called for this when he wrote "not sick individuals, but peculiarly characterized situations were the subject matter of research and therapy."—We are, etc.,

A. ESTERSON.
D. G. COOPER.
R. D. LAING.

London W.1.

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SIR,—I should like to congratulate Drs. A. Esterson and his colleagues on their valuable paper (18 December, p. 1462) on the "Results of Family-orientated Therapy with Hospitalized Schizophrenics."

Might I point out that the paper they refer to by Orlinsky[1] (whose name, incidentally, is misspelt) and D'Elia deals with a follow-up, not of 13,036 discharged schizophrenics but with two groups, one of 1,336 patients who attended their clinic at least once, and 796 who did not attend the clinic during the period of their conditional discharge?

I note in passing that from the data, and since these groups were self-selected, the authors conclude that "these results suggest that motivation to attend an aftercare clinic may be as important as the care actually received in predicting how long the patient remains in the community after hospital discharge." This would appear to be an extremely important finding.—I am, etc.,

J. STEINERT.

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Epistaxis in Sickle-cell Anaemia

SIR,—I thank Dr. M. I. Ogbeide for the points raised (27 November, p. 1309) about my article "Torrential Epistaxis with Symmetrical Facial Skin Ulceration in Sickle-cell Anaemia" (9 October, p. 859). The following attempt is made at replying to his questions.

(1) "Slight icterus" when the serum bilirubin was "only 1 mg./100 ml." The majority of patients with sickle-cell anaemia have jaundice whether they are in crisis or not.[1,2] Although such icterus is usually slight to moderate and of the acholuric haemolytic type with serum bilirubin in the range of 1 mg. to 6 mg./100 ml., approximately 10% of those seeking medical advice have an obstructive type of jaundice with serum bilirubin greater than 6 mg. per 100 ml.[1] Clinically detectable jaundice is not incompatible with a serum bilirubin of 1 mg./100 ml., if only because variations in bilirubin level can be so rapid as to make clearance of the pigment from the sclerae lag behind clearance from serum.

(2) Haematocrit remaining at 22% when blood loss was estimated to be between 300 ml. and 500 ml. over 36 hours. The haematocrit during sickle-cell crisis is not easily predictable even when as much as 300 ml. of blood has been lost, because: (*a*) sickled erythrocytes don't pack consistently; (*b*) tissue sequestration and subsequent release of sickled erythrocytes may modify the packed cell volume; (*c*) circulating plasma and total blood volumes are decreased[3]; and (*d*) erythropoiesis may be grossly enhanced.

(3) Large liver no longer palpable. Dr. Ogbeide's experience that the liver in a 16-year-old patient with sickle-cell anaemia is cirrhotic and therefore incapable of retraction must be the exception rather than the rule. The experience of Brew and Edington,[6] also from Nigeria, is different. Hepatomegaly is very common, and changes in liver size (up and down) may, like the spleen, be very rapid.[4,5]

(4) Autosplenectomy is common in the adult, but this does not mean no patient over 16 years of age with sickle-cell anaemia has a palpable spleen. Splenomegaly can occur in the adult sickle-cell anaemic patient,[7,8] as can rapid changes in spleen size.[4]

(5) Generalized lymphadenopathy as a feature of sickle-cell anaemia does occur.[1,4,7,9]

(6) Control of salmonella osteomyelitis with a total of 7.0 g. oral chloramphenicol in two weeks in an undersized 16-year-old girl should not cause surprise. In the management of salmonella osteomyelitis in particular,[10] and sickle-cell disease in general,[11] emphasis is placed not merely on antimicrobial drugs but on increasing the patient's resistance by scrupulous attention to general health and nutrition.

(7) Any hypothesis, mine included, connecting the epistaxis with facal lesions would be difficult to prove.

That most of the findings in this girl come as a surprise goes to underline the fact that sickle-cell disease is a great masquerader and must be watched very carefully. Your leading article (27 November, p. 1263) stated, "A blood count, including examination of a stained film, is an essential precaution in Negro patients in whom surgery is contemplated." Indeed, as the sickling test is very simple, could it be suggested that facilities be made available in every consulting-room for screening anyone of African extraction seeking medical or other advice? This is important, for sickle-cell crisis can be precipitated by so-called harmless and beneficial procedures like vaccination (personal observation) and blood transfusions,[1,12] presumably because of the pyrexia they are wont to produce.—I am, etc.,

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The Fifth Freedom

SIR,—Sir Dugald Baird (13 November, p. 1141) is to be admired for his courageous and enlightened approach to the problem of excessive fertility in women. Contraceptive advice given by competent people should be available under the National Health Service, but surely its limitations make it applicable at its best for the spacing of children rather than for effective permanent sterility. Indeed it is accepted by most medical authorities that when there is a medical contraindication to pregnancy then tubal ligation is preferred. The present methods of contraception carry some small risk of pregnancy—as, for example, the use of an intrauterine device[1]—or have other disadvantages—as, for example, the very long-term, boring, and even suspect taking of contraceptive pills. However, the present techniques of tubal ligation carry the disadvantages of an invasion of the abdomen, together with some risks of pregnancy—viz., the Madlener operation is followed by pregnancy in 1.4%,[2] the Pomroy operation in 0.4%.[3]

These disadvantages are now overcome to a great degree by the recent introduction in Oldham of sterilization by laparoscopic diathermy coagulation of the innermost isthmic portion of the tubes.[4] This can be performed with the minimum disturbance to the patient. It is carried out under general anaesthesia, but requires little preparation and a very short convalescence. Patients are kept in hospital for at most sixty hours, and return to normal life on the day of discharge. The cost to the National Health Service for one patient cannot be more than the cost of her one year's supply of contraceptive pills. Several of our patients have been followed up so far for one year. They have been investigated both by hysterosalpingography and by a second laparoscopic survey about six months after the diathermy. These investigations have shown complete cornual blockage, contracted fibrous tissue replacing the medial 2 cm. of each tube. In the cases in the city of Edinburgh, and he cerprising absence of adhesions of any kind. Thirty cases have been followed up in detail, and though the numbers are small and the follow up, as yet, limited, the results so far suggest that the degree of effectiveness is probably the highest which can be achieved.

Few gynaecologists in this country are, as yet, familiar with laparoscopic techniques, but these methods of diagnosis and treatment should be recognized as essential skills for the modern gynaecologist to possess. Nevertheless, it is to be hoped that whoever learns these methods will not be tempted into the error of abusing them, and will apply the sterilization techniques with the highest ethical standards. Sir Dugald Baird has given us a good lead and a sound, liberal, humane approach towards his "Fifth Freedom."—I am, etc.,

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SIR,—Dr. S. L. H. Smith's suggestion (1 January, p. 49) that the contraceptive pill should be prescribed more freely on E.C.10s merits support. Sir Dugald Baird (13 November, p. 1141) offered a challenge that we must all accept by deciding precisely what we believe should be done about the "tyranny of excessive fertility"; no man of conscience can deny that population control and maternal morbidity from abortion are urgent problems.

The situation has been confused by those reformers who have advocated abortion simply on demand. This is no answer, and termination of pregnancy without real medi-