enough to cater for all the psychiatric needs of the population and not just the less seriously ill. (3) At least some of the new industrial therapy units should be located within the psychiatric departments. (4) Each area must be charged with developing its services according to its local needs and not subjected to remote, inexperienced civil service policy. Any intractable problems at local level could be resolved by a committee composed of members practising in the different regions. (5) Every area should develop its services for character disorders (psychopaths). (6) In the problems of training and recruitment it is essential to ensure that doctors and nurses can handle all groups of patients and are not limited in their training and experience to the less severely ill.

We agree with Drs. Leberg and Mackay that the problem is not just one of finance. We are disappointed that our letter received so little response. We would have thought that this subject is of such importance both to psychiatrists and the general public that more readers would have commented. Are we to assume that the vast majority agree with us?—We are, etc.,

F. A. BLEADEN
J. H. PRICE

St. John's Hospital,
Lincoln

Trial of Mefruside

SIR,—I report here the results of a study of the hypotensive effect of mefruside in 15 patients with systemic hypertension. Plasma sodium, potassium, chloride, uric acid, and creatinine were also monitored during the study.

Five patients receiving no other antihypertensive drug were given 25 mg of mefruside daily for two months and 10 patients already receiving antihypertensive therapy were given 50 mg of mefruside daily, also for two months. In patients receiving mefruside alone the reduction in the mean systolic pressure in the supine position was 28 mm Hg and in the erect position 26 mm Hg. The mean diastolic pressure was also reduced—by 16 mm Hg when the patients were supine and 12 mm Hg when erect. In those patients already receiving an antihypertensive agent the reduction in the mean systolic pressure in the supine position was 36 mm Hg and in the erect position 50 mm Hg. The mean diastolic pressure fell by 18 mm Hg in the supine and by 21 mm Hg in the upright position.

Anderson and his colleagues¹ reported an average reduction in blood pressure of 8.5 mm Hg systolic and 5.6 mm Hg diastolic in patients taking frusemide. They reported a greater reduction with hydrochlorothiazide, averaging 19 mm Hg systolic and 11.6 mm Hg diastolic, than with frusemide. Auld and Murdoch² found a mean fall of blood pressure from 180/110 to 161/97 mm Hg in 15 patients given mefruside 25 mg daily for seven days.

We used automated procedures to measure plasma sodium, potassium, chloride, uric acid, and creatinine. After two months' treatment with mefruside there was no significant change in plasma potassium concentration in six patients; in three there was a fall of less than 0.5 mEq, and in six there was a fall of more than 0.5 mEq. Both Healy³ and Anderson¹ and their colleagues¹ have shown that there is a significant reduction in plasma potassium concentration in patients taking frusemide and hydrochlorothiazide. Losel⁴ reported only one case of hypokalaemia in a group of 65 patients taking mefruside. All of them received

potassium supplement during the therapeutic trial.

Mefruside therapy caused no appreciable change in the plasma sodium, chloride, and creatinine levels in our patients, but all of them developed hyperuricaemia. The highest plasma uric acid concentration recorded at the end of two months was 11 mg/100 ml.

Other naturetics have been used in the treatment of hypertension, but the adverse effect of each prompts the search for a better one. In this study mefruside was found to be a useful supportive antihypertensive agent but, like other naturetics, it caused hyperuricaemia and hypokalaemia.

I thank Drs. W. G. A. Swan and F. S. Jackson for permission to do the study. I am also grateful to Messrs. Bayer, Germany, Limited for providing the drug for the trial. I am also indebted to Sister Drewit and Mrs. Grievson for their assistance.

—I am, etc.,

S. J. JACHUCK

Regional Cardiovascular Unit,
Newcastle General Hospital,
Newcastle upon Tyne

- 1 Anderson, J., Godfrey, B. E., Hill, D. M., Munro-Faure, A. D., and Sheldon, J., *Quarterly Journal of Medicine*, 1971, 40, 541.
- 2 Auld, W. H. R., and Murdoch, W. R., *British Medical Journal*, 1971, 4, 786.
- 3 Healy, J. J., et al., *British Medical Journal*, 1970, 1, 716.
- 4 Lösel, H. C., *Medizinische Klinik*, 1968, 63, 759.

Suicide Rate

SIR,—The official suicide rate in England and Wales has steadily declined over the past seven years, from 120 per million in 1963 to 80 per million in 1970. Doubts are sometimes expressed, most recently in the *Guardian* of 22 July, about the validity of this fall, apparently because of a belief that coroners are concealing more suicides than before, calling them accidents or open verdicts instead, thus concealing a rising incidence of suicide. Such an opinion is not sustained by serial mortality statistics for suicide and related violent death causes.

The accompanying Table of crude death rates per million of total population (England and Wales) shows that the suicide rate fell by one-third between 1963 and 1970. To argue that suicide is on the increase because coroners' standards for a suicide verdict have changed it is necessary to show an increase in accidental and open verdict deaths from the main specific death causes of suicide—gassing, poisoning, drowning. No such increases have occurred in gassing or drowning. A small increase in poisoning is present but nowhere near large enough to make up the fall in the suicide rate. All the evidence, therefore, supports the view that the incidence of suicide is decreasing and the official suicide rate based on coroners' decisions, imperfect though we know it to be, does truthfully reflect that decrease.

His critics sometimes forget that the

coroner must use a legal definition of suicide which leaves no room for surmise. If he strays too far towards a medical definition based on the balance of probabilities his decisions are liable to be reversed on appeal. Provided the standard of proof in use does not vary we may draw the conclusion that a change in the official rate reflects a change in incidence, even though we know that suicide is under-reported.—I am, etc.,

B. M. BARRACLOUGH

Graylingwell Hospital,
Chichester, Sussex

Neurotic Dyspnoea

SIR,—Dr. H. J. Trenchard (29 July, p. 289) has done us all a service by his reminder of the "neurotic" symptoms of pulmonary embolism, which all too often may be signalized by apprehension of a degree apparently disproportionate to the physical, radiological, and electrocardiographic findings. Carefully taken right and left lateral chest x-rays, however, may reveal tell-tale small, linear fibrotic or atelectatic markings. These are legacies of recurrent pulmonary infarcts and are urgent indicators for anticoagulant treatment, unless there is convincing evidence of another aetiology for their existence. Such treatment, of course, may easily be dismissed as having produced a placebo effect if the patient's dyspnoea subsequently disappears, but surely three months of carefully supervised anticoagulant treatment is preferable (even in a doubtful case) to the disasters so cogently presented in Dr. Trenchard's letter. Paul Wood¹ stated "mild cases [of pulmonary embolism] are easily overlooked . . . fleeting unexplained breathlessness . . . may be the sole manifestation of an event that brought death very close."

In this context it is worth mentioning that another condition has been described as presenting with "dyspnoea sine materia" (in America) and hence "neurotic"—namely, systemic lupus erythematosus.—I am, etc.,

J. DE SWIFT

East Glamorgan General Hospital,
Nr. Pontypridd, Glamorgan

- 1 Wood, P., *Diseases of the Heart and Circulation*, 3rd edn., London, Eyre and Spottiswoode, 1968.

Aetiology of Varicosity

SIR,—I agree with Dr. A. A. R. Gossage (8 July, p. 112) that the weight of the colon as the main cause of deep vein thrombosis is difficult to accept. The bulk residue diet of the African leads to his having at least two large bowel actions a day, and x-ray examinations of the abdomen invariably show a colon full of faecal material. Yet varicose veins and, clinically, deep vein

Year	Suicide Rate	Accidental Gassing	Accidental Poisoning	Accidental Drowning
1961	111	17	9	19
1962	118	21	12	16
1963	120	24	13	15
1964	116	17	15	18
1965	107	15	15	15
1966	103	15	17	18
1967	97	12	17	16
1968	94	11	17	16
1969	89	9	21	18
1970	80	7	22	16

From Registrar General's mortality tables for years in question. Accidental and open verdict death rates are combined.

thrombosis are very uncommon in Botswana. The part of activity in the aetiology of varicosity mentioned by Dr. Gossage is, in my opinion, important. In the virtual absence of bus and train services and the low car ownership most Africans in Botswana think nothing of walking 10 miles (16.1 kilometers) or more a day going to and from work.

It is also interesting to note that no patient under my care has died postoperatively from pulmonary embolism in 2½ years, and this in a hospital without physiotherapists where prophylaxis against deep vein thrombosis, though attempted, is difficult. A study is at present being undertaken to try to determine whether deep vein thrombosis is occurring postoperatively and what factors account for the apparent absence of pulmonary embolism in these patients.—I am, etc.,

R. H. JOHNSON

Princess Marina Hospital,
Gaborone,
Botswana

Sir Ronald Ross

SIR,—I read with interest the appreciation by Professor L. J. Bruce-Chwatt (19 August, p. 464) of the discovery by Sir Ronald Ross 75 years ago last month of the transmission of malaria by mosquitoes.

I think it is possible that I am the only one alive who worked with Ross. I was his technician in the R.A.M.C. in 1917 until the end of the war, and then for a further three years helped him at the Ministry of Pensions. At this time his great interest was the prevention of *P. vivax* relapses which were so frequent in demobilized troops from Salonika. I well remember the prolonged discussions between him and Col. S. P. James on why relapses were so persistent despite the heroic daily doses of quinine which were given.

Today, 50 years later, we are not sure beyond doubt that the exoerythrocytic stage of the parasite is responsible for relapses in *P. vivax* malaria. In passing, Sir Ronald was awarded the K.C.M.G. in 1918 and not, as stated in the article, the C.M.G.—I am, etc.,

P. G. SHUTE

Epsom, Surrey

Overpopulation

SIR,—You ask (19 August, p. 432), "When does a populated place become overpopulated?" Ehrlich's answer is when human numbers press upon human values. To this I would add Southwood's¹ definition of the optimum population: "The maximum that can be maintained indefinitely without detriment to the health of individuals from pollution or from social or nutritional stress."

Sociologists are fond of relating the whole question simply to density, ignoring the area and resources required for the production of food, goods, and services consumed and the effect of such consumption beyond our immediate territorial limits. We might reflect, before adding to our numbers in Britain, that half the World's people have no access to health care at all,² that probably more than a million people in Asia are blind as a result of malnutrition,³ and that there is a world protein shortfall of about 20-30 million tons a year.⁴

A large proportion of the protein and fertilizers produced in the developing countries is imported into Western Europe and North America to feed livestock. The green revolution is critically dependent on chemical fertilizers and it remains to be seen how much longer one-third of the World will continue to be able to consume two-thirds of the World's food. So far successive British governments have either encouraged or condoned future increases in our numbers and thus placed one determinant of per caput resource usage beyond public policy. There is now widespread public concern and if a population policy were to be adopted it might, in Theodore Fox's⁵ words, "Produce a policy more rational than the one holding the field—a collection of assumptions made by people living, biologically, in the past."—I am, etc.,

P. J. HORSEY

Winchester,
Hants

¹ Southwood, T. R. E., in *The Optimum Population for Britain*, ed. L. R. Taylor. London, Academic Press, 1970.

² *New England Journal of Medicine*, 1970, 283, 537.

³ *Lancet*, 1971, 1, 503.

⁴ *Nature*, 1971, 229, 79.

⁵ Fox, T. *Lancet*, 1966, 2, 1238.

SIR,—Following the considerable interest and discussion earlier this year concerning doctors and overpopulation I, and I am sure there must be others, am anxiously awaiting the reaction of Dr. J. A. D. Anderson and his cosignatories (8 January, p. 108) to the proposed admission into this overcrowded country of tens of thousands of Asians from Uganda—the more so as these would-be immigrants will be, by reason of tradition, culture, and religion, at least for a very considerable time, immune to the propaganda regarding birth control and abortion, etc., for which the letter made an especial appeal.

It is to be hoped that these medical men who regard overpopulation as "the supreme dilemma of our age" will not ignore this matter, being as it is a further blow in the attempt to combat "the British disease of overpopulation," to which they have so vehemently referred.—I am, etc.,

J. A. BARCLAY

Edinburgh

SIR,—There is one aspect of overpopulation which might be considered and that is whether it is advantageous or desirable for any country to have more people than it can educate well. Of course, this brings up the question of education and how much is necessary, and can lead to endless controversy. Recently I have heard of three individuals whose experience I found rather disturbing.

The first was a student doing holiday duty at a small hotel in Scotland. She was asked to set and light the fire. She had never done this and had no idea how to proceed. The second was also a student who had never been to a zoo but had seen all the animals on television. On her first zoo visit she was astonished at the size of wild animals. The third was a postgraduate working in matters of advanced physics who laid down his fork and knife in distress on realizing for the first time that muscle is meat.

Long ago C. G. Jung pointed out that the menace to Europe and beyond was huge urban populations who were relatively

divorced from contact with nature and the land. Who can therefore get in a high state of emotion about a budgerigar or cat, and who have perhaps an unbalanced view of sex, because it is their only experience of being very close to nature? How many of our people have never planted a seed or bulb and watched it grow?—I am, etc.,

H. RUSSELL

Edinburgh 2

Aortocoronary Venous Graft Bypass Surgery

SIR,—Mr. Donald Ross and his colleagues are to be congratulated on their technical achievement with 67 aortocoronary venous graft bypass operations (10 June, p. 644). However, it is unfortunate that the pre-operative and postoperative studies add nothing to our knowledge of the benefits or otherwise of this procedure (see your leading article, p. 603). The only objective observations were the exercise performance and the measurements of left ventricular end-diastolic pressure, but these were done in only 16 patients and we have no idea whether these were a representative sample of the 53 survivors. The work done in the exercise tests is given in kg (Fig. 1), a unit of mass not work; it is sad to see such a fundamental error in a journal with such a high reputation. Left ventricular end-diastolic pressure and heart size were unchanged. "Ventricular function" assessed from an angiogram is a subjective judgement, not an objective measurement. None of the assessments were done blind. The elementary and mandatory measurement of blood flow through the bypass graft after implantation (see your leading article) was not done.

It is also sad to reflect on the loss of the opportunity to learn something about this killing disease. Could not some of the bypassed coronary artery have been excised and the abnormalities of its metabolism studied? What was done with the material obtained by endarterectomy of the distal segment?

We assume that this paper in your Medical Practice section was published to acquaint the profession with current British activities in this field of cardiothoracic surgery. The teams at the National Heart and Guys Hospitals are to be congratulated on achieving a possibly acceptable mortality comparable to that achieved in the U.S.A. (see leading article). We doubt the wisdom of this unoriginal approach to the problem of ischaemic heart disease.—We are, etc.,

M. I. M. NOBLE
A. GUZ

Department of Medicine,
Charing Cross Hospital Medical School,
London W.6

**It is regretted that the units in Fig. 1 of the article by Mr. Donald Ross and his colleagues were wrongly given as kg instead of kilogramme metres as they should have been.—ED., *B.M.J.*

Portrait of Parkinson

SIR,—May I appeal through you to your readers for information concerning the whereabouts of a portrait—should such a portrait exist—of Dr. James Parkinson (1755-1824), who lived in the then village