Typical Medical Students

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Like other teaching, medical education aims to bring about planned alteration in students. Medical students are provided with a complex learning experience to fit each student who completes the training for the professional status of doctor. To get this qualification students learn the scientific methods on which contemporary practice is based, the technical skills needed to examine and treat patients, and the attitudes considered necessary to carry out a doctor's responsibilities to the sick and his obligations to his profession and the community. This professional education is not a standard procedure, measurable differences being found in students taught in differing types of medical school.¹

In the last decade intensive studies have been made of medical schools,^{2,3} and much has become known about medical students in general. A problem in research has been the finding that medical students, highly selected both by themselves and by their teachers, form a relatively homogeneous group. They become still more uniform during the professionalization process. Evaluation methods which discriminate sufficiently between individual medical students have proved difficult to devise.⁴

Applicants to medical schools are selected mainly on intellectual criteria, as reflected in the results of school-leaving examinations. The schoolchildren applying for entry to medical school are by no means the most able ones.⁵ Medical teachers are disquieted by the uncertainties in selecting from among the applicants. They may turn away potentially good students, and among those they select much wastage occurs; some students pass years in study before they withdraw. Among students entering medical school in five consecutive years at Edinburgh, 20% left before completing their studies; half of these students spent an average of 3.5 years in the medical school before being rejected.

Failure to meet the demands of a university training may be the result of temperamental as well as narrowly intellectual factors. Students entering an eastern U.S. university were studied by means of psychological tests to discriminate individuals with specific clusters of personality traits. A significantly greater number of students in the S-group ("stereopaths" who were rigid in personality with fixed attitudes) withdrew from university; students in the N-group ("non-stereopaths" who were not conforming in their attitudes and showed flexibility of behaviour) rarely withdrew.⁶ Adequate methods have yet to be developed to assess students for the personality traits which would predict their fitness to undertake a course of study and their capacity to carry it through.

During the medical training itself the chief grading procedure adopted is the use of periodic examinations. Medical

educators have become increasingly doubtful about the reliability and validity of examinations,⁷ and interested in efforts to improve examinations⁸ or find other methods to study students.⁹

Further knowledge about individual differences of students will lead to improvement in selection procedures, and will also enable teachers to organize the curriculum and plan methods of teaching to meet students' requirements. Unless more is known about the response of students, teachers will not be able to plan the steps required to attain their defined educational objectives. Teachers are concerned that they do not have means as yet for reliably assessing students as individuals, or even for becoming sufficiently aware of students' activities during the medical training. Sociologists¹⁰ found that the activities of the student body at the University of Kansas Medical School were separate from and to an extent unknown to the teaching staff. Education embodied a contest of the students against the teachers, the level and direction of each student's effort being set by his fellow-students collectively rather than by his teachers.

The occurrence of cynicism, humanitarianism, and general anxiety among Yale medical students has been studied¹¹; as training progressed students became more cynical.¹² Changes were also found to occur over time in Cornell students,¹³ but were interpreted by these investigators as a development of detachment and control over emotional reactions; the approval of their fellows influenced students towards acquiring this professionally helpful "detached concern."

The sort of doctors students become by the end of their training will be influenced by the content and form of the teaching, but will also depend on basic personality factors which predated the training and were not greatly influenced by it. In Michigan 132 test measures of medical students were correlated by factor analysis, and three factors emerged: a general achievement factor, a sociability factor relating to popularity with fellow-students, and a service (or humanitarian) factor.¹⁴

The present investigation is a study of the individual differences in a class of Edinburgh medical students at the end of their training.

Method

A class of 112 medical students graduating at the University of Edinburgh in 1962 was studied by three procedures at different times.

1. The first was an inventory of 17 items administered as the students were completing their final examination. The questions asked dealt with their attitudes to social and emotional aspects of illness—for example, "Would you want to treat psychotic patients in your practice?" The students could reply "yes," "no," or "uncertain" to this item.

2. The second source of information was examination results. In the qualifying professional examination 93 students

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graduated and 19 failed. Measures of the clinical abilities of the students were provided by the medicine, surgery, and obstetrics and gynaecology final clinical examinations. Marks obtained in the professional examination in psychiatry in the fifth year were available, providing written, clinical, and oral examination scores. An additional multiple-choice test was devised to provide an objective measure of students' factual information about psychiatry. An academic score was derived from the marks in all professional examinations taken during the six years of medical school. These were averaged for each student and this mean score was used as a measure of the student's overall medical school performance.

3. A third source of information was the response from students in this class in March 1961 (during their fifth year) in the medical school inquiry carried out by the Association for the Study of Medical Education.³ The survey explored individual differences between students in the satisfactions they hoped for in their later medical practice, the anxiety they experienced before examinations, and their attitudes to such

TABLE I.—*Characteristics, Abilities, and Attitudes*

Variable	
1	Sex
2	Educational background since 13 (English, Scottish, or Foreign)
3	Married, engaged, or single
4	Age at which father completed formal education
5	Did mother have more education than father?
6	Either parent medically qualified
7	Medicine clinical examination (top 1/4 of the class)
8	Surgery clinical examination (top 1/4 of the class)
9	Obstetrics and gynaecology clinical examination (top 1/3 of class)
10	Psychiatry written examination (top 1/5 of class)
11	Psychiatry oral examination (top 1/5 of class)
12	Psychiatry clinical examination (top 1/5 of class)
13	Psychiatry multiple choice test (bottom 1/5 of class)
14	Passed final professional examination
15	Considered a career in psychiatry/don't want to do psychiatry
16	More interested in organic than in psychological aspects of illness/equally interested in organic and in psychological aspects
17	More interested in psychiatry since course in psychological medicine
18	Enjoyed most case-demonstrations by lecturers/talking myself, to psychiatric patients, or seeing how psychiatry and medicine are related
19	Put off from psychiatry by lack of effective treatments
20	Interested in psychiatric patients
21	Personally interviewed patients with psychological illness
22	Had chance to follow a case of psychiatric breakdown over weeks or longer
23	Friend or relative had a serious psychiatric breakdown
24	Psychiatric training rated excellent or good/fair or poor
25	Considered biochemical and neurophysiological research most likely to advance psychiatry/research into personality formation, or how to make existent clinical services function more efficiently
26	Able to differentiate psychological complaints from primarily organic complaints
27	Able to make an accurate diagnosis in a case of psychiatric illness
28	Able to formulate treatment for and management of a case with prominent psychological aspects
29	In general practice, would want to treat psychotic patients
30	In general practice, would want to treat psychoneurotic patients
31	In general practice, would want to treat organically ill patients who have a psychological aspect in their illness
32	A factor important in satisfaction as a doctor will be opportunity to utilize skilled techniques
33	A factor important in satisfaction as a doctor will be gratitude of patients
34	A factor important in satisfaction as a doctor will be standing in the community
35	A factor important in satisfaction as a doctor will be opportunity for research
36	A factor important in satisfaction as a doctor will be good income
37	Has had doubts that it was the right decision to study medicine
38	Found difficulty in establishing good relationships with patients
39	Psychiatry considered difficult at the time it was being taught
40	Believes examiners expect in written examination a summary of views presented by teachers only/in addition, textbook facts or own ideas
41	Seriously worried before degree examination
42	Kept the approaches of the different medical disciplines quite separate/tried to fit them together to understand the body as a whole
43	Had sufficient academic contact with teaching staff
44	Had sufficient social contact with teaching staff
45	Had enough time for learning all one is expected to know in medical school
46	" " " following all advances in books and journals
47	" " " spending time with family and friends
48	" " " keeping up with current affairs
49	" " " sport, physical exercise, etc.
50	Students should see patients from the beginning of the preclinical period/only after they understand the normal human body
51	Uncertainties of diagnosis and therapy are a disturbing prospect in later practice
52	Avoiding emotional involvement in patient's problems is a disturbing prospect in later practice
53	Feeling the proper degree of concern for all patients is a disturbing prospect in later practice
54	The fact that functional illness forms a large part of practice is a disturbing prospect
55	Reacts unfavourably to aggressive patients
56	" " " hypercritical patients
57	" " " hysterical patients
58	" " " neurotic patients
59	" " " rude patients
60	" " " self-diagnosing patients
61	" " " patients without serious organic disease
62	" " " hypochondriacs
63	" " " mental defectives
64	" " " psychiatric patients
65	" " " patients with social problems
66	Assisted by the medical teaching to form good relationships with patients

varying types of patient as the hypochondriacal, the self-diagnosing, and the hysterical. Some factors relating to social background were also elicited: the level of education of the student's parents, where he had his schooling, whether he was married or engaged.

These three sources provided 66 variables (Table I). Complete information was available for 104 graduates; of these, two graduates chosen at random were dropped to meet the requirements of the statistical design.

The Variables

Each variable is dichotomous. For example, Variable 29 groups the graduates who affirmed they were prepared to treat psychotic patients, and contrasts them with the graduates who responded "no" or "uncertain."

In an earlier study¹⁵ of this class, analysis focused on the finding that half the graduates (labelled "affective") were as interested in psychological as in organic aspects of illness, while the other half (labelled "physical") were more interested in organic factors: this is Variable 16. There were a number of correlates of this affective-physical classification—for example, affective graduates had considered a career in psychiatry. This classification did not apply along several other meaningful dimensions—for example, both "affective" and "physical" students could be either science-centred or patient-centred (Variables 25 and 35).

A factor-analytic technique was used to discover how the variables cluster together and to characterize particular sub-groups within the 102 graduates studied.

Delegate Analysis

The statistical technique used was an interperson form of factor analysis.¹⁶ This analysis produces a small number of factors or delegates. The delegates are composite medical students representing the whole class, in terms of the measures selected to study the class.

This technique has been described elsewhere,¹⁷ and only a brief outline of the procedure is given here. The sample of persons is first ranked in terms of an arbitrary common factor, and then divided into a number of equal and conveniently sized groups called constituencies. The test items or variables on which the persons within each constituency are to be compared must be dichotomous. Each person is now compared on each of the variables with every other person in his own constituency. The degree of similarity or dissimilarity can be expressed as a non-parametric correlation coefficient. In this way a correlation matrix is produced for each constituency, which is then factor-analysed to yield a general factor and two or three bipolar factors. The first-order bipolar factors produced can be regarded as composite individuals or delegates, each representing his own constituency. The delegates can then be treated as persons, accorded scores on each of the test variables, and correlated with one another. The final matrix which is produced is factor-analysed, and the second-order bipolar factors which emerge are the final delegates.

The last step is to calculate factor loadings for each of the test items in each of the second-order factors. Each constituency has had an equal share in determining the nature of the final delegates who represent and typify the whole population of persons being studied. (For each delegate derived in this way another composite person can be inferred with mirror, or opposite, characteristics.)

Procedure

The technique of delegate analysis just described was applied to the 102 graduating students. The *a priori* criterion used to rank them was the overall medical school performance.

They were divided into six constituencies of 17 students. Constituency 1 had thus all the most academically successful students, while constituency 6 comprised the least successful students. Each student had a score on each of the 66 variables set out in Table I, and it was on this basis that the interpersonal correlations and factor analyses were carried out. Seventeen first-order delegates emerged, and yielded in their turn four second-order delegates or composite students. The significant factor-loadings for each test variable by which the delegate or composite student can be described are set out in Tables II, III, IV, and V. These Tables and the descriptions which follow present us with four representative students.

Findings

Doctor 1

This graduate perceives himself as outgoing, relating well to patients, and wishing for more social contact with his teachers (Table II). He had as much time as he needed for his studies, and he was not anxious before examinations. In the examinations he considered it best merely to reflect back his teachers' views. He places importance on earning a good income in later practice.

TABLE II.—*Doctor 1*

Variable	Attributes	Probability Level
47	Enough time for family and friends	0.01
45	Enough time to learn	0.05
44	Not enough social contact with teachers	*
41	Not seriously worried before degree examination	0.05
40	Examiners expect back a summary of teachers' views	0.01
38	Not difficult to establish good relations with patients	*
36	A good income important in later practice	*
52	Not disturbed that patients will involve him emotionally	0.01
54	Not disturbed that much illness in practice will be "functional"	0.05
57	Does not react unfavourably to hysterical patients	0.05
58	Does not react unfavourably to neurotic patients	0.05
62	Does not react unfavourably to hypochondriacal patients	*
61	Does not react unfavourably to patients without serious organic disease	0.05
29	Would not want to treat psychotic patients	0.01
30	Would not want to treat psychoneurotic patients	0.05
9	Not in top 1/3 of class in obstetrics clinical examination	0.05
10	Not in top 1/5 of class in psychiatry written examination	0.05
26	Able to distinguish psychological from organic complaints	0.01
28	Not confident of ability to treat and manage psychological illness	0.05
17	Not more interested in psychiatry after being taught the course	*
39	Did not find psychiatry difficult to study	0.01
21	Did not interview patients with psychological illness	0.01
2	Educational background not Scottish	0.05

* Factors of marginal significance, $P < 0.1 > 0.05$.

He is confident he can distinguish physical from psychological complaints, and he does not intend to treat either major or minor psychological illness. He did not see patients while studying psychiatry, which he did not find a difficult subject; but his teachers failed to make him more interested in it. He does not consider himself competent to treat or manage psychological illness. He is not in any way hostile to non-organic patients. Indeed, he is quite unperturbed that functional illness, which he is both disinclined and unable to handle, is common in practice. He did not go to school in Scotland.

Doctor 2

This graduate perceives himself as having considerable difficulty in establishing good relations with his patients (Table III). In addition to this personal problem he is characterized by the wide range of patients to whom he reacts negatively himself.

He responds unfavourably to a wide range of patients with psychological aspects to their illness; he is disinterested in overtly psychiatric patients; he is antagonistic to patients who are critical of him or who diagnose their own complaints. He is disturbed by the prospect that functional illness forms a large part of medical practice. He does not intend to treat psychoneurotic patients in his own practice.

While his interest is in organically ill patients, his clinical examiners did not find him among the better students in general medicine.

Not surprisingly, he does not consider a career in psychiatry. His aversion to psychiatric patients is not based on a perception of psychiatry as lacking in effective treatments. It is a subjective matter: he feels himself incompetent to diagnose, treat,

TABLE III.—*Doctor 2*

Variable	Attributes	Probability Level
16	More interested in organic than in psychological factors in illness	0.05
54	The fact that functional illness forms a large part of later practice is a disturbing prospect	0.05
30	In practice would not want to treat psychoneurotic patients	*
38	Found difficulty in establishing good relations with patients	0.05
56	Reacts unfavourably to hypercritical patients	0.01
61	Reacts unfavourably to patients without serious organic illness	0.01
62	Reacts unfavourably to hypochondriacal patients	0.01
58	Reacts unfavourably to neurotic patients	0.05
60	Reacts unfavourably to self-diagnosing patients	0.05
64	Reacts unfavourably to psychiatric patients	0.05
7	Was not in top 1/4 in medicine clinical examination	*
28	Not able to formulate treatment and management of a case with prominent psychological aspects in the illness	0.05
27	Not able to make an accurate diagnosis in a case of psychiatric illness	*
39	Psychiatry considered difficult at the time it was being taught	0.05
20	Not interested in psychiatric patients	0.05
19	Not put off psychiatry by lack of effective treatments	0.05
15	Does not want a career in psychiatry	0.05
4	Father's education continued beyond the age of 16	0.05

* Factors of marginal significance $P < 0.1 > 0.05$

or manage non-organic illness. This feeling of professional ineptitude could account for his rejection of a wide variety of patients, but may itself be a response to his individual personality and temperamental characteristics.

His father was educated beyond the age of 16 years.

Doctor 3

This graduate has reached firm views about his later medical career (Table IV). Social status, standing, and income are not important to him. Research opportunities are most important; in addition, he wants to find some scope for using skilled techniques.

TABLE IV.—*Doctor 3*

Variable	Attributes	Probability Level
34	Standing in the community is not important for satisfaction in later work as a doctor	0.01
36	Good income is not important for satisfaction in later work as a doctor	0.05
35	Opportunities for research are important to obtain satisfaction in later work as a doctor	0.01
32	The opportunity to utilize skilled techniques is important in obtaining satisfaction as a doctor	*
42	Does not keep the approaches of the different medical disciplines separate	0.05
41	Not seriously worried before degree examination	0.05
9	In the top 1/3 in the obstetrics and gynaecology clinical examination	0.05
10	In the top 1/5 in the psychiatry written examination	*
11	Not in the top 1/5 in the psychiatry clinical examination	0.05
12	In the top 1/5 of the psychiatry oral examination	0.01
13	Not in the bottom 1/5 in the psychiatry multiple-choice examination	0.01
24	Rated the psychiatric training excellent or good	0.01
21	Personally interviewed patients with psychological illness	0.05
53	Feeling the proper degree of concern for all patients in later practice is a disturbing prospect	*
60	Reacts unfavourably to self-diagnosing patients	0.05
4	Father's formal education was completed before the age of 16	*
6	Neither parent medically qualified	*

* Factors of marginal significance, $P < 0.1 > 0.05$.

He could overcome the division of medicine into separate disciplines by integrating them for himself during his training. He was not anxious before examinations. He was aware that he might not feel sufficient concern about all his patients. He reacts unfavourably to self-diagnosing patients.

He was in the top third in the obstetrics and gynaecology clinical examination. He was not among the best students in the psychiatry clinical examination, but in the psychiatry written and oral examinations he performed excellently.

He had considered the psychiatry teaching good. He took the opportunity to interview patients with psychological illness for himself.

Neither parent is a doctor; his father's formal education did not go beyond the age of 16 years.

Doctor 4

This graduate is troubled that he may not respond adequately to the emotional needs of his patients (Table V). Attaining social status is not important to him. He will want to be able to carry out research in his later medical career. (In the field of psychiatric research he sets more store by investigations dealing with patients and psychological factors than by research concerned with physical processes.)

TABLE V.—*Doctor 4*

Variable	Attributes	Probability Level
50	Considers that students should see patients from the beginning of the preclinical period	0.05
53	Feeling the proper degree of concern for all patients is a disturbing prospect in later practice	0.01
35	Opportunity for research is important to his later satisfaction as a doctor	*
34	Standing in the community is not important for his later satisfaction as a doctor	*
25	He would not give psychiatric research priority to biochemistry and neurophysiology, but to personality formation or clinical services	0.01
16	Equally interested in organic and psychological aspects of illness	0.05
7	Not in top 1/4 of medicine clinical examination	0.05
8	Not in top 1/4 of surgery clinical examination	0.05
10	In top 1/5 of psychiatry written examination	0.05
15	Has considered a career in psychiatry	0.05
22	Had the chance to follow a case of psychiatric breakdown over weeks or longer	0.05
20	Interested psychiatric patients	*
19	Not put off from psychiatry by lack of effective treatments	0.05
49	Has not had enough time for sport, physical exercise, etc.	*
2	Educational background Scottish	0.05

* Factors of marginal significance, $P < 0.1 > 0.05$

This patient-centredness also finds expression in his belief that students should not be deprived of contact with patients during preclinical years. He is as interested in psychological as in organic aspects of illness.

He is not among the better students in either the medicine or the surgery clinical examinations. He did distinguish himself in the psychiatry written paper. He considers psychiatry is a possible career for him. He is interested in psychiatric patients. When he studied psychiatry he did not conclude it suffered from a dearth of effective treatments. During the course he followed a case of psychological illness over weeks or longer.

He could not find enough time for sport and physical exercise. His schooling was in Scotland.

Interpretation and Inferences

Four composite graduates have been isolated to describe this class. These are hypothetical individuals derived from inter-correlations between pairs of graduates. Each "delegate" summarizes a cluster of similar graduates, described above in terms of the statistical findings. From these findings the following inferences are made.

1. The Adequate Graduate

This graduate is a realist. He turns his professional attention firmly away from matters he considers irrelevant to his main purpose. He is well adjusted, is calm, and has no difficulties in his relations with people. He knows his limitations, and does not perceive them as defects. He was not a notably excellent student, but he was not in awe of his teachers, with whom he would have liked greater social contact. He declines to interest himself in emotional aspects of patients, which he is perfectly capable of recognizing.

A number of his attributes convey that he perceives the motives of others but reacts to these very much on his own terms. There is a suggestion of calculated manipulation of others. He gives back to examiners the type of material he concludes they want—their own views. He is aware many patients have functional illness, but he does not intend to treat these. In his imperturbability about anxiety in others he differs from Doctors 3 and 4. He responds by detaching himself from

this aspect of medicine, without self-criticism. He is not an introspective person. He is sociable, probably popular, and not anxious. He had come away for his medical education from the country in which he went to school. Money is important to him. The impression is that he would have done well in a number of other fields than medicine. More facts about this graduate are needed to explain why he chose a medical career, and how he will resolve the conflict between the frequent occurrence of non-organic illness and his refusal to be concerned about it. He may have decided on specialization of a type not calling for psychological insight.

2. The Limited Graduate

This graduate differs from the first in that he had needed to limit his clinical activities in order to manage his educational and professional task. He does not like working with people. His rejection of non-organic forms of illness is so wide in range that he uses considerable energies to ward off patients he regards as undesirable. As a fifth-year student he found himself in difficulty because he could not relate comfortably with the patients he saw in the general wards. His harshly critical attitude to patients and his personal discomfort when in contact with them are his main attributes. He reacted aggressively towards psychologically vulnerable patients and was also fearful himself of hostility in patients.

He has not evolved a tenable professional solution. He is not obviously outstanding in any of the medical disciplines. Resenting so many types of patient, his ability to take a history (one of the three divisions of the clinical examination) will be impaired in many of the cases he sees. It is difficult to envisage him providing adequate medical care. He does not show particular research interests. Unlike Doctor 1, he views himself as unable to deal with a psychological case. He recognizes such illness with particular sensitivity, and recoils from it. He is the graduate whose father had higher education; this professional family background may have influenced him in his choice of medicine.

3. The Research-oriented Graduate

This graduate comes from a less advantageous background socially, but is not in medicine for financial gain or social status. He has a vocation for medicine; he has science interests and finds satisfaction in technical proficiency. He did very well in the obstetrics and gynaecology clinical examination. He is not anxious. He showed initiative in seeing psychiatric patients for himself—not a required part of the psychiatry course. Although he did very well at psychiatry, this is not a field in which he would choose to work. There is some suggestion that he might need to be in control of a situation in order to feel wholly comfortable in it. He appears close to the "true clinicians who are at the same time actively interested in research,"¹⁸ on whom the progress of medicine has been held to depend. He seems mature, objective, competent medically, with his professional future firmly planned.

4. The Patient-centred Graduate

This graduate is the type who emphasizes contact with patients. He resented that no patients featured in the pre-clinical years. He is strongly aware of the psychological processes of others. He is characterized by his drive to understand and respond to the subjective needs of patients. He is a potential psychiatrist. He may be outgoing in personality and physically active, and he does not find enough time left over for himself. Neither his medicine nor his surgery clinical examiners thought highly of his abilities. While he does not have the interest in technical procedures of Doctor 3, he does have research interests. However, these are less strong, and it is not experimental or basic science research which interests

him but rather direct clinical investigations. He is not as travelled as Doctor 1; his schooling was in the same country as his university education.

Discussion

The composite representatives of the class of graduating students demonstrate how the tested attributes fit together. In addition to academic ability, non-cognitive qualities of students such as personal attitudes, professional preferences, and later career aspirations have been correlated. Actual students corresponding to these delegates can be identified from the responses of individual students in the class.

When attitudes of students can be identified reliably particular departments can plan how to implement their teaching goals more effectively.

Teachers of medicine will be concerned by the finding that two of the delegates, markedly dissimilar in attitude, are not prepared to pay attention to non-organic aspects of illness. Teachers of psychiatry will be struck that two of the four delegates have been uninfluenced by the objectives of psychiatric teaching, one of them being frankly hostile to patients with psychological difficulties. Moreover, the two responsive delegates have different interests which teaching must accommodate—one favouring research and skilled techniques, while the other (who is inclined to enter psychiatry) wants patient-contact.

Further research could reveal how the different types of student are represented proportionately in the class, and teaching approaches which are called for can then be planned rationally.

Summary

In a class of 102 graduating medical students four composite doctors have been defined by a statistical technique, delegate analysis, based on 66 attitudinal and criterion measures.

Two of the composite doctors representing the class are organically oriented, while two are interested in non-organic illness and the psychological and social aspects of patients.

The first organically oriented doctor, although confining his medical interests to a narrowly physical approach, was labelled "adequate": he has a positive or neutral relationship to patients as people, and is relaxed in his attitudes towards them. The second organically oriented doctor was termed

"limited": he is characterized by rancour towards all patients who do not have serious organic illness, to which he confines his anxious and irritable attention.

The other two representatives were both interested in social and emotional aspects of illness. The third composite graduate is "research oriented": he has scientific attitudes and an interest in technical procedures. The last graduate is "patient-centred": he considers that medical students should see patients from the start of their training; he is characterized by his interest in the social and psychological problems of patients, and is a potential psychiatrist.

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"Not Men, but a Method"*

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The new thing in Johns Hopkins Hospital was to be, in Osler's words, "Not men, but a method." The question how far has this proved true came to mind during the seventy-fifth anniversary exercises held from 11 to 15 May 1964.

Osler was no mean paediatrician. It was all the more exciting for an Oslerian who is also a paediatrician to attend these exercises, with the main event the dedication of the new Children's Medical and Surgical Center, and the main intellectual food a symposium on "The Child." Seventy-five years, the lifetime of one man, little more than twice the age of the

Osler Club, is but a small span in time. Yet this time has seen such changes in the science and the practice of medicine, matching society's altered ways and means, that at history's usual pace these 75 years equal some centuries. The Johns Hopkins now has 3,000 employees, 1,000 physicians, 99 separate clinics, cares for 400,000 patients a year, and has an annual budget of \$20m.

"Not men, but a method"—this May it seemed to be "not method, but a building." And yet this is only a surface judgment, for it is men working by a method in a building—when it is the right men, and the right method, and the right building—that reap the harvest of knowledge in the new acres

* A talk to the Osler Club of London given on 24 June 1964.