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The Chest-Piece

THE JOURNAL OF THE BRITISH MEDICAL STUDENTS' ASSOCIATION
(Malta Branch)

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THE BRITISH MEDICAL STUDENTS' ASSOCIATION

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EDITORIAL

THE year 1949 will see yet another group of duly qualified medical students going out into general practice. This is surely the right time, therefore, to examine the road by which the present day medical student has to travel to reach his goal and to visualize, as far as this is possible, the future that awaits him. By far the great majority of medical students are destined to become general practitioners; looking back on their student days they ask themselves: "How far did my training go in preparing me for the job I am now doing?" The general practitioner cannot help recalling the hours he spent watching an operation he would never be called upon to perform; the time he spent listening by the bedside to a physician talking on the differential diagnosis of some obscure nervous case with an incidence in the population of one in several thousands; and, to go some time further back, he will recall those great efforts of his to memorise with the aid of mnemonics the relations of the posterior triangle of the neck and the branches of the Posterior Tibial Artery. These considerations go to prove that medical education needs reshaping.

In the days of old, when less facts were known, the student suffered less than he does now. To-day, with the growth of specialisation, the greatest difficulty in the education of medical men lies in the fact that the general practitioner is educated by the specialist. No surprise is to be felt, therefore, when the Academic teacher remarks that the product of a University to-day is not a philosopher but a living medical encyclopaedia. If the teacher may thus harshly criticize the student, the student himself may have something to say in reply. We feel that whereas in the past, admittedly, the medical curriculum was insufficient, to-day it is overloaded and unbalanced. What we propose is a better integration of subjects, and an easier transition from the pre-clinical to the clinical years: the medical student must not only acquire the facts, but he must be trained in the method of using them. Above all the timetable must ensure that adequate leisure hours are provided for the medical student — an opportunity which has up to the present been denied to the student who has undoubtedly to master a more comprehensive range of study than those for example who take law or any other subject. The medical student of to-day is the victim to over-organisation of instruction, with the obvious result that the student is discouraged, loses his initiative and his powers of observation. The way into Medicine should be the way of the scholar and that of the ever-curious student.

What is the future that awaits these senior students of the Alma Mater? Malta is to have a National Health Service too, not before long, amply reiterating as it were George Bernard Shaw's words: "It is difficult if not impossible for most people to think otherwise than in the fashion of their own period." The future Bill may be a progressive step forward for improving the care of the sick; but everyone can see that the Bill, in its present form, will deter the able and the ambitious from entering the medical profession. The Bill, as it stands, can only be described as restrictive. Restriction will envelop the newly graduated doctor; the long and arduous training that he has undergone to become what he has always aspired to be, the work which engages his entire skill and capacity are compensated by a ridiculous monetary reward. He learns to his surprise that he is no doctor but an apprentice to a craft. No surprise should be occasioned by the fact that, as things are at present, a persistent sense of fierce dissatisfaction exists among the medical student body.

Whatever scheme is evolved for running a State Medical Service, we strongly maintain that salary schedules should be adequate for the medical staff to live in comfort and dignity, enjoying some of the luxuries of life. The day must come when the rewards for medical service will compare more favourably with those of outstanding services in other walks of life.

The Convulsive Treatment of Mental Disorder

BY V. VASSALLO, O.B.E., M.D., D.P.M.
Professor of Mental Diseases and Dean of the Faculty

Among the physical methods of treatment of mental disorder, convulsive methods give the most positive results. They consist in the artificial induction of convulsions, very much similar to epileptic seizures, by means of pentamethylene-tetrazol or electric current. The original working hypothesis (VON MEDUNA) was an alleged biological antagonism between Schizophrenia and Epilepsy, which has been mainly disproved.

Both methods are simple in operation and comparatively safe. Accidents have happened when risks were taken because the course of the Psychosis would have led to death if no active treatment was carried out; but these do not amount to more than one in a thousand. In my experience of thousands of convulsions, after careful physical selection, no fatal accidents have occurred. Standard contra-indications are evidence of myocardial damage, failing circulation, hyperpiesis, tuberculosis and renal disease.

Indications for treatment are all affective syndromes whether the emotional disorder is either dominating or determining the clinical pattern. In depressions it is almost specific and in Schizophrenia, Paranoid states, and Obsessive-Compulsive syndromes with dominant affective symptoms treatment is beneficial in many cases. Mania appears to be somewhat refractory unless treatment is intensive and prolonged. In the psychoneurosis and especially in Anxiety States the treatment is not effective and in most cases inadvisable.

The electric method introduced in 1937 by CERLETTI and BINI is the most extensively used, but some observers claim results with pentamethylene-tetrazol where the former fails.

Pentamethylene-tetrazol is injected intravenously very rapidly in doses which vary between 3c.c. to 15c.c., but much larger doses have been used. Patients react differently and it is found that they get used to the drug during the course of treatment and doses must be increased progressively. The same dose or more may be repeated after a few minutes if no convulsion occurs and a third dose may be given with impunity.

The seizure is best described as epileptic, although some variations from the usual pattern may be observed. It takes place within five to fifteen seconds after the needle is withdrawn and the patient usually emits a cry and opens his mouth wide, forcibly and slowly, during which an assistant holds his jaw in such a manner as to prevent a possible dislocation. Patients usually experience a distressing sensation of passing out and for this reason may refuse further treatment or might have to be restrained. The convulsion lasts between 15 to 50 seconds and there is usually a brief period of apnoea terminated by a deep inspiration. Some become restless afterwards, but many go to sleep. Normality returns usually within half-an-hour.

With electric current the convulsion obtained is similar. It is produced from a machine using alternating current from the mains. The range of voltage is from 80 to 150 and the duration of exposure from 1/10 to $\frac{1}{2}$ second. The current is passed to the brain by means of an electrode system applied or clamped to the scalp on the temples. The current which flows through the head is in the order of $\frac{1}{2}$ to 1 Ampere. If passed through the heart it is likely to set up a fatal ventricular fibrillation and would be very unpleasant if passed through any

other part of the body apart from the head. For all that, none of the patients are aware that they have received an electric shock. The amount of current required to produce a convulsion cannot be determined beforehand because the head does not obey Ohms law. In order that a fit may be induced it is necessary that a large area of the cortex is stimulated at once and that the stimulus must be repeated a number of times before a convulsion occurs. It is accepted by electro-physiologists that an effective electric stimulus is one which occurs at the negative pole of the stimulating current. If this rule holds with the brain we may assume that when an alternating current is applied to it, stimulation will occur at each negative half-cycle, and in this manner for an exposure say of 1/5th of a second to a 100 cycle alternating current, there will be 20 effective stimuli for each hemisphere.

Once we cannot determine beforehand the appropriate voltage required to produce a fit we begin a course of treatment by using a standard medium setting, say of 100 volts for 1/10th second. If the fit occurs immediately the same setting may be used for subsequent treatments, or may be slightly reduced, though no harm results from using an over-strength stimulus. The convulsion usually follows in about one second but may be sometimes delayed. If the stimulus was not sufficient a higher voltage or an increase in the time interval may be necessary to obtain a fit. Very rarely we fail to induce a convulsion with the highest setting allowed by the apparatus, but in these cases we generally succeed if we repeat the stimulus several times. If this method also fails the convulsive threshold may be lowered by giving Benzedrine before treatment.

The patient does not experience any discomfort if the first stimulus fails as he is usually stunned. Unlike pentamethylene-tetrazol the effect of the electric stimulus is instantaneous and the patient has complete amnesia for the shock.

In both drug and electric therapy the number of seizures necessary to procure a remission of symptoms is best determined according to the individual results obtained. The frequency of treatment is usually governed by criteria obtained with experience. In severely depressed patients treatment at first is best given daily and then tapered off at increasing intervals; 5 or 10 seizures are usually sufficient. In Mania good results are obtained by two daily treatments at intervals of half-an-hour between each convulsion. For Schizophrenia treatment on alternate days is usually sufficient and should be prolonged to 20-30 seizures according to the results obtained. In all cases where improvement takes place the treatment is carried out at greater intervals until one is satisfied that recovery has occured.

Complications noted are dislocations, most commonly of the jaw or shoulders, and fracture of long bones and spine, resulting from the violence of muscular contraction. In Malta fractures of long bones have never occured. Compression fractures are not of much significance. Curare is sometimes used to minimise these complications. I have personally observed four lung abscesses, two of which after pentamethylene-tetrazol, and probably due to a mobilisation of a thrombus at the site of the injection. Prolonged apnoea with extreme cyanosis at the end of the convulsion is often very alarming and artificial respiration may have to be resorted to. Cardiovascular complications are rare if patients are carefully selected before treatment.

Cerebral complications have never been seen during or after electric shock. Evidence has been accumulated which indicates that brain damage is possible with this form of shock therapy, although no clinically recognisable signs of organic changes have been detected. Temporary loss of memory is usually noticeable and with intensive methods this may lead to mental confusion which, however, clears soon after the cessation of treatment.

The mode of action of convulsive treatment is still unknown, and the method remains empirical. It is obvious however that

the induction of repeated epileptic fits produces extensive physiological activity with accompanying alteration in the flow and alteration of the blood. As **HEMPHILL** puts it "it is possible that these changes may help in the correction of certain physiological disturbances which may influence to a considerable extent the picture of the mental illness. It was noticed that in schizophrenic patients the least improvement was in those in whom delusions and hallucinations were prominent and in whom the general appearance was that of normal bodily health. Even among the chronics, the retarded type with stagnant circulation showed the greatest tendency to improve. In the case of agitated involutional melancholics in whom there was already evidence of a complex physical disorder determined perhaps by malfunction of the pituitary, it is tempting to assume that alteration in the blood supply or perhaps direct stimulation have had a physical effect upon the pituitary or the frontal and neighbouring regions of the brain. It is in just such patients that the most favourable results have been claimed, for example, by **FREEMAN** after the operation of prefrontal leucotomy."

Convulsive treatment has the advantage that it can also be carried out in an outpatient clinic or in the home of the patient. Many patients are being treated in this way and hospitalization becomes unnecessary. This is a considerable advantage which is appreciated by patients and relatives and is conducive to better social adjustment.

As in every method of treatment in psychological medicine convulsive treatment should be accompanied and followed by active psychotherapy. The patient must be helped in every way and his ailment discussed, with suitable attempts at reassurance and interpretation of symptoms. It is a good practice not to let patients mix with psychotics, and relatives and nurses should be warned to refrain from discussing the illness with the patient. Special consideration should be given to occupation and the patient encouraged not to remain idle.

CONTRIBUTIONS

All members of the Medical Profession and all Medical Students are invited to contribute to "The Chest-piece". Correspondence and contributions should bear the signature of the author (not necessarily for publication), and should be addressed to:

The Editor of "The Chest-piece"

117 St. Paul's Street

Valletta.

THE STUDENTS' INTERNATIONAL CLINICAL CONGRESS

PREAMBLE:

We, medical students from 25 countries, in full agreement that common problems can be solved only by increasing international co-operation, have met at the first Student International Clinical Congress, in England, 1948, organised by the British Medical Students' Association, on behalf of the International Union of Students, to strengthen international friendship, to exchange medical knowledge and to facilitate the achievement of common goals.

The role of medicine in modern society is a changing one. Advances in the knowledge of the basic causes of diseases have expanded the scope of medicine to include not only the science of therapy, but also that of prevention of diseases. The extensive social and economic influences in the origin of diseases can be neglected not only in sickness but also in health. The competent doctor of today should be fully capable of participating in the control of environmental factors leading to illness, of preventing illness before symptoms appear, and of treating illness after symptoms have appeared. Thus there is a new sense of responsibility: in accordance with this, the doctor must equip himself with adequate knowledge in order to discharge his role in the social, economic, political and spiritual life of community.

The impact of this new role of medicine upon medical education is extensive. The medical student or young doctor must realise the nature of this role and must equip himself to deal effectively with the responsibilities arising from it. Similarly, he must have available adequate facilities with which to attain his training. Towards these ends, existing concepts and facilities of medical education call for re-evaluation and revision to meet new requirements. New courses should be added and new inter-relationships developed. The participation and contribution of the student is essential in this process.

Implicit within this new role of medicine is the realisation that health cannot be achieved without a socially productive and peaceful world. International understanding and co-operation is essential for such a world. When peoples direct their resources and knowledge towards the attachment of an ever-increasing standard of living for all and concentrate upon the solution of common problems, there exists the foundation for true international accord and the maintenance of peace.

Science is a basis of such developments. Used constructively it implements social well-being; used destructively, it is perverted. It is the duty of every doctor to ensure that the facilities provided for us by science are utilised to promote the health of the people, and not to new means for their mass destruction.

It is with these basic promises that the discussions in this Congress have been approached. We have exchanged information and ideas. We have considered mutual problems. We have formulated policies to achieve their solution.

In order to facilitate these considerations, we have examined the principles of medical education required to fulfill contemporary responsibilities, we have examined the means whereby we can carry out successfully the programme adopted, and increase international co-operation, so amply exemplified in this Congress.

PRINCIPLES AND FACILITIES OF MEDICAL EDUCATION:

In these discussions great differences were revealed in the practice and problems of medical education among the countries represented. These differences are related to the prevailing social and economic structure of

each society. So numerous and complex are these problems that it is neither desirable nor practical to recommend at present a uniform system of medical education for the entire world. It is believed that a system of medical education is the most efficient when adapted to the structure and requirements of a particular country. There are, however, definite common ideals and beliefs along certain broad educational lines which are held in common.

AIMS OF MEDICAL EDUCATION.

As previously defined in the preamble, the goal of medical education must be to train the student to discharge adequately his future responsibilities in the medical, social, economic, political and spiritual life of his community.

With due recognition of the diverse roles played by the doctor in society, it is felt that there should be one type of basic training. On completion of such a basic training, the young doctor should spend a varying amount of time to become proficient in any chosen branch of medicine. General practice is regarded as one of those branches. The following deficiencies, noted in the basic training stages should be remedied:

a) The failure to integrate theoretical, clinical and technical work. Laboratory procedure and clinical observation and judgement are not separate entities but should be used conjointly in the proper management of the patient. One should not be used to the exclusion of the others.

b) A lack of understanding of the functioning of the human mind, of its common disorders, of the relationship of mind to bodily disease, and of the influence of society upon it.

c) A failure to understand society and its problems whether general or applied specifically to medicine. The lack of an adequate approach to the social and economic aspects of medicine was particularly emphasised.

d) Absence of instruction in the scientific method with particular reference to the principles of logic, the use of language and statistical analysis of data.

MEANS OF ACHIEVING AIMS.

I. Academic Means.

1. The medical course should be arranged so that maximum integration of the preclinical theoretical sciences, clinical medicine and the social approach to medicine may be affected.

This entails the simultaneous presentation of these subjects throughout medical training. It was further agreed that the principles of sociology and economics should be included in the medical course. The training in these subjects should not so much aim at the attainment of a specialist status as to enable the doctor to utilise them in his practice and be able to co-operate with specialists in these fields.

2. To facilitate the training in the early diagnosis of diseases, consideration should be given to the methods by which students can be shown cases prior to hospitalisation. One important way of achieving this is the students' attendance at health centres.

3. The time taken to complete such a medical education would vary from country to country, depending upon the type of preliminary education, the facilities for postgraduate education and the development and structure of the particular society. On general principles it was suggested that at least three years should be spent on clinical training, integrated with pharmacology and pathology. It was further recommended that an interne year be compulsory before a licence to practice is granted. Opinion was divided about the advisability for making the interne year before qualification for the degree compulsory.

4. Students should have the widest possible freedom in their mode of studying. Opinion was divided about the advisability of allowing the student to sit for examinations whenever he choses. It was agreed that attendance at lectures should be voluntary,

and attendance at practical work compulsory.

5. Officially recognised staff-student curriculum committees should be established and, when necessary students should have full voting powers on these committees.

6. Refresher courses of some kind were felt to be necessary. In large centres, courses of lectures and demonstrations extending over several weeks could be organised with profit. It was agreed that refresher courses should be made available to graduate physicians and that funds be provided to enable them to spend 4 to 8 weeks every few years at a medical faculty or teaching hospital refresher courses. It was also recommended that grants should be provided for such post-graduate education.

II. MATERIAL MEANS.

Selection of students.

1. In order to provide sufficient doctors for the people, each country must formulate a plan based solely on the needs of that country in order to provide the optimum doctor-patient ratio. Where the existing facilities are inadequate, they must be improved by the combined efforts of students, schools and governments.

2. Students must be elected from the population so as to produce doctors of a high standard, and to reduce wastage in training. At present no completely satisfactory method exists of predicting the value of matriculant to the medical profession, and it is recommended that research into this problem be extended as much as possible and be given full student support.

3. In the selection of students, any discrimination of students on the basis of race, religion, colour, creed, political opinion or sex was strongly condemned and all students and governments are strongly urged to undertake fullest activity in removing such discrimination where it exists.

4. Costs of medical education are prohibitive in many countries; they thus provide a basis for discrimination on economic grounds. Therefore, equal educational opportunities must be provided for the entire population of a society. While the ultimate goal shall be free education provided by the State, the initial steps may well be graduated system of fees according to the students' income.

The number and value of scholarships should be increased and after the student's first year is complete, the student's organisations should have the opportunity to assist in the selection of candidates for scholarships. Apart from financial needs, the only qualification for such aid shall be the academic standards of the institution involved.

5. Whereas the state should ultimately provide all necessary funds for medical education, it should not have direct financial control of the medical schools.

6. Since the student has no real earning capacity, he should be aided in providing the cost of living. Ultimately the provision of free board and lodging should be obtained. In the interim, much can be and has been accomplished by certain student organisations in running their own co-operatives, non-profit making restaurants, and residences.

7. Facilities for exchange of graduates shall be encouraged. Scholarships for graduates should be allotted by agreement between the granting authorities, the university authorities and undergraduate organisations. These scholarships should be so conditioned that students availing themselves of facilities in other countries have their term of work recognised in their own countries so that the time spent studying away from home is not lost.

8. Internes should be paid a living wage. All hospitals offering interneeships should provide library and teaching facilities and time to take advantages of them. The existing discrimination against newly qualified doctors on lines similar to those outlined for undergraduate students, should be established.

EDUCATIONAL FACILITIES.

9. Laboratory facilities and clinical equipment are greatly insufficient in many countries, and should be remedied by:

a) government funds,
b) medical schools extended to embrace non-teaching hospitals,
c) mutual assistance among countries to advance development of these facilities.

10. Library facilities and text-books are inadequate in many countries especially in devastated areas. That this state of affairs may be corrected:

a) by students buying co-operatives,
b) by publications on student presses,
c) by a system of international collection and distribution of medical books which should be organised by the **M.F.B.**

11. In order to remedy shortages of teaching staff:

a) full time opportunities for junior teachers should be made by adequate living wages.
b) wherever possible, senior students, supplementing staff as demonstrators with compensation.
c) intimate personal contact between teachers and students should be worked for.

STUDENT WELFARE.

12. The university authorities should partake in the responsibility for student housing, food, and the students should be represented on any committees set up for this purpose.

13. Student Health Clinics and sanatoria should be established. Alongside the services at such clinics, a regular mental hygiene service should be provided. Student participation in the organisation of these clinics is recommended. In areas where complete care for students is not free, a low-cost comprehensive students' insurance plan should be compulsory.

14. Every student should receive a complete health examination annually and chest X-rays should be taken twice a year.

STUDENT ORGANISATIONS.

15. Since medical students have the above problems in common, it is important that they should actively participate in their respective medical student organisations. In many countries, medical student organisations have already been able to solve these problems to some extent. In order to be effective, medical student organisations should unite students regardless of their race, colour, creed or political belief on both a local and national level. They should co-operate with other student organisations in their country on common student problems. The development of full international co-operation should be an important aim of the national medical student organisations and its active participation in the **M.F.B.** will help further this aim.

Finally, two general conditions are stressed, the fulfillment of which is a prerequisite to the recommendations here proposed:

a) there must be adequate financial resources to provide all necessary medical facilities,

b) every form of medical care should be available to every member of the population without any economic limitations.

Symptoms are universally available; they are the Voice of nature; signs, by which I mean more artificial and refined methods of scrutiny — the stethoscope, the microscope, etc. — are not always within the power of every man, and with all their help, are additions not substitutes.

JOHN BROWN. Introduction to Horae Subsecivae

MEDICAL FACULTY BUREAU of the INTERNATIONAL UNION of STUDENTS

PREAMBLE:

The Medical Faculty Bureau of the I.U.S. will be the co-ordinating centre of the medical students of the world.

AIMS:

1. To carry out the recommendations of the Students' International Clinical Congress and to make known to all medical students the work of the M.F.B.

2. To act as an international co-ordinating centre for the organisation of relief for needy medical students and faculties. The needs of medical students in colonial and former colonial countries should be given special consideration with regard to priority of distribution.

3. To present the needs of medical students to international agencies which can be of assistance in carrying out the work of the M.F.B.

4. To facilitate extensive travel and exchange among medical students.

5. To provide information of general and scientific interest to medical students.

6. To integrate the activities of medical students with those of other faculties.

7. To work for an international standard of medical education.

8. To organise International Students' Clinical Congresses at least bi-annually.

9. To organise other conferences as desired.

10. To encourage and support the activities of all national Medical Students' Associations provided that their programme does not run contrary to that of the M.F.B.

PROGRAMME:

1. The M.F.B. will publish a bulletin at the end of the Congress, containing a report of the Congress, and its discussions and the recommendations arising therefrom. This will be widely distributed among medical students and will also be represented to U.N.E.S.C.O. and W.H.O.

2. The M.F.B. will work with the relief department of the I.U.S. to facilitate the contribution by medical students to students in need. The M.F.B. will publish as soon as possible a list of the requirements of medical students in various parts of the world to guide medical students' organisations in the collection of such materials. The M.F.B. will organise in connection with the general relief campaign held every November 17th, International Students' Day, a special contribution from medical students of text-books, instruments, drugs, etc.

3. The M.F.B. will organise support among the medical student organisations for all student sanatoria.

4. To increase student exchanges, the M.F.B. will periodically issue a questionnaire inquiring into the following:

   a) facilities for and costs of housing visitors,
   b) expenses of travel,
   c) amount and type of medical work available including specialist's opportunities,
   d) possibilities of founding scholarships for foreign students.

5. To issue I.U.S. Travel Bureau identity cards to facilitate inexpensive travel for medical students.

6. To publish a special travel bulletin not later than February 1949, containing all information of medical student exchanges and details of arrangements for general students travel.

7. The M.F.B. will study the possibilities of group exchanges to increase the scope of student exchange.

8. The M.F.B. will issue a quarterly press letter which will include reports on activities of local student organisations, articles, and drawings from student journals, original stu-

dent contributions, reviews of clinico-pathological conferences, new books, journals, etc. as well as addresses of students wishing to correspond with colleagues abroad.

9. The M.F.B. will obtain copies of original student work for circulation to medical student organisations.

10. The M.F.B. will collect and facilitate the exchange of medical students' journals and papers.

11. The M.F.B. will establish a central film library available to medical student organisations and faculties, and facilitate the circulation of these films by publishing a full description of them. This bulletin will also contain lists of medical films generally available in different countries.

STRUCTURE:

1. The M.F.B. of the I.U.S. will work within the framework of the I.U.S. and follow the democratic principles already laid down by the I.U.S. Constitution.

2. The M.F.B. will be chosen at every Students' International Clinical Congress which will be held at least bi-annually, all delegates present to have full voting powers — including non I.U.S.-members — for electing M.F.B. Board.

3. The M.F.B. Board will consist of all countries which are I.U.S. members, chosen on the basis of geographical distribution and degrees of activity, plus 2 observers from non-I.U.S. countries. The latter to have the full right of participation on the M.F.B. Board discussions but not to vote on the Board.

4. For the next two years, representatives will be chosen from the following countries:

Chile, France, Great Britain, Italy, India, Poland, one Scandinavian country, South Africa, U.S.A., U.S.S.R., Vietnam, plus two vocal non-voting observers from among non-I.U.S. member countries themselves. If any country fails to appoint a representative, China and Brazil will be requested to do so in that order.

5. The M.F.B. Board will recommend from among the members one suitable person as candidate for secretary; the Executive Committee of the I.U.S. will approve the nomination.

6. The Secretary will live and work in Prague, and the I.U.S. will be asked to provide him with financial aid for living and part-time study. Non-I.U.S. members shall make a financial contribution to the I.U.S. purely for the purpose of the running of the M.F.B. and the expenses of the Secretary.

7. If the Secretariat is not available on or before 18th Sept., 1948—the date the I.U.S. Council finishes its work in Paris — or at any time subsequently, the I.U.S. Executive Committee will be asked to appoint a substitute to carry out the work of the Secretary pending his arrival or that of an alternate candidate.

8. The Chairman of the M.F.B. will be elected by the S.I.C.C., this position to be held rotationally.

9. All Medical Faculty Bureau members will belong to the I.U.S., but the Secretary and Chairman of the M.F.B. will be instructed to communicate with all medical student organisations irrespective of their relationship to the I.U.S., to inform them of and to involve them in M.F.B. projects and to invite them to participate in all activities.

10. The Secretary of the M.F.B. will be an observer at the I.U.S. Council and will be consulted on all medical student problems.

11. The Congresses will formulate the specific programme for the M.F.B., which when approved by the Executive Committee of the I.U.S. will be carried out through the various departments of the I.U.S. in accordance with the instructions of the M.F.B. Board.

12. At each Congress, the I.U.S. will be asked to submit its suggestions for the work of the M.F.B.

EPILEPSY IN CHILDREN

BY C. ZAHRA NEUMANN B.Sc., M.D., D.C.H., M.R.C.P.
Professor of Physics and Lecturer in Experimental Sciences

No doctor can be in practice for long before meeting with cases of convulsions in infants or young children. It is, of course, common knowledge that these have a special tendency to convulsions although the reason is obscure. Some authors have attributed this tendency to the lack of a properly developed myelin sheath in the brain tissue, others to greater permeability of the infantile cerebral capillaries leading, under appropriate conditions such as fever, to cerebral oedema. As the child grows this predisposition to convulsions appears to wane and is exceptional after the third year of life.

The commonest causes of convulsions at birth or shortly after are intracranial birth injury and congenital brain defects. From the 2nd month to the 3rd year febrile convulsions, that is, fits associated with acute feverish conditions, are frequent. Other and less common causes are uremia, tetany, brain tumour, intracranial injuries and infections and idiopathic epilepsy. It should be observed that in all these conditions *apart from idiopathic epilepsy*, the convulsion is merely an incident in the course of a more important disease, whereas in the latter condition it is the main if not the only symptom. However, one must not forget that convulsions occurring during fevers are not all "innocent" and that in a certain percentage of cases the fits tend to recur even in the absence of any pyrexia; provided no organic cause to account for the fits is found, these cases should be diagnosed as epileptics.

It is usually said that idiopathic epilepsy is a hereditary disease. Out of 24 cases met with in my practice this was so in only 4 cases. However Lennox and others claim that encephalograms of relatives of epileptics are abnormal in a higher percentage of cases than could be accounted for by pure chance. Gibbs states that the hereditary factor in epilepsy is, generally speaking, no greater than in diabetes and he thinks that what is inherited is not the actual disease but some kind of weakness which must somehow be activated for the fits to occur.

What is the essential nature of the malady cannot yet be understood. Since the myelin sheath, that presumably acts as an insulator, is well developed at the age when epilepsy makes its appearance, this anatomical factor can be discounted. During the last war a technique was developed to discover whether service personnel with histories suggestive of epilepsy were genuine. This consists in the administration of large quantities of water (2 to 6 litres per day), while salt was completely eliminated from the patient's diet. Simultaneously pitressin, the anti-diuretic hormone, was injected three-hourly. When the water-retention reaches 5 per cent of the patient's weight a fit occurs in the epileptic subject only. It is reasonable to suppose that the pitressin water-retention test indicates an increased permeability of the cell membranes of the brain tissue. Dehydration lessens the tendency of fits which explains the success of the "fasting cure" in the middle ages when epileptics were considered holy. So also does acidosis, whereas a shift of the pH of the blood towards the alkaline side increases the liability to epileptic fits. Hence the reason why hyperventilation will induce an attack of petit mal in a suitable subject.

SYMPTOMS: Irvine McQuarrie classifies epilepsy into three types: (1) Somatic motor; (2) Somatic sensory; (3) Psychic.

I do not propose to discuss the somatic motor seizures of which "grand mal" is the principal type nor the somatic sensory or "auras", as the former are familiar to all and the latter, in my experience, are rare in children. The third group, the psychic, sometimes presents great difficulties in diagnosis. Muscular spasms are absent or

only larval but the main feature is disturbance of consciousness. This may be lost for a short while as in "petit mal" when the patient may suffer from so called "fainting fits" or "dizzy attacks" often misdiagnosed as heart syncope or vaso-vagal attacks. In other cases consciousness is disturbed or clouded but is not abolished. The child may have *periodical* fits of destructiveness when otherwise he is a quiet obedient type, or, although naturally active he becomes at times apathetic, refusing to budge from his chair or bed. It is the periodical reversal of temperament or character which should make us suspicious and also the occasional irritational acts which the patient does not remember performing. It is especially in these cases that the encephalogram may be very useful.

TREATMENT: Too little regard is usually paid to the environment of the epileptic child. If the fits are not frequent and the mental powers normal the child should be sent to a normal school and kept in his home if this is pleasant and congenial. If the fits are severe and numerous, or if the intelligence quotient is much below normal, his education may be beyond the capability of his home or school. In Malta no proper institutions exist and it is doubtful if the limited number of cases would justify the creation of such a school. It would probably be better in these cases to educate the parents to carry out their added responsibility. It is to be hoped that in future arrangements may be made to create a special institution in England for the reception of difficult epileptics and other abnormal children from various small colonies, each incapable of catering adequately for such cases.

DRUG TREATMENT: Phenobarbitone is probably the most popular drug in "gran mal" or somatic motor epilepsy. A few years ago another drug was introduced and is known as phenytoin sodium (dilantin and epanutin). It has no narcotic or soporific action like phenobarbitone and this is a great advantage, but Peterman is not greatly impressed by this drug and states that the toxic manifestations, such as vertigo and disorientation were far more common and much more undesirable with this drug than are the occasional reactions of drowsiness met with phenobarbitone treatment. This is especially the case, states Peterman, in children, whereas the drug is stated to be more effective and better tolerated in adults.

"Petit mal" is often resistant to both phenobarbitone and to phenytoin sodium and it was only lately that an efficient drug has been prepared; this is trimethadione (tridione). I have used it recently in a case refractory to phenobarbitone and the fits, which numbered 2 or 3 per day disappeared within a few days. It is stated that it may precipitate attacks of "gran mal" in "petit mal" subjects that occasionally suffer from somatic motor siezures. Also, it is a bone marrow depressant and cases of agranulocytosis have been reported. Lennox in 1946 introduced "Paradione" a derivative of trimethadione and Peterman in 1947 reported his results of "Thyphenytoin" both said to be more effective and less toxic than trimethadione and phenytoin sodium in the treatment of "petit mal." All these drugs may be used together with phenobarbitone.

Finally we must not omit diet, which in the treatment of epilepsy may have a specific effect. According to Peterman 50% of all cases of epilepsy in children may be controlled by the use of a ketogenic diet. The basis of such a diet lies in the excess of fats given to the child coupled with a diminution of carbohydrates. The details can be found in many text-books on treatment. I have never used diet alone and cannot check the accuracy of these figures but 4 cases of "gran mal" in children of 10 to 14 years which were refractory to doses of phenobarbitone that did not produce sleepiness, were enabled to have reasonably small and effective doses of the drug when a ketogenic diet was instituted. On the whole a ketogenic diet, even if effective, is very difficult to carry out for long and is probably impossible in children under 6—7 years of age owing to lack of cooperation on the part of the little patients.

THE PRESENT-DAY STATUS OF THE NEWLY QUALIFIED DOCTOR

By
A. Kissaun
Student in the Academical Course of Medicine and Surgery

When at the end of seven long years of toil and hardship the medical student has succeeded in passing his final examinations he is received with pomp and circumstance into the great, noble and selfless profession of medicine. In recognition of his initiation he receives the time-honoured parchment with the writing.—

.....*Nos, Universae Melitensium Educationis Rector, de Facultatis.....sententia, Te,....., quem probitas et eruditio explorata jam satis nobis commendant, Doctorem in... ..... die hac constituentes, ad Lauram doctoratus solemni ritu promovemus; dignumque insuper declaramus, qui omnes doctoris actus publice ac privatim exercere possis et valeas*.....

The occasion is one of some importance. A new addition has been made to the brotherhood of doctors!

For a time our poor little man, who through no fault of his own, still clings to the childish complacency which is the natural psychological reaction to university life, is glad of the change. He is proud of his parchment, glad of his new designation and of his increased importance in the public eye. He even looks forward, almost with boyish fervour to the gay party which his people at home are feverishly organising to celebrate the occasion.

Do not think, however, that this state of inebriate complacency is going to last for long. Our young doctor is no simple-minded fool. Very soon he begins to take stock of his position. He awakens as one would say to the realities of life... to find that he has nothing to congratulate himself upon. What does he discover?

His former school-mates of the secondary schools have, by the time he has graduated obtained employment of some sort or other and pocketed enough money to give themselves that security which is the real basis of all happiness in life. He finds that most of them have already feathered their nests. All of them have a small reserve upon which to draw in the event of illness or an emergency. Some of them, untrammelled by long hours of study, have ridden the tide that leads on to fortune. And he? "He is bound in shallows and in miseries". His only possessions are a number of delapidated books and a few shgs. —the charity of his relatives. He has no bank account, no reserve to draw upon. His best years have been spent on study. His prime is past its peak. He looks hopefully to the future..... but the future is as dark and mysterious as ever.

It is no wonder, therefore, that those with ability and no capital are oftener than not lost to the profession of medicine. For as things are at present in Malta the young man who wishes to become a doctor must be prepared to face seven long years of university training involving a net expenditure in the region of £1000 before being able to qualify. And that is not all! Failure to pass his examinations or to attend lectures during an illness or the emergency of war may easily prolong the training — not to say the torture— by another three years.

It thus comes about that the young doctor thrown to face the world at a handicap has to act — and act quickly and even ruthlessly — if he is to make up for lost time. No wonder that he learns early in his career that he must either abandon his high ideals and start giving some consideration to his urgent needs or else he must inevitably perish. No

wonder that, as the Hon. Dr. Schembri Adami has recently reminded us, George Bernard Shaw has spoken of the doctor as a man who has a vested interest in disease.

Whose fault is it? The guilt, says G.B.S., is shared by all of us. It is primarily a defect of social organisation. That very society which expects so much of the doctor is at the same time very slow, if not altogether reluctant, to take an active interest in his making and in his well-being. Even in the middle of the 20th century, Society cannot bring itself to realise that doctors are made and not born, and that it takes money, energy and sacrifices to make them. The modern doctor is not, like his equivalent of old — a deus ex-machina, a rare specimen fallen from the skies. He has a very definite and important part to play in the life of the community and he must therefore receive the attention and the emoluments which his position calls for. A Society organised according to the modern concepts of government presupposes a number of well-trained and well-paid individuals whose task it is to look after the health of its members very much the same as a modern army requires a number of well-trained and well-paid officers to look after its soldiers. Recognition of this fact is a sine qua non of comprehensive N.H.I. as it is understood today.

As things stand at present this condition is far from being fulfilled. Today, our Society adopts the doctor only after he has graduated i.e. after he has invested a great deal of money and time on his studies. And even then it takes little interest in his potentialities and in his well-being. It merely gives him the right-in a sort of perfunctory way-to see its sick and to administer his potions to them.

As a direct result of this state of affairs the newly-graduated doctor tends to follow the line of least resistance in his blind instructive search for a short cut to security and success. Thus — and quite logically too — the idea of post-graduate hospital training cannot but sound distasteful to the majority of newly-graduated doctors. These young men know that the hospital is not prepared to pay them enough for their work in its wards to make employment there a sound financial proposition even if they are prepared to gloss over the restricted measure of liberty that work in hospital necessarily entails. The newly-graduated doctor knows that what the hospital administration wants is not a staff of well-paid honest, hardworking, doctors but a band of cheaply paid residents to play the part of "extras" in the big comedy.

Why is it that the hospitals of Malta would not pay the newly-graduated doctor an honest wage?

The disease we are told came direct from England. In England up to a little time ago there were two recognised hospital systems viz. the voluntary hospitals which were independent units run under and financed by their own schemes and possibly also by philantropic endowments; and the private hospitals which were government institutions provided for by taxation under the Poor Law. In these voluntary hospitals the resident staff were the most junior members of the profession— the newly graduated doctors. These young men while burdened with considerable responsibility were paid exceedingly small amounts for their day's work on the pretext that they were still undergoing instruction. Thus on the one hand they were treated as responsible doctors and on the other as apprentices still learning the art. Such a blatant contradiction could only be explained by the fact that the voluntary hospitals, in their fight for existence had to adopt a policy of thrift and stringent economy especially when with the evolution of modern medical practice they became faced with the danger of bankruptcy and extinction. In England the prospective G.P. had to buy his practice at a high price indeed. The newly graduated doctor who could not afford to buy a practice recognised in the voluntary hospital a straw at which he could catch rather than let himself drown in a sea of bankruptcy and disillusionment. He became, therefore, a

victim of circumstances. He became — faute de mieux — a useful tool in the hands of hospital committees.

The methods of the voluntary hospitals of England were translated to Malta with characteristic thoroughness. The Crown Colony Administration, which shaped our destinies for 15 long years, in its blind attempt at imitation of everything British, was not slow to import into the Island methods and policies which were absolutely incompatible with the traditions and needs of the Maltese. In Malta the newly graduated doctor, provided he had the necessary energy and ability, had no great problems to solve. Practices here are not bought and sold. Our newly graduated doctors were therefore always free to start work on the very day of their graduation. There was always, of course, a number of newly graduated doctors who could not or would not for reasons best known to themselves take up private practice. Their one alternative was the Government hospital. And the Colonial Administration was not slow to make them its slaves, giving them the same wages and applying to them the same conditions of work then existing in the voluntary hospitals of England.

As always happens in a country like ours a stupid and unjust precedent became to be accepted as if it were law. It took a war to shake the Colonial Administrators and their faithful servants in the Medical and Health Department, from their cynical attitude and patronising airs, towards the newly-graduated doctor.

When war reached the Island in 1940 the tables were turned. It soon became evident that due to the existing emergency the Government was in urgent need of doctors and that attempts should be made at finding them. And find them it did. How? Very easily!

Now it was no more true that newly graduated doctors had to learn the art from hospital, "to learn *to reduce a fracture* and bandage a leg from the nurse" as one of our influential greybeards had the brazenness to describe it. Far from it. Rather it was then deemed proper to contract the Medical Course to six years instead of the statutory seven so that students then in the sixth year of their studies could be able to fill the gap which the emergency of war had created. It, moreover, paid them reasonable salaries for fear of losing them to the fighting forces.

When the war was drawing to a close and the Siege had been lifted the Government, with cynical imperturbability, reverted to its former policy as if nothing had happened.

Now all this goes to show that in Malta the newly-graduated doctor has been for long a convenient tool in the hands of government officials. The clever people who shaped our destinies came to realise that by paying the newly graduated doctor wages *that the most unskilled of unskilled workers would justly refuse*, they could keep the hospitals cheaply and — as far as they were concerned — efficiently doctored. And it is no wonder that during all these years not a voice was raised in protest. The C.G.M.O. was virtually a dictator under Crown Colony Administration. He could not be challenged in the political forum.

That was more or less the position when the present Government took over from the Colonial Office and its faithful servants in the Medical and Health Department. The new Government meant business. Anyone with a little common sense — regardless of his political leanings — will admit that this Government had honest intentions. It meant to deal with matters in a realistic manner. It meant among other things to improve the health services and especially the patched-up hospital service which it inherited from the previous administration. The need for a strong staff of R.M.O.'s became firmly established.

The first time that the R.M.O's raised their voice was soon after the return of responsible government. Determined to make the Government understand that they could no longer submit to a treatment which the humblest unskilled worker would not accept they petitioned the Government for a reconsideration of their emoluments. And when somebody tried to juggle with words they tendered their

resignations in protest. To my mind they did the wisest thing imaginable. "The butcher and baker" says G.B.S., "are not expected to feed the hungry unless the hungry can pay; but a doctor who allows a fellow-creature to suffer or perish without aid is regarded as a monster". These young doctors preferred to be regarded as monsters as long as their just aspirations were realised. Thus the red-tape was cut short and the ignominious, fallacious, irresponsible, ridiculous, childish theory of "block votes" was given a good shattering. They were given an increase in pay and their conditions of work were bettered. It was the only way to make the government official give up his arm-chair methods and policies.

In his speech from the throne at the opening of the 3rd Session of Parliament H.E. the Governor made the first official announcement of the introduction in Malta of N.H.I. It would not be wise at this stage to discuss the merits or demerits of such a venture in its application to Malta. But it is hoped that our Government will make itself sure, before embarking on such a venture, that it has the necessary finances to back the scheme. The ancient methods of robbing Peter to pay Paul do not very well conform to modern methods of administrative justice. "We should not," said Lloyd George in 1911, "do our charity at the expense of the medical profession." The Government should therefore see to it that before taking any steps to implement its political programme it is in a position to compensate fully those who for the sake of the majority are prepared to sacrfice their inalienable and sacred rights as individuals. Among those who will be affected are newly graduated doctors. These young men are a dependable source of medical talent and medical talent is the raw material of any health service.

The question remains: Has the newly graduated doctor doing hospital work a right to be paid an honest salary and to be offered honest conditions of work? He has. Let us see why:—

The Argument from common sense.

The newly graduated docor is a great potentiality. He can in a very short time become a great prop in the fabric of a health service. To what degree he will succeed depends on the extent to which he is permitted to flourish. Like everything which is growing he needs security and encouragement. Failing that, he will, in his fight for existence, adopt means and methods which will serve his end and his end only. Therefore do not nip him in the bud.

The argument from Christian Doctrine.

The newly graduated doctor is a human being and must therefore be treated as such. If he works for you you must pay him and pay him according to his skill. You are not allowed to tamper with his freedom and if you do it for the common good you must be prepared to compensate him fully. Even if you are prepared to regard him as an unskilled worker (which your common sense would not allow you to do) you cannot therefore pay him less than the least paid of unskilled workers. You cannot pay him less than a scavenger or a rat-catcher.

The Technical Argument.

The newly graduated doctor IS a doctor. He is therefore a man whose position in Society is one of dignity. Dignity is part of the doctor's armamentarium in his treatment of human illness. You cannot expect him to carry dignity at 10s/- a day, a wage which a rat-catcher or a scavenger would not accept.

The Argument from Psychology

The newly graduated doctor employed by any health service has the right to strike as much as a dockyard worker or a scavenger. He does not do it often when he is unfairly treated because the nature of his mission and the etiquette of his profession do not encourage it. Therefore do not avail yourself of his virtues to make him your slave.

The Sociological Argument.

Output is a function not only of the body but also of the unconscious mind. It is a

psychological certainty that anybody who, for some reason or other, is not receiving fair treatment at the hands of his employers, will not give of his best, not to say that in the long run he tends to become more of a liability than an asset. This applies to the doctor in hospital service as well as to the ordinary worker.

Society owes every newly graduated doctor a debt. To become a doctor a young man—

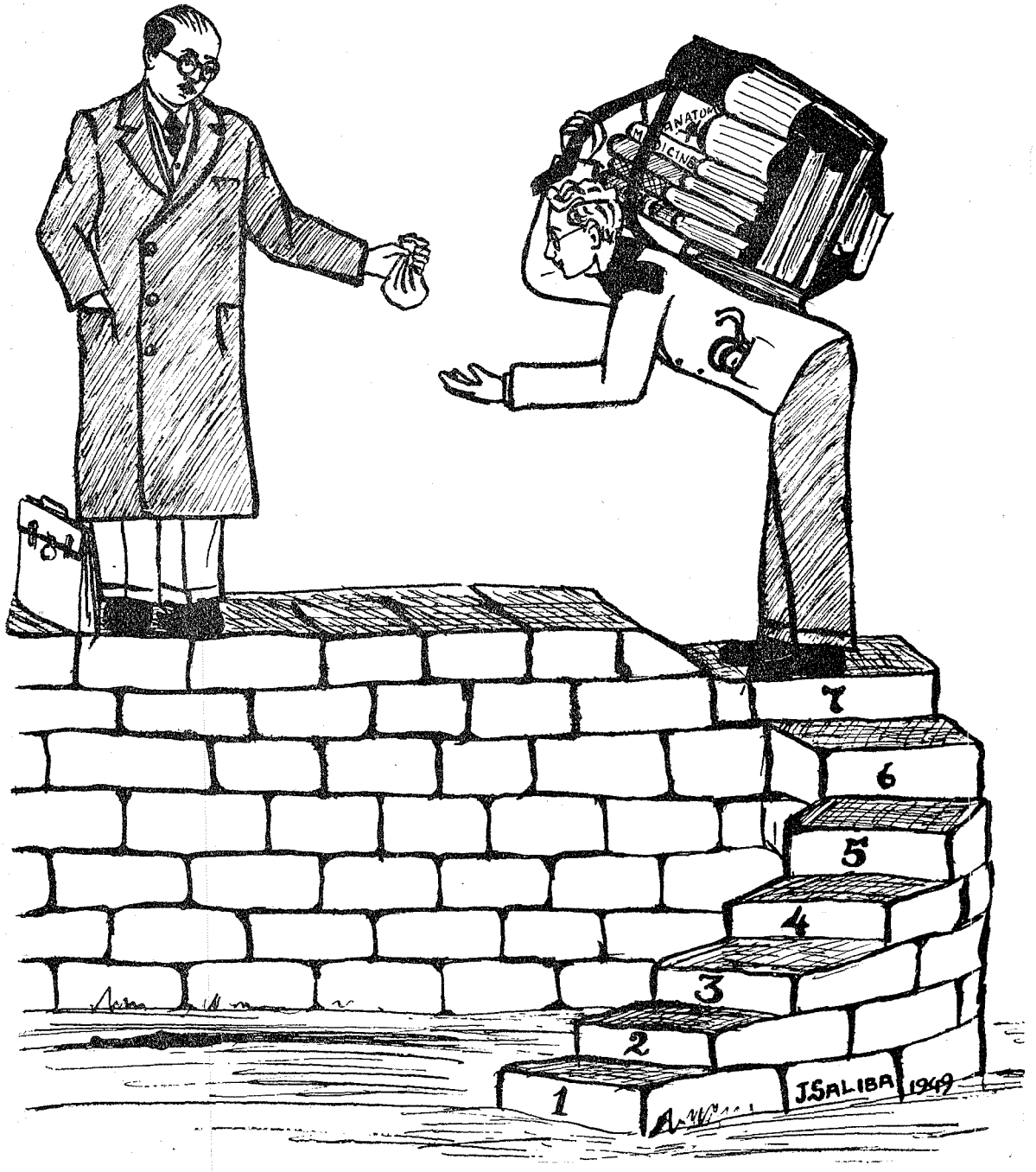
(a) spends a lot of money;
(b) deprives himself of the best years of life;
(c) sacrifices his physical and mental health;
(d) deprives himself of the benefits ordinarily accruing from a working wage.
(e) has to keep his family instinct in abeyance.
(f) has to live in a dependent position for seven whole years.

It is only natural therefore that Society should foot the bill.

ON HIS KINDNESS

When I consider how my life is spent
Ere half my days, in this dark Course and wild
And that one Textbook which it's best to hide
Lodged with me useless, though my mind more bent
To serve therewith Professors, and present
My true account, lest They examining chide:
Shall They exact day-labour, Wards denied?
I foudly ask. But Labour, to prevent
That Murmur, soon replies, Adam doth not need
Either thy Work, or His own Gifts. Who best
Bear his Health Scheme, they serve him best. Thy State
Be Single! *Thousands have unmarried seed,*
See patients day and night, and without rest.
They also serve who only stand and wait.

Hammet with apologies to Milton's
Antiseptic Notions



APPRENTICE'S CHARITY!

THE ACTIVITIES OF THE ASSOCIATION

SEPTEMBER 1948 — JANUARY 1949

The Branch of the B.M.S.A. was represented by Messrs S. Muscat B.Sc., and J. Muscat, students of the Academical Course, at the first Students' International Clinical Congress, 1948, which was held in England during the period 6th to 23rd July 1948. This Congress was organised by the B.M.S.A. on behalf of the International Union of Students. Mr. Muscat's report made reference to special visits to hospitals, to lectures given by prominent members of the British medical profession and to discussions held at London, Oxford and Birmingham. This congress gave birth to the Medical Faculty Bureau which has been entrusted to look after the interests of medical students from all over the world irrespective of race, colour, sex, or political views, and also to call two years hence, a second gathering of students, probably in the U.S.A.

A Variety Show held in October at the Floriana Government School proved a great success and money accruing therefrom has been devoted to the purchase of new books for the Library of the Association.

During this month the Vice Chancellor and Rector Magnificus, Prof. J. Manchè B.Sc., M.D., and the Chief Government Medical Officer, Prof. A. C. Briffa M.D., D.P.H., were guests to a luncheon given in their honour at the Phoenicia Hotel.

Other important events of this period included visits by medical students to Hospitals, attendance to Medical Film Shows at the British Institute, and to a film show held at the Library of the Royal University under the auspices of the Branch, and attendance, by students of the Academical Course, to lectures sponsored by the B.M.A.

A Supplement to the first issue of the Chest-Piece has been published. It has been dedicated to the talk by the Hon. Minister of Health and Social Service on the N.H.S.

In January the Students of the Academical Course of Medicine & Surgery met the Hon. Minister of Health & Social Services to discuss the N.H.S. Many items of vital interest to the future doctors were debated.

After a long period of correspondence the Senate of the R. University has notified the B.M.S.A. Council that the final examinations in Medicine & Surgery will be conducted under the provisions of Art 72 of the Statute and not as laid down by Arts. 21 b and c.

In the mind, as in the body, there is the necessity of getting rid of waste, and a man of active literary habits will write for the 'fire' *as well as for the* press.

JEROME CARDAN.

Random Thoughts of a Bacteriologist

BY E. AGIUS, B.Sc., M.D., D.P.H., D.Bact. (Lond.)
Additional Lecturer in Bacteriology

When I was young, I was very shocked once at discovering that our main public library classified books on medicine, humiliatingly, as it seemed to me then, amongst those concerned with the "useful arts". Age, "with his clawing steps", has removed the sting from that appellation and cynicism a sin which besets me and which I keep in control by copious draughts of Chesterton's philosophy — rather prompts me to wonder whether it is an art (useful or otherwise), whether it is a science, whether it is both, or whether it is neither but a hotch-potch bred out of sheer credulity by pious hope. That, I say, is merely being cynical, and cynicism is dogs' philosophy fit only for dogs. Wisdom convinces me that good medical practice is a difficult discipline, which can be faithfully followed only by exceptional and rarely gifted individuals. This need not worry beginners unduly: people who are only bored and think they are ill need persons to console them, and a man may be a bad doctor but a very good dispenser of cheering counsel. So there is room for all.

The laboratory has no place in what I call, to avoid harsh language, consolatory medicine. The laboratory man is only concerned with facts, and his pursuit of them is dispassionate and single-minded. Whatever medicine may be, the bacteriological and pathological laboratory is a place where cold science should reign supreme. Exactness, as far as this is attainable, (the subjects of our studies being biological entities) is the aim; and, having said that, let me say that between the objective and its attainment lie many obstacles. For many reasons, economic, administrative etc., hardly any laboratory in the world has the equipment it desires. Sinclair Lewis makes Martin Arrowsmith, the hero of a great novel which a real bacteriologist, Paul de Kruif, inspired, beg chiefly for "unlimited glassware". Only the practising bacteriologist knows how heartily one wishes for that. There never seems to be enough. Moreover glass unfortunately breaks, and that causes a continuous drain on supplies. Especially in times like these one has so often to do with what one has. Another bother is the supply of experimental animals. Shortages of staff are always with us. Very often it is not qualified doctors who are needed. Just as to keep a soldier at the battlefield a score of workers are required behind the lines, similarly the skilled medical man must needs have media ready to his hand, and apparatus which has continually to be cleaned and prepared for use. Kipling wrote of gardens:

"For where the old thick laurels grow,
along the thin red wall,
You'll find the tool and potting-sheds
which are the heart of all;
The cold-frames and the hot-houses,
the dung-pits and the tanks,
The rollers, carts and drain-pipes
with the barrows and the planks".

The same is true of laboratories, and these facts should be remembered not only by the laboratory people (who, in fact, are in no danger of forgetting them) but by medical men.

The relations between the clinicians who ask for a laboratory investigation and the laboratory which carries it out are worthy of study. The laboratory, whether biochemical, pathological or bacteriological stands as the very backbone of scientific medicine. Make no mistake about that. Clinical laboratories are not a luxury, but a necessity. One can, of course, carry on without them

for a shorter or a longer time, but one must never forget for a moment that modern medicine, modern surgery, and preventive medicine have depended at every step throughout their developement on the findings of laboratory research. Excepting anatomy and very simple physiology, every branch of medicine as we now know it has blossomed and borne fruit only since Pasteur and Virchow set to work. One does not suggest on this score that the practice of semeiotics and the ability every doctor should have of using his unaided senses is unimportant: that would be very, very wrong indeed.

"When it comes to slaughter
You will do the work on water,
And you'll lick the blooming boots of him
that's got it",

sang the poet in a different context. The naval surgeon in the turret of a battleship into which a shell has just burst is not going to worry very much about blood fragility tests or some such finesse, nor the medical man in a cholera epidemic or some similar emergency. But, medical practice is becoming less and less a matter of urgency and more a business of applied science. So, never let the laboratory become your master, be on your guard against your clinical sense atrophising through disuse, but learn how to use the laboratory to your patient's best advantage. Nowadays a patient in a hospital is "put through the works", as the phrase goes, X-rays, blood-counts, and what not. This rather tends to rob the exponent of traditional medicine of some of his glories but it has the all-important effect of giving good results.

Having said that, let me say that the clinician has certain definite duties towards the laboratory. To ask for a particular test might only cost him the writing of a short phrase: in the laboratory that request might mean a good deal of labour, time, and expense. The clinician should be reasonable in his demands. One thing which is sometimes, although one hopes rarely, missing in the doctor-laboratory relationship is trust. Very often this is due to what Dr. Samuel Johnson, with engaging frankness, bluntly called "ignorance, pure ignorance". On whose part the defect lies, I will leave to your judgement. Of course, mistakes can conceivably happen in the laboratory, and it is the duty of the director to keep their number down to the minimum, but the clinician should remember that they can also happen in the hospital ward. Delegate the often unpleasant business of getting samples far enough down the hospital social scale, and you will succeed in raising the percentage of errors astonishingly. The reputation of the greatest pathologist in the world may come to lie in the hands of the greenest probationer. Again, trust your laboratory to the extent of consulting it about the advisability of carrying out a test, about the time when this should be done, and perhaps even about the interpretation if you are not quite certain of it. You will generally find the laboratory men willing to co-operate in all these ways, and liaison fosters mutual confidence. Don't forget that lab. people are just as human as everybody else. They do not enjoy, after a hard week's toil being called upon to do at one o'clock of a Saturday afternoon, some complex test which could have been asked for equally well on the Friday. Foresight is a great virtue.

One thing more. Some clinicians have the engaging habit of submitting a second sample from the same patient under a different name "to catch out the laboratory". This is about as ethical as would be the behaviour of a pathologist who returned a three plus result instead of a negative just to see whether the clinician was ready to swallow anything or not. These subterfuges are very silly. Any laboratory man worth his salt will not hesitate to return a second result in conflict with his first finding. He will, of course, try to find out why the discrepancy has arisen, but you should be able to trust him not to meddle with his own findings. Don't resort to this trick to avoid "prejudice" in the pathologist. If there were the danger of that sort of thing, the pathologist would take the necessary precau-

tions himself, and pathologists, as a class are habitually sceptic.

One amusing brush I had with a clinician who was (and remains, I believe) one of the people I like and esteem most in Malta, came about when I reported to him a patient's serum agglutinating *Brucella melitensis* up to a dilution of 1/320, whilst as he pointed out this serum had agglutinated up to a dilution of 1/640 a week before. He had expected a rising titre. There were many serious explanations I could have offered for this apparent discrepancy, but I noted that while the patient had been said to be 42 years old when the request for the first exam had been made, he was stated to be 40 years old on the second occasion. I suggested the titre was falling because time was running backwards with this patient. We had a good laugh over it. Still that serves to show that care should be exercised by both parties, and moreover that a little sense will breed good fellowship where otherwise mistrust and rancour might needlessly arise.

The Aphorisms of Hippocrates

'Old men endure fasting most easily, than men of middle-age, youths very badly, and worst of all children, especially those of a liveliness greater than ordinary'.

'When sleep puts an end to delirium it is a good sign'.

'Spontaneous weariness indicates disease.'

'In every disease it is a good sign when the patient's intellect is sound and enjoys his food. The opposite is a bad sign'.

'Those who are constitutionally very fat are more apt to die quickly than those who are thin'.

'Pains and fevers occur when pus is forming rather than when it has been formed'.

'A convulsion supervening upon a wound is deadly'.

'Consumption occurs chiefly between the ages of eighteen and forty-five'.

'If diarrhoea attacks a consumptive patient it is a fatal symptom'.

'Apoplexy occurs chiefly between the ages of forty and sixty'.

'In the case of a person afflicted with hiccough, sneezing coming on removes the hiccough'.

'In acute diseases chill of the extremities is a bad sign'.

'Whenever abscess of the liver is treated by cautery or the knife, if the pus flows pure and white, the patient recovers, for in such cases the pus is in a membrane; but if it flows like as it were lees of oil, the patient dies'.

T.B. TOLL

BY J. H. VINCENTI.
Student in the Intermediate Course of Medicine and Surgery.

"Official list of infectious diseases notified during week ending 22nd January last includes four new cases of pulmonary tuberculosis, and three deaths from the same disease."

Week after week we read similar distressful news about the tragic progress of this insiduous disease amidst the population of our islands. I do not possess a definite knowledge neither of the line of action which the Public Health Officials might have taken in the past to combat this evil, to protect the health of our community, nor of the results of any such action. It is evident, however, that for some time now fresh cases have been reported at the rate of from two to five per week. Deaths through tuberculosis have similarly increased. It is felt that if a vigorous anti-tuberculosis campaign is not launched wholeheartedly in due time, this scourge may yet prove to be a menace, it may yet, slowly but surely, claim an ever-increasing number of victims. The need of an anti-tuberculosis campaign should be seriously taken into consideration because in tuberculosis, perhaps more than in most other diseases, the saying "Prevention is better than cure" bears the utmost significance, mainly through the extents of its virulence as well as through the difficulty encountered in effecting a cure.

As R. W. Fair-brother writes, "The greatest danger to the community is not the frank case, which is easily diagnosed and controlled, but the unrecognised case and and the carrier." This problem of "the unrecognised case and the carrier" of tubercle bacilli which confronts our Public Health Officials is evidently made more difficult due to the carelessness and ignorance of the subject who unknowingly turns into a powerful "fifth columnist" who ceaselessly and secretly sabotages the health of his fellow citizens. One surely knows that not all persons afflicted with tuberculosis are confined at Mdina within the precints of Connaught Hospital or at St. Vincent de Paul Hospital which are capable of accomodating 149 and 30 patients respectively. Many unfortunate victims walk about the streets of Valletta, sip their coffee next to our table at the Premier and frequent public places as for example dance-halls and cinemas. These poor victims walk about amongst the non-tuberculous whom sooner or later they infect, simply because they do not know or do not care to take adequate precautions. Thus, these tuberculous saboteurs may be grouped into two categories. In one may be classified those who are ignorant of the fact that they are tuberculous and hence not to be blamed for spreading the disease, and in the other may be included that type of person who knows quite well that he is tuberculous but takes no adequate precautions through carelessness or indifference. To remedy this state of affairs, all and sundry must be made to realize that it is a crime to infect their fellow citizens. The Medical and Health Department can do much by distributing instructive pamphlets, exhibiting large illustrated posters in the streets, projecting health slides on the screen of our picture houses, delivering health talks, etc.

As my readers well know, infection in this case is brought about primarily by the inhalation of minute droplets which are sprayed around by sneezing and coughing individuals. Presence of dust and dried sputum are equally dangerous. Infections also occur very easily through eating and drinking any infected food or drink, or by using crockery or even forks, spoons, or knives which may happen to be contaminated with

tubercle bacilli. Hence we see that with the approach of the cold season which invariably brings along with it an increase in the number of people with colds and influenza, the careless "unrecognised case and the carrier" who wantonly coughs and sneezes right and left without at least the application of a handkerchief, plays havoc among his neighbours. Here it must also be borne in mind that the majority of people have not yet conquered that age-old superstition which involves closure of doors and windows. The extremists will even go so far as to stuff newspapers into ventilators! On the other hand, during the dry season or even during those periods when no rain falls, the risks of tuberculous infection are not diminished by any means because much dust accumulates in our streets especially in the neighbourhood of blitzed areas and areas under reconstruction. This accumulation of dust is not left undisturbed for it is easily stirred up by passing vehicles and by our "over zealous" street sweepers. It is also important to remember, that the average Maltese is in the habit of spitting too much. The flying dust particles, laden with a wonderful assortment of bacilli including the tubercle type derived from the dry sputum of "the unrecognised case and the carrier", are subsequently inhaled by a passer-by and thus we are presented with a classical example of infection through inhalation.

It is realized that one cannot do very much to minimise the accumulation of dust coming from blitzed and reconstruction areas except perhaps by the removal of a great amount of rubble and an occasional irrigation of our streets with sea-water but certainly something must be done to convince the community to spit less! Some foreign governments very wisely "charge" a couple of pounds for every spit. Similarly not much can be done to prevent people from catching colds or influenza but on the other hand the public can be instructed to make use of their handkerchiefs when coughing and sneezing and to keep doors and windows open, especially in places where large numbers of people meet.

Personally I feel that the Public Health Officials are more than lax when dealing with problems of hygiene which involve the management of picture-houses, bars, dancing-halls, restaurants, and other public places. Proper supervision is not conducted to ensure that adequate hygienic measures are taken in protecting food from contamination; and in the proper washing of all used glasses, cups, spoons, etc. In various establishments cracked and unglazed crockery are also tolerated. To check the spread and to stamp out this scourge from among our population a serious drive must be started at once. An appeal must be made to the public to cooperate. Strict measures must be taken against defaulters of Sanitary Regulations, but first of all we must realize the danger!

The Hospital is the only proper College in which to rear a true disciple of Aesculapius.

ABERNETHY.

The Birth of Medical Chemistry

BY Ph. FARRUGIA B.Sc., M.D.
Professor of Chemistry

Up to nearly the middle of the sixteenth century men studied chemistry for personal gain, striving with patience, perseverance and zeal, first after the discovery of a substance that would change all metals into gold, the "philosopher's stone", and later after the discovery of a medicine that would cure all diseases, the "elixir vitae". From the thirteenth century to the time of Paracelsus, who died in 1541, the aim of the alchemist, or the chemist of that period, was the transmutation of the common metals into gold and the preparation of a universal elixir. Disappointment and failure could not damp his ardour, nor could poverty force him from the pursuit of his illusory objects.

In the history of chemistry it is very noticeable that progress was often delayed by the prevalence of a wrong idea. The ideas of a philosopher's stone and of a universal medicine were usually associated in the minds of alchemists, though sometimes it is not clear whether they were searching for two things or for just one but with the double property of turning metal into gold and curing any disease. The search lasted for centuries, and, although in the course of their experiments the alchemists made real discoveries and truths were acquired that might have remained unknown for ages, still the alchemist's passion was the cause of much delay of progress in the field of chemistry where time, money, health, and study were prodigally sacrificed.

The man who first suggested that the chief aim of the alchemist should be the curing of disease and who, engaging chemistry in the service of medicine, reorientated it and established it as a true science equipped for further advances, was Paracelsus, the son of a Swiss physician and an individual of originality and strong opinions, who was born at a village near Zurich in 1493. Paracelsus regarded the efforts of the alchemists as a waste of energy which might be better employed. He considered that one of the main objects of chemistry should be the preparation and purification of chemical substances for use as drugs, and urged chemists, apothecaries, and physicians alike, to devote themselves to experiments of this purpose. One must remember that the apothecaries of that time usually had no knowledge of chemistry, and prepared their medicines from roots, leaves, fruits, syrups and the like in the fashion of a village housewife, and that the physicians were in no better case. "They think it suffices", says Paracelsus of contemporary physicians, "if, like apothecaries, they jumble a lot of things together and say: Fiat unguentum... Yet if medicine were handled by artists (that is, chemists), a far more healthy system would be set on foot". It was indeed the vigorous impulse of this reformer that deflected many chemists from their alchemical pursuits, liberated physicians from slavish deference to authority, and gave a new aim to chemistry making it an indispensable part of a medical training. Released from the trammels of degenerate alchemy, "the art of chemistry was cultivated by medical men in general, it became a necessary part of their education, and began to be taught in colleges and medical schools; the object of chemistry came to be, not to discover the philosopher's stone, but to prepare medicines; and a great number of new medicines, from both the mineral and vegetable kingdoms, some of more and some of less consequence, soon issued from the laboratories of the chemical physicians".

Of a restless disposition Paracelsus journeyed through Germany, Italy, France, the

Netherlands, Denmark, Sweden, and Russia, and, according to some, may even have visited India. For a time he served as an army surgeon in the Danish wars, and managed to secure the degree of Doctor of Medicine, though at what university remains undecided. During his travels he associated with physicians, alchemists, astrologers, apothecaries, miners, gipsies, and adepts of occult science, returning to Germany with a stock of curious knowledge such as few men can ever have possessed. We are told by a contemporary that Paracelsus was most laborious, and that he would often throw himself, fully dressed booted and spurred, upon his bed and write ceaselessly for hours. He has, in fact, left us a large number of books on medicine and chemistry. More than a writer he was an accomplished experimenter. Among other items of chemical information scattered throughout his books, are references to zinc, cobalt, and bismuth, to the fact that gas is given off when iron is dissolved in dilute sulphuric acid, to the bleaching action of sulphur dioxide, and to several other observations that bear witness to his laboratory experience. He showed, too, that the alums differ from the vitriols, since the latter are derived from a metal, but the former from an earth (that is from a metallic oxide which at the time could not be reduced to metal). It was he who first gave the name 'alcohol' to spirit of wine; because the term al-kuhl or al-kohol had come to mean the best or finest part of a substance and he regarded spirit of wine as the best part of wine.

Paracelsus died physically worn out by the restless and strenuous life he had led. His epitaph reads as follows:

"Here lies buried Philippus Theophrastus, distinguished Doctor of Medicine, who with wonderful art cured dire wounds, leprosy, gout, dropsy, and other contagious diseases of the body, and who gave to the poor the goods which he obtained and accumulated. In the year of Our Lord 1541, the 24th of September, he exchanged life for death."

This was the epitaph to the man who had brought about the downfall of alchemy. It was the epitaph which marked the birth of iatrochemistry or medical chemistry. After the death of Paracelsus a bitter strife broke out between his followers and the supporters of the old methods of pharmacy and medicine. Medical chemistry however, was not killed in its cradle, but, to the contrary, it prospered, it steadily gained in weight in the hands of Libavius, van Helmont, Lemery, and other exponents of the Paracelsian doctrine. Libavius may be said to have planned the first chemical, as opposed to alchemical, laboratory, with a main room equipped with furnaces, descensories, sublimatories, distillation apparatus, crucibles, mortars, and phials, and with a storeroom for chemicals, a preparation room, room for the laboratory assistants, a room for crystallization and freezing, a room for sand and water baths, and a feul room. van Helmont, the greatest of iatrochemists, was the founder of pneumatic chemistry, and it is indeed by his work on gases that he will be chiefly remembered; it was he who first realised that here was a new and important class of substances, and who, as a matter of fact, actually invented the word 'gas' (from chaos) by which to designate them. Lemery was one of the most acute and skilful experimenters France has ever produced. Lemery's rational outlook in all his work is characteristic of the man who was resolved to abolish from chemistry anything enigmatical and mystificatory. After Lemery the progress of medical chemistry was no less steady, till gradually medical chemistry grew into the giant science which the world of to-day is familiar with. To-day, while the physical sciences are benefiting mankind with new comforts and luxuries, medical chemistry is doing the same thing with the preparation and purification of drugs essential for the prevention and the cure of disease.

MORAL ASPECTS OF MENTAL ILLNESS

BY P. CASSAR, B.Sc., M.D., D.P.M.
Resident Medical Officer, Hospital for Mental Diseases.

"He who is ill, whether he be rich or poor, ought to wait at the doctor's door".
Plato.

The conduct of a mentally ill person may sometimes resemble the actions of the evil-doer. The resemblance, however, is only a superficial one. The motivation behind the acts of the mental patient is beyond his control and sometimes contrary to his will, and, therefore, his actions are devoid of moral responsibility. Sometimes such behaviour is the initial overt manifestation of the underlying mental illness. For instance, an old man of hitherto irreproachable character was brought for treatment after he had been found making sexual advances to a little girl. This was the first indication of an incipient senile dementia.

These behaviour patterns coloured by an apparent moral taint are not met with in every case of mental disorder but they are common enough to deserve study and a proper understanding of the mental mechanisms which produce them. Very often these transgressions of the moral code are not recognised by observers as manifestations of a disordered mind and they are mistaken for wilful immoral conduct with the consequence that their perpetrator is considered an evil-doer and treated as such. Such treatment is to be condemned for two reasons.

Firstly, it is unfair because a careful study of the mental processes motivating the individual's conduct will reveal that he is not morally responsible for his actions and therefore does not deserve censure and punishment.

Secondly, it is quite useless as a remedial measure because instead of striking at the root of the trouble it either leaves it untouched or contributes to reinforce it. I remember, in this connection, the case of a patient who was suffering from a severe obsessional neurosis, his obsessions being mainly of a sexual kind. He was a very conscientious person, as most obsessionals are, and he was very distressed by the particular nature of his obsessions. He was unmarried and though he had succeeded in controlling to his satisfaction his normal sexual urges, he had found himself unable to dispel from his mind the sexual thoughts that kept recurring with insistence in spite of all his efforts to suppress them. This persistence of a thought or wish which a person refuses to accept but which he cannot get rid of, constitutes an obsession, that is, it enters within the realm of the pathological and therefore exonerates the patient from all responsibility. Subjectively, however, it is accompanied by a sense of guilt and the individual may seek advice about his trouble from a religious source. There is, of course, no harm in this provided that his counsellor recognises the real nature of the trouble. Not uncommonly, however, obsessional symptoms are mistaken for moral lapses. This is what happened to the patient I have referred to above. His obsessive thinking was not recognised as a mental symptom and he was told that his sexual fantasies were "tentazzjonijiet" — the result of diabolic activity having as a goal the damnation of his soul. This did not improve mat-

ters but only helped to increase his sense of guilt. Fortunately, in his search for peace of mind, he confined his worries to another priest who, realising that the troubles of his penitent were mental symptoms, referred him to the psychiatrist. But a good amount of harm had been done for by the time this man had reached the psychiatrist he was not only worried about his unwanted thoughts but had also become very anxious because he had come to regard his thoughts as sinful and was pre-occupied about the fate of his soul. This secondary conflict would have been avoided if the patient had been referred to the doctor before the idea of devilish interference had been inculcated in him.

Sometimes the patients themselves are spontaneously misled into regarding their troubles as moral lapses instead of symptoms of a sick mind. These individuals undergo a good amount of suffering from the pangs of conscience before it dawns upon them to seek medical advice. A patient went through continuous torment for months because of a compulsion to swear and blaspheme in the presence of sacred images. This was the more distressing to him because as a boy he had been brought up very religiously and was a keen member of the Catholic Action. Some of these patients resort to unusual practices in their efforts to get rid of their trouble. A middle-aged widow had interpreted her frustrated sexual impulses as having been in some way occasioned by the soul of her husband and in order to obtain relief she was in the habit of devoting her meagre savings for the saying of masses in the hope of placating her husband's soul. Another young lady had not left her home for months on end because of the compulsion to put her hands on the private parts of those around her.

We are familiar with individuals who feel compelled to make the sign of the cross repeatedly, or to say the same prayer over and over again, or who are assailed by persistent doubts about the tenets of their faith. Sometimes, however, the patient's fantasies are quite bizarre. An elderly man could not ride in a bus or car because the thought occurred to him that the wheels of the vehicle were threading on the Sacred Host; while another patient had become incapable of moving about because of the fear that when she walked she trampled on sacred images. These patients may fully realise the absurdity of their fears but since they are unable to account for their origin they are prone to see in them the influence of evil spirits or the punishing hand of God for some past misdeed. Not a few of these patients become gravely depressed and are driven to suicide to escape their supposed immoral thoughts and acts. It is of the utmost importance for the safe-guarding of the patient's health that his troubles should be distinguished from real moral lapses and that psychiatric treatment should be advised from the very begining. In the case of obsessional neurotics it is mere waste of time hoping that the condition will clear spontaneously. The priest is usually the first in whom a patient will confide his worries and he can do a lot of good in protecting the patient's health by referring him to the psychiatrist without delay.

The man or woman who has begun to suffer from depression also needs a sharp look out. When this illness has become well established there is very little risk that it will escape attention, but its real nature may pass unnoticed in the initial stages. Not infrequently a patient who is feeling depressed does not look it, and the only outward sign of the trouble that is brewing may be some degree of over-religiosity or self-reproachfulness. He may accuse himself of imaginary wrong doings which may be so realistic that there is a danger that he may be taken at his word by persons that do not know him intimately. Thus a depressed patient may blame himself for the death of a relative through negligence or wilful bad nursing. Indeed there is no depraved act of which a depressed person may not accuse himself ranging from quite trivial matters to murder. I know of a depressed man who

handed himself over to the police in England declaring himself to be the perpetrator of a murder that had caused a sensation a few years ago.

Depressed patients may go so far as to reproach themselves for their dreams. I came across such a patient quite recently. She was a middle-aged widow who had frequent wishfulfilling dreams of a sexual nature. She became very preoccupied about them as in her depressive state she could not bring herself to regard them as being otherwise than sinful fantasies.

Some depressed patients dwell on misdeeds which they have really committed in the past. They may have confessed them, obtained absolution for them and forgotten them altogether. But when a patient becomes depressed he is inclined to review his past life and to exaggerate the importance of lapses committed in his younger days. This revival of old, unpleasant memories is accompanied by a deep feeling of guilt which is disproportionate to the nature of the acts of which he accuses himself. The anxiety produced by such a conflict may be so intense and persistent that in order to escape its torment the patient may do away with his life. Hence the importance of recognising that this self-accusator is a very ill person. We must be very careful not to increase, by words or deeds, his self-imposed burden of remorse; on the other hand we must do our best to lighten his guilty feeling and ensure his peace of mind.

Another class of patients who deserve sympathy and careful handling are those with moral conflicts about masturbation. These are usually adolescents who for the first time in their life are becoming aware of the stirring of their natural sexual drives. Because of the adult's hush-hush attitude towards sex, a number of these youths pick up erroneous and fantastic ideas about the supposed harmful effects of masturbation. Unfortunately these ideas are sometimes drilled into them by persons who have an authoritative standing in society but who have no clear idea of the anatomy and physiology of the sexual organs. Consequently their advice and warnings about masturbation are of no value at all or else are definitely harmful. Instead of helping the youth to adjust himself to his budding sexual urges by an explanation of the very natural processes taking place in his body and mind, they frighten him with imaginary physical and mental consequences that may attend his acts. The result is that to a moral conflict is added the anxiety that through his immoral actions he is ruining his health. By the time they consult the psychiatrist these patients are terrified lest as a consequence of their sexual habits they have become tubercular or weakened their spine (whatever that may mean) or are going mad. The degree of misery occasioned by these ideas about the alleged harmful effects of masturbation is only equalled by their absurdity. I wish to emphasise that no physical ill effects are caused by masturbation but quite a lot of mental agony and harm is produced by worry about its imaginary deleterious influence on health.

Far from being a cause of insanity, masturbation may be the result of a mental illness. In some persons with an obsessional personality masturbation may be a compulsion, like, for instance, the frequent washing of hands which is commonly found in obsessional states. It is an uncontrollable urge which the patient tries hard not to carry out but which he cannot help performing in spite of the fact that his act is morally unacceptable to him. It is irresistible and therefore the patient cannot be held morally responsible for it.

There is another type of masturbation which is equally involuntary and which is found in neurotics. The patient is usually a conscientious and religious person for whom masturbation is extremely repugnant. He manages to suppress his sexual tendencies by driving them from his conscious into the unconscious mind, where, however, they do not become extinguished. On the other hand they strive to obtain satisfaction but since they cannot overcome the moral resist-

ance of the patient they attain their goal in a morbid way. The result is what we may call surrogate-masturbation. The patient is caught by mild convulsive movements during which orgasm occurs accompanied by ejaculation. The orgasm may also occur spontaneously or following slight friction of the patient's genitalia with his underwear while he is walking or bending down.

In all the cases illustrated above masturbation is invariably accompanied by a deep feeling of guilt. In some forms of mental disorder, however, there is no such feeling of remorse and the individual appears not to care at all about the moral implications of his acts. This is bound to occur in cases of schizophrenia and mental deficiency.

In the schizophrenic, sexual acts may be performed at the behest of an hallucination which usually takes the form of a "voice" that the patient hears commanding him to do them.

The sexual behaviour of the mentally deficient patient may result from various factors. It may be due to his lack of a sense of shame or his impaired judgment. Thus it is not uncommon for him to carry out sexual acts in the presence of relatives or in open disregard of public censure. Another characteristic of the mentally deficient which may lead him to come in conflict with the moral code is his suggestibility. He is easily induced by others to uncover himself in public or to commit similar indecent actions. Suggestion need not be direct to influence the mentally deficient. Indirect suggestion is as effective. A feebleminded was sent to hospital because of indecent exposure provoked by the taunts of his neighbours who used to insinuate in his presence that he was a eunuch.

Self-exhibitionism may be a sign of senile mental deterioration. This condition is generally ushered in by gradual loss of memory but an apparent offence of a sexual kind may be the first untoward abnormality to be noticed in the patient's conduct. Unfortunately the acts of these seniles are not uncommonly regarded as being wilful perversions. Old men who have never fallen foul of the law may find themselves in prison for such crimes as corruption of minors and indecent exposure. Their impaired powers of inhibition are the cause of their apparently immoral conduct. These poor individuals are really sick people who are entitled to care and treatment just as much as society is entitled to protect itself from the consequences of their actions. It is not only unfair but also useless to punish these men who because of pathological processes beyond their control are unable to resist the last flare-ups of an instinct which is on the point of extinction.

Still another class of mentally ill patients who frequently clash with the ethical rules of the community are the psychopaths. These are people whose intellectual development proceeds normally (indeed their intellectual attainments may be above the average) but whose emotional growth lags behind and never reaches full maturity. The moral sense may, therefore, remain imperfectly developed with the consequence that the patient never succeeds in subduing his antisocial urges in conformity with the ethical tenets of the community. This failure in ethical adjustment may be the only gross impairment exhibited by the patient. Indeed in the past he was designated as a "moral deficient". We have dropped this term now because we have found out that the patient's immaturity shows itself also, though in a lesser degree, in other spheres of mental life. The homosexual or the swindler may be such a psychopath. If you trace his life history you will discover that he has manifested untoward behaviour since his early years. He may have been a management problem for his parents or he may have shown morbid sexual tendencies since adolescence. These abnormalities, however, may first make their appearance at a much later period. Censure and punishment have no remedial effects on these individuals; on the contrary they may even make them worse as some of them get the impression that they are misunderstood and may even

develop paranoid ideas or a strong feeling of hostility towards society in general. Marriage should never be recommended to a homosexual as a remedy for his sexual anomaly. He should be dissuaded from marrying for marriage will not cure his disability. It will only succeed in rendering him more unhappy and in imposing a life of misery on his unfortunate partner.

Man is a complex creature. We should not be satisfied by the simple observation of his behaviour when passing judgment on him, but we must enquire what are the motives from which his actions spring. If this principle is kept in mind we are bound to discover that what, sometimes, appears to be immoral conduct is actually a manifestation of a disordered mind. Persons thus disabled are unable to conform to the moral requirements of the group through circumstances which are beyond their control. It is, therefore, important to understand the mechanism, conscious or unconscious, that underlies such behaviour in order to prevent our moral indignation from chastising the sick with the evil-doer.

Every pain has its distinct and pregnant signification, if we will but carefully search for it.

JOHN HILTON, Lectures on Rest and Pain

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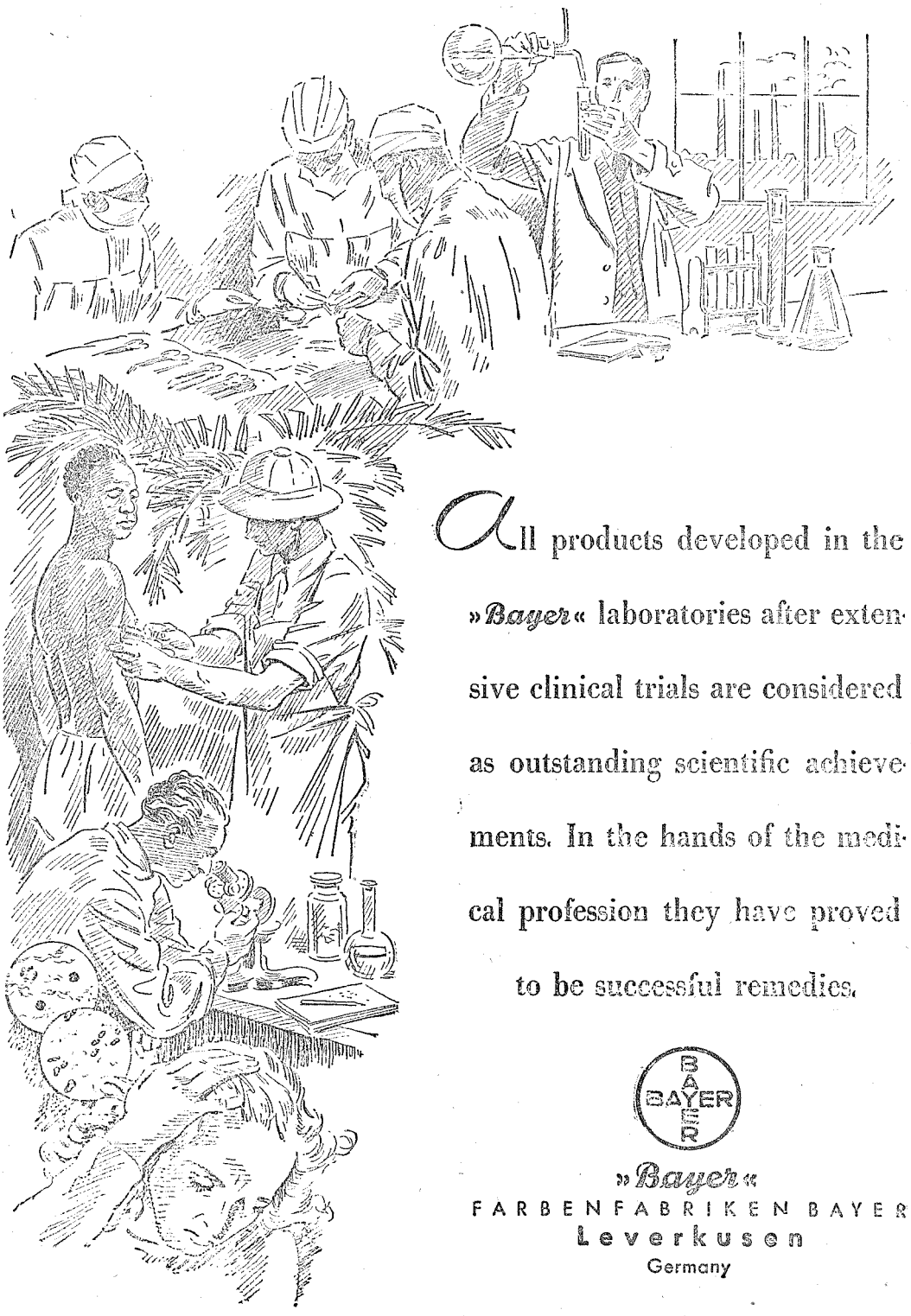

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