Congress of Free Churches were in favour of reconsideration of the present law regarding abortion in the apparent belief that change in it could lead to a significant decrease in the number of both physically and mentally deformed children. It must be stressed that such decrease could only be obtained by better midwifery, and by deliberately destroying infants late in pregnancy or after they were born. The present tendency is to destroy the foetus between the 16th and 18th week of pregnancy.

It used to be thought that girls under 16 who became pregnant were either raped or "near raped," but some modern opinion encourages promiscuous intercourse amongst teenagers, so that such a view will not last long. Discouragement of this tendency would lessen the clamour for abortion to be done in this group, and would also lessen the somewhat alarming increase in venereal diseases.

The crunch of the problem lies in the fact that the majority of women who want abortion done are married, and this explains the fact that four times as many illegal as legal abortions are done in Copenhagen, notwithstanding the fact that Denmark has for long held a very "liberal" view concerning legal abortion.

Parliament must clearly decide whether they are mainly concerned with preventing the birth of defective children or with accommodating pregnant women. If they intend to move further than they have done in Scandinavia and give "abortion rights" to women they will have to set up special abortion clinics staffed by "committed" gynaecologists. The antipenultimate section of Lord Brain's article smacks of pressure being brought to bear on gynaecologists, of snooping, and of police control, and the thin end of the wedge would inevitably ultimately affect every branch of the profession, and indirectly the general public.

The Lords Spiritual and perchance the Lords Temporal would be less inclined to support such a Bill if they recognized the present freedom enjoyed by British gynaecologists; that its operation would not significantly lessen the numbers of physically and mentally defective children to be born, and neither would it abolish illegal abortions; that the majority of women who want to procure abortion are married; that a long overdue change in the climate of opinion concerning promiscuous premarital intercourse would both lessen the number of unwanted pregnancies and the incidence of venereal disease; and that the operation carries a higher risk than ordinary childbirth. The profession, for its part, must devise simpler and more effective means of birth control and of sterilization, and perhaps be willing to offer the latter to all women who have had two or more children.

Hard cases make bad law, and bad law breeds litigation and dissension, and the "fifth freedom" could easily result in bondage. The amount of crime which has resulted from "legalizing" gambling should perhaps warn us that the solution of this particular problem is best left to evolve with change in public and in professional "climate," rather than be forced on us by hasty legislation stampeded through Parliament by a small but vocal pressure group. We have a particular genius for pragmatism and compromise, and a rigid law might even lessen the chances of some women having their pregnancies terminated.—I am, etc.,

G. W. THEOBALD.

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REFERENCE

[1] *The Times*, 23 March 1965.

SIR,—I feel myself in broad agreement with the answers given by Mr. Philip Rhodes (2 April, p. 859) to Lord Brain's points, with the exception of his categorical "No" to the question, "Should the fact that a pregnancy is the result of rape be a ground for its legal termination?" He goes on to say, "The establishment of the fact of rape is often impossible. No one factor can be absolute in the decision for or against termination in a given patient." This is true, but the difficulty in establishing the facts is not the question posed. In the Services the establishment of whether or not a wound is self-inflicted is often impossible, but this does not prevent courts martial from hearing all the evidence and giving a verdict. The issue is not ducked because it is difficult.

Rape, a criminal assault upon the person, may be associated with bodily injury resulting in brain, facial, genital, or other damage. These injuries would be treated by neuro-, plastic, gynaecological, or other appropriate surgeons. If, at a later date, a pregnancy is discovered, two questions arise: (1) Was this woman/child raped? (2) If answer "Yes," was this pregnancy the result of said rape? If the answer to both questions is "Yes," my view is that the operation of therapeutic abortion would be a continuation of the treatment already given, and which was designed towards alleviating as much as possible all the then known hurtful consequences of criminal action.

Obtaining the answers to questions (1) and (2) is surrounded with difficulties which are not basically medical. There may be an accused whose defence must not be prejudiced. The alleged rape may have taken place abroad, possibly while the woman/child was in rebel or enemy hands. These are but a few difficulties which come to mind and which are legal problems, not medical.

I feel that an attempt to establish the probable truth should be instituted with as little delay as possible and could best be carried out in private with the help of some such person as a procurator fiscal or coroner.

I put these views forward as a tentative suggestion. I feel that rape *per se* should be a ground for legal abortion, but at the same time it is important that the flood-gates to abuse should not be opened wide.—I am, etc.,

TERENCE G. ROBINSON.

General Hospital,
South Shields.

SIR,—With reference to the present discussion on the proposed changes in abortion law, and in particular to the report by the Royal College of Obstetricians and Gynaecologists (2 April, p. 850), I should like to make the following point:

Even if more liberal measures were introduced, the individual patient may well be faced with a gynaecologist not prepared to perform the operation because of personal moral misgivings.

I should like to question the right of a gynaecologist to refuse to do the work he is employed to do on grounds of moral prejudice. What would be the consequence, I wonder, if a surgeon refused to order blood transfusion on the basis of his beliefs as a Jehovah's Witness?

It is a well-accepted principle of medical ethics that treatment should not depend on race, colour, or creed of patient or doctor. I maintain, therefore, that it is clearly wrong for a person not prepared to perform abortions to follow a profession which requires him to do so.

To the obvious reply that a patient may find another gynaecologist, I say that this is, first, irrelevant to the above argument, and, secondly, that it is not easy for a woman to do this, when in a highly emotional state and with the short time at her disposal.—I am, etc.,

Bath, Somerset. D. G. WITHERS.

Lasers and Ultrasonics

SIR,—It is reassuring to read (2 April, p. 859) that Mr. H. V. Ingram and others feel that no "neurological symptoms" (*sic*) are produced in rabbit eyes with laser energies of as much as 100 joules. This impression is presumably based on work described in their 1965[1] paper. However, I was not concerned with neurology, and their paper contains no mention of mechanical or ultrasonic effects of laser beams in the eye, contrary to what is stated in the first paragraph of their letter.

I reported (19 March, p. 719) recording mechanical pulses produced in the eye by laser coagulation. These pulses have large amplitudes and complex waveforms with a "fundamental" frequency of the order of 200 Kc./s.; hence the term ultrasonic. These mechanical events are produced only when a lesion is at once visible ophthalmoscopically and travel outwards from the lesion site. This ultrasound is, in fact, a form of shock wave generated by the explosive formation of a lesion. Preliminary results indicate that the amplitude of these wave trains is of the order of 1 g./sq. cm. peak to peak, 12 mm. from the site of origin. It seems to me that the delicate vitreous gel in the region of a lesion is subjected to violent stresses, and further work is being undertaken to see how the vitreous responds to what is undeniably rough treatment. As the long-term effects of vitreal damage have been sadly underestimated in the past, it is only reasonable to be cautious when considering use of lasers in retinal photocoagulation.

One further point arises from the letter. The authors claim that lesion formation is due to electromagnetic disruption, but if this effect occurs it is unimportant. If the temperature around a lesion site during its formation is measured carefully, large temperature changes are recorded. Both Novori *et al.*[2] and myself[3] have shown this, and Ingram[4] has noted the existence, but not the significance, of Noyori's data; his own results (showing negligible temperature rises[1]) were obtained with a measuring system with a response time a thousand times longer than the event he was seeking to measure. Also, as Ingram *et al.*[1] confirm, retinal pigmentation affects the size of lesion produced. It can only do so if lesion formation depends