

There is, however, a much more sinister aspect to this brainwashing process by the new media and by noise affecting young people, and that is loss of critical faculties and increased suggestibility. These two phenomena are well known to psychiatrists and may play their part in the various violent protest movements we are witnessing to-day. We have created a society where for some young people stimulation of the mind by the mass media and by other undesirable aspects of our society, such as many films, comics, loud pop music, noise at work, and traffic has already reached saturation point, and the cult of drug addiction may be one way of escape for them.

It is high time our politicians and social scientists recognized these facts, as a reversal of the trend at this stage will prove very difficult.—I am, etc.,

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### Hyperbaric Oxygen and Radiotherapy

SIR,—As you observe in your leading article (13 May, p. 368) the exact value of hyperbaric oxygen in radiotherapy is still subject to debate. Apart from the question of the effectiveness of changing malignant tissue from the anaerobic to the aerobic state before irradiation, the complexity of the technique and the expense of apparatus are two further deterrents to its wider use.

Recently it has been shown that glucose loading greatly increases the heat emission of tumours of the breast.<sup>1</sup> This is presumed to be due to increased metabolism stimulated by the excess carbohydrates. Normal tissue does not appear to react in the same way.

Although the reduced sensitivity of some malignant tissue can be attributed to lack of oxygen, counter measures to increase radiosensitivity need not necessarily be confined to increasing oxygen tension, and it is possible that increased metabolic activity can bring cells into a more radiosensitive state.

Could it be that the relatively simple perfusion of glucose prior to radiotherapy would be an equally effective "dose-multiplying agent" as hyperbaric oxygen? It would be inexpensive to try, and if effective, tiresome expertise and the paraphernalia of hyperbaric oxygen both obviated.—I am, etc.,

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<sup>1</sup> Chiricuta, I., Bucur, M., Opris, I., and Bolaga, S., *Oncologia si Radiologia*, 1970, 9, 453.

### Termination of Pregnancy

SIR,—Mr. Desmond Bluett (22 April, p. 228) raises some important points. Not the least of these are the long-term complications of induced abortion. It can be inferred, not only from Mr. Bluett's figures, but also from other sources, that abortion is being increasingly used as a contraceptive method, a procedure which is acceptable only if an abortion is considered as a reasonably safe and simple procedure. However, "there is now ample evidence to show that abortion is neither safe nor simple. The long-term complications alone condemn its use as a contraceptive method."<sup>1</sup>

The facts about mortality and morbidity are not likely to have consequences to family life, the stability of marriage, or financial cost in the same proportion as the risk of infertility and the risk of harm to unborn children. The British Perinatal Mortality Survey showed that women who had one or more abortions had on average a reduced reproductive capacity and subsequent children were at higher risk.<sup>2</sup> There are also papers from Japan, Hungary, and Czechoslovakia showing that induced abortion increases perinatal mortality, subsequent spontaneous abortions, subsequent ectopic or extrauterine pregnancies, sterility, the proportion of premature births, and a variety of other complications affecting subsequent pregnancies.<sup>3,4</sup>

It is indeed surprising that the consequences of induced abortion have not yet been the subject of a systematic longitudinal study of a large cohort of women. As full knowledge is needed for doctors and social workers to give women responsible advice on therapeutic abortion only an appropriate study will provide the necessary facts, and the consequences of induced abortion on subsequent pregnancies and to subsequent children should be one of the main purposes of such a survey.—I am, etc.,

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<sup>1</sup> Gordon, H., *Royal Society of Health Conference Proceedings*, 10 February 1972, p. 7.

<sup>2</sup> Butler, N. R., and Bonham, D. G., *Perinatal Mortality*, E. & S. Livingstone, Edinburgh and London, 1963.

<sup>3</sup> Kotasek, A., *Journal of Gynaecology and Obstetrics*, 1971, 9, 118.

<sup>4</sup> Klinger, A., *Journal of Gynaecology and Obstetrics*, 1970, 8, 680.

### Cardiac Enlargement in Jamaicans

SIR,—Professor K. L. Stuart and others (1 April, p. 21) reported that many of their Jamaican outpatients with mildly elevated blood pressure had cardiac enlargement on chest x-ray (cardiothoracic ratio >50%) and left ventricular hypertrophy on electrocardiogram (Sokolow Lyon criteria). The significance of these observations may be misjudged by readers who are unaware that, by these standards, a high proportion of healthy, normotensive Jamaicans have cardiac enlargement and left ventricular hypertrophy.

Cardiovascular surveys have been carried out involving subjects aged 35-64 years living in communities in rural<sup>1</sup> and suburban<sup>2</sup> Jamaica and in a village in Guyana<sup>3</sup> among persons of similar ethnic (African) and socio-economic backgrounds. The data have been re-analysed using the same criteria for cardiac enlargement, left ventricular hypertrophy, and hypertension as were used by Professor Stuart and his colleagues. (Mild hypertension was regarded as a diastolic pressure in the range 95-109 mm Hg in those under 45 years and 100-119 mm Hg at 45 years and over; normal

blood pressure and severe hypertension were diastolic pressures below and above these values respectively.)

The data could not be closely compared with those of Professor Stuart because no details of age, sex, and blood pressure of their patients were reported but the combined results from the three surveys show (Table) that cardiac enlargement and left ventricular hypertrophy, although more prevalent in hypertensives, were also common in normotensive subjects.

One of the reasons for the surprisingly high rates of apparent cardiac enlargement in healthy West Indians of African origin is that their thoracic diameters are, on average, smaller whereas their cardiac diameters are similar to those of Caucasians of the same height.<sup>4</sup> This ethnic difference may also partially explain the greater amplitudes of their R and S waves in E.C.G. precordial leads<sup>5</sup> (on which the Sokolow Lyon criteria for left ventricular hypertrophy are based).

The high prevalence of apparent cardiac enlargement and left ventricular hypertrophy in mild hypertension might lead to its overestimation as a cause of cardiac changes if the common presence of these arbitrarily defined states in healthy normotensive Jamaicans is not appreciated. The use in medicine of standards and criteria based on studies of white populations should be scrutinized before being applied to other ethnic groups.—I am, etc.,

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<sup>1</sup> Florey, C. du V., and Miall, W. E. M., *American Journal of Epidemiology*, in press.

<sup>2</sup> Miall, W. E. M., *Proceedings of the 5th International Scientific Meeting of the International Epidemiological Association*, Belgrade, 1970, 277.

<sup>3</sup> Ashcroft, M. T., Beadnell, H. M. S. G., Bell, R., and Miller, G. J., *Bulletin of the World Health Organisation*, 1970, 42, 205.

<sup>4</sup> Ashcroft, M. T., and Miall, W. E., *American Journal of Epidemiology*, 1969, 89, 161.

<sup>5</sup> Ashcroft, M. T., Miller, G. J., Beadnell, H. M. S. G., and Swan, A. V., *American Heart Journal*, 1971, 81, 467.

### Herpes Encephalitis Revisited

SIR,—The interesting letter from Dr. A. R. M. Upton (22 April, p. 226) concerning the treatment of herpes encephalitis deserves comment.

I have examined the results of 369 cases of acute necrotizing encephalitis either published in the world literature or the subject of personal communications (Table). These suggest that any treatment is better than no treatment at all. However, in such a retrospective study the biases and obscurities are numerous, and a full report on that subject has been prepared.<sup>1</sup> Most of the reported cases represent the severer form of the disease, while it is probable that the least severe cases will have been overlooked, and may sometimes be merely diagnosed as a "stroke." The true incidence and natural history of the disease

	Normal Blood Pressure		Mild Hypertension		Severe Hypertension	
	M.	F.	M.	F.	M.	F.
No. of Subjects	474	619	64	104	9	23
Cardiac enlargement %	31.3	52.0	42.2	76.0	66.7	87.0
Left ventricular hypertrophy %	34.8	10.5	50.0	19.2	66.7	41.7