The right ventricle may influence the change in the curve in the same way as the left; but its relatively smaller normal bulk requires gross increase to produce much effect, so it therefore seems relatively late.

For the most part gross cardiac enlargement is due to valvular disease or hypertension, or congenital defects; less commonly to abnormalities in the pulmonary circulation. The cardiogram will then to some extent help to gauge the degree of deviation from the normal, and so help to assess the gravity of the case. The changes associated with hypertrophy of one or other ventricle give a progressively abnormal type of curve, and so may indicate to which stage the disease has reached.

It must be remembered that in some cases of hypertensive heart disease ischaemic lesions may be present as well. These would increase the gravity of the prognosis. The cardiogram may reveal them.

The cardiogram is quite useless in the early diagnosis of valvular disease, or in the direct diagnosis of valvular disease at all; only indirectly, by indicating ventricular hypertrophy, may the curve suggest that a defect in the function of a particular valve may be the cause of it.

Fig. 1 is reproduced from Scherf and Boyd's *Clinical Electrocardiography* by permission of the authors and Messrs. Heinemann Medical Books, Ltd.

UNIVERSITY VENTURES OLD AND NEW*

BY

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All university education, and indeed all education and all activities of universities, could be brought under my title. For, whatever can be said for or against the educational process, it is a constant series of ventures—often over seas which are unknown and therefore uncharted. Which of them shall I choose?

There is first the venture of doing things for the first time. Some of you may well feel that you have a special claim to inclusion here. It is your first year in the school or your first year of a new and different part of your course. I can assure you, however, that these particular types of venture do not stop here. I claim a special place in this category myself—by asserting that few people so often do strange acts for which they feel at best only partly qualified. I should like to warn you of this in case any of you are thinking of becoming vice-chancellors. The things may be different, but the process remains the same.

But it is of collective rather than individual ventures that I want mainly to speak—appropriately enough to a world where emphasis is growing on the importance of collective action or, if you prefer it, combined operations. The use of the last term will in itself be enough to show that collective action is in the last resort the action of individuals. The antithesis is an unreal one. Somewhere in all collective action there is someone who is making a decision. Frederick the Great once said that he disliked councils because they were always timid. One of the problems of the modern world is to secure that this is not true. Individual responsibility and individual initiative are, when it

comes to the point, essential to all organizations, large or small. That cannot need emphasis in a medical school which has, at least in its associated hospitals, so many examples of the individual idiosyncrasies of the members of the human race.

We start, then, with the knowledge that these corporate activities of ours are at heart the activities of individuals. And I am choosing at random. The first I would call the venture of choosing and finding the subjects of academic study. We have been on the whole conservative in this country in our attitude to university education. Some countries have gone further than we have in the direction of including among the courses which could be taken for university degrees a number of forms of training which are training for a particular type of post, and it may well be that there will be further pressure upon us in this country. No one would in fact be prepared to say that subjects should be excluded because they are useful. We are driven to the harder task of defining what we mean in a positive form. What are the characteristics which entitle a subject to be put on the right side of the line? Perhaps the nearest that we can get to it is to say that every subject which should be included contains in it an unlimited possibility of development by research. This on the whole is a good approximation to the truth, for it implies something which I believe to be fundamental to undergraduate study, that what is being studied is something which is constantly changing and which therefore holds out a promise in the future which no undergraduate can hope to reach.

It is true that one of the difficulties of all university education at the present day—and I imagine that this applies to the faculty of medicine just as much as to any other—is that the body of knowledge already obtained is so great that it is necessary to go a very long way before even a glimpse is caught of the knowledge of the future. So far as undergraduates are concerned this situation has obvious drawbacks. We all maintain, those of us who teach in universities, whatever our subjects may be, that we are doing or trying to do something more than impose upon the memories of our students masses of detailed information which indeed is all recorded in numerous textbooks which are available to them. Yet in our candid moments we have all to own that a good memory can carry an undergraduate a very long way.

This brings me to another of the several ventures which are included under my title—the venture which must be of necessity a combined effort on the part of the university teacher and the man or woman who is being taught. This is the venture of seeing beyond the factual information which it is essential to impart or absorb to the as yet unproved or unascertained items of knowledge which lie beyond. It is a venture which requires above all an effort of faith, and I should be prepared to prophesy that a great many of you who are now beginning your university career will find a good many moments, if you take what I have said seriously, when you wonder whether it is anything but moonshine.

If this is a venture of faith and the most constant of all the ventures with which we are concerned, it is nevertheless only one of the many differing things which can be brought under my heading. I should like to refer in the first place to some matters with which I have been concerned.

During the war—and I am not concerned for the moment in dealing with the reason—there was a greatly increased sense of purpose in relation to a totally different aspect of governmental activity: the welfare of colonial peoples. It is difficult to give a date to this development, but roughly speaking it came with the

*Inaugural address at the opening of the 1950-1 session of the Royal Free Hospital School of Medicine, delivered at B.M.A. House on September 29.

middle period of the war, although of course its history could be traced back to the pre-war era. It will be enough for the moment to refer to the decision in 1940 to grant a substantial sum of money by parliamentary action to what is technically described as "Colonial Development and Welfare." One of the results of this policy has been the establishment of a number of new university institutions in the colonial areas. A commission was appointed in August, 1943, to inquire into this matter: "To consider the principles which should guide the promotion of higher education, learning and research and the development of universities in the colonies. . . ."

Ventures Overseas

I was a member of this commission, and shared with a number of other people, therefore (there were sixteen of us in all), the task of making recommendations on this subject. I am glad to say that it was one of the commissions—of which, whatever the general public may think, there are many—which led to some practical results. Roughly speaking it may be said to have led to two main classes of results: to the transformation into universities or university colleges of certain institutions which were already in existence—for example, the colleges in Singapore have since been transformed into the University of Malaya, and two institutions in Africa which were not at the time of university status at all—Makerere College in Uganda and Gordon Memorial College, Khartum—have been transformed into university colleges; that is one group of results. The second is the founding of new university colleges—two of them in West Africa at Ibadan in Nigeria and Accra in the Gold Coast, and the other in the West Indies in Jamaica. I am not going to venture to speak of this last, much as I should like to do so; Professor Lucas Keene knows it well, and has contributed so much of value to it that it would be impertinence to say much in her presence. Nor shall I refer to Nigeria, which I have never visited, while Professor Killick has. All these are ventures which, like all other actions or series of actions that can be included in that term, are acts of very considerable faith on the part of those who carry them out. The institutions which I know best, at Khartum and in Jamaica, belong to the two different categories which I have mentioned; they have a great many other differences as well.

The College of Khartum is essentially a Moslem institution in a predominantly Moslem country. There are no religious tests and there are in fact now a few Christian students. The majority of the staff is Christian, but, as is appropriate in a Moslem country, the outlook of the College is strongly affected by the predominant religion. The weekly holiday is on Friday and not on Sunday. There is not yet a mosque attached to the College, but the new buildings which are envisaged will include one. This affects perhaps the study or teaching in certain faculties, but does not alter materially the fundamental characteristics of university institutions. Another interesting characteristic is the fact that the Anglo-Egyptian Sudan is far more completely a socialist State than the Britain of to-day. The effect of this fact is that practically every occupation which is open to the students of the College is in government service of one kind or another. It is thus more difficult to maintain that university education in the Sudan is something more than training for a particular occupation. Another element in the situation is to a large extent common to all these new institutions. It is the difficulty of making it clear that a university course is something other than the successful passing of appropriate examinations. This difficulty is

the greater because in all these regions, where only a very small minority of school-boys or school-girls can possibly hope to reach the stage at which they could enter a university institution, the passing of examinations looms very large in the educational system. At almost every stage of their early education they have to face a competitive examination upon the results of which they keep or lose their place on the educational ladder. By the time, therefore, that a student reaches a university college he has almost inevitably become imbued with the idea that what matters is a successful climbing of the next particular step.

No student in London whose private interests lie in art or in music can legitimately complain if provision is not made at his own particular institution. The opportunities not only in other parts of the university but in London as a whole are so great that his difficulty is rather a matter of choice than anything else. He may well, and of course often does, complain that with all these opportunities he lacks time to take advantage of them, and thus it comes about that, while in these new university ventures overseas the chief need is to provide for something which will interest and stimulate students outside their compulsory curriculum, in our own case the parallel need is rather to see to it that everybody has time to take advantage of some of the many opportunities which at present exist.

There is naturally something exciting in these university ventures in distant countries which is lacking in our own problems. There is something exciting for visitors to these regions simply because the countries themselves are in so many ways different from our own. There is a measure of excitement from the point of view of the peoples themselves. Colleges necessarily live there in a blaze of publicity which is fortunately lacking, for example, in London. To a very large measure the hopes of the peoples for self-government are tied up in the progress of the college: their national pride is involved in its success.

University Education for All

Nevertheless, most of our university activity here could be brought in one form or another under the heading of a venture. This is perhaps particularly true in our own day, since there has been such spectacular development in university education in the past hundred years. Most of the modern universities in England have grown to maturity in that period, and we ourselves in London only celebrated our centenary fourteen years ago, and our older colleges, though some of them are older than the university itself, are for the most part the product of the nineteenth century. What is interesting as we look back upon this historical record is that there were a number of differing influences which went to make the different university institutions and indeed the university itself. If we reflect upon these factors and try to pick out one thing above others which characterizes the movement as a whole, I think it would be the attempt to provide university education of one kind or another for virtually all comers. The absence of restrictions upon first creed—it is difficult to think that only a hundred years ago that was a matter of burning importance—and later on race or sex is one way of bringing out this insistence upon a universal opportunity. We have at the same time to realize that in our age also there are ventures to be faced almost, if not quite, as important as those which were involved in the great university development of the nineteenth century. In almost every respect our outlook on university affairs needs to be adjusted to the new circumstances of our own age. The great ideal for which I have said our own

university stood, the provision of opportunities for university education for all those who by one means or another could achieve it, has a new bearing when so much of university education is achieved not by individual unaided effort but by the grant of support in one form or another by the State. This is one of the main problems facing universities at the present time, and our new venture of the mid-twentieth century is perhaps above all to find a way of reconciling two things—the great tradition to which we are almost without exception devoted, the freedom of universities and, within measure, of students in universities, and the necessity of finding some proper method of determining the proportion of people, and indeed the actual persons, in the population who should be enabled to enter upon a university life. There is no easy answer. It is easy to adopt phrases such as “service to the community” or “the good of the community,” or even the older phrase of “equal chances for all,” but none of these is satisfactory as a solution of the practical problems with which we are all faced.

It is undoubtedly true in university as in other aspects of life that there is a danger lest the matters which are of concern for the future should be decided almost wholly by people who by the mere passing of time belong largely to the past. I am not, however, so far removed from my own generation as to think that the younger anyone is the better their judgment. There is a great deal to be said for that peculiar, as it seems to us, constitution which is one of the many which were invented by the fertile brains of French revolutionaries which divided the population into the young and the old rather arbitrarily at the age of 40 and gave to the young the duty of formulating ideas and to the “ancients” the duty of criticizing them and the power to prevent any of them from being put into action. It embodied at any rate one fundamental principle, that in all developments which could possibly be brought under the word which I have used in my title it is necessary to blend together the old and the new, and to give some opportunity, however small, to the trying out of new ideas.

MIDDLESEX HOSPITAL MEDICAL SCHOOL

The annual dinner of the Middlesex Hospital Medical School was held at the Savoy Hotel on September 28. Mr. E. W. Riches presided over a record attendance, the number of covers laid being greater even than at the dinners before the second or the first world war. The principal guests included Lord Webb-Johnson, the presidents of the three Royal Colleges, the regius professors of Oxford and Cambridge, the principal of the University of London, the medical directors-general of the Royal Navy and the Royal Air Force, the secretary of the Ministry of Health, the chief administrative officer of the North-west Metropolitan Regional Hospital Board, the mayor of St. Marylebone, and the medical officer of health to the London County Council.

The chairman said that among the former Middlesex men who had died during the past year was Warwick Deeping, the novelist, and mentioned that when one of Mr. Deeping's novels was filmed Middlesex men took part “to ensure accuracy of technique.” It was unusual for a hospital to have two of its members knighted in the same year, and he congratulated Sir Harold Boldero, dean of the school, and Sir Harold Graham Hodgson. Another tribute was the institution by the Royal Australasian College of Surgeons of a Gordon-Taylor Prize. He announced that the *Archives of Middlesex Hospital* would be revived in 1951. Many of them, he continued, had been a little critical of the increase of administrative and clerical staff under the National Health Service, but, with a total population at Middlesex of about 2,500, the administrative staff formed

about 8%. With the ratio of nurses to patients now approximately 1:1, and bearing in mind the vast services rendered apart from treatment, the percentage did not seem to be excessive. The new department of physiotherapy at the Middlesex, opened during the year, was agreed to be one of the best of its kind. In the medical school, the first two women students of Middlesex—Verity Wills and Jean Shanks—had qualified.

Responding to the toast of “The Hospital and School,” the dean, Sir Harold Boldero, declared, “We are prepared to back youth at the Middlesex.” After welcoming Professor Walls as the new professor of anatomy, Sir Harold turned to the increase in facilities in the clinical years at the school. They were grateful to their friends at the Central Middlesex Hospital, and in particular Dr. Joules, for an arrangement whereby students would go to that hospital for a portion of their clinical period. They were also beginning to develop their associated hospitals for teaching purposes—the Soho Hospital for Women, in gynaecology, and Harefield Sanatorium, for tuberculosis.

Mr. R. W. Gilliatt, as Senior Broderip Scholar, in a further and admirable response to the toast, referred to the ex-Servicemen who had returned to complete their training after the war; the first of these had qualified during the past year. Mr. D. H. Patey, in proposing the health of the chairman, mentioned that among those present was the chairman's daughter, herself a student at the hospital.

KING'S COLLEGE HOSPITAL SIR LIONEL WHITBY ON THE ADVANCE OF MEDICINE

At the opening of the 121st winter session of King's College Hospital Medical School on September 29, with Mr. J. B. Hunter presiding, the scholarships and prizes were presented by Sir Lionel Whitby, regius professor of physica, University of Cambridge.

SIR LIONEL WHITBY said that King's College was one of the younger generation of great teaching hospitals, having been founded not in the eighteenth but in the nineteenth century. It was founded by churchmen, three years after University College, largely to counteract that seat of learning where no religious instruction was given. There had been three hospitals, two on the Strand site, and the present magnificent building on Denmark Hill, opened in 1913. At the time of the foundation of the hospital the practice of medicine was just about to pass from the empirical to the rational phase. Before that time there had been only one outstanding contribution to the control of disease—also a brilliant piece of empiricism—Edward Jenner's successful cross-immunization experiment with cowpox.

The council of the hospital was wise enough in 1877 to create an additional chair of clinical surgery and to invite Joseph Lister to join the staff. Nowadays there was no part of the body which could not be explored with complete freedom from the bog of sepsis. From Lister's time until now there had been an epoch-making transition from the empirical to the rational, or from the pharmacopoeial to the specific. There had grown up an immense accumulation of knowledge of the habits of parasites and of the complex science of immunology. Not much more than 50 years ago most of the drugs in medicine were used—with much art and some skill and a certain measure of success—only for the alleviation of symptoms. There was little or no knowledge of their action on the primary cause of the disease. The advances in rational therapy had yielded a rich dividend.

It was remarkable to read the lives of men who had, so to speak, a foot in both eras. One such was his famous predecessor at Cambridge, Clifford Allbutt, of whom Sir Humphry Rolleston said that during his 89 years he witnessed changes in medicine which were never likely to be equalled. That, of course, was no longer true, for the speed of the advance had greatly quickened since Allbutt's death in 1925. Allbutt was born before the introduction of anaesthesia. He saw the development of bacteriology, immunology, antiseptic and aseptic surgery, the creation of the nursing profession,