THE ART OF LECTURING

BY

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I am not a theologian, but I was once privileged to attend, at a week-end conference, a lecture by a professor of theology. It was twenty-five years ago and it is still vivid to me to-day. The subject was Amos, of whom I previously knew precisely nothing. By the end of the lecture I had not only a dynamic impression of the character and message of the prophet but also a clear and colourful picture of the contemporary economic, political, and social structure of the people of Israel. The professor used no notes. He padded round the room, with his hands behind his back, and wearing felt slippers. From time to time he raised one foot to scratch the calf of the other leg. Now and then he looked at one or other of us directly in the eyes, with a kind of challenging glare. At other times he gazed through the window into the extreme distance, as if looking at Palestine, and describing what he saw, taking our gaze with him. I recall that he pronounced Jahweh with the sort of sound one makes in clearing one's throat.

I have listened to Professor Massey lecturing on atomic energy in a London lecture-room with traffic roaring outside, clinging to the knob of a wooden balustrade on the platform, stock-still for an hour, also without notes, powerful, compelling, consecutive, telling a story he knew from the inside, with no mannerisms. And to Professor W. P. Milne, many times, on mathematics. For him the history of mathematics was a hilarious breath-taking adventure, massive bodies were always elephants and infinite planes were all as flat as gramophone records; he always mingled mirth with mathematics. And to a shy, reserved, precise lecturer in physics who announced one morning, "I am going to introduce spherical harmonics to you. The day I grasped this subject was the happiest in my life." And to the late Charles Spearman, who lectured in a somewhat staccato and confusing manner, committing many faults of delivery, but who compelled attention because this branch of psychology—the Noëgenetic theory—was his own creation. I get the same thrill and more listening to Professor Astbury, not only because he is a much better lecturer but because biomolecular structure is a subject which he has brought into existence.

Vitality

I now ask myself, What have these exceedingly diverse performances in common? I ask this because, desirable as it might be for all university lecturers to have a training in lecture techniques, I cannot persuade myself that this would usher in a millennium of enlightenment. Of the lectures I really remember (as distinct from the thousands which helped me get through my examinations and thereafter faded) I can see little or nothing as regards common techniques. What was common was something less tangible. Though some of the lecturers were actual creators of their subjects this was not so in all cases, and the circumstance is necessarily a rare one. Certainly all were masters of their subjects, but this is also true of many ineffably dull lecturers through whose performances I have dozed my way. Unfortunately, mastery of a subject seems to be not incompatible with an academic necrosis of the personality.

You can wander about, you can indulge in irritating mannerisms, you can hum and haw, you can remain glued

to a desk, you can twiddle your fingers, you can commit all the crimes on the statute book (the latter would make entertaining reading if someone would write it: "The Deadly Sins of the Lecture Theatre"), and you can get away with all of them if only you have the one supreme virtue. What is that virtue? The name I would give it is *vitality*. This was the common factor in all my remembered lectures.

Vitality does not mean flamboyance. It is not exactly the same as energy. It is compatible with a considerable variety of surface qualities. It combines well with originality but is not identical with this. There are noisy, restless lecture-rooms which yet lack vitality, and there are lecture-rooms in which a quiet, subdued atmosphere testifies to intense, creative man-to-man contact—a contact of both learning and personality. The still, small voice may hold something which the thunder lacks. But of course there are personalities whose vitality needs a boisterous expression. There can be no holds barred.

Techniques

I have been asked in this symposium to write on "techniques" and I am trying to do so, but perhaps not quite in the sense intended by the Editor. For how could principles for the technique of lecturing be established? Only by the systematic analysis of lecture successes on a wide scale—not by the formal application of *a priori* educational principles excogitated by theorists. The extraordinary gap between educational theory and educational practice in the scholastic world would merely be paralleled in the academic world. At present the academic world gets along without any particular theories about study and lecturing. There is certainly plenty of dissatisfaction with the methods and results of academic education, and it is sometimes suggested, or implied, that an injection of educational theory might remove the complaint.

Personally, I think that a dose of empiricism would be more effective—that is, a study of how good lecturers get their results. And from my own limited sample I should say, as a preliminary generalization, that good lecturers get their results primarily by having sufficient vitality to give good lectures. Their techniques are a direct consequence of their vitality. But this vitality is not an easy thing to define. It is a force which is called up by the joint challenge of a topic and an audience, a challenge which stimulates the organizing capacity of the man's mind to draw upon whatever material and mental resources he has. After all, what is a "technique"? A technique is a way of doing something. When we observe a certain effect being achieved we may pin-point all the details of the procedure, item by item, and yet fail to account for the achievement. The technique is more than the sum of the details. It is the organization of those details which sustains the process. We must grasp the organization if we are to understand the achievement. I would say, soberly and reluctantly, that educational psychology to-day, with all its progress, is not yet in a position to say to the teacher or lecturer: "Here are all the tricks of the trade; follow these and you are bound to succeed." Indeed, I am not sure that educational psychology ever will, or ever should, fulfil this aim.

The last thirty years have witnessed an unprecedented outburst of experimental activity in education. Every dodge, trick, and stunt, every device, mechanism, and apparatus, every system, procedure, and method which the ingenuity of dissatisfied educationists could think up—all

these have been pressed into service. Most of them can claim successes. Most of them have their intrinsic merits. But none is the panacea claimed by its promoters, and there have been plenty of successes in which all were ignored. The literature of educational experiment gives, as a rule, an account of the successes. A much more voluminous literature could be compiled if we were honest, describing the failures. But, as so often, "the operation was highly successful, but the patient died without recovering consciousness."

Now I am not a reactionary in these matters. I regard the modern developments in educational techniques (many of them referred to in the article by Professor Lauwers) as being no less important than the atomic bomb, and indeed part of the answer to the menace of the latter. But as the release of nuclear energy has gone astray because of human conflict so, too, the use of modern educational techniques is missing fire because of a neglect of the human problems attendant upon their use. I want to discuss these problems.

Human Interaction

Not only does the use of a specialized educational technique—for example, the film—involve human beings both in its preparation and in its presentation, demanding training and insight if full justice is to be done to the medium, the matter, and the method, but—and this is the crux—the actual educational occasion is essentially a pattern of human interactions. By an "educational occasion" I mean any period in which instruction, stimulation, training, etc., is being given to a group of students. Whatever media and methods are being adopted we always have some kind of a performance by human beings and for human beings. And we know enough to-day about the psychology of the learning process to know that the transmission of knowledge is very, very unlike the process of recording sound on a disk or an image on a photographic plate. The disk and the plate have no "attitude" to the process or to the person performing it. The human learner has, and his attitude both to the task and to the teacher is decisive in determining the outcome. This does not mean that the details of the task are unimportant or that an inspiring atmosphere can compensate for neglect of material completeness and accuracy. But it does mean that attention to the latter can be rendered ineffective by ignoring the human factors.

If we consider some other occasions of human interaction we may get some clues to what is involved. In the stage performance of a play the whole production is carefully designed precisely to take account of the attitude of the audience. Every movement, every gesture, every inflection of the voice, every beam of light, every piece of furniture—all are under the producer's control and all play an exactly calculated part in building up the developing pattern of dramatic tension. There are many background factors too. Not only the architecture of the theatre, the time of day, and the season of the year, but the name and prestige of the author, the reputations of the star actors, the press reviews of the play, the fashionableness or otherwise of the play itself and its theme, the tradition of the theatre—all these conspire to create or destroy that final outcome—namely, the dramatic experience of the audience which is the goal of the whole complex game.

Mutatis mutandis, similar considerations apply to a broadcast, and they should (though seldom do) apply to the screening of a film. But how do these points apply in a university lecture to a class of medical students? Is it

suggested that each lecture should be regarded as a dramatic performance to be scripted, produced, rehearsed, with spotlights and music and all the impedimenta of the modern stage? If I proposed this the answer would, of course, be, "Not Pygmalion likely!" What I am suggesting is that if such lavish attention to the requirements of the occasion can be devoted to entertainment, surely no less attention should be devoted to the requirements of learning—especially the learning of those who will be responsible for the nation's health. And, although "the play's the thing," just as a good play can fail in its effect by reason of a bad production, so, too, the most carefully thought-out piece of medical knowledge can fail to get across if badly delivered. On the other hand, the best production cannot make much of a bad play. These two essentials, matter and method, must both receive equal weight in considering the requirements of medical education.

Morale

Perhaps we can arrive at more clues by considering the problem in terms of morale. This is really the military term for what I have been calling "attitude." Troops who believe they have a just cause to defend; who have good reason for confidence in those responsible for the "logistics" of the campaign, and faith in their leaders; who have had a good training; who know clearly what their immediate objective is; and who have the challenge of the enemy himself in view—such seem to be the regular winners, if military history is to be believed. Medical education is something of a campaign. The student is the individual fighter and the enemy is his own ignorance. He has a long gruelling war of five or six years' duration, with tough fighting all the way. How can his morale be sustained through this long ordeal? The full answer to this would give us the complete dynamics of medical education. I can venture only some of the main headings, those bearing particularly on the art of lecturing. Lectures, laboratory work, and clinical work are the three great forces in the campaign and each has its own problems.

The "pep talk" has its place in study as in fighting. Mr. Churchill's wartime broadcasts at one extreme, the final words of a briefing to bomber pilots or commandos before a sortie at the other extreme, illustrate the force of sheer words. Sheer words, but not mere words. The essentials of "pep" are not so much energy and verbiage as sincerity and vision. Education is not solely an intellectual process. The distant achievement, the entry into a life-saving profession with a great tradition and immense contemporary power and opportunity for humane service—this is not a trivial goal. It calls for all that is best in a man. And whatever the difficulties, the discontents and disputes, the petty rivalries and squabbles, the cynicism and cheap jokes, and all the other superficialities with which the word "medicine" can become encrusted, its own essential vision and purpose are too high in the scale of human values to be allowed to fade from men's minds. They need to be particularly bright and sharp in the minds of students. There is a place, then, for the occasional introduction of this element into the lecture-room by the right man, in the right way, at the right time.

Historical Element

Allied to this is the historical element. Doctors need to know the history of their craft, but there is very definitely a problem of technique in teaching it. A formal course of lectures on the history of medicine is not likely to achieve

what is wanted unless handled with exceptional skill. We have to ask, "What is the function of historical knowledge?" Certainly as part of the doctor's culture and general education it is important, but, more than that, an insight into its past growth is needed to appreciate the present growth of medicine.

The student is not mastering a body of static knowledge which will last him throughout his career. He is being given a start, at a particular epoch in time, in a system of developing skills and achievements, a system which will go on developing while he is practising it. Moreover, it is a system closely linked to the current techniques of civilization and scientific resources, to the current ways of life of the people, and to current beliefs and superstitions. In a sense all medicine is social medicine, and must be interpreted in the light of statistical knowledge of sickness and death, of wars and plagues, of poverty and wealth, of housing and diet.

A full, rounded, perspective view of modern medicine can be given only by those whose teaching intuitively refers to history because their own understanding is informed by a grasp of history. The history of medicine is not a separate subject but a dimension of the subject. The lecturer's technique must include the process of imparting to the student a sense that he personally is entering into this historical stream. One may compare the immense pains taken by great regiments not only to maintain the historical sense of their own traditions but to see that every recruit comes to possess this sense. This may not have much to do with the logic of learning, but it is an undoubted factor in morale.

"Logistics"

Thirdly come the "logistics"—the supply and movement of men and materials. I take the analogue of this to be the technique of planning time-tables, of not only preparing lectures but lecture-rooms, demonstration materials, visual aids, supplementary notes and reading references, and the uses of libraries. How far such matters are determined by tradition and habit, or by considerations of mere convenience, or by casual day-to-day decisions no one can say. But if we look at these matters from the point of view of the student and imagine them asking themselves, as well they may, "Is this medical school going all out not only to train us in the best modern techniques of medicine but to train us by the best modern techniques of instruction according to a genuine thought-out educational plan, or are our lectures mere episodes in the life of busy men with too many other irons in the fire to leave time for thinking about our needs?" this may focus the issue.

Students need to be exposed to the stimulating contact with vital personalities who have themselves contributed, and are contributing, to the advances of medicine. But my earlier remarks about vitality must not be taken as a plea for spectacular histrionic exhibitions of personal prowess. Medicine is one thing and medical education is another. Each is a great creative job. Those taking part in the second must have their hearts not only in medicine but in education. They are building for future health as surely as present practice is building for present health. The students need the assurance that the lecturer is as much interested in them as in his subject. This interest may be shown in a variety of ways. It may not, it seldom can with large classes, take the form of direct individual concern with each particular student—though each needs at least one tutor whose business it is to treat him as an indi-

vidual. But students have, I believe, more awareness than is commonly realized of the extent to which their educational needs are respected. And a well-planned campaign of instructional progress has not only the strength of its technical merits but the additional strength which arises from the effect on students' morale of their awareness that it is a planned campaign. So I would suggest that one of the most important techniques in lecturing is to take the students into one's confidence with regard to the general plan of the course, and the reasons for whatever particular methods are adopted.

One of the best reasons for adopting a particular method is that one knows how to use it successfully. One man's meat is another man's poison. Universal techniques cannot be prescribed. This does not mean that techniques do not matter. They matter supremely. The trouble is that so many lecturers assume unreflectingly that there is just one droning, repetitive technique—the vocal textbook technique—and that their personalities have nothing to do with the case. There is a great range of techniques. It is for each man to find for himself which particular techniques suit both himself and his subject.

The upshot is that lecture technique is not a matter of a few simple tricks of the trade but something to be studied as closely as a piece of surgery. Lecturers, particularly at the beginning of their careers, would do well to have occasional voice-recordings made so that they can hear their own delivery. They would do well to invite experienced critics to come in and sit at the back and tell them frankly whether they could clearly hear and see all that was said, written, and shown; whether exposition was lucid; whether timing was right; whether information was lively or dull, pretentious, or hackneyed; whether justice was done to the subject-matter; whether it was made to seem significant, made to seem part of a connected scheme of knowledge, given colour and perspective and brought to life.

In short the art of lecturing, like any other art, must be learnt through the painful experience of practice and criticism. It will then become evident, through this empirical process, that lecturing is a living art, an art of moving the thoughts and feelings of human beings, an art in which, whilst the talk and the topic are in the foreground, there is a background of interaction between personalities, of historical achievement, and, in Medicine, of movement towards a proud participation in the most humane of labours.

Social insurance in Austria is the theme of an article by Dr. Reinhold Melas in the *Bulletin* of the International Social Security Organization for April, 1950. He describes how all employees and members of their family are insured against sickness. The scheme provides sickness benefits, lying-in allowances, funeral grants, and family assistance. Free medical care is provided; insured persons choose one of the doctors under contract to the insurance fund. The relations between the doctors and the sickness fund are regulated by collective or individual agreements. The expenses of diagnostic tests are borne by the fund. Drugs and other medical products are obtainable free of charge by the insured person on presenting a prescription at a chemist's, though members of his family must pay 20% of the cost of products prescribed for them. The preparations that may be prescribed are approved by the public health office, and number about 4,000; there are about 400 which may be supplied only with the consent of the sickness fund. Hospital care is also provided under the scheme for 52 weeks as a free benefit to the insured person, and for 26 weeks for members of his family, who must pay 10% of the cost. There are also dispensaries where people may go to be regularly examined by a doctor even though not complaining of any symptoms.