

stole. Prophylaxis in the absence of E.C.G. control may well produce unnecessary deaths.—I am, etc.,

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<sup>1</sup> Horgan, J. H., *Journal of the Irish Medical Association*, 1971, **64**, 163.

### Suicide and Euthanasia

SIR,—I am concerned that the opinions of Dr. S. L. Henderson Smith (10 April, p. 111 and 5 June, p. 591) appear to be passing unopposed although I am encouraged by Dr. D. Hooker's letter (5 June, p. 585). With some re-wording, the latter could equally well apply to the euthanasia problem.

How can we accept the view that euthanasia would not be immoral? If Dr. Henderson Smith can define and authorize in this way, why should not Tom, Dick, and Harry also do so? Who has authority to decide what is moral and what is not? Which religion condones this taking of life and calls it moral?

Dr. Henderson Smith is rightly concerned about the problem of terminal suffering, although I feel his language is exaggerated, and his "daily . . . appalling torture" is in sharp contrast with the view of your leading article (23 January, p. 187). The answer does not lie in euthanasia (in its current meaning) but is a challenge to our profession to ease these sufferings, without "striving officiously to keep alive." With all the resources of modern medicine, combined with a real concern and compassion, we must be in a better position than ever to do this. This is not a question of confusion of semantics; whether we kill or whether we encourage or assist another to take his own life, this is immoral.

It has been my purpose in this letter to emphasize an underlying principle rather than the many practical problems such as uncertainty of prognosis and selection of patients, or the possible late results and abuses which would inevitably follow. We can now look back on the abortion law reform, and I sense that most of us do so with some regret. Are we going to stand by while yet another immoral and degrading Bill is slipped past us?

While I respect Dr. Henderson Smith's worthy intentions and concern about terminal suffering, I fear lest we may deviate from what is right by confused thinking.—I am, etc.,

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### X-ray Equipment

SIR,—At the meeting of the Radiologists' Group of the B.M.A. on 20 May one of the speakers put forward a suggestion of a panel of radiologists to advise the x-ray supply industry on the type of equipment required. One of the Department of Health medical advisory staff who was present promised to look into this and to consider setting up such a panel under the aegis of the Department.

The more I think about this proposal, the less I like it. It is obvious that the advice of such a panel would have to be available to

all companies interested in supplying x-ray equipment. I wonder if the proposer of this panel had such a wide dissemination in mind? With the "benefit" of support from the Department, I fear that the advice of this panel would be regarded as binding. This could lead to over-standardization of equipment and to delays in introducing new ideas; few committees are sufficiently "light on their feet" for such a changing field as x-ray equipment.

For it to be at all effective the panel would have to be small and it would have to meet fairly frequently. Could such a panel be at all representative? The size and the facts of geography would be against it. Further, most x-ray apparatus is used by radiographers, not radiologists; giving them adequate representation would create further problems over committee size.

To sum up, I think such a panel would probably be too small to be truly representative, but too large to be effective. It would lead to centralization and standardization and thus have a stultifying effect on the design of x-ray equipment.

Far from centralization in this field I think we need to bring the decision making and financial responsibility down to local level. Standardization has many benefits and we should try to evolve a system of purchasing x-ray equipment which encourages radiologists to buy standard equipment, but leaves latitude for purchase of modified or non-standard items where the local need demands it. I suggest that a hospital group should be allocated a number of "capital units" each year depending on the work done. Teaching and other special hospitals would have a loading factor depending on their particular requirements. Groups should be able to bank their units and earn interest or they could borrow on their "future earnings" and pay interest. Each year the Department should assess the cash value of a "capital unit." This calculation should be based on Hospital Equipment Note No. 6. *Diagnostic X-ray Department* (H.M.S.O. 1962), a reasonable work load per room, and an average expectation of life of apparatus. The radiologists could then plan their purchase of x-ray equipment over a period of several years in the light of the needs of the group.

The mechanics of the system would be quite simple. The unit system is already in use in x-ray departments for assessing work load; 100 notional units might well equal one "capital unit." This x-ray unit system is now in need of updating and it requires some standardization of application, but would nevertheless be a practical basis of assessing work load. The figures are already returned at group, board, and Department levels, so that little work would be involved in allocating "capital units."

Such a system would put the decision making and the financial responsibility at the same level, that of the user of the equipment; this would fit in with modern ideas of management. It would give manufacturers the chance to plan their production; the inability to do such planning was one of the complaints made by the speaker mentioned in my first paragraph; he hoped his panel would, among other things, help him to do this forward planning.—I am, etc.,

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### Logical Foundations of Medicine

SIR,—Like most general physicians I feel too out of my depth to engage in a technical argument with the computer experts. Nevertheless, because I feel that the medical man in the street must remain in contact with the computer men, I wish to discuss certain aspects of the paper by Professor W. I. Card and Professor I. J. Good (27 March, p. 718).

I concede that computers have a logic of their own, but surely it is a rigid logic compared with the flexibility of the logical processes of the human mind influenced by experience. The computer can adapt to changing situations but it must be programmed to adapt. The human mind is adapting as it goes along. Further, in relation to clinical facts, the computer only performs with information ascertained by clinicians, as distinct from its capacity to perform directly in relation to response to laboratory data. Skill in obtaining pertinent clinical facts is often what makes the difference between the good and the poor diagnostician. The computer can take a structured history, but can it take a good situational history, one in which skilled questioning flows from the subtleties of interpretive listening to patients' answers? There is an assumption that computer use is exclusively scientific. I suspect that a great deal of it is as much an art as is the practice of medicine.

The computer is one of many medical helps which are being promoted as ways of saving the doctor's time, and much of this development is legitimate and desirable. But we are saving the doctor's time for what purpose? Surely so that he can spend more of it in the business of clinical communication with the patient. A clinical history is not only an instrument of diagnosis, it is often an instrument of therapy. Talking to someone is more personal and satisfying than talking to something. Even if a computer takes a history, no doctor will believe it in his heart until he has checked at least some aspects of it with the patient, and no patient will believe he has been properly listened to unless he talks to a person.

How can a dermatologist use a computer? What rigmarole of documentation can supplant the instant view of a skin lesion? Who needs a computer to diagnose chicken pox and measles? The problems in acute alimentary bleeding have to do with detecting the bleeding lesion, with the techniques of investigation and not with the niceties of differential diagnosis. It does not need two hundred questions on a piece of paper to raise the suspicion of a duodenal ulcer. It needs five or six questions and clinical common sense. A computer can be encyclopaedic but it cannot be sensible. It can be systematic but not sensitive. The fact that common things commonly occur does not mean that the uncommon is not what my patient has. Unfortunately doctors do miss the diagnosis of myxoedema, but can myxoedematous patients fill in forms correctly?

Computers may have improved weather forecasting but they have not perfected it. Low pressure areas shift unexpectedly, other weather systems appear from nowhere. And there is only one weather forecast a day. How do you organize two or three million health forecasts a day? This must need a lot of time, energy, machinery, and people. And apart from the question whether clinical