the hope of severing a partly cut off tissue or by cutting the tube and allowing the trapped specimen to slough off so that eventually the capsule may be recovered in the faeces. With the tubes designed by Brandborg *et al.* and ourselves the knife movements are controlled at all times by the pull-wire, and thus any nipped mucosa can be released without trouble.

To summarize, we believe that a smaller biopsy aperture, carefully controlled use of negative pressure, and indirect control of the movements of the knife make for safe biopsies. With our own child's-size biopsy tube no complications were encountered in 104 successful child biopsies.

The investigator has therefore to choose between safety on the one hand, and simplicity of method and perhaps technical superiority on the other hand. Small intestinal biopsy in children must be regarded as a specialized procedure and requires skill and knowledge of technique, whatever method is used. We believe that the pull-wire tubes should not be discarded in favour of the Crosby-Kugler tube, especially in paediatric work. They could certainly be improved technically. Would any paediatrician be interested in trying?—I am, etc.,

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- ² Crosby, W. H., and Kugler, H. W., *Amer. J. dig. Dis.*, 1957, 2, 236.

Psychiatric Units in General Hospitals

SIR,—Dr. H. S. Capoor's letter on psychiatric units in general hospitals (August 17, p. 443) is of great interest, and I felt it might stimulate discussion and inquiry if I constructed, on the replies to the questionnaire, the profile of a model unit of this kind, founded on the majority opinion on each item.

The model unit would be sited either in a wing of the general hospital or in a separate building. The number of beds would be between 15 and 80, under the supervision of one or two consultants, for a population of 100,000. The ratio of male to female beds would be two to three. There would be no security arrangements. Patients of both sexes would be mixed for meals, occupational therapy, and for social and recreational activities. Day hospital accommodation would be provided in the same hospital, either as part of the in-patient unit or separately. Facilities would be available for electroplexy, modified insulin, abreaction, and group therapy. A day nursery would be provided for the use of patients with pre-school children, and facilities would be provided for the admission of puerperal patients with their infants. Out-patient clinics would be held in the unit. Informal patients and patients under Section 29 or 25 would be eligible for admission. Stay would be limited to three months. The nursing staff would be mixed, student nurses from the

general hospital spending three months, and nurses from the psychiatric hospital six months, in the unit. The medical administration would be the responsibility of a consultant attached to a psychiatric hospital; medical, nursing, and ancillary staff would rotate or interchange between the psychiatric hospital and the general hospital unit.—I am, etc.,

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Psychiatry and the Law

SIR,—May I as a psychiatrist who is engaged in the treatment of offenders be allowed to comment on Lady Wootton's address on "The Law, the Doctor, and the Deviant" (July 27, p. 197)? I entirely agree with all her criticisms of the state of the law regarding "diminished responsibility." If this concept has a meaning it is a purely moral one on which psychiatry has nothing whatever to say. Psychiatrists as humanitarians may feel strongly about the problem but nothing in their training permits them to make *ex cathedra* declarations about it. I must agree also that psychiatrists themselves are to blame for the present muddle. The difficulty is that psychiatrists tend to be looked up to as oracles by the general public and it is most tempting when asked for an opinion to make an oracular pronouncement.

In my view psychiatry has very little to say about the guilt or innocence of a person before conviction. I think however that we have a role to play with convicted offenders. We are often able to clarify for the magistrates some of the complex factors which lie behind the committal of any individual offence. As a member of a psychiatric team working at a boys' remand home I have the opportunity to discover much about the individual which is germane to his offence, and much more which is relevant to his general wellbeing and which the magistrate can incorporate into a humane decision about his future. I am also asked for an opinion as to the best method of treatment. Here clearly my role as a psychiatrist comes into juxtaposition with my role as a member of society. I do not find any real conflict in this since I am of the opinion that what is best for the boy is in the long run also best for society. In any case the ultimate decision is rightly the magistrate's and not the psychiatrist's.

On the occasions that I recommend psychiatric treatment my recommendation is conditioned not only by the degree of the offender's psychological disturbance but more particularly by his acceptance of his need for help and his willingness to receive psychiatric treatment. I happen also to work in a clinic which deals in the treatment of offenders and I do not regard my work here as being anything but medical; in particular, I do not see myself as being "an agent of the State—part of the machinery of law enforcement." The blame for this

muddle lies with the magistrates quite as much as with the doctors. Patients referred to this clinic come for the most part quite freely. Occasionally there is a "condition of medical treatment" written into their probation order, but I find such conditions a hindrance, and my first task in dealing with them is to explain that my concern is first and foremost with their own wellbeing, that I am no part of the machinery of law enforcement, and that if they do not wish for my help I do not feel under any obligation to give them treatment. The great majority of patients are then willing to agree that they have a problem quite apart from what society may say in the matter.

The treatment that I am able to offer—psychotherapy—is aimed at helping them to understand and cope with whatever problems they may bring and not to enforce any particular moral code, either my own or that of society. Unless there is free consent on both sides I would regard psychotherapy as meaningless. Some psychiatrists take a different view, but the one Lady Wootton quotes, Maxwell Jones,¹ until recently ran a unit for the treatment of psychopaths to which admission was almost entirely voluntary and the quotation which she lifts out of its context gives a false impression of his article.

Finally, I think that a vital question is begged in Lady Wootton's address. If we agree that psychiatrists should not dictate the treatment of offenders, then who should dictate it? There can be few who are satisfied with the present penal system on any count. Of course, "action is necessary for the protection of others," and it is nonsense to suggest that this notion has been dropped. The question is—what action is most expedient? On humanitarian grounds I am tempted to say that humane treatment is likely in the long run to produce better results than some of the crasser inhumanities that have existed in the past, but I am of course straying outside my psychiatric role.—I am, etc.,

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H. M. HOLDEN.

REFERENCE

- ¹ Jones, M., *Brit. J. Crim.*, 1963, 3, 267.

Mental Retardation

SIR,—What used to be (and in some places still is) called mental deficiency has in recent years been called by so many names that it is time simplification and clarity were introduced. The pot boiled over with the passing of the Mental Health Act (1959). In this Act two terms were introduced—"severe subnormality" and "subnormality"—and subsequently the General Nursing Council adopted the term mental subnormality for its syllabus, examination, and certificate. But now the Ministry of Health has emphasized that the Act is concerned almost exclusively with compulsory patients, and it follows that the terms severe subnormality and subnormality are not applicable to the majority of our patients who are admitted

informally and applicable only to the very few compulsorily detained in hospital or under guardianship.

The terms subnormality and severe subnormality as descriptions of human beings are inaccurate, hideous, and revolting. They were not introduced into the Scottish Act; the composite term was sensibly rejected by the Mental Deficiency Section of the Royal Medico-Psychological Association, by the *Journal of Mental Deficiency Research*, and by other organizations. As clinical descriptions of our patients they should be rejected now and for ever. The older term "defective" did not collect much opprobrium, but if some find it offensive what is wrong with "mental retardation"? Mental retardation is a term in general use in this country and America; it is acceptable; it holds out a measure of hope. Let anyone say to himself which he would rather disclose: "I have a subnormal child" or "I have a retarded child." Nurses who find the term subnormal so offensive and degrading would much rather be called a nurse of the retarded, and even we doctors who practise in this branch of psychiatry could call ourselves retardologists. A further disadvantage of the terms severe subnormality and subnormality is that they divide the patients into two classes, whereas they have always been divided into three, and their introduction has made chaos of statistics and other work. If the term mental retardation is to be adopted then patients could be classified as severely retarded, moderately retarded, and slightly retarded, or as in American practice as untrainable, trainable, and educable.—I am, etc.,

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Haemagglutination in Virus Hepatitis

SIR,—Your annotation (July 13, p. 69) refers to our studies,¹ among others, in a discussion of the diversity of observations relating to haemagglutination in viral hepatitis. Although all who have looked have indeed seen this effect in some form, there remains an important difference of opinion concerning the significance of the phenomenon. To be resolved is the matter of whether the virus itself is required to produce the haemagglutination or if it is entirely the effect of some physical or biochemical change produced by the disease process. Also to be considered is whether differences in the technique of performing the test are important.

I would like to describe some recent observations that might help to explain the disparate views. In a comparison of several reported techniques I found that the method of Hoyt and Morrison² was insensitive to the point of uselessness. Solvent treatment of the test sera, which Havens found useful,³ is derived from techniques designed to prevent interference with virus effects.^{4,5} Our method of using rhesus monkey erythrocytes gives

significantly higher titres and more discrimination than do chick cells, provided great care is taken to keep everything cold.

Using this preferred technique, the sera of 28 hospital patients with acute hepatitis were tested as soon as a diagnosis was made, and weekly thereafter. Of these patients, 19 had brief but sharp rises in titre, persisting for two or three weeks at peak values of 256 to 2,048. The levels then dropped gradually during a period of three to four weeks to stable, low levels of 8 to 32. Of these 19 there were five in whom the maximum titre occurred in two to four weeks, nine in five to eight weeks, four in eight to twelve weeks, and one in 22 weeks. The last patient died in the 24th week as his titre was dropping.

Of the remaining nine patients, one died in the midst of a sharp rise during the 14th week. In five of the others, titres rose slightly in the fourth to sixth week and remained constant but at a fairly low level (16 to 32). In three patients there was no change in haemagglutinating titre during the period of observation.

Considering the variations in diagnosis, symptoms, time of admission, etc., the haemagglutinating responses were quite reproducible for most of the cases. A somewhat similar progression of changes has been described by Turner *et al.*⁶; and I have been informed by Dr. Rightsel, of Parke-Davis Laboratories, that patients given viral hepatitis experimentally and tested by means of our preferred technique have shown a similar temporal pattern of rising and falling haemagglutinating response.⁷

It is evident that if one examines hepatitis patients at different times in their illness there may be great variations in the proportions with positive responses, depending not only on the time after the diagnosis of the disease but also upon its severity. It is also clear that this is not the usual form of virus haemagglutination as it is seen in the classical pattern of influenza, etc.

From the concomitant biochemical studies it appears that peak haemagglutination titres occur when the disease and the serum transaminase values are first beginning to regress. Therefore, one view of the mechanism could be that this phenomenon of cold haemagglutination requires not only virus but also specific antibody; and when the antibody levels are high enough to suppress the virus the phenomenon disappears.

In support of this view is our previous observation¹ that the haemagglutinating titre can be destroyed in hepatitis serum with β -propiolactone, an agent known to inactivate the hepatitis virus. Antiserum produced in animals to rhesus monkey cells, to serum of "normal" people, or to pooled human gamma globulin with measurable haemagglutinating titres cannot be affected by this chemical treatment. The occasional case of hepatitis in which the titre fails to disappear or where it never occurs might be explained either by faulty diagnosis or by the per-

sistent carrier state that is well known in hepatitis—where one might imagine that antibody production would be deficient.

There is no protracted disease that is characterized by a biochemical change that appears only briefly. Indeed, it would be difficult to conceive of a metabolic change that was detectable neither during the most acute phase of a disease nor during the period of resolution, but only in the interval between the two stages. Nor is it likely that a pathological manifestation would be delayed (but not abolished) where the disease was more severe—as seen in our two fatal cases.

An explanation that is completely compatible with our understanding of infectious disease processes (and with the present situation) is the simultaneous presence of an infectious agent and its antibody. These do occur together, though only briefly, when the disease begins to regress.

The observation that the serum of a normal person can cause the haemagglutination of rhesus monkey or chick cells is not surprising. Non-specific inter-species haemagglutination, as well as haemagglutination inhibitors, have frequently been reported. Although there are many ways of producing haemagglutination non-specifically, such phenomena cannot rule out the possible effect of viruses, and it may be possible to distinguish the source of the agglutinating activity by the judicious use of β -propiolactone.—I am, etc.,

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Gas Mixtures

SIR,—The preliminary communication by Dr. M. E. Tunstall (October 12, p. 915) describes a number of experiments upon the cooling of pre-formed nitrous oxide: oxygen mixtures, some of which are in part based upon those of Cole.¹ It might appear from Dr. Tunstall's observations that a chilled "condensed" cylinder containing some liquid nitrous oxide and gaseous oxygen would always give warning of its dangerous state to a would-be user by appearing "frosted" on the outside when brought into a warm room. I think it likelier that a cold cylinder, whether below its N_2O condensation temperature or not, would merely show moisture condensation on its surface. This would give no information about the state of the cylinder gases. "Inverting briskly three times,"