarding your leading article on the choice of treatment in operable lung cancer (14 April, p 970) pass without protest.

It is very difficult to compare radiotherapy as a curative, as distinct from a palliative, treatment with resection in lung cancer. Many patients submitted to thoracotomy are found to have previously unrecognised advanced mediastinal disease and are closed without resection, which is therefore carried out on a highly selected group of the most favourable cases.

I have discussed the problems of radiotherapy as a curative treatment for lung cancer elsewhere.¹ I should like to point out here that tracheo-oesophageal fistula is not a complication of radical radiotherapy; it is occasionally met when palliative radiotherapy is given for dysphagia in patients whose tumour is invading the oesophagus, and who are therefore candidates for a fistula in any case. I should like Mr Belcher and Dr Caplin to enumerate the other causes of late mortality from radiotherapy which they feel exist. It is not my experience that radiotherapy for lung cancer is particularly unpleasant, but I commonly see patients who complain of persistent chest pain after thoracotomy.

I would agree, Sir, with your leading article that, although surgery still seems to be

the best treatment for suitable cancers in patients who are good operative risks, we need to understand much more about the natural history of the disease.

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¹ Mantell, B S, in *Radiotherapy in Modern Clinical Practice*, ed H F Hope-Stone, p 145. London, Crosby Lockwood Staples, 1976.

Accidental removal of endotracheal tubes

SIR,—Dr Sheena M Ross and others (14 April, p 987) report the disastrous consequences of a confused patient's removal of her intravenous catheter. In the past few months I have known of four young children in whom disaster occurred or was narrowly averted when they removed their endotracheal tubes. Three of these had croup or epiglottitis and the fourth severe asthma. All of these accidents happened in the intensive care units of large hospitals, and in each case management had been meticulous up to the accident.

No conscious child will tolerate an endotracheal tube if he can remove it. Reliance on sedation, nursing vigilance, or instructions to the child to leave his tube alone can be based only on blind faith, or perhaps some vague notion that restraints are cruel. Paediatricians, anaesthetists, and ENT surgeons involved with these acute respiratory crises in young children must make sure that the patients' hands are restrained securely by one of the standard nursing procedures (such as Tubegauze mittens tied to the side of the bed) before they leave the intensive care unit.

It may seem unnecessary to labour such a basic and obvious point, yet my experience suggests that self-extubation must be quite a frequent accident—especially in units that have little experience with children.

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Marriage matters

SIR,—As a divorcee, I feel very strongly about the conclusion of your leading article "Marriage matters" (5 May, p 1164). Clearly it would be marvellous if there were a marriage guidance counsellor available, particularly in general practices. It need not stop at general practice either; I have an endocrinological clinic and find that with between 10% and 20% of my patients at different times a marital problem is a most significant factor in the illness. As your editorial says, the problem may be presented in covert ways; but the solution of it may lie in the patient's personal life. Obviously none of this is new.

To suggest, however, that improvement of the "unprofessional" image of marriage guidance counsellors will increase their value is, I think, a great error, and symptomatic of a basic misconception widespread among people practising in these areas which surround the central core of traditional clinical medicine. This misconception runs like this: "If we take a person trying to deal with problems of a highly personal or emotional nature, and equip that person with a training (often referred to as skills) which is heavily orientated

towards, for example, psychoanalysis, psychology, sociology, or what have you, then that person will be better able to relate to the recipients of his or her care, will be better able to manipulate them, and hence will be more effective." This is particularly true of sexual counselling. The idea is that if you label people experts, then they must be able to give better advice and will become better listeners.

The falsity of this can be shown by perusing newspapers and listening to the radio, which these days may deal with the topic several times a week. Without referring to individuals, I must say that I have come across many examples of arrogant or harmful views that seemed to arise from the "professionalisation" of the people involved. It is surely quite illogical when dealing with life matters to abstract from them some sort of unlikelike discipline which constrains and distorts the relationship and the advice and help offered but which is thought to be "authoritative."

The marriage guidance counsellor who was most help to me was a lady who did not take these views, but was patient and tolerant and had a degree of personal wisdom. Interestingly, she has now left the Marriage Guidance Council simply because of this false and pretentious professionalisation. What matters in counselling is the person, not the qualifications. Let us by all means have more people doing this, but let us let their wisdom grow unfenced by mental discipline imposed by enthusiasts.

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The health of the Maoris

SIR,—Dr Richard Smith has written an entertaining and generally perceptive view of New Zealand (14 April, p 996). There are, however, some inaccuracies in the section on Maori health.

The Maori population certainly declined seriously following the advent of Europeans but was never as low as 35 000. The lowest figure was 42 000 at the census of 1896. Dr Smith implies that whites shooting Maoris was a factor in the decline. Certainly whites and Maoris did shoot each other but in numbers too small to have any real effect on the population. Intertribal warfare, on the other hand, was an important feature of the Maori way of life. So long as this was limited to hand implements its total effect was small. The introduction of firearms by unscrupulous European traders completely changed the balance and the result did reduce the population.

The next major cause of the decline was disease. Cook's crew did bring tuberculosis and probably venereal disease. The viral epidemics, influenza and measles, came later and had a devastating effect on a non-immune population. Undoubtedly the worst European influence was dietary. Cook and Banks commented that there were no fat Maoris, a marked contrast with the situation they had just seen in Tahiti. The reason lay in the sparse diet of the Maoris. New Zealand did not have any large animals to form a protein source and the big flightless moa had been hunted to extinction. Cannibalism was not practised sufficiently regularly to make, as Dr Smith suggests, a significant contribution to the diet. It was, rather, an occasional (greatly enjoyed) victory ritual. The dog was a delicacy

for great feasts but did not breed in sufficient numbers to be eaten frequently. Fish were the major protein source and were plentiful. Birds and sometimes the native rat were snared to make a useful addition to the diet.

From these sources the Maori diet was adequate, probably just adequate, in protein; but there was no generous source of carbohydrates. The climate is too cold for coconut palms. Kumara, the Polynesian sweet potato, grew only in the northern half of North Island and is not a prolific vegetable. The staple item in the diet—as is stressed by all the eighteenth-century European visitors, both English and French—was fern root, the rhizome of the common bracken fern. When dug up, baked, and pounded, this could be chewed to yield some starch, a meagre result from much hard work. Thus the Maori remained lean and his genetic hyperuricaemia was controlled.

The white visitors and early settlers did what they thought was a kindness. They gave the Maori a better and easier food supply. Potatoes, wheat, and sugar were the downfall of the Maori race. With copious sources of carbohydrate, the Maoris got fat and with obesity came diabetes, gout, and cardiovascular disease. The worst results came from good intentions. I have not mentioned alcohol because it entered the picture only at a later stage; the Maori was slow to develop a liking for alcohol. Beer may make a significant contribution to Maori obesity today, but that was not so in the early days.

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Pressure on the tracheal mucosa from cuffed tubes

SIR,—The study by Drs J M Leigh and J P Maynard (5 May, p 1173) is of considerable help in the difficult choice of a tube for prolonged tracheal intubation. However, we would like to inject a note of caution into the use of low-pressure cuffed tubes in spontaneously breathing patients.

A recent patient in our intensive therapy unit died as a result of massive aspiration of gastric contents past the properly inflated, low-pressure cuff of an endotracheal tube. The patient was breathing spontaneously in the sitting position while being weaned from mechanical ventilation. Despite intensive resuscitation, cyanosis became intense and death rapidly ensued. Necropsy confirmed extensive pulmonary aspiration and did not demonstrate any abnormality of oesophagus or trachea.

If the pharynx fills with fluid, with the patient sitting up, a hydrostatic pressure of 10–12 mm Hg may be exerted from above on the cuff of the endotracheal tube. Preliminary laboratory studies on the low-pressure cuffed tubes used in our unit confirm that, with a cuff pressure of 15 mm Hg, there is a leak of fluid past the cuff along folds in its wall. The effect is accentuated by a negative pressure below the cuff, such as may occur during spontaneous ventilation. If a patient were to take a deep inspiration, as after a coughing fit, or if the lumen of the tube were partially obstructed, greater negative pressures may be generated and the effect further exaggerated.

We hope to pursue our study of this phenomenon, and offer this report not as an argument against the use of "floppy" cuffed

tubes but simply to warn against too great a reliance on the protection against aspiration offered by such tubes.

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Driving after anaesthetics

SIR,—Recently Dr T W Ogg (31 March, p 891) drew attention to the fact that no published work seems to exist on the question of when it is safe to drive after general anaesthesia.

We have been investigating this problem for some time in relation to the administration of nitrous oxide in dental surgeries as an analgesic and sedative agent (relative analgesia or inhalation sedation). With the help of dental student volunteers we have tested driving ability following 15 minutes' inhalation of air, 50% N₂O/O₂, and 70% N₂O/O₂ mixtures, using a driving simulator and a film based on the British Department of Transport driving test. A slight but quantified impairment in driving ability was found up to 30 minutes following inhalation of the N₂O/O₂ mixtures. Under our experimental conditions it would appear that caution in driving should be exercised after a short exposure to nitrous oxide. Full details of the experiment have been submitted for publication to the *South African Medical Journal*.

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Another view of the Kalash

SIR,—We were interested to read Dr Alison Leach's account in Personal View (10 March, p 679) of her experiences with the Kalash tribe of the North-west Frontier. As we spent over two months living with these people a short while ago we thought that we ought to bring a few points to her attention.

Firstly, the suggestion that these people are descendants of Alexander the Great is at best a myth and something quoted by the Government guide books rather than by the people themselves, though we admit that one does occasionally see the unusual sight of a blue-eyed Pakistani in these parts.

We were slightly perplexed about where she discovered the names of the Kalash villages that she visited (Rumbhur, Bumboret, and Birir, for example) as these are not villages but the names of the three valleys in which these people can be found. In each of them are upwards of five small hamlets stretched over at least 10 miles of rugged, mountainous countryside.

Delighted we were when we read her observation that infected skin lesions were so common, but it would be worth pointing out that this is almost certainly due to the people's tradition that they should never wash except on the rare occasions that custom permits it.

From our point of view iodine-deficient goitre was the most prevalent condition, affecting some 65% of women and 35% of men. The area shows one of the highest levels of endemic goitre in the world and has been extensively studied in the past.

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Dalziel's disease

SIR,—The correct spelling of Sir Kennedy's surname is Dalziel¹; he was born at Penpont near Dumfries in 1881 (31 March, p 876). Several senior colleagues have attempted to identify the pathologists who were at the Western Infirmary, Glasgow, 66 years ago. Almost certainly all the reports were scrutinised by Sir Robert Muir. However, in the first edition of his *Textbook of Pathology*² Muir made no reference to the pioneering work on chronic interstitial enteritis which Sir Kennedy Dalziel presented in Glasgow and Brighton in the spring³ and summer of 1913.

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¹ Dalziel, T K, *British Medical Journal*, 1913, **11**, 1068.

² Muir, R, *Textbook of Pathology*. London, Arnold, 1925.

³ Dalziel, T K, *Glasgow Medical Journal*, 1914, **82**, 346.

"The Edinburgh School of Surgery after Lister"

SIR,—I read the *BMJ* of 28 April with particular pleasure—firstly, on account of Dr Dale Falconer's fascinating article "Best-dressed casualties" (p 1130) and, secondly, for Professor Hugh Dudley's generous review of my book *The Edinburgh School of Surgery after Lister* (p 1138). I accept his criticism that there is no index. An index was discussed but I felt, as there was very little overlap of subject matter, that the headings of the chapters in the contents list were a sufficient guide. However, I was wrong.

As regards references to source material, a fair copy of all this voluminous material is being prepared. This will be available in the library of the Royal College of Surgeons of Edinburgh for anyone interested, possibly someone in the future taking Professor Dudley's hint and writing a modern history of the college that is long overdue.

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Disinfection with glutaraldehyde

SIR,—Your correspondents Dr G A J Ayliffe and others (14 April, p 1019) suggest that the products which have become available since the expiry of the patent on the original 2% activated alkaline glutaraldehyde solution are likely to be corrosive to certain metals and to damage other materials.

We have recently completed laboratory investigations on the effects of six aqueous 2% glutaraldehyde preparations on 25 different metals, combinations of metals, and other