TEACHING AIDS IN CLINICAL PSYCHIATRY.

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THE effective teaching of Psychiatry to medical students remains a formidable problem for many reasons apart from the actual methods employed by the teacher. Allocation of adequate time to the subject, the attitude of other teachers and students towards it, the facilities provided by local hospitals, clinics and other institutions alike contribute to the difficulty in establishing Psychiatry as a major subject within the medical curriculum. It is with the problem of teaching method alone that this paper wishes to deal: first to outline the inherent difficulties commonly encountered; secondly to describe the design of structures and equipment found useful in overcoming these difficulties in some measure; and thirdly to point the way for possible future development.

PRESENT LIMITATIONS.

Present clinical teaching in psychiatry is modelled upon clinical medicine, with the demonstration of the typical case at the bedside or in the lecture theatre as the central theme. There are many reasons why traditional methods, found so successful in the one sphere, are much less so in the other. Some of these will now be discussed.

i. Many psychiatric patients are unsuitable for demonstration before a group of students. Some patients will object, others will withhold important information about their private lives, others again (the exhibitionists) will distort information, exploiting the situation for personal gratification. While the average patient can tolerate his body becoming public property, he wishes to retain his mind as a private possession. This objection applies principally to most cases of neurosis, to those exhibiting emotional problems with psychosomatic disorder, to sexual deviates, and to some psychopathic personalities.

ii. The elusive quality of many symptoms and signs in psychiatry presents a major problem in formal demonstration. Often the symptom is transient; rarely can it be demonstrated as if it were, say, a cardiac murmur for anyone to hear at almost any time. Often it disappears on close scrutiny or in the actual process of demonstration. Objective commentary disturbs, perhaps annoys or embarrasses the patient so that only this secondary state is observed.

iii. The long and variable course of most psychiatric disorders renders the introduction of the time dimension in demonstration virtually impossible except by second-hand reporting. To report upon the patient rather than demonstrate him to students introduces an element of unreality which often leads on to frank incredulity. Students will simply not believe what they are told, for it is already too far removed from their everyday experience—even from their experience as medical students immersed in the clinical study of other types of case-material.

iv. Objective commentary by the clinical teacher upon his own method is not always a pleasant task, nor an easy one. If the natural tempo of the psychiatric examination of the patient is to be preserved, the teacher cannot carry out a running commentary nor can he readily invite questions from his students. Nor is it altogether satisfactory to postpone all discussion of the case until after the examination, when the vividness of the demonstrated material has been lost and cannot be recaptured; and it is impossible to demonstrate the variety of techniques which may be employed to elicit the same kind of information in different patients. The student can learn only in a most limited way what is in the mind of the teacher

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as he proceeds to examine the patient: what system of investigation he is adopting in the particular case; what diagnostic categories are being considered; what methods of disposal are open before him. For the most part the student is ignorant of the significance of pauses, changes in emphasis and subject, and other finer points of interview technique. These difficulties of commentary are particularly evident when specific test procedures for intelligence, memory, attention and so forth are being demonstrated, and above all in therapy.

v. It has been rightly pointed out by Strauss (1947) that "Psychology is the most abstracting (not abstract) of all the sciences. Any and every psychological formulation is little better than a parable, a simile or a metaphor." It can also be the most disturbing to the earnest newcomer, and his confusion by the subject-matter or a desire to escape from it are ever-present evils which must be avoided by the good teacher. The answer is for him to present the clinical facts with great simplicity and directness, to select the case-material so that the least disturbing is presented initially, and to graduate succeeding demonstrations within a planned and prepared clinical course. Such planning and preparation cannot easily be carried out within the traditional framework of clinical demonstration, and it is in this connection that the value of the procedures to be described will be apparent.

Possible Solutions.

The one-way screen is a window of glass which permits observers to see without being seen; thus it can be adapted for teaching purposes in the psychiatric interview, with the patient and doctor on one side and the student observers and their commentator on the other. One-way screens of different types have been used in psychiatric research and teaching for some time. A crude type of screen is described by Gesell (1947); it consists merely of a piece of gauze mesh let into a door, and behind it the observer has to sit in silence and darkness. A simple device such as this works satisfactorily enough, and it is an unfortunate fact that the more ambitious type of screen requires a great deal more elaboration to get better or even comparable results.

The observers, seated in the room next to that in which the interview takes place, require some means of hearing what is going on, and this is most conveniently accomplished by a sound reproduction system—a microphone, and its amplifying channel and loudspeaker. With the addition of recording apparatus a permanent record can be made of the interview.

Sound recording of psychiatric interviews has been developed as a teaching and research technique in recent years, reports having appeared in the literature both in this country—Bierer and Ström-Olsen (1948), Oldfield (1949)—and in the U.S.A.—Brody, Newman and Redlich (1951), Redlich, Dollard and Newman (1950), Rodgers (1946). One of us (W. M. M.) had been impressed by the possibilities for psychiatry of modern high-fidelity recording during the last war (McLaughlin and Millar, 1941). The views expressed by Kubie (1947, 1948) on the importance of records and films as a means of obtaining more permanent and observable data for teaching and research in psychiatry acted as a timely stimulus when the present Department of Mental Health at Aberdeen was being planned. This department has now been constructed, and two rooms have been designed so that the maximum use can be made of different types of sound-recording equipment, a "live" amplification system and a "one-way" vision screen.

A basic principle may be enunciated at this point, in so far as it is undesirable to use the one-way screen for eavesdropping on the patient; he should always be told that the interview can be seen and heard by students or other doctors in the next room. One might think that this means the same thing to the patient as having the observers in the room with him, but in fact this is not the case; so long as they are unseen and unheard the knowledge of their presence changes the quality of the interview surprisingly little. Questioned about this afterwards, patients usually say that they forgot about the one-way screen within a minute or two, and opening up the interview may well prove more embarrassing to the psychiatrist than to the patient. From this principle follows the corollary, there is no need to disguise the screen or microphone; and hence any "disguising" of those is in the nature of camouflage rather than concealment. The screen and microphone therefore should be made to appear as innocuous as possible, but no attempt at complete concealment is necessary.

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These features are now considered in some detail, because apparatus of this sort gives disappointing results unless proper care is taken in its construction. The aims to keep in mind are, first, that the interview should be unembarrassed by technical instrusions; and second, that the observers should be able to see clearly and hear without strain.

Technical Considerations.

The "One-way" Screen.

Given sufficient space, one imagines a system based on these lines: a unit composed of interview room, small recording room, and auditorium or viewing-room. The auditorium would have tiered seating for 20–40 persons, and the screen permit vision of the entire interview-room. The whole unit would be sound-proofed from the rest of the building, and its individual sections sound-proofed from each other.

In practice, however, it is usually a matter of adapting two existing rooms, and the main item is the screen of "one-way" glass which is let into the party wall between the interview-room and the viewing-room. This must be of adequate dimensions—say 6 ft. × 3 ft. 6 in.—and the lower edge should not be more than 2 ft. 6 in. from floor level if the viewers are to be seated. A screen of this size will comfortably accommodate a group of 8–12 students without tiered seating; in our experience this is the best size of group for clinical teaching. It is usual to mount the "one-way" glass flush with the viewing side of the wall, and to help in sound-proofing a piece of plate glass is similarly mounted on the interview-room side of the wall.

Two types of "one-way" glass are currently available—one which presents a black surface, the other a mirror surface, as seen from the interview-room. Both depend on absorption of re-entering light and require differential lighting—that is, the viewing-room must be heavily shaded or in near-darkness, and the interview-room brightly illuminated. The shading of the viewing-room, however, need not preclude the use of a miniature slide projector; this is a useful "visual aid" in the demonstration of psychological test procedures. As an example, the Rorschach test plates may be projected on a small screen on a side wall of the viewing-room for the students to refer to, while the test is in progress in the interview-room.

Both types of glass appear to possess approximately the same optical efficiency, and which one uses is largely a matter of individual preference. The windows of "one-way" and plate glass form between them a sort of cupboard within the thickness of the wall, and it can in fact be used as such or otherwise made to fit in with the general decor.

A bright, sunny room can be viewed satisfactorily by daylight, but in most circumstances reinforcement by powerful artificial lighting is necessary, since ordinary standards of room illumination are quite inadequate to withstand the loss in intensity caused by the screen; diffused reflected light from the walls and ceiling is preferable to direct lighting. If fluorescent lighting is utilized, the "warm white" type of tube assists in correcting for the greenish coloration apt to be present in plate glass. In this case, diffusing louvres are desirable over the fluorescent tubes, and the chokes should be installed outside the room to avoid mains hum interfering with the sound system. Whatever type of illumination is used, light-coloured walls and furnishings will be an advantage.

The Sound System.

This falls naturally into two divisions—sound reproduction, by which is meant the relay of "live" sound from room to room; and secondly, sound recording. The second may include the first, but it is as well to have separate channels for each.

In considering the equipment required, it is essential to start with the room in which the sound is produced. This is just as important as the rest of the acoustic apparatus, and strivings after perfection in equipment will be frustrated unless the "studio" equals the quality of the microphones, amplifiers, etc. The interview room must therefore be submitted to a thorough acoustic damping treatment, and when adequately treated the room should have no perceptible reverberation-time. It is also important that the two rooms should be sound-proofed from each other, as otherwise acoustic feed-back from loudspeaker to microphone will occur at ade-

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quate listening levels. Some useful information and references are given by Shears (1951); but again a compromise is necessary, and it is better to accept something a little short of ideal rather than have the patient suspect that frantic efforts have been made to reproduce his voice naturally. Similarly the viewing-room must not be neglected, as the sound is to be reproduced there; and the quality of the reproduction will suffer if the room contains a lot of reflecting surfaces.

So far as microphones are concerned, our first intention was to conceal these—the concealment being merely to relieve the patient of the embarrassment of having the instrument in front of him. Finally, however, the idea was abandoned, and for adult interviews we use a free-field moving-coil microphone mounted normally but as inconspicuously as possible. One reason for this decision was that we found it impossible to retain the highest fidelity results from a concealed microphone.

Getting the microphone leads through the wall in any neat fashion presents something of a problem, solved in our case by a conduit-box. This is a small aluminium box which slips into place like a brick into a hole made for it in the party wall. It has several standard screened jack-sockets connected from side to side, so that the microphone leads simply plug " into the wall." The conduit-box can also be used for intercom equipment, and adapted to transmit low-tension currents, e.g., to actuate from the interview-room a kymograph signal-marker on the observers' side; tubes are also mounted through it so that a pneumograph and sphygmomanometer in the interview-room may record in the viewing-room for experimental purposes.

We have now traced the sound path to the point where signals enter the amplifier. The amplifier must be virtually distortionless and matched to the microphone; a good signal-noise ratio is more important than high gain, and its output should be matched to a properly mounted loudspeaker of good quality. For information on loudspeakers and their mounting Briggs' (1949) book should be consulted.

In this connection it is worth while considering the merits of a " stereophonic " sound system. An objection to the usual monaural (single-channel) system is that direct and reflected sounds are mingled inseparably so that the listener cannot distinguish between voice sounds picked up by the microphone direct and those reflected to it. A more natural and lively reproduction of the interview can be obtained by mounting two similar microphones back-to-back on the desk; each is led to a similar amplifier and loud-speaker, and the speakers are set up on the screen wall of the viewing-room at either side. If the gain in each channel is adjusted to equality, the conversation appears to have a three-dimensional quality, as the voices of interviewer and patient come from points which correspond to their actual positions.

Our installation has entirely separate channels for the following:

i. Live sound reproduction, i.e., listening to an interview in progress. For teaching purposes this needs the attention of two staff members, one to conduct the interview and one to act as commentator with the students. The commentator can momentarily suspend proceedings by turning down the amplifier to allow him to explain things to the students.

ii. Tape recording: For interviews where some permanent record may be desirable, the microphone is switched to the tape recorder, and the interview can also of course be heard by one of the monitoring systems. Recordings are made in this way of any interviews likely to be of special interest, and these are used to illustrate the course of lectures in systematic psychiatry; they are also helpful in staff conferences from the dual viewpoints of study of the patient, and study of interview technique. Also, special features can readily be built up and edited by joining sections of tape. This is especially valuable in order to compress an interview; if, for example, one wishes to illustrate some points out of it and discard the rest, they can be extracted from the tape reel, edited and supplied with a commentary. Thus compressed, the recording can be dubbed on to discs with no loss of quality, in a convenient form for filing and reference.

iii. Direct disc recording is used to make the permanent records which we wish to retain. We use it now only to make dubbed records; interviews, etc., are recorded first on tape, and afterwards edited and dubbed to discs as required. The record is available for replay immediately on any orthodox turntable, and the 12-in. record at the conventional speed of 78 r.p.m. has a playing time of 4½ minutes each side. Microgroove recording can increase this to about 17 minutes per side, but the technical difficulties become rather more formidable.

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Any number of copies may be made by repeated dubbing, or by impressions from a master disc; a pleasing feature of these records as compared with commercial pressed recordings is their low surface noise. For more detailed information on disc recording the reader is referred to Briggs (1950).

Only very brief mention has been made of the technicalities involved in a satisfactory one-way-screen and sound recording system, but the authors will be pleased to give full details on personal application.

Discussion.

A set-up such as we have described will be found readily adaptable to the teaching requirements of the unit. In our own case we have found it particularly successful with the groups of medical students taking a short intensive course in clinical psychiatry in their fourth year. On the first day of this course they are given demonstrations of psychotic and psychoneurotic patients, broadly to illustrate their differentiating features. On the next few days there follow demonstrations of common psychiatric reaction-types, such as anxiety, depression, and hysteria; and a valuable feature is the demonstration of a diagnostic interview. By this we mean a session with a patient referred for consultant opinion for the first time. The students find it particularly rewarding to observe the psychiatrist review the history, elicit signs and symptoms, and generally conduct the interview, while at the same time the commentator is "reading his mind," and interpreting to the students such points as differential diagnosis and the problem of disposal. Later in the course, demonstrations are given of psychological test procedures, children's play therapy, examples of organic impairment, and the follow-up of patients discharged from mental hospitals. In the course of these sessions the students have the opportunity of watching a number of psychiatrists at work, but the danger of their becoming confused by this variety is offset by the continuity preserved by the commentator.

On occasion a "set piece" may be presented, the aim being to provide a rapid but comprehensive introduction to the whole field. In these demonstrations the case is presented from several different viewpoints. The patient is examined by the psychiatrist (in effect, an "initial interview"), while the commentator interpolates in accordance with a pre-arranged plan. This is followed by a report from the psychiatric social worker on the interview with the relatives and the home visit. The case presentation is further amplified by the psychologist's account of the test procedures carried out; and finally the doctor who has had charge of the patient's care (ideally to the point of cure) gives an account of his treatment plan and the patient's response to therapy up to the present time.

The recording apparatus itself may of course be employed separately in the teaching of systematic psychiatry, as a clinical aid, in research and in other ways. For instance, a library of discs may be built up consisting of typical case-material, illustrative examples of mental mechanisms, and classic mental signs. Serial recordings of the same patient taken over the course of treatment and in follow-up are of value as an objective means of assessing progress. In research, it is clear that we have an instrument of great value in that psychiatric data are rendered permanent, and set down for detached observation by any number of observers. Other uses suggested include the instruction of trainee psychiatrists by playback of interviews and discussion of their own technique; and it has also been suggested that members of the faculty might care to listen to recordings of their own lectures as delivered to their students.

Summary.

The traditional methods of teaching in clinical medicine are found to be unsuited to the teaching of clinical psychiatry; the problem is examined, and a possible solution offered in the exploitation of the "one-way" screen and sound system. Technical details are given for the construction and use of this equipment, and suggestions made as to the most rewarding methods for its use in teaching. The possible future development of these techniques is discussed.

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