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.

This investigation is part of a larger study of teaching of medical students being sponsored by the Nuffield Foundation. We are grateful to Professor G. M. Carstairs, of the Department of Psychological Medicine; to Professor J. H. F. Brotherston, Dr. F. M. Martin, and Dr. F. A. Boddy, of the Department of Social Medicine; and to Dr. B. Semeonoff, of the Department of Psychology, University of Edinburgh.

REFERENCES

- Hutchins, E. B., *J. med. Educ.*, 1962, **37**, part 2, p. 67.
- Merton, R. K., Reader, G., and Kendall, P., *The Student-Physician*. Cambridge, Mass., 1957.
- Brotherston, J. H. F., Martin, F. M., and Boddy, F. A., Interim Report of the Medical Student Enquiry. Association for the Study of Medical Education, London, 1963.
- Caplovitz, D., Student-Faculty Relations in Medical School. Faculty of Political Science, Columbia University, New York, 1959.
- Technology and the Sixth Form Boy. Oxford University Department of Education, 1963.
- Stern, G. G., Stein, M. I., and Bloom, B. S., *Methods in Personality Assessment*. Glencoe, Ill., 1956.
- Goldstein, A., *J. med. Educ.*, 1958, **33**, 193.
- Hubbard, J. P., *Nat. Bd Examr.*, 1960, **8**, No. 3.
- Illingworth, C., *Lancet*, 1963, **2**, 1268.
- Becker, H. S., Hughes, E. C., Geer, B., and Strauss, A. L., *Boys in White*. Univ. of Chicago Press, 1961.
- Eron, L. D., *J. med. Educ.*, 1955, **30**, 559.
- in *The Ecology of the Medical Student*, edited by H. H. Gee and R. T. Glaser. Evanston, Ill., 1958.
- Lief, H. I., and Fox, R., Publication A-345, Bureau of Applied Social Research, Columbia University, New York, 1963.
- Whitaker, W., Kelly, E. L., and Uhr, L., in *The Appraisal of Applicants to Medical Schools*, edited by H. H. Gee and J. T. Cowles. Evanston, Ill., 1957.
- Walton, H. J., Drewery, J., and Carstairs, G. M., *Brit. med. J.*, 1963, **2**, 588.
- Sandler, J., 1958. Some notes on Delegate Analysis in S. F. Tacon's "An investigation of some psychosomatic symptoms in adult neurotic patients." Ph.D. thesis, University of London.
- Semeonoff, B., *Brit. J. Psychol.*, 1963, **54**, 71.
- Snapper, I., *Meditations on Medicine and Medical Education Past and Present*. Grune and Stratton, New York, 1956.

"Not Men, but a Method"*

ALFRED WHITE FRANKLIN, M.B., B.CH., F.R.C.P.

Brit. med. J., 1964, **2**, 748-750

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.

opened up by the technological skills of this age. The new paediatric building is designed to allow patient-care, in an atmosphere as much like home as possible, to be accompanied by the continuous and related functions of teaching and research. Osler's dictum, "Teacher and student alike should be in the fighting line," finds expression in steel and concrete when the ward block is matched by a laboratory block of equal size; when a hospital building is conceived as something more than a shell for a given number of beds, as a place where patients are not only cared for but can live in comfort while being treated; where doctors not only care for patients but have room to sit and think and read and research; where "the student of medicine has his place in the hospital as part of its machinery" and is amply provided with teachers, laboratories, lecture-rooms, and encouragement.

The first two days of the week witnessed the Cardiac Clinic Reunion, to which Fellows taught by Dr. Helen Taussig had come from the world over to pay her tribute on her retirement. Her work for the child with congenital heart disease and the stimulus that it gave to Dr. Alfred Blalock to devise surgical relief for Fallot's tetralogy have brought as much glory to Johns Hopkins as any other single achievement in the 75 years.

On Wednesday 13 May the new Children's Medical and Surgical Center was dedicated. In bright sunshine and to the strains of Meyerbeer's Coronation March the hospital, the university, the city of Baltimore, all gathered for the ceremony.

Fifteen million dollars had produced the new building and its equipment, and the money came largely from three children's institutions—the Robert Garrett Fund for the Surgical Treatment of Children, the Eudowood Sanatorium, and last but not least the Harriet Lane Home. A representative of each foundation spoke his piece and gave his blessing, leading up to an address by Dr. Robert E. Cooke, paediatrician-in-chief, worthy successor of von Pirquet, Howland, and Edwards A. Park, an address that under happier circumstances would have been given by President John Kennedy. The Center's aim is "to foster family and community concern for the total health needs of children," and Dr. Cooke spread before us his vision of paediatrics, a many-coloured tapestry of interwoven designs, a concept at once a marvel and a challenge.

Thursday and Friday were occupied with the symposium on "The Child." The subjects ranged from fundamental studies in immunology and genetics, through surgical and medical therapeutic procedures for congenital heart disease and cerebral palsy, through environmental studies in nutrition and child health in its widest sense, to experiments in senescence in cultured human cells.

And of course there was a dinner, and at the dinner there were speeches. In America tradition must be respected. The

speeches were long but good; one remembers the Mayor, a semi-inaudible humorist, sparking off asides like a Baltimore edition of Mr. Dickson Wright. Dr. Alfred Blalock, recently recovered from an operation but determined to be present, gave an address reminding his hearers by word and by film what the hospital used to be like and what sort of people had begun it and who had made it what it is to-day. Two films, one of "Popsy" Welch and one of Dr. Llewellys Barker, were shown, and I am happy to present copies of these to the club with the best wishes of the President of the Johns Hopkins Hospital, Dr. Russell A. Nelson. Popsy Welch it was who, captivated by Osler, converted Billings, the medical

adviser to the Johns Hopkins Trustees, who had our own Lauder Brunton in his mind. But the evening was long, and I was reminded of Harvey Cushing's account of the twenty-fifth anniversary of the founding of the Johns Hopkins University. On that night of Saturday, 22 February 1902, President Alderman of the University of Virginia, seeing that it was after 12 o'clock, began his speech, "Last week when this banquet began..." The guests sat under blown-up photographs of the hospital and of Osler and his classes, and each guest was given a medallion struck for the occasion, with the profile of Johns Hopkins on the reverse and on the obverse the famous hospital dome that he caused to be built. The last guest to leave was Dr. Park, one-time paediatrician-in-chief, wearing his 85 years like a cloak of eternal youth. No one who heard it will forget his history of the Harriet Lane Home which had opened the symposium.

"Not men, but the method." My mind turns back to the meeting in the Great Hall of the Welch building. The occasion—the presentation to Dr. Helen Taussig by her fellows of her portrait by the son of Andy Wyeth, a brilliant work of art, but, alas, to the sorrow of her friends a

scowling masterpiece. Sargent's portrait of the four professors dominates the hall—Welch, Osler, Halsted, Kelly—and who shall say that these are not great men? But they worked by a method, the method of science. When I was in Baltimore in the Harriet Lane Home in 1934 Dr. Taussig supervised a rheumatic heart clinic. "Why," she used to grumble, "why do these doctors keep sending up children with congenital heart disease?" She appealed to Dr. Park, her chief, need she see them? Yes, he insisted, and so she applied the method—the patient collection of measurable

data, by clinical examination, by E.C.G., by radiology—and gradually the method paid dividends, for the method made her the outstanding clinical cardiologist for children in the world.

Osler said of the early days, "Binding us all there came as a sweet influence the spirit of the place." The spirit remains, and not men, not the method, not the buildings, but all three infused with this spirit make of the Johns Hopkins Hospital, 75 years old, the Temple of Minerva Medica that Johns Hopkins would have wished it to be.

International Congress of Urology

[FROM A SPECIAL CORRESPONDENT]

The Thirteenth Congress of the International Society of Urologists, which was held at the Royal College of Surgeons from 29 August to 5 September, was the first to be held in London since 1933. It may come to be looked upon as a turning-point in the evolution of a branch of surgery which has sprung up within a generation from the surgery of strictures and stones to encompass the most interesting and active of all the growing edges of surgery. Organ transplantation, haemodialysis, hypertension, the problems of intersex, infertility, and endocrinology, as well as about a third of all the day-to-day operations of surgery, now fall within its compass. The old distinction between surgeon and physician is blurred in the face of the special problems posed by these new developments. "What is Urology?" asked Sir ERIC RICHES, president of the Congress, and suggested "a discipline which can offer special skill in the investigation and treatment of urinary disease." He also emphasized the need in London for a postgraduate urological centre worthy of the place which this country holds in the surgery of the world.

Three main topics had been chosen for discussion: testicular tumours, carcinoma of the bladder, and renal insufficiency.

Testicular Tumours

Urologists are divided into two main camps: those (mostly in North America) whose tumours are classified according to the U.S. Armed Forces Institute of Pathology system, and who treat teratomas by radical orchidectomy with dissection of the retroperitoneal lymph nodes, and those (mostly in Great Britain and Europe) who classify their tumours differently, and treat all of them by simple orchidectomy and radiotherapy. The meeting began with a plea by Dr. R. C. B. PUGH (Great Britain) in support of the new British nomenclature based on the Testicular Tumour Panel and Registry. This differs in detail from the U.S.A.F.I.P. system, which was set out in an exhibit and was defended vigorously in discussion by Dr. MELICOW (U.S.A.). Without agreement on classification, comparison of treatments was impossible, so that the attempts by Professor G. GIERTZ (Sweden) and Dr. C. J. ROBSON (Canada) to assess the value of lymphadenectomy versus radiotherapy in collected series classified and treated in the same countries was of especial interest. The

answers, alas, were not clear cut: both contributors felt that their series would have to be continued before any valid conclusions could be drawn. The necessarily incomplete removal of the regional lymph nodes of the testicle, and the high proportion of uninvolved nodes subjected to operation, were commented on by more than one speaker. Only one point was agreed by all, that simple orchidectomy combined with radiotherapy gave excellent results in the group of tumours described by different pathologists as seminomas.

It was therefore difficult to assess the value of chemotherapy in these tumours. Only in seminomas did sarcolysin have any value. Professor ABRAMIANE (U.S.S.R.) reported that it gave a response in 43% of these tumours, after radiotherapy, but 25% of them relapsed within six months and failed to respond further. Dr. C. J. ROBSON (Canada) found in his reported series that other antimitotic agents were also of doubtful value. All series showed the usual high incidence of tumours in association with imperfect descent of the testis—a striking example was described by Mr. G. C. TRESIDDER (Great Britain)—but on a show of hands there was no agreement that this association justified routine removal of undescended testes.

Carcinoma of the Bladder

Here no dispute arose from classification: most reports expressed their results in terms of the new *Unio Internationalis Contra Cancrum* nomenclature, which owes so much to Dukes and Jewett. Dr. HUGH J. JEWETT (U.S.A.) showed how his system could be translated into the U.I.C.C. terms, and emphasized the importance of lymphatic involvement and its close association with the subsequent survival of the patient. All reporters agreed that the results were fairly good in the superficial mucosal tumours, with some 60% five-year survivals whatever treatment was used. Once the bladder muscle was deeply invaded all agreed that the results were poor, and with all treatments of these tumours more or less equally unsatisfactory it appeared that there was little to choose between them. Total cystectomy with node dissection was preferred by the Italian surgeons whose work was reported by Dr. U. BRACCI (Italy). Dr. W. F. WHITMORE, jun. (U.S.A.), reported a combination of total cystectomy with radiotherapy and felt that the initial results were promising, though the numbers were small.

Mr. D. S. POOLE-WILSON (Great Britain) and the group from the Royal Marsden Hospital (in a demonstration) showed figures supporting the use of radiotherapy in the control of this disease. There was an unexplained divergence of views here: Dr. BRACCI (Italy), and Dr. R. ANDERSEN (Norway) and his colleagues felt that radiotherapy added nothing to the effect of cystectomy, and some of Dr. Andersen's figures suggested that it might even make the patients worse. Differences in technique of radiotherapy may here be of crucial importance: Mr. Poole-Wilson emphasized the importance of not attempting to irradiate the whole bladder, whilst the method used at the Royal Marsden Hospital aims to do just this. The important aspect of palliation (as opposed to the attempt at curing) was emphasized by Dr. FRANK HINMAN, jun. (U.S.A.), in a report of the results achieved using the 70 million electron volt synchrotron; 83 patients were treated, 70% of them "responded," but 16% tolerated therapy badly, among whom were seven with serious complications including rectovesical fistula and rectal stricture. Not only cure but even palliation remains a daunting problem in carcinoma of the bladder.

The present position of fundamental research into causation of bladder cancer in non-industrial cases was reviewed by Dr. WHITE from the Institute of Urology: he referred to some of the technical problems of measuring carcinogenic tryptophane metabolites in the urine from cancer patients, warned against too ready acceptance of uncontrolled reports of such findings, and made it clear that no simple answer was yet available.

Topical chemotherapy for superficial tumours of the bladder was presented in a demonstration by Professor R. J. VEENEMA and colleagues (U.S.A.); 38% of superficial tumours could be destroyed, and in cases with multiple papillary tumours thiotepa could cause the numerous superficial tumours to disappear, leaving a localized invasive growth to be resected locally when appropriate.

Unlike so many other growths, cancer of the bladder cannot easily be resected *en bloc* because the problem remains of diverting the urine safely. Many methods were reviewed critically for the Congress. Dr. J. J. CORDONNIER (U.S.A.) had changed from using ureterocolic anastomosis after cystectomy to ileal loops, to which he attributed a 10% increase in the five-year survival rates of his cases. Professor L. PYRAH (Great Britain) presented his series of 33