The School continued throughout the war. It ran seventy-two special war courses in which the lecturers were, for the most part, serving officers, and these courses were attended by 3,700 officers from British, American, Canadian and other forces, and this had considerable effect in spreading the School's reputation abroad, because the officers attending saw the quality of the research work in progress.

After the war, the School gave up its position as an independent school of the university in order to make possible the start of the Postgraduate Medical Federation, which brought into union all the postgraduate teaching activities in London. The Federation took over the provision of refresher courses for general practitioners, and the School was able to concentrate on its work as a training ground for consultants and teachers.

The School has usually been short of money. For years every penny went to the development of research, a policy which paid dividends, though the University Grants Committee did eventually complain about the lack of amenities for the postgraduate doctors. It has always been short of space:

the Medical Research Council thought well enough of the School to build and develop on the site. Help came from Aneurin Bevan, who gave a licence for eight huts at a time when building licences were unobtainable. Extra accommodation was added by the hospital, and laboratories were built on existing buildings. The School finally started its own appeal for building in 1956. Mr. W. W. Watt, Lord Stamp and others carried this through with success. The Wolfson Foundation gave the money for the building to house the amenities, where large medical societies can meet and the School collected over £1,000,000 for the new thirteen-storey building for the rest of the School going up. The progress of the School has just about fitted rightly with Hughlings Jackson's famous remark that 'It takes twenty years to get an idea out of the head of the medical profession, and another twenty years to get a new one in.' It took about twenty years, 1921 - 1941, to get the old idea of postgraduate education out of people's minds, and between 1941 and 1961 the School has gradually achieved a certain status in this country, as well as abroad.

THE POSTGRADUATE MEDICAL SCHOOL : THE PRESENT SITUATION

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THE BASIC pattern for the Postgraduate Medical School was set by Sir Francis Fraser. It was to be a university centre with whole-time academic staffing and with research opportunities for the staff. It is only by pursuing research in his particular field of study that a specialist can build an academic reputation, become expert in his subject, develop enthusiasm about his subject and transmit this enthusiasm to his juniors. The qualified doctor, wishing to learn, must be taught by experts and never by amateurs. In this postgraduate centre experts are continuously available. The detail required in modern clinical investigation demands this continuity of observation and interest and, increasingly, this pattern of at least geographical whole-time service to the teaching hospital is becoming a wider aim in the future organisation of many undergraduate medical schools as well.

Now this School is part of the Postgraduate Medical Federation, the other institutes of which concentrate on particular specialised clinical material based on diseases of a single system. Such concentration can be of enormous value and the contribution from these institutes can indeed be very great. Nevertheless they may miss easy contact with the basic sciences and also with general medicine. The institutes thus possess considerable depth vertically into their specialty but are lacking in readily available collateral biological contacts.

This School has a special position as the pioneer academic organisation within the Federation and as a general hospital we can integrate the specialties and give both breadth and depth with channels of information from the basic sciences, particularly through the paraclinical subjects. Perhaps this can

be best explained by a diagram of our major whole-time activities. Our gaps in psychiatry, dermatology and ophthalmology are filled by joint appointments with the appropriate institutes on a shared part-time basis. Some of the special advantages which the School possesses in addition to its widely based integration include the sections on endocrinology, metabolic and gastro-intestinal disorders which cannot readily be taught in other centres, and in our Department of Paediatrics the intimate link with the Department of Obstetrics and Gynaecology gives opportunities for the study of the newborn from the moment of birth which are not available in any other paediatric hospital. The Department of Experimental Surgery has been generous in the provision of facilities for colleagues in other departments to pursue experimental study, particularly in large animals, and this has added a strength to the School which has been considerable in the last few years. Our equipment in physics and engineering, together with the M.R.C. Cyclotron Unit, has also created remarkable opportunities for the development of new techniques of approach, while on the more fundamental side we have evolved one of the most original approaches in the world to fundamental genetics in the Medical Research Council Unit of Microbial Genetics run by Dr. William Hayes, F.R.S.

Another facet of growing importance is our intent to create a Department of Therapeutics, backed by pharmacology, the space for this having recently been provided in the new building by a grant from the Wellcome Trust. The power and complexity of modern drugs, which are likely to be used by anyone responsible for a whole patient, from general practitioner to specialist or from psychiatrist to orthopaedic surgeon, demand an intensive teaching effort which has hitherto been lacking in England and particularly in London. We propose to fill this gap and I imagine that therapeutic conferences in the future will become just as important as our clinico-pathological conferences today.

This general structure of the School has not fallen into our laps like manna from heaven but it has in fact been built by the unremitting efforts of a succession of devoted people who have spent their lives in transforming an unpromising municipal hospital into one of the famous world centres of medicine. This joint effort and determination have in fact been the inspiration of the spirit of mutual co-operation which within this School is, I think, quite remarkable. Although many of our staff are brilliant to the point of being *prima donnas* who cannot be expected to subdue their personal feelings, the school is remarkably united and free from the disrupting influences of mutual rivalry. We are, of course, not so inhuman as not to disagree but at

least we respect each other's opinions, and devotion to the interests of the School of which we are proud has given us an inspiring ideal. The School is permanent while we who merely serve it are all transients.

In teaching, our effort is to teach by example. We can do this by giving an exemplary service and exhibiting this effort to all students who wish to attend, week by week. We try to set an example of bedside history-taking and clinical examination, procedures which are basic to all clinical studies and by emphasising the necessity for quality and precision of such observations we hope that our postgraduate students will wish to emulate elsewhere what they have learned here. I shall return later to the importance of this part of our work.

It has been enunciated by quite senior people in this country that what we need is more kind doctors rather than clever doctors! This I think is an incorrect assessment of human nature. Firstly, in a Gallup poll of public opinion asking the public what they wished in their doctors, the top requirement was competence, while kindness came second. Even this judgement makes a basic assumption that kindness and cleverness could be mutually exclusive. Nothing could be further from the truth. Kindness and consideration are matters of personal manners and civilised upbringing, including also example by our teachers and those we respect. What medicine needs to recruit these days is the best available brains in the country and I am glad to say that the present omens are indeed more than satisfactory in this respect. The University of Edinburgh has informed the UGC that the academic quality of the students now entering medicine was the highest of any faculty in any university in this country. The arrival into practice of these bright cohorts could indeed change the whole picture of the practice of medicine in the future.

There have been suggestions that our scientific objectives are pitched at too high a level and that we ought to be more "practical" in our teaching. We should remember that the students now coming through our portals will be practising medicine in the twenty-first century. If we teach them the medicine of yesterday this will certainly be of no use to them in a decade or two. We must show that we appreciate where our knowledge ends and where the basis of our practice has become insecure. What we *know* in medicine is far exceeded by the vast area of ignorance and uncertainty. We therefore try to pursue the understanding of this vast problematic field as we unravel the problems, arising from bedside study, in our laboratories. From this country and overseas we have 60 potential teachers and trainees in medical research in our laboratories this year. The knowledge gained feeds into our understanding of clinical situations and, if

POSTGRADUATE SCHOOL ORGANISATION *EVERY PHYSICIAN A PHYSIOLOGIST*

you like, becomes part and parcel of our continually improving bedside judgments which constitute the major part of our teaching to a succession of graduates (about 60 to a class) every term throughout the year. We distil out of our analytical experience in the wards, postmortem room and the laboratories, practical judgments on the best management of the patients and it is this experience that we try to present to all our trainees. Progressive medicine is less costly in money and health than static or second rate medicine.

Some people pay lip service to something which they call wisdom which they think can be acquired by some magical process separate from the science of medicine. Wisdom, however, in my opinion, is not attainable without wide-ranging knowledge and we try to make this clear in our teaching which expounds for our students a mode of observation, thought and deduction. Logical deduction from observation of maximum precision is the recurring theme of the education we try to give.

Finally, we do not forget that a background of memory work on the principles of medicine is an inevitable need. A great deal of the medicine of today is still empirical: no amount of logical deduction will explain why the rash of measles begins on the forehead, but on the other hand, the

growth of science illuminates past mysteries and we begin to comprehend why vaccinia sometimes becomes generalised in the absence of gamma globulins.

Some people think we ought to relieve the student of the drudgery of learning. To my mind, learning should never be a drudgery as new facts are always stimulating, challenging when not properly understood, and of memorable interest when their reason becomes obvious. We try to inculcate a spirit of scholarship.

This School does not instruct for any examination drill but rather attempts to educate by training reasoning power. There are no *ex cathedra* pronouncements. Statements by anybody, senior or junior, are liable to questioning and there is no pretence of omniscience. We study medicine together, we learn from one another. Students' questions often teach me more than I have taught them. As a team we are constantly learning from our colleagues who are freely consulted when we think they might know more about any phenomenon presented by a patient than we do.

Sometimes people say we are not really helping the young graduate who is going to go back to work in more primitive conditions without sophisticated instruments. The answer is that he goes out,

surely, as an educated man whose eyes and mind have been opened up to possibilities. He has been taught that accurate perception and observation at the bedside of the individual sick man is still 80% of the physician's job. He is taught that simple use of his trained senses can clarify many complex situations for, as I have said before, our investigative endeavour leads to more and more precise clinical bedside work. Interest in medicine arises from the effort we make to understand the phenomena before our eyes. Effort is rewarded by intellectual enjoyment. Hard work generates interest and hard work in medicine is always, to my mind, rewarded. James MacKenzie wrote his notes by hand and analysed his pulse tracings while waiting for babies to be born in a busy general practice. Patrick Manson established the nature and transmission of filariasis while working in primitive conditions in Fiji. They were educated men who rose to the challenge in their environment.

The heights by great men reached and kept
Were not attained by sudden flight,
But they while their companions slept
Were toiling upward in the night.

Let us go on training and exciting men's minds to set a pattern in which we show that effort is rewarded by continuing interest. Anyone who regards the work of medicine as drudgery probably should not be in the profession. We observe, devise and test, discuss and think and study all our waking hours. It would be a sad day for medicine if we demanded a 40-hour week. We are in the most exciting profession in the world and the growth of biological knowledge around us is going to continue to revolutionise our work with each cycle of the years.

So far as we have gone in achieving our ambitions our progress has not been without its anxiety and particularly its financial troubles. The collaborative effort and personal sacrifice by the staff in raising money is exhibited in our new building. All this has been achieved in a quinquennium in which no expansion from official sources seemed possible at

all. We have depended on industry, charities and the Medical Research Council and, not only that, we have given, as is our duty, private patients' fees to help to meet our expanding research needs.

Many of our departments are hard pressed. The academic is less well off than his practising colleague. The attractions of university life are being whittled down by this continuity of financial worry, inadequate support and the struggle for proper accommodation to do the job. Fortunately we are still surrounded by able and idealistic young men who feel that the challenge of academic work and research in medicine is more attractive than the better financial rewards available outside the medical school. To them I would say that they must depend on the quality of their research to attract funds for its development and pursuit. As an index of success in this direction, we can say today that support from bodies outside the university slightly exceeds the total university support to this School. Successful research has enabled us for practical purposes to double our income but if the basic subsistence provided by the university could be increased this School could move on to still higher fields of endeavour and achievement.

We can look proudly at some of the things we have done and, particularly proudly at the achievement of our former alumni. In this year alone from the Department of Medicine, our former lecturer Professor Graham Bull has been made Director of the Medical Research Council's Clinical Research Centre. His Deputy Director, Dr. Richard Doll F.R.S. was a house physician here at the beginning of the war. My former house physician Alec Bearn, a distinguished clinical geneticist, has been made Professor of Medicine in Cornell University, New York, Dr. Austin Doyle has become Professor of Medicine in Melbourne and Dr. Vallance-Owen, a former registrar, has been made Professor of Medicine in Belfast. The catalytic influence of this School is, I think, quite remarkable: in the future I hope we shall go on developing peaks of achievement and that there will be no debasement of the ideals at which we have aimed in the last third of a century.