emergency. However, in the past 18 years in medical circles the term accident and emergency has come to designate precisely what previously had been called casualty. This stems directly from the Platt Report's second recommendation. In the ensuing years it has gained such widespread acceptance in the United Kingdom that one searches with difficulty for any trace of the word casualty in an authoritative contemporary document on this subject such as the Lewin Report,⁴ where it appears briefly on page 23, referring to small peripheral departments, but where in all other paragraphs the term accident and emergency is used.

Maybe the discussion on page 4 of our book⁵ on the use and misuse of accident and emergency departments does lack the clarity and forcefulness which Mr Abson desires. However, I cannot believe that clarity and forcefulness would have been well served by substituting the word casualty for either "emergency" or "accident and emergency," or by defining casualty in terms of "community dependence" described as "the need of immediate assistance from the independent citizen."

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¹ Subcommittee of the Standing Medical Advisory Committee of the Central Health Services Council. *Accident and emergency services*. London: HMSO, 1962:23-4, 39. (Platt Report.)

² Anonymous. *Lancet* 1969;ii:577.

³ Anonymous. *Lancet* 1969;ii:613.

⁴ Lewin W. *Medical staffing of accident and emergency services*. London: Joint Consultants Committee, 1978:23.

⁵ Rutherford WH, Nelson PG, Weston PAM, Wilson DH. *Accident and emergency medicine*. Tunbridge Wells: Pitman Medical, 1980:4.

Open-access endoscopy

SIR,—Mr M W L Gear and others (3 May, p 1135) justify their open-access endoscopy service by their success in finding organic lesions. A cynic has defined a healthy person as "someone who has not been fully investigated." Their article does not show the effect of the investigation on the patient or how relevant they considered, for example, the mucosal lesions.

Gastroenterologists find that many dyspeptics have no relevant organic lesion and are cured by instant reassurance supported, when necessary, by barium meal or endoscopy. These have suffered in the past from being wrongly labelled as victims of visceroptosis, chronic appendicitis, chronic cholecystitis, or hiatus hernia (without objective evidence of reflux). Obviously, the endoscopist will find more satisfaction in "finding something"; but much mucosal disease like gastritis is irrelevant and found in normal people, or a reddened mucosa may be a reaction of the psyche to endoscopy. If an unnecessary organic label is given, neurosis may be perpetuated and patients may be condemned to dieting or cimetidine instead of being cured by reassurance.

So open-access endoscopy can do harm. The ill effect of new technology has been shown in other specialties; for example, the electrocardiogram produced many invalids in the early days before the normal variations were known.

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Low-tar smoking versus middle-tar smoking

SIR,—Dr M A H Russell and others (5 April, p 972) report an important study which, albeit in a highly selected population, indicates that smokers of ventilated (low-tar) cigarettes smoke their products more intensively than smokers of unventilated (middle-tar) cigarettes when the products have been both self-selected and smoked over a relatively long period of time.

The results presented, however, based primarily on the measurement of blood nicotine, do not wholly support the authors' conclusion that tar intake is not appreciably lower in the low-tar smokers than in middle-tar smokers. Despite a high (statistical) correlation between the tar and nicotine yields of manufactured cigarettes the tar:nicotine ratio can by no means be considered a constant. On the basis of table IV of the paper the middle-tar and low-tar products have, on average, tar:nicotine ratios of 13.77 and 11.63 respectively. Thus even if smokers achieved the same levels of nicotine from the low-tar cigarettes as from the middle-tar cigarettes, their tar intake would remain on average lower by 16%. In fact, the levels of blood nicotine measured in the low-tar cigarette smokers are for men 87.5% and for women 95% of the values found in the middle-tar cigarette smokers; on the basis of these levels the corresponding relative tar intakes would be 73% for men and 80% for women (one would expect a relative nicotine intake of 62% and a relative tar intake of 52% if the cigarettes were smoked under comparable standard conditions). Therefore although the nicotine intake by low-tar cigarette smokers may not be appreciably lower than that of middle-tar cigarette smokers it does not follow that the same is true for tar intake.

It might be argued that this could support the hypothesis that has been advanced that maintenance of nicotine intake determines the intensity of smoking but whether this is true or not, the smoker—if he cannot stop smoking—should be encouraged to smoke not only a lower-tar product but also one with a lower tar:nicotine ratio.

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Carbon monoxide yield of cigarettes

SIR,—Dr N J Wald and Sir Richard Doll disagreed with Mr P N Lee's statement that there seems to be no strong case for the publication of carbon monoxide (CO) yields on the grounds that the values would be useful to physicians who wish to advise smokers to reduce their exposure (1 March, p 646). We question the general assumption that numbers for quantities such as cigarette tar, nicotine, and CO are a good indication of potential brand toxicity.

Estimations for cigarette yields are provided by smoking machines, which take a 35 ml puff of two-second duration once every 60 seconds until a fixed butt length is reached. These conditions are probably a poor reflection of current human behaviour, particularly for those smokers who "compensate" when they switch brands¹; as Drs M J Jarvis and M A H Russell point out in their comment on the Hunter Committee's second report (5 April, p 994), there is much evidence that people do

not smoke cigarettes in the same way that smoking machines do.

The utility of these standard numbers may be questioned on other grounds as well. The Canadian Government has recently released the CO yields of cigarettes and, on the basis of these results, we have defined a group of low-hazard cigarettes, average CO yield 10.9 mg (range 1.7 to 14.8 mg), and high-hazard cigarettes, average CO yield 23.0 mg (range 20.7 to 24.4 mg).² We have also determined levels of carboxyhaemoglobin for two groups smoking similar numbers of both types of cigarettes ("low" 19±2 and "high" 19±3 cigarettes per day) and found no difference. The average for smokers of the "low" CO yield brands was 4.7±0.8% and 5.0±0.8% for those smoking the brands defined as "high" yield. If this result is substantiated by further studies, then it would be difficult to escape the conclusion that behavioural factors are far more important than cigarette yields in determining exposure and the risk of smoking-related diseases. Obviously in order to answer this question CO yields must be made public.

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¹ Schulz W, Seehofer F. In: Thornton RE, ed. *Smoking behaviour, physiological and psychological influences*. Edinburgh: Churchill Livingstone, 1978:259-76.

² Rickert WS, Robinson JC, Young JC. *J Toxicol Environ Health* 1980;6:353-67.

A computer in every surgery?

SIR,—The leading article "A computer in every surgery?" (28 June, p 1556) is in our opinion a retrogressive contribution to the debate on the role of computers in general practice. It fails to recognise the very real changes in record keeping which have occurred over the last few decades in a large number of practices. It fails to recognise the importance of information systems to assist practice management, the process of care, surveillance of chronic conditions, and clinical audit. It fails to recognise the rapidly changing world in which we live and, finally, it fails to recognise the far-reaching changes in general practice which will have to materialise if the GP is to retain his position as the main provider of primary care.

It is just not possible for the general practitioner's surgery to remain a haven from modern society. Our role in society is largely determined by our patients and we ignore their needs and wishes at our peril. A recent example of our failure to meet this need is over the matter of blood pressure measurement. We inform the public that untreated high blood pressure leads to an increased chance of a stroke, yet we deny them the opportunity to receive regular blood pressure checks because we are too busy for routine screening procedures. Our patients, therefore, turn to the supermarkets and chemists where a machine takes their blood pressure. If we do have to resort to such a machine to take blood pressures, then surely it should be situated in the doctor's surgery. With an increasing awareness of risk factors, and the need for informed advice for all patients, including the obese, smokers, and women over 35 years taking the contraceptive pill, the GP who does not record these facts and advise his

patients accordingly will quite correctly be censured for professional negligence. Obviously it will still be up to patients to decide for themselves, but the GP will need to present all the known facts to each patient so that they are well informed.

Hopefully the human side of general practice will continue, or even grow, for most of us wish to remain the trusted family physician to whom our patients can turn in times of trouble. However, with increasing numbers of female graduates (many of whom cannot work full time because of other commitments), shorter working weeks, an unwillingness to do home visits and out-of-hours cover, and lengthening holidays and study leave, where will we be when our patients need us? We have no divine right to our patients' loyalty and respect and perhaps not many people would mourn our passing if the new primary care helper to whom they turned had a degree in sociology and computer science.

As regards to the situation today, many computer experts would totally disagree with the statement that "present computer systems are relatively expensive and unreliable." Effective and reliable information systems are now available at costs ranging from 40p per patient per annum for a basic record summary up to £1 per patient per annum for a full encounter system with repeat prescription facilities. These costs are inclusive of all software and maintenance and running costs. Projected costs over the next few years will fall slightly. However, costs will never come down if there is no market for the system, so the policy of "wait and watch the prices fall" is a false one. It has been repeatedly pointed out that the average GP is now responsible for spending over £150 000 a year of the resources of the NHS. It seems sensible to allocate less than 1% of this to an effective information system, which could pay for itself several times over with safer and more effective prescribing, less iatrogenic disease, and more appropriate referral. The fact that there is so little evidence of the effect of computerised information systems on general practice is a reflection of the low priority given to them by the profession and the DHSS alike. We support your call for many more pilot studies and agree that improvements in patient care must be demonstrated.

We may never have a more opportune time to invest and experiment in computerised information systems and records. If we keep our heads in the sand for much longer we may find that everyone has gone on without us. Computers, video sets, and improved communication networks will be the growth area of the next two decades. Whether we like it or not, they must also be a growth area in general practice. As the old saying goes, if you don't like the destination perhaps you'd better get off the train.

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HLA and disease 1980

SIR,—The mechanisms suggested to explain the association of HLA with disease, reviewed in your leading article (21 June, p 1485), were classified either as two-gene theories or as one-gene theories, whereby the HLA antigen

either cross-reacts with some infectious agent or acts as a receptor for such an agent. The main evidence favouring the two-gene theory was the presence in mice of "immune response genes" within the H-2 complex, although no such human genes had so far been identified. However, mouse "IR" genes have not been identified either, and the term represents a semantic abbreviation for the evident demonstration of high and low immune responses in different species of inbred mice when injected with the same dose of antigen, and the data could equally well be explained by a molecular mimicry hypothesis.^{1 2}

Ankylosing spondylitis remains the model par excellence for studying HLA and disease. Partial cross-reactivity between HLA-B27 lymphocytes and *Klebsiella* has been obtained using both rabbit sera^{3 4} and tissue typing sera,⁵ although only the latter can be used as evidence for suggesting a direct link between HLA-B27 itself and Gram-negative bacteria, since monospecific xenogeneic typing sera have so far not been produced.⁶ *Klebsiella* micro-organisms have been isolated during the active phase of the disease,⁷ including uveitis,⁸ and similar results have been obtained by another group.⁹

The chief merit of the molecular mimicry hypothesis, despite the controversial issue of *Klebsiella*,¹⁰ is that it provides a mechanism for the pathogenesis of the disease, in that anti-Gram-negative bacterial antibodies binding to HLA-B27-positive chondrocytes, through complement activation, could produce spinal disease. The theory can be tested by investigating differential distribution, according to HLA type, of natural antibodies evoked by gut flora; and such studies are currently in progress.

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¹ Ebringer A, Davies DAL. *Nature (New Biol)* 1973; **241**:144-7.

² Wooley PH, Ebringer A. *J Med Microbiol* 1980; **13**: 11-7.

³ Ebringer A, Cowling P, Ngwa Suh, et al. In: Dausset J, Sveigaard A, ed. *HLA and disease*. Paris, INSERM 1976; **58**:27.

⁴ Welsh J, Avakian H, Cowling P, et al. *Br J Exp Path* 1980; **61**:85-91.

⁵ Avakian H, Welsh J, Ebringer A, Entwistle CC. *Br J Exp Path* 1980; **61**:92-6.

⁶ Bodmer WF. *J R Coll Phys Lond* 1980; **14**:43-50.

⁷ Ebringer R, Cooke D, Cawdell DR, et al. *Rheum Rehab* 1977; **16**:190-6.

⁸ Ebringer R, Cawdell DR, Ebringer A. *Br Med J* 1979; **3**:383.

⁹ Eastmond CJ, Willshaw HE, Burgess SEP, et al. *Ann Rheum Dis* 1980; **39**:118-23.

¹⁰ Warren RE, Brewerton DA. *Ann Rheum Dis* 1980; **39**:37-44.

Drugs and rheumatoid arthritis

SIR,—In their article on the effects of drugs on the manifestations of rheumatoid arthritis Professor V Wright and Dr R Amos (5 April, p 964) end by saying that radiological assessment over a long period is needed to show whether a drug favourably affects the course of rheumatoid arthritis.

They include corticosteroids among drugs and refer to the first controlled trials of their use run by a joint Medical Research Council and Nuffield Foundation committee specially formed for the purpose. They omit to mention, however, the two striking findings of those trials.¹ The first was that prednisolone had a markedly favourable effect on the manifestations of early rheumatoid arthritis, which cortisone did not. This finding has yet to be

accounted for. The second was that, in the prednisolone trial only, the incidence of new bone erosions was strikingly less than in the aspirin and other analgesics control group over a period of two years. The radiological assessment was continued by the co-ordinator for a further three years and the reduction, though less, was still marked. This finding that prolonged prednisolone therapy, at a dose of 10-12 mg each day, resulted in potentially affected bone retaining its integrity is of major interest in the study of rheumatoid arthritis but does not justify the routine use of this hormone. In consequence the latter finding was published in an article on general rheumatoid arthritis research and not on treatment.²

The picture, to my mind, is of a tissue concentration of prednisolone able to prevent the initiation of an inflammation that it could not suppress once started, and of the more easily metabolised cortisone in a theoretically equivalent dose being unable to do so. (Cortisone and cortisol are interconvertible throughout the body; the former is the inactive form.) To the author this is a complex matter as in his opinion treatment with adrenocorticotrophic hormone, producing an equivalent dose of cortisol, is also effective.

The fact that this interesting effect of prednisolone has parallels in the treatment of other diseases increases the need to know its nature.

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¹ Joint Committee of the Medical Research Council and the Nuffields Foundation on clinical trials of cortisone, ACTH, and other therapeutic measures in chronic rheumatic diseases. *Ann Rheum Dis* 1959; **18**:173-86.

² West HF. *Abst World Med* 1967; **41**:401-17.

Must plagiarism thrive?

SIR,—The recent outbreak of flagrant plagiarism referred to by your special correspondent (5 July, p 41) belongs to a long tradition of scientific theft. One is reminded of the great Tom Lehrer's bitter comment on scientific endeavour, "Why the Good Lord made your eyes—... to plagiarise...!"

Few thieves have been as blatant as Dr E A K Alsabti, but in the 1930s a French mathematician, Maurice de Duffahel, published a number of papers which were word-for-word copies of classical papers of previous decades¹; and as recently as the late 1960s a paper was published in the *Proceedings of the Japanese Physical Society* which was a complete copy of a paper by a British physicist.²

Much more common is the theft of ideas without acknowledgment and the failure to quote foundational work of other authors, so that derivative studies are passed off as original. Hagstrom found that 52% of 1309 scientists thought that they had been abused in this way³ and Gaston, who interviewed 203 high-energy physicists, discovered that half of them felt that the other researchers failed to cite their articles when a reference was clearly called for.² Whether this is scientific paranoia is hard to say. I have myself twice had the experience of seeing other workers with access to resources that I cannot command publish without acknowledgment results based on ideas that I have discussed with them over coffee at scientific meetings.

If anyone should think that they have seen some of this letter before, I must admit that I have lifted some of the information from an article by Eugene Garfield, published seren-